

Flexible Control Cables

For generations people have tried to build machines and plants which take on different functions. To raise, sink, slide, drill, transport and much more, and have attained fantastic results.

Today we control, inform, weld, pack and transport automatically by electric control and data cables.

These cables are necessary to ensure a frictionless flow of data and material. We are able to offer most of these cables for many applications. On the following pages we present cables for the corresponding applications.

If you cant find a suitable cable in our catalogue, we can fabricate this special cable on request already from **100 m** or maybe we can offer you a similar cable from our stock.

HELUKABEL® has one of the biggest stocks of special and standard cables in Germany and excellent logistics and wants to prove itself every day.

Stocks in:
Hemmingen/Stuttgart, Neuenhagen/Berlin,
Pleißa/Chemnitz, Windsbach/Nuremberg.



FLEXIBLE CONTROL CABLES

Temperature (°C) - flexing

Temperature (°C) - fixed

Nominal voltage U₀/U

Bending radius - flexing x Ø

Bending radius - fixed x Ø

Halogen-free

UV-resistant

Outdoor use

Drag chain

Colored cores/VDE 0293

Screened/shielded

HAR/VDE REG no./VDE

UL/CSA

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PVC control cables														
Cable Type	Temp (°C) - flexing	Temp (°C) - fixed	Nominal voltage U ₀ /U	Bending radius - flexing x Ø	Bending radius - fixed x Ø	Halogen-free	UV-resistant	Outdoor use	Drag chain	Colored cores/VDE 0293	Screened/shielded	HAR/VDE REG no./VDE	UL/CSA	Page
JZ-500	-15 to +80	-40 to +80	300/500	7.5x	4x						X			30
JZ-500 black	-15 to +80	-40 to +80	300/500	7.5x	4x	X	X							32
JZ-500 orange	-15 to +80	-40 to +80	300/500	7.5x	4x						X			33
JZ-500 COLD	-30 to +80	-40 to +80	300/500	7.5x	4x		X							34
H05VV5-F (N)SYLYÖ-JZ	-5 to +70	-40 to +70	300/500	7.5x	4x						X			35
(H)05VV5-F ((N)SYLYÖ-JZ	-5 to +70	-40 to +70	300/500	7.5x	4x						X			37
JZ-750	-15 to +80	-40 to +80	450/750	7.5x	4x									38
JZ-600	-15 to +80	-40 to +80	0.6/1 kV	7.5x	4x	X	X							40
JB-500	-15 to +80	-40 to +80	300/500	7.5x	4x				X		X			42
JB-750	-15 to +80	-40 to +80	450/750	7.5x	4x				X					43
JB-750 yellow	-15 to +80	-40 to +80	450/750	7.5x	4x				X					44
H03VV-F	-5 to +70	-40 to +70	300/300	7.5x					X		X			45
H05VV-F	-5 to +70	-40 to +70	300/500	7.5x					X		X			46
H05VV-F	-5 to +70	-40 to +70	300/500	7.5x					X		X			47
F-CY-OZ (LiY-CY)	-10 to +80	-40 to +80	300/500	10x	5x					X	X			48
F-CY-JZ	-10 to +80	-40 to +80	300/500	10x	5x					X	X			50
JZ-500 C black	-10 to +80	-40 to +80	300/500	10x	5x	X	X			X				52
Y-CY-JZ	-15 to +80	-40 to +80	300/500	10x	5x					X	X			53
SY-JZ	-15 to +80	-40 to +80	300/500	20x	6x					X	X			55
H05VVC4V5-K (N)SYLYCYÖ-JZ	-5 to +70	-40 to +70	300/500	10x	5x					X	X			57
(H)05VVC4V5-K ((N)SYLYCYÖ-JZ	-5 to +70	-40 to +70	300/500	10x	5x					X	X			59
JZ-600-Y-CY	-15 to +80	-40 to +80	0.6/1 kV	10x	5x	X	X			X				60
Y-CY-JB	-15 to +80	-40 to +80	300/500	10x	5x				X	X	X			62
SY-JB	-15 to +80	-40 to +80	300/500	20x	6x				X	X	X			64
PUR control cables														
JZ-500 PUR	-15 to +80	-40 to +80	300/500	7.5x	4x	X	X							67
PURÖ-JZ	-20 to +80	-40 to +80	300/500	7.5x	4x	X	X							68
PUR-ORANGE	-15 to +80	-40 to +80	300/500	7.5x	4x	X	X	X						70
PUR-YELLOW	-15 to +80	-40 to +80	300/500	7.5x	4x	X	X	X						71
H05 BQ-F / H07 BQ-F (NGMH11YÖ)	-40 to +80	-50 to +90	300/500	5x	3x	X	X	X		X		X		72
UNIPUR®	-40 to +90		300/500	10x	5x	X	X	X	X	X		X		73
PUR-750	-40 to +80		300/500	10x	5x	X	X	X	X					75
JZ 500-FC-PUR	-10 to +80	-40 to +80	300/500	10x	5x	X	X			X				76
F-C-PURÖ-JZ	-20 to +80	-40 to +80	300/500	10x	5x	X	X			X				78
Yö-C-PURÖ-JZ	-20 to +80	-40 to +80	300/500	10x	5x	X	X			X				80
UNIPUR®-CP	-40 to +90		300/500	12.5x	7.5x	X	X	X	X	X	X			82
PUR-C-PUR	-40 to +80		300/500	10x	5x	X	X	X	X	X	X			84



FLEXIBLE CONTROL CABLES

Temperature (°C) - flexing
 Temperature (°C) - fixed
 Nominal voltage U₀/U
 Operating peak voltage
 Bending radius - flexing x Ø
 Bending radius - fixed x Ø
 Halogen-free
 UV-resistant
 Outdoor Use
 Drag chain
 Colored cores/VDE 0293
 Screened/shielded
 HAR/VDE REG no./VDE
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Halogen-free control cables														
JZ-500 HMH	-15 to +70	-40 to +70	300/500	12.5x	4x	X								86
MEGAFLEX® 500	-30 to +80	-40 to +80	300/500	10x	4x	X	X	X					X	88
H07 ZZ-F	-5 to +70	-20 to +70	450/750	10x	4x	X							X	90
JZ-600 HMH	-15 to +70	-40 to +70	0.6/1 kV	15x	7.5x	X		X						91
JB-750 HMH	-15 to +70	-40 to +70	450/750	12.5x	4x	X						X		93
(H)03 Z1Z1-F	-5 to +70	-40 to +70	300/500	7.5x		X						X		94
(H)05 Z1Z1-F	-5 to +70	-40 to +70	300/500	7.5x		X						X		95
JZ-500 HMH-C	-15 to +70	-40 to +70	200/500	12.5x	4x	X						X		96
MEGAFLEX® 500-C	-30 to +80	-40 to +80	300/500	10x	4x	X	X	X				X	X	98
JZ-600 HMH-C	-15 to +70	-40 to +70	0.6/1 kV	15x	7.5x	X		X				X		100
JB-750 HMH-C	-15 to +70	-40 to +70	450/750	12.5x	4x	X						X	X	102
Inherently safe PVC control cables														
OZ-BL	-15 to +80	-40 to +80	300/500	7.5x	4x								X	105
OZ-BL-CY	-10 to +80	-40 to +80	300/500	10x	5x							X	X	106
OB-BL-PAAR-CY	-10 to +80	-30 to +80	900	10x	5x							X	X	107
Bio-oil & microbe-resistant cables														
BIOFLEX-500®-JZ	-20 to +80	-40 to +80	300/500	15x	4x			X						109
BIOFLEX-500®-JZ-C	-20 to +80	-40 to +80	300/500	20x	6x			X				X		110
KOMPOFLEX® JZ-500	-30 to +90	-40 to +100	300/500	7.5x	4x	X	X	X						112
KOMPOFLEX® JZ-500-C	-30 to +90	-40 to +100	300/500	7.5x	4x	X	X	X				X		113
Hygienic cable														
NANOFLEX® HC*500	-5 to +80	-40 to +80	300/500	7.5x	4x		X	X						116
NANOFLEX® HC*500-C	-5 to +80	-40 to +80	300/500	10x	5x		X	X				X		117
NANOFLEX® HC*TRONIC	-5 to +80	-40 to +80	350	7.5x	4x		X	X			X	X		118
NANOFLEX® HC*TRONIC-C	-5 to +80	-40 to +80	350	10x	5x		X	X			X	X		120

The selection table is intended as an initial orientation.
 Please see the relevant page of the catalogue for detailed information on the product properties.



Flexible Control Cables / PVC Control Cables

JZ-500 black flexible, metermarking



Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range** flexing -15°C to +80°C fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** flexing 7,5x cable Ø fixed installation 4x cable Ø
- **Radiation resistance** up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour black (RAL 9005)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- **UV-resistant**
- **Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type: **JZ-500-C black**, confer page 52

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms and **in open air**. Must not be laid directly in soil or water. When screened for measurement, control and control line etc. in mechanical and plant engineering, machine tools, production lines and conveyor belts.

CE= The product is conformed with the EC Low Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10340	2 x 0,5	5,4	9,6	40,0	20
10341	3 G 0,5	5,7	14,4	46,0	20
11630	3 x 0,5	5,7	14,4	46,0	20
10342	4 G 0,5	6,1	19,0	56,0	20
11631	4 x 0,5	6,1	19,0	56,0	20
10343	5 G 0,5	6,8	24,0	65,0	20
11632	5 x 0,5	6,8	24,0	65,0	20
10344	7 G 0,5	7,3	33,6	80,0	20
11633	7 x 0,5	7,3	33,6	80,0	20
10345	12 G 0,5	9,6	58,0	135,0	20
11634	12 x 0,5	9,6	58,0	135,0	20
10346	18 G 0,5	11,5	86,0	196,0	20
10347	25 G 0,5	13,5	120,0	270,0	20
10348	2 x 0,75	5,9	14,4	46,0	19
10349	3 G 0,75	6,2	21,6	54,0	19
11635	3 x 0,75	6,2	21,6	54,0	19
10350	4 G 0,75	6,7	28,8	66,0	19
11636	4 x 0,75	6,7	28,8	66,0	19
10351	5 G 0,75	7,5	36,0	80,0	19
11637	5 x 0,75	7,5	36,0	80,0	19
10352	7 G 0,75	8,3	50,0	110,0	19
11638	7 x 0,75	8,3	50,0	110,0	19
10353	12 G 0,75	10,8	86,0	179,0	19
11639	12 x 0,75	10,8	86,0	179,0	19
10354	18 G 0,75	12,8	130,0	257,0	19
10355	25 G 0,75	15,1	180,0	365,0	19
10356	2 x 1	6,2	19,2	60,0	18
10357	3 G 1	6,5	29,0	72,0	18
11640	3 x 1	6,5	29,0	72,0	18
10358	4 G 1	7,2	38,4	86,0	18
11641	4 x 1	7,2	38,4	86,0	18
10359	5 G 1	8,1	48,0	104,0	18
11642	5 x 1	8,1	48,0	104,0	18
10360	7 G 1	8,7	67,0	141,0	18
11643	7 x 1	8,7	67,0	141,0	18
10361	12 G 1	11,4	115,0	230,0	18
11644	12 x 1	11,4	115,0	230,0	18
10362	18 G 1	13,7	173,0	343,0	18

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10363	25 G 1	16,2	240,0	485,0	18
10543	34 G 1	18,7	326,0	690,0	18
10364	2 x 1,5	7,0	29,0	70,0	16
10365	3 G 1,5	7,4	43,0	90,0	16
11645	3 x 1,5	7,4	43,0	90,0	16
10366	4 G 1,5	8,2	58,0	109,0	16
11646	4 x 1,5	8,2	58,0	109,0	16
10367	5 G 1,5	9,1	72,0	131,0	16
11647	5 x 1,5	9,1	72,0	131,0	16
10368	7 G 1,5	9,8	101,0	184,0	16
11648	7 x 1,5	9,8	101,0	184,0	16
10369	12 G 1,5	13,2	173,0	309,0	16
11649	12 x 1,5	13,2	173,0	309,0	16
10370	18 G 1,5	15,6	259,0	440,0	16
10371	25 G 1,5	18,6	360,0	620,0	16
10372	2 x 2,5	8,4	48,0	112,0	14
10373	3 G 2,5	8,9	72,0	148,0	14
11650	3 x 2,5	8,9	72,0	148,0	14
10374	4 G 2,5	9,8	96,0	178,0	14
11651	4 x 2,5	9,8	96,0	178,0	14
10375	5 G 2,5	10,9	120,0	221,0	14
11652	5 x 2,5	10,9	120,0	221,0	14
10376	7 G 2,5	12,0	168,0	306,0	14
11653	7 x 2,5	12,0	168,0	306,0	14
10377	12 G 2,5	15,9	288,0	498,0	14
11654	12 x 2,5	15,9	288,0	498,0	14
10378	18 G 2,5	19,0	432,0	764,0	14
10379	25 G 2,5	22,6	600,0	1044,0	14
10380	4 G 4	11,5	154,0	295,0	12
10381	5 G 4	12,8	192,0	361,0	12
10382	4 G 6	13,6	230,0	424,0	10
10383	5 G 6	15,1	288,0	525,0	10
10384	4 G 10	17,1	384,0	701,0	8
10388	5 G 10	18,9	480,0	909,0	8
10385	4 G 16	20,9	614,0	1035,0	6
10386	4 G 25	25,6	960,0	1582,0	4
10387	4 G 35	29,4	1344,0	2105,0	2



Flexible Control Cables / PVC Control Cables

JZ-500 COLD

 flexible at low temperature, number coded, meter marking

Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -30°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type YI4
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of cold flexible special PVC
- Sheath colour black (RAL 9005)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

This cold-flexible PVC hose cable is used under average stress for flexible applications with free movement, without tensile load and without forced motion guide in dry, moist, wet rooms and outside, as measuring and control cable at machine tools, conveyor belts and transport belts, production streets, in plant construction, in air condition construction and in refrigerated warehouses. Selected PVC mixtures guarantee good flexibility, efficient and fast installation.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10750	2 x 0,5	4,8	9,6	40,0	20
10751	3 G 0,75	5,6	21,6	54,0	19
10752	3 x 0,75	5,6	21,6	54,0	19
10753	4 G 0,75	6,3	28,8	66,0	19
10754	4 x 0,75	6,3	29,0	66,0	19
10755	5 G 0,75	6,9	36,0	80,0	19
10756	5 x 0,75	6,9	36,0	80,0	19
10757	7 G 0,75	7,5	50,0	110,0	19
10758	7 x 0,75	7,5	50,0	110,0	19
10759	12 G 0,75	9,8	86,0	179,0	19
10760	18 G 0,75	12,2	130,0	257,0	19
10761	25 G 0,75	14,3	180,0	365,0	19
10762	2 x 1	5,6	19,2	60,0	18
10763	3 G 1	5,9	29,0	72,0	18
10764	3 x 1	5,9	29,0	72,0	18
10765	4 G 1	6,6	38,4	86,0	18
10766	4 x 1	6,6	38,4	86,0	18
10767	5 G 1	7,3	48,0	104,0	18
10768	5 x 1	7,3	48,0	104,0	18
10769	7 G 1	8,1	67,0	141,0	18
10770	7 x 1	8,1	67,0	141,0	18
10771	12 G 1	10,4	115,0	230,0	18
10772	18 G 1	12,9	173,0	343,0	18
10773	25 G 1	15,4	240,0	485,0	18

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10774	2 x 1,5	6,4	29,0	70,0	16
10775	3 G 1,5	6,8	43,0	90,0	16
10776	3 x 1,5	6,8	43,0	90,0	16
10777	4 G 1,5	7,4	58,0	109,0	16
10778	4 x 1,5	7,4	58,0	109,0	16
10779	5 G 1,5	8,3	72,0	131,0	16
10780	5 x 1,5	8,3	72,0	131,0	16
10781	6 G 1,5	9,2	86,0	157,0	16
10782	7 G 1,5	9,2	101,0	184,0	16
10783	7 x 1,5	9,2	101,0	184,0	16
10784	12 G 1,5	11,8	173,0	309,0	16
10785	18 G 1,5	14,6	259,0	440,0	16
10786	25 G 1,5	17,4	360,0	670,0	16
10787	2 x 2,5	7,8	48,0	112,0	14
10788	3 G 2,5	8,3	72,0	148,0	14
10789	3 x 2,5	8,3	72,0	148,0	14
10790	4 G 2,5	9,2	96,0	178,0	14
10791	4 x 2,5	9,2	96,0	178,0	14
10792	5 G 2,5	10,1	120,0	221,0	14
10793	5 x 2,5	10,1	120,0	221,0	14
10794	7 G 2,5	11,2	168,0	306,0	14
10795	7 x 2,5	11,2	168,0	306,0	14
10796	4 G 6	13,0	230,0	424,0	10
10797	5 G 6	14,5	288,0	525,0	10

Dimensions and specifications may be changed without prior notice. (RA01)

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Flexible Control Cables / PVC Control Cables

JZ-500-C black EMC-preferred type, Cu-screened. flexible, meter marking



Technical data

- Special PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -10°C to +80°C
fixed installation 40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage**
core/core 4000 V
core/screen 2000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80x10⁵ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Foil separator
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour black (RAL 9005)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- **UV-resistant**
- **Tests**
PVC self-extinguishing and flame retardant acc. to DIN VDE 0482 332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type **JZ-500 black**, confer page 32

Application

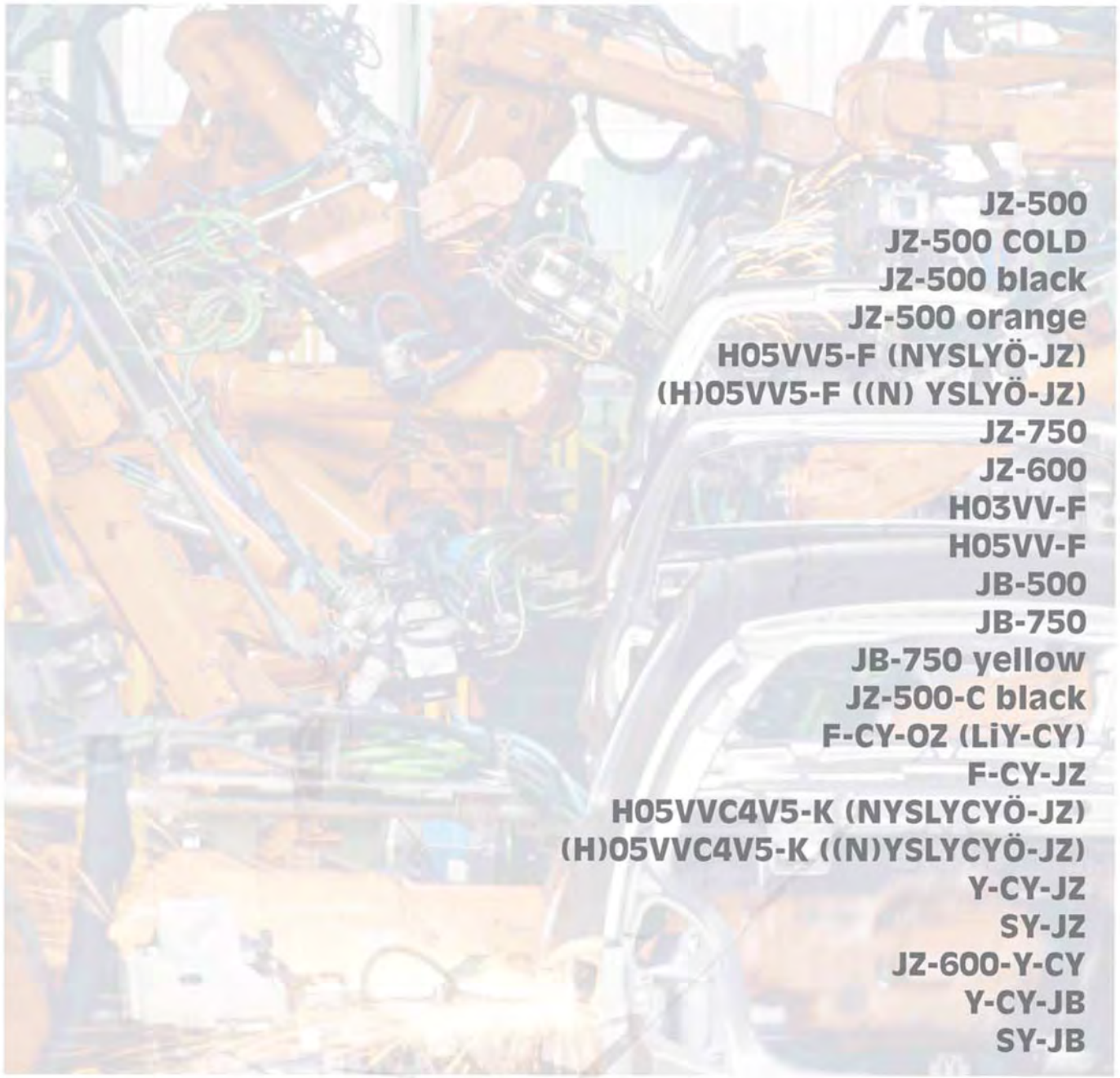
For medium mechanical stress for flexible use with free movement without tensile stress or forced movements in dry, damp, wet rooms and **in open air**. Must not be laid directly in soil or water. When screened for measurement, control and control line etc. in mechanical and plant engineering, machine tools, production lines and conveyor belts.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

Ⓢ The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10934	2 x 0,5	6,1	35,0	45,0	20	11499	12 x 1	12,4	184,0	260,0	18
10935	3 G 0,5	6,4	42,0	55,0	20	10956	18 G 1	14,7	260,0	380,0	18
11479	3 x 0,5	6,4	42,0	55,0	20	10957	25 G 1	17,5	349,0	534,0	18
10936	4 G 0,5	6,8	47,0	61,0	20	10958	2 x 1,5	7,8	63,0	88,0	16
11480	4 x 0,5	6,8	47,0	61,0	20	10959	3 G 1,5	8,2	80,0	100,0	16
10937	5 G 0,5	7,5	56,0	74,0	20	11500	3 x 1,5	8,2	80,0	100,0	16
11481	5 x 0,5	7,5	56,0	74,0	20	10960	4 G 1,5	8,9	97,0	126,0	16
10938	7 G 0,5	8,1	69,0	98,0	20	11502	4 x 1,5	8,9	97,0	126,0	16
11482	7 x 0,5	8,1	69,0	98,0	20	10961	5 G 1,5	9,8	119,0	160,0	16
10939	12 G 0,5	10,6	108,0	157,0	20	11503	5 x 1,5	9,8	119,0	160,0	16
11483	12 x 0,5	10,6	108,0	157,0	20	10962	7 G 1,5	10,8	147,0	208,0	16
10940	18 G 0,5	12,4	145,0	217,0	20	11520	7 x 1,5	10,8	147,0	208,0	16
10941	25 G 0,5	14,7	240,0	314,0	20	10963	12 G 1,5	14,0	267,0	338,0	16
10942	2 x 0,75	6,7	40,0	59,0	19	11522	12 x 1,5	14,0	267,0	338,0	16
10943	3 G 0,75	7,0	52,0	66,0	19	10964	18 G 1,5	16,8	374,0	479,0	16
10944	3 x 0,75	7,0	52,0	66,0	19	10965	25 G 1,5	19,8	526,0	705,0	16
10944	4 G 0,75	7,7	60,0	77,0	19	10966	2 x 2,5	9,2	96,0	130,0	14
11485	4 x 0,75	7,7	60,0	77,0	19	10967	3 G 2,5	9,8	144,0	167,0	14
10945	5 G 0,75	8,2	71,0	93,0	19	11523	3 x 2,5	9,8	144,0	167,0	14
11486	5 x 0,75	8,2	71,0	93,0	19	10968	4 G 2,5	10,6	148,0	195,0	14
10946	7 G 0,75	9,0	91,0	130,0	19	11524	4 x 2,5	10,6	148,0	195,0	14
11487	7 x 0,75	9,0	91,0	130,0	19	10969	5 G 2,5	11,7	181,0	223,0	14
10947	12 G 0,75	11,6	142,0	202,0	19	11526	5 x 2,5	11,7	181,0	223,0	14
11488	12 x 0,75	11,6	142,0	202,0	19	10970	7 G 2,5	12,8	255,0	344,0	14
10948	18 G 0,75	13,7	212,0	292,0	19	11527	7 x 2,5	12,8	255,0	344,0	14
10949	25 G 0,75	16,4	281,0	415,0	19	10971	12 G 2,5	17,0	441,0	570,0	14
10950	2 x 1	7,0	50,0	65,0	18	11550	12 x 2,5	17,0	441,0	570,0	14
10951	3 G 1	7,5	60,0	80,0	18	10972	18 G 2,5	19,8	570,0	681,0	14
11493	3 x 1	7,5	60,0	80,0	18	10973	4 G 4	12,4	230,0	310,0	12
10952	4 G 1	8,0	71,0	98,0	18	10974	5 G 4	13,7	273,0	385,0	12
11495	4 x 1	8,0	71,0	98,0	18	10975	4 G 6	14,7	305,0	415,0	10
10953	5 G 1	8,8	88,0	127,0	18	10976	5 G 6	16,2	439,0	509,0	10
11496	5 x 1	8,8	88,0	127,0	18	10977	4 G 10	18,2	535,0	783,0	8
10954	7 G 1	9,5	111,0	158,0	18	10978	4 G 16	21,1	740,0	880,0	6
11497	7 x 1	9,5	111,0	158,0	18	10979	4 G 25	25,8	1140,0	1570,0	4
10955	12 G 1	12,4	184,0	260,0	18	10980	4 G 35	29,7	1576,0	2070,0	2



- JZ-500
- JZ-500 COLD
- JZ-500 black
- JZ-500 orange
- H05VV5-F (NYSLYÖ-JZ)
- (H)05VV5-F ((N) YSLYÖ-JZ)
- JZ-750
- JZ-600
- H03VV-F
- H05VV-F
- JB-500
- JB-750
- JB-750 yellow
- JZ-500-C black
- F-CY-OZ (LiY-CY)
- F-CY-JZ
- H05VVC4V5-K (NYSLYCYÖ-JZ)
- (H)05VVC4V5-K ((N)YSLYCYÖ-JZ)
- Y-CY-JZ
- SY-JZ
- JZ-600-Y-CY
- Y-CY-JB
- SY-JB



Flexible Control Cables / PVC Control Cables

JZ-500 flexible, number coded, meter marking



Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51/ DIN EN 50525-2-51
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering (also available in other colours on request)
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- conditional drag chain compatible
- conditional suitability for torsion
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- We supply any "desired length" of stranded cores without outer sheath, core insulation colour acc. RAL 9005 with number combination acc. customers requirement.
- Please note the cleanroom qualification when ordering.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
F-CY-JZ, confer page 50
F-CY-OZ (LIY-CY), confer page 48
Y-CY-JB, confer page 62
Y-CY-JZ, confer page 53

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air, as measuring and control cables in tool machines, conveyor belts, production lines in machinery production, in air-conditioning and in steel production.

Selected PVC-compounds guarantee a good flexibility as well as an economic and fast installation.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10001	2 x 0,5	4,8	9,6	40,0	20	10025	50 G 0,5	17,5	240,0	513,0	20
10002	3 G 0,5	5,1	14,4	46,0	20	10169	52 G 0,5	17,5	252,0	534,0	20
10003	3 x 0,5	5,1	14,4	46,0	20	10026	61 G 0,5	18,5	293,0	625,0	20
10004	4 G 0,5	5,5	19,0	56,0	20	10027	65 G 0,5	19,4	312,0	682,0	20
10005	4 x 0,5	5,5	19,0	56,0	20	10028	80 G 0,5	21,4	384,0	780,0	20
10006	5 G 0,5	6,2	24,0	65,0	20	10029	100 G 0,5	24,0	480,0	980,0	20
10007	5 x 0,5	6,2	24,0	65,0	20	10030	2 x 0,75	5,3	14,4	46,0	19
10008	6 G 0,5	6,7	29,0	75,0	20	10031	3 G 0,75	5,6	21,6	54,0	19
10009	7 G 0,5	6,7	33,6	80,0	20	10032	3 x 0,75	5,6	21,6	54,0	19
10010	7 x 0,5	6,7	33,6	80,0	20	10033	4 G 0,75	6,3	28,8	66,0	19
10011	8 G 0,5	7,4	38,0	97,0	20	10034	4 x 0,75	6,3	29,0	66,0	19
10172	8 x 0,5	7,4	38,0	97,0	20	10035	5 G 0,75	6,9	36,0	80,0	19
10012	10 G 0,5	8,3	48,0	116,0	20	10036	5 x 0,75	6,9	36,0	80,0	19
10013	12 G 0,5	8,7	58,0	135,0	20	10037	6 G 0,75	7,5	43,0	99,0	19
10014	12 x 0,5	8,7	58,0	135,0	20	10177	6 x 0,75	7,5	43,0	99,0	19
10015	14 G 0,5	9,5	67,0	150,0	20	10038	7 G 0,75	7,5	50,0	110,0	19
10183	16 G 0,5	10,0	76,0	175,0	20	10039	7 x 0,75	7,5	50,0	110,0	19
10016	18 G 0,5	10,7	86,0	196,0	20	10040	8 G 0,75	8,3	58,0	130,0	19
10017	20 G 0,5	11,3	96,0	215,0	20	10173	8 x 0,75	8,3	58,0	130,0	19
10018	21 G 0,5	11,3	101,0	240,0	20	10041	9 G 0,75	8,9	65,0	153,0	19
10019	25 G 0,5	12,6	120,0	270,0	20	10042	10 G 0,75	9,2	72,0	162,0	19
10020	30 G 0,5	13,5	144,0	310,0	20	10043	12 G 0,75	9,8	86,0	179,0	19
10021	32 G 0,5	14,0	154,0	323,0	20	10044	12 x 0,75	9,8	86,0	179,0	19
10022	34 G 0,5	14,3	163,0	362,0	20	10045	14 G 0,75	10,6	101,0	214,0	19
10023	40 G 0,5	15,3	192,0	434,0	20	10046	15 G 0,75	11,4	108,0	218,0	19
10024	42 G 0,5	15,8	202,0	449,0	20	10047	18 G 0,75	12,2	130,0	257,0	19



Flexible Control Cables / PVC Control Cables

JZ-500 flexible, number coded, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10533	19 G 0,75	12,2	137,0	264,0	19
10048	20 G 0,75	12,7	144,0	286,0	19
10049	21 G 0,75	12,7	151,0	320,0	19
10050	25 G 0,75	14,3	180,0	365,0	19
10534	27 G 0,75	14,6	195,0	382,0	19
10051	32 G 0,75	15,9	230,0	455,0	19
10052	34 G 0,75	16,5	245,0	510,0	19
10182	37 G 0,75	16,7	266,0	537,0	19
10053	40 G 0,75	17,2	288,0	595,0	19
10054	41 G 0,75	18,1	296,0	607,0	19
10055	42 G 0,75	18,1	302,0	612,0	19
10056	50 G 0,75	19,8	360,0	735,0	19
10057	61 G 0,75	21,2	439,0	845,0	19
10178	65 G 0,75	21,8	468,0	895,0	19
10058	80 G 0,75	24,3	576,0	1070,0	19
10059	100 G 0,75	27,0	720,0	1322,0	19
10060	2 x 1	5,6	19,2	60,0	18
10061	3 x 1	5,9	29,0	72,0	18
10062	3 x 1	5,9	29,0	72,0	18
10063	4 x 1	6,6	38,4	86,0	18
10064	4 x 1	6,6	38,4	86,0	18
10065	5 x 1	7,3	48,0	104,0	18
10066	5 x 1	7,3	48,0	104,0	18
10067	6 x 1	8,1	58,0	125,0	18
10068	7 x 1	8,1	67,0	141,0	18
10069	7 x 1	8,1	67,0	141,0	18
10070	8 x 1	8,8	77,0	175,0	18
10071	9 x 1	9,7	86,0	200,0	18
10180	10 G 1	9,8	96,0	217,0	18
10170	10 x 1	9,8	96,0	217,0	18
10072	12 G 1	10,4	115,0	230,0	18
10073	12 x 1	10,4	115,0	230,0	18
10074	14 G 1	11,4	134,0	271,0	18
10075	16 G 1	12,3	154,0	300,0	18
10076	18 G 1	12,9	173,0	343,0	18
10174	18 x 1	12,9	173,0	343,0	18
10197	19 G 1	12,9	182,0	355,0	18
10077	20 G 1	13,8	192,0	375,0	18
10184	20 x 1	13,8	192,0	375,0	18
10179	21 G 1	13,8	205,0	420,0	18
10175	24 G 1	15,1	230,0	440,0	18
10078	25 G 1	15,4	240,0	485,0	18
10176	25 x 1	15,4	240,0	485,0	18
10196	26 G 1	15,5	252,0	500,0	18
10198	27 G 1	15,6	259,0	534,0	18
10168	30 x 1	16,4	308,0	550,0	18
10079	34 G 1	17,7	326,0	650,0	18
10080	36 G 1	17,9	346,0	668,0	18
10199	37 G 1	17,9	355,0	701,0	18
10081	40 G 1	18,5	384,0	755,0	18
10167	40 x 1	18,5	384,0	755,0	18
10082	41 G 1	19,5	394,0	770,0	18
10083	42 G 1	19,5	403,0	810,0	18
10084	50 G 1	21,3	480,0	936,0	18
10085	56 G 1	21,9	538,0	920,0	18
10086	61 G 1	22,5	586,0	1100,0	18
10087	65 G 1	23,6	628,0	1180,0	18
10088	80 G 1	26,1	768,0	1294,0	18
10089	100 G 1	28,8	960,0	1644,0	18
10090	2 x 1,5	6,4	29,0	70,0	16
10091	3 G 1,5	6,8	43,0	90,0	16
10092	3 x 1,5	6,8	43,0	90,0	16
10093	4 G 1,5	7,4	58,0	109,0	16
10094	4 x 1,5	7,4	58,0	109,0	16
10095	5 G 1,5	8,3	72,0	131,0	16
10096	5 x 1,5	8,3	72,0	131,0	16
10097	6 G 1,5	9,2	86,0	157,0	16
10098	7 G 1,5	9,2	101,0	184,0	16
10099	7 x 1,5	9,2	101,0	184,0	16
10100	8 G 1,5	10,0	115,0	216,0	16
10101	9 G 1,5	10,9	129,0	259,0	16
10181	10 G 1,5	10,9	144,0	275,0	16
10102	11 G 1,5	11,6	158,0	300,0	16
10103	12 G 1,5	11,8	173,0	309,0	16
10104	12 x 1,5	11,8	173,0	309,0	16
10105	14 G 1,5	13,0	202,0	345,0	16
10106	16 G 1,5	13,9	230,0	386,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10107	18 G 1,5	14,6	259,0	440,0	16
10185	19 G 1,5	14,6	279,0	445,0	16
10108	20 G 1,5	15,6	288,0	490,0	16
10109	21 G 1,5	15,6	302,0	555,0	16
10110	25 G 1,5	17,4	360,0	620,0	16
10535	27 G 1,5	17,5	389,0	670,0	16
10111	32 G 1,5	19,5	461,0	790,0	16
10112	34 G 1,5	20,0	490,0	830,0	16
10536	37 G 1,5	20,2	533,0	892,0	16
10113	41 G 1,5	21,8	591,0	996,0	16
10114	42 G 1,5	21,8	605,0	1007,0	16
10115	50 G 1,5	24,2	720,0	1250,0	16
10116	56 G 1,5	24,9	806,0	1332,0	16
10117	61 G 1,5	25,8	878,0	1440,0	16
10187	65 G 1,5	26,8	936,0	1602,0	16
10118	80 G 1,5	29,8	1152,0	1871,0	16
10119	100 G 1,5	33,2	1440,0	2353,0	16
10120	2 x 2,5	7,8	48,0	112,0	14
10121	3 G 2,5	8,3	72,0	148,0	14
10122	3 x 2,5	8,3	72,0	148,0	14
10123	4 G 2,5	9,2	96,0	178,0	14
10124	4 x 2,5	9,2	96,0	178,0	14
10125	5 G 2,5	10,1	120,0	221,0	14
10126	5 x 2,5	10,1	120,0	221,0	14
10127	7 G 2,5	11,2	168,0	306,0	14
10128	7 x 2,5	11,2	168,0	306,0	14
10129	8 G 2,5	12,3	192,0	363,0	14
10548	10 G 2,5	14,1	240,0	429,0	14
10130	12 G 2,5	14,8	288,0	498,0	14
10131	14 G 2,5	16,0	336,0	569,0	14
10132	18 G 2,5	18,2	432,0	764,0	14
10133	21 G 2,5	19,2	504,0	914,0	14
10134	25 G 2,5	21,6	600,0	1044,0	14
10135	34 G 2,5	24,8	816,0	1470,0	14
10136	42 G 2,5	27,4	1008,0	1790,0	14
10137	50 G 2,5	30,0	1200,0	2095,0	14
10138	61 G 2,5	32,0	1464,0	2750,0	14
10139	100 G 2,5	41,4	2400,0	4450,0	14
10140	2 x 4	9,2	77,0	195,0	12
10141	3 G 4	9,8	115,0	230,0	12
10142	4 G 4	10,9	154,0	295,0	12
10143	5 G 4	12,1	192,0	361,0	12
10144	7 G 4	13,2	269,0	458,0	12
10145	8 G 4	14,7	307,0	590,0	12
10549	10 G 4	16,8	384,0	687,0	12
10146	12 G 4	17,7	461,0	790,0	12
10147	3 G 6	11,9	173,0	355,0	10
10148	4 G 6	13,0	230,0	424,0	10
10149	5 G 6	14,5	288,0	525,0	10
10150	7 G 6	16,2	403,0	625,0	10
10151	3 G 10	14,9	288,0	540,0	8
10152	4 G 10	16,5	384,0	701,0	8
10153	5 G 10	18,3	480,0	858,0	8
10154	7 G 10	20,2	672,0	1106,0	8
10190	3 G 16	18,3	461,0	827,0	6
10155	4 G 16	20,1	614,0	1035,0	6
10156	5 G 16	22,6	768,0	1259,0	6
10157	7 G 16	24,8	1075,0	1780,0	6
10191	3 G 25	22,3	720,0	1186,0	4
10158	4 G 25	25,0	960,0	1582,0	4
10159	5 G 25	27,7	1200,0	1999,0	4
10160	7 G 25	30,6	1680,0	2825,0	4
10192	3 G 35	25,9	1008,0	1585,0	2
10161	4 G 35	28,7	1344,0	2105,0	2
10162	5 G 35	31,9	1680,0	2633,0	2
10193	3 G 50	30,8	1440,0	2550,0	1
10163	4 G 50	34,1	1920,0	2940,0	1
10188	5 G 50	38,1	2400,0	2936,0	1
10194	3 G 70	36,4	2016,0	3180,0	2/0
10164	4 G 70	40,2	2688,0	4090,0	2/0
10189	5 G 70	44,7	3360,0	5443,0	2/0
10195	3 G 95	41,3	2736,0	4680,0	3/0
10165	4 G 95	46,0	3648,0	5540,0	3/0
10333	5 G 95	50,7	4560,0	6931,0	3/0
10166	4 G 120	51,0	4608,0	7000,0	4/0
13139	4 G 150	57,2	5760,0	8340,0	300 kcmil
13140	4 G 185	63,0	7104,0	9904,0	350 kcmil

Dimensions and specifications may be changed without prior notice. (RA01)

Yö-C-PURö-JZ

tear and coolant resistant, Cu-screened, with inner sheath, increased oil resistant, EMC-preferred type, meter marking



Technical data

- Special-PUR sheathed multicore cable adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -20°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage**
up to 2,5 mm² U₀/U 300/500 V
from 4 mm² U₀/U 450/750 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Outer sheath of **oil resistant** PVC compound type T12 adapted to DIN VDE 0207-363-3 / DIN EN 50363-3 for better sliding abilities
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of **oil resistant** PVC
- Tinned copper braided screen, approx. 85% coverage
- Core wrapping of fleece guarantees easy cable stripping
- Outer sheath of special **full-polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour grey (RAL 7001)
- with meter marking

Properties

- **Resistant to**
UV-Radiation
Oxygene
Ozone
Hydrolysis
Microbes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
PURö-JZ, confer page 68

Application

Extremely robust control cable characterised by high abrasion and notch resistance properties. Used for critical areas in such applications as machinery, tooling and plant construction, in rolling mills and steel works because of the resistance to mineral oils and to coolant emulsions in particular. The mechanical strength of the cable is increased by the additional oil-resistant inner sheath. The ideal interference-protected control cable for such applications as given above. Suitable for outdoor installation.

These screened cables are particularly suitable for the interference-free transmission in instrumentation and control engineering applications (electromagnetic compatibility).

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21400	2 x 0,5	7,0	41,0	68,0	20	21425	2 x 0,75	7,7	46,0	88,0	19
21401	3 G 0,5	7,3	45,0	84,0	20	21426	3 G 0,75	8,0	57,0	98,0	19
21402	4 G 0,5	7,9	54,0	95,0	20	21427	4 G 0,75	8,5	63,0	112,0	19
21403	5 G 0,5	8,4	66,0	107,0	20	21428	5 G 0,75	9,3	76,0	130,0	19
21405	7 G 0,5	9,1	79,0	135,0	20	21430	7 G 0,75	9,9	100,0	185,0	19
21407	10 G 0,5	10,7	107,0	170,0	20	21432	10 G 0,75	11,8	140,0	270,0	19
21408	12 G 0,5	11,5	137,0	195,0	20	21433	12 G 0,75	12,7	175,0	294,0	19
21409	14 G 0,5	12,2	142,0	222,0	20	21434	14 G 0,75	13,3	190,0	317,0	19
21411	18 G 0,5	13,5	156,0	278,0	20	21436	18 G 0,75	14,9	240,0	357,0	19
21413	21 G 0,5	14,2	189,0	330,0	20	21438	21 G 0,75	15,4	274,0	455,0	19
21415	25 G 0,5	15,7	250,0	406,0	20	21440	25 G 0,75	17,5	306,0	510,0	19
21416	30 G 0,5	16,2	297,0	520,0	20	21443	32 G 0,75	18,9	349,0	688,0	19
21419	36 G 0,5	17,7	320,0	587,0	20	21446	41 G 0,75	21,0	403,0	951,0	19
21420	40 G 0,5	18,4	345,0	655,0	20	21447	50 G 0,75	23,1	470,0	1100,0	19
21421	50 G 0,5	20,7	407,0	742,0	20						

Continuation ▶



Flexible Control Cables / PUR Control Cables

Yö-C-PURö-JZ

tear and coolant resistant, Cu-screened, with inner sheath, increased oil resistant, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21451	2 x 1	8,0	54,0	98,0	18
21452	3 G 1	8,3	64,0	102,0	18
21453	4 G 1	9,0	76,0	145,0	18
21454	5 G 1	9,7	89,0	170,0	18
21456	7 G 1	10,3	114,0	220,0	18
21457	8 G 1	11,2	130,0	270,0	18
21458	10 G 1	12,6	156,0	330,0	18
21459	12 G 1	13,3	186,0	350,0	18
21460	14 G 1	14,1	198,0	402,0	18
21461	16 G 1	14,8	214,0	420,0	18
21462	18 G 1	15,6	284,0	515,0	18
21463	20 G 1	16,4	325,0	545,0	18
21465	25 G 1	18,5	387,0	690,0	18
21468	34 G 1	20,9	500,0	912,0	18
21469	41 G 1	21,5	578,0	1070,0	18
21470	50 G 1	24,8	681,0	1318,0	18
21474	2 x 1,5	8,6	64,0	130,0	16
21475	3 G 1,5	9,2	82,0	152,0	16
21476	4 G 1,5	9,8	99,0	167,0	16
21477	5 G 1,5	10,8	123,0	203,0	16
21479	7 G 1,5	11,7	148,0	305,0	16
21480	8 G 1,5	12,6	172,0	335,0	16
21481	10 G 1,5	14,2	198,0	422,0	16
21482	12 G 1,5	14,9	274,0	435,0	16
21483	14 G 1,5	15,8	294,0	480,0	16
21484	16 G 1,5	16,7	318,0	525,0	16
21485	18 G 1,5	17,4	386,0	642,0	16
21487	21 G 1,5	18,5	447,0	722,0	16
21489	25 G 1,5	20,8	531,0	803,0	16
21492	34 G 1,5	23,2	671,0	1068,0	16
21494	42 G 1,5	25,0	890,0	1370,0	16
21495	50 G 1,5	27,4	997,0	1677,0	16
21499	2 x 2,5	10,1	110,0	180,0	14
21500	3 G 2,5	10,8	148,0	215,0	14
21501	4 G 2,5	11,5	169,0	268,0	14
21502	5 G 2,5	12,8	220,0	349,0	14
21503	7 G 2,5	14,0	284,0	406,0	14
21504	12 G 2,5	17,9	470,0	720,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21507	2 x 4	13,3	124,0	300,0	12
21508	3 G 4	14,0	178,0	340,0	12
21509	4 G 4	15,3	234,0	408,0	12
21510	5 G 4	16,7	284,0	504,0	12
21511	7 G 4	18,4	321,0	640,0	12
21512	3 G 6	15,6	245,0	453,0	10
21513	4 G 6	17,0	316,0	560,0	10
21514	5 G 6	18,6	442,0	700,0	10
21515	7 G 6	20,4	530,0	905,0	10
21516	3 G 10	19,0	367,0	750,0	8
21517	4 G 10	21,1	549,0	1023,0	8
21518	5 G 10	23,1	604,0	1114,0	8
21519	7 G 10	25,6	820,0	1505,0	8
21521	4 G 16	25,3	807,0	1385,0	6
21522	5 G 16	28,0	940,0	1550,0	6
21524	4 G 25	31,1	1169,0	1894,0	4
21525	5 G 25	34,3	1420,0	2272,0	4
21526	4 G 35	33,9	1680,0	2395,0	2
21527	5 G 35	37,8	2020,0	2890,0	2
21528	4 G 50	40,1	2370,0	3312,0	1
21529	5 G 50	45,0	2880,0	4100,0	1
21530	4 G 70	46,0	3257,0	4605,0	2/0
21531	5 G 70	50,6	4032,0	5710,0	2/0
21532	4 G 95	51,2	4060,0	6055,0	3/0
21533	5 G 95	56,5	5244,0	7520,0	3/0
21534	4 G 120	56,3	5231,0	7318,0	4/0

Dimensions and specifications may be changed without prior notice. (RA02)

JZ-500 COLD flexible at low temperature, number coded, meter marking



Technical data

- Control cables, special PVC
- Requirements adapted to DIN VDE 0281, 0293, 0295
- **Temperature range**
flexing -30 °C to +80 °C
fixed installation -40 °C to +80 °C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable ø
fixed installation 4x cable ø
- **Radiation resistance**
up to 80x10⁵ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper, fine wire conductors, according to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Core insulation of special PVC Y14
- Black cores with continuous white numbering according to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Cold flexible outer sheath of special PVC
- colour black (RAL 9005)
- with meter marking

Properties

- Extensively oil resistant, öl-/ chemical Resistance - see table Technical Informations
- PVC self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow earth core;
x = without green-yellow earth core (OZ).

Application

This cold-flexible PVC hose cable is used under average stress for flexible applications with free movement, without tensile load and without forced motion guide in dry, moist, wet rooms and outside, as measuring and control cable at machine tools, conveyor belts and transport belts, production streets, in plant construction, in air condition construction and in refrigerated warehouses.

Selected PVC mixtures guarantee good flexibility, efficient and fast installation.

CE – The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10750	2 x 0,5	4,9	9,6	40,0	20
10751	3 G 0,75	5,6	21,6	54,0	18
10752	3 x 0,75	5,6	21,6	54,0	18
10753	4 G 0,75	6,3	28,8	66,0	18
10754	4 x 0,75	6,3	29,0	66,0	18
10755	5 G 0,75	6,9	36,0	80,0	18
10756	5 x 0,75	6,9	36,0	80,0	18
10757	7 G 0,75	7,5	50,0	110,0	18
10758	7 x 0,75	7,5	50,0	110,0	18
10759	12 G 0,75	9,8	86,0	179,0	18
10760	18 G 0,75	12,2	130,0	257,0	18
10761	25 G 0,75	14,3	180,0	365,0	18
10762	2 x 1	5,6	19,2	60,0	17
10763	3 G 1	5,9	29,0	72,0	17
10764	3 x 1	5,9	29,0	72,0	17
10765	4 G 1	6,6	38,4	86,0	17
10766	4 x 1	6,6	38,4	86,0	17
10767	5 G 1	7,3	48,0	104,0	17
10768	5 x 1	7,3	48,0	104,0	17
10769	7 G 1	8,1	67,0	141,0	17
10770	7 x 1	8,1	67,0	141,0	17
10771	12 G 1	10,4	115,0	230,0	17
10772	18 G 1	12,9	173,0	343,0	17
10773	25 G 1	15,4	240,0	485,0	17

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10774	2 x 1,5	6,4	29,0	70,0	16
10775	3 G 1,5	6,8	43,0	90,0	16
10776	3 x 1,5	6,8	43,0	90,0	16
10777	4 G 1,5	7,4	58,0	109,0	16
10778	4 x 1,5	7,4	58,0	109,0	16
10779	5 G 1,5	8,3	72,0	131,0	16
10780	5 x 1,5	8,3	72,0	131,0	16
10781	6 G 1,5	9,2	86,0	157,0	16
10782	7 G 1,5	9,2	101,0	184,0	16
10783	7 x 1,5	9,2	101,0	184,0	16
10784	12 G 1,5	12,0	173,0	309,0	16
10785	18 G 1,5	14,6	259,0	440,0	16
10786	25 G 1,5	17,4	360,0	620,0	16
10787	2 x 2,5	7,8	48,0	112,0	14
10788	3 G 2,5	8,3	72,0	148,0	14
10789	3 x 2,5	8,3	72,0	148,0	14
10790	4 G 2,5	9,2	96,0	178,0	14
10791	4 x 2,5	9,2	96,0	178,0	14
10792	5 G 2,5	10,1	120,0	221,0	14
10793	5 x 2,5	10,1	120,0	221,0	14
10794	7 G 2,5	11,2	168,0	306,0	14
10795	7 x 2,5	11,2	168,0	306,0	14
10796	4 G 6	13,0	230,0	424,0	10
10797	5 G 6	14,5	288,0	525,0	10

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / Halogen-free Control Cables

JB-750 HMM flexible control cable, coloured core, halogen-free, extremely fire resistant, oil resistant¹⁾, meter marking



Technical data

- Halogen-free flexible control cable, adapted to
DIN VDE 0285-525-2-51 /
DIN EN 50525-2-51 and
DIN VDE 0285-525-3-11/
DIN EN 50525-3-11
- **Temperature range**
flexing -15°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U₀/U 450/750 V
- **Test voltage** 3000 V
- **Minimum bending radius**
flexing 12,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to
DIN VDE 0295 cl.5, fine-wire,
BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of halogen-free polymer compound type T16 to
DIN VDE 0207-363-7 / DIN EN 50363-7
- Core identification to DIN VDE 0293-308
- GN-YE conductor
- Cores stranded in layers with optimal lay-length
- Outer sheath of halogen-free polymer compound type TM7 to
DIN VDE 0207-363-8 / DIN EN 50363-8
- Sheath colour grey (RAL 7001)
- with meter marking
- **LSOH**= Low Smoke Zero Halogen

Properties

- ¹⁾ We recommend you for critical applications a consultation
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- ### Tests
- Flame test acc. to
DIN VDE 0482-332-3, BS 4066 part 3,
DIN EN 60332-3, IEC 60332-3 (previously
DIN VDE 0472 part 804 test method C)
 - self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2,
DIN EN 60332-1-2, IEC 60332-1 (equivalent
DIN VDE 0472 part 804 test method B)
 - Corrosiveness of combustion gases acc. to DIN VDE 0482 part 267,
DIN EN 50267-2-2, IEC 60754-2
(equivalent DIN VDE 0472 part 813)
 - Halogen-free acc. to DIN VDE 0482 part 267 / DIN EN 50267-2-1 / IEC 60754-1
(equivalent DIN VDE 0472 part 815)
 - Smoke density acc. to DIN VDE 0482 part 1034-1+2, DIN EN 61034-1+2,
IEC 61034-1+2, BS 7622 part 1+2
(previously DIN VDE 0472 part 816)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- Please note the cleanroom qualification when ordering.
- AWG sizes are approximate equivalent values.
The actual cross-section is in mm².
- screened analogue type:
JB-750 HMM-C, confer page 102

Application

Halogen-free, flame retardant cables are used as measuring and control cable in machine tools, conveyor belts, production lines as well as in plant installations, in air-conditioning and steel production works. For fixed installation or flexible application, directed without forcing by casual, not constantly recurring free movements and without tensile stress, for medium mechanical strain. This cable is suitable for the application in dry, damp and wet environments and also for laying on plaster.

☑ The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11965	3 G 1,5	7,8	43,0	110,0	16
11966	4 G 1,5	8,5	58,0	140,0	16
11967	5 G 1,5	9,6	72,0	181,0	16
11968	3 G 2,5	9,3	72,0	181,0	14
11969	4 G 2,5	10,2	96,0	223,0	14
11970	5 G 2,5	11,4	120,0	269,0	14
11971	3 G 4	11,3	115,0	238,0	12
11972	4 G 4	12,5	154,0	292,0	12
11973	5 G 4	13,9	192,0	357,0	12
11974	4 G 6	14,2	230,0	392,0	10
11975	5 G 6	15,8	288,0	501,0	10

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11976	4 G 10	18,1	384,0	750,0	8
11977	5 G 10	20,1	480,0	916,0	8
11978	4 G 16	22,0	614,0	1037,0	6
11979	5 G 16	24,4	768,0	1280,0	6
11980	4 G 25	27,1	960,0	1504,0	4
11981	5 G 25	30,1	1200,0	1883,0	4
11982	4 G 35	29,9	1344,0	2057,0	2
11983	5 G 35	33,4	1680,0	2575,0	2
11984	4 G 50	35,5	1920,0	2808,0	1
11985	4 G 70	40,2	2688,0	3964,0	2/0
11986	4 G 95	46,0	3648,0	4951,0	3/0
11987	4 G 120	51,3	4608,0	6387,0	4/0



Flexible Control Cables / Halogen-free Control Cables

(H)03Z1Z1-F halogen-free, meter marking**Technical data**

- flexible halogen-free control cable adapted to DIN VDE 0285-525-3-11 / DIN EN 50525-3-11
- Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +70°C
- Nominal voltage** U_0/U 300/300 V
- Test voltage** 2000 V
- Breakdown voltage** min. 4000 V
- Minimum bending radius**
7,5x cable Ø
- Radiation resistance**
up to 20×10^5 cJ/kg (up to 20 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of thermoplastic compound
- Core identification to DIN VDE 0293-308
- GN-YE conductor, 3 cores and above
- Outer sheath of thermoplastic compound
- Sheath colour by request
- with meter marking

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- Tested for flame retardation acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Smoke density acc. to DIN VDE 0482-1034-1+2, DIN EN 61034-1+2, IEC 61034-1+2
- Halogen-free acc. to DIN VDE 0285-525-1, DIN EN 50525-1

Note

- G = with green-yellow conductor
x = without green-yellow conductor
- Please complete the part number for these cables by adding the suffix for the colour required as per the list:
0 = ca. RAL 9005 black
1 = ca. RAL 9003 white
2 = ca. RAL 5015 blue
3 = ca. RAL 6018 green
4 = ca. RAL 8003 brown
5 = ca. RAL 1021 yellow
6 = ca. RAL 3000 red
7 = ca. RAL 2003 orange
8 = ca. RAL 4005 violet
9 = ca. RAL 7001/7032 grey
Further colours on request.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

These cables may be used when halogen-free, low smoke and corrosive gas properties are required in case of fire. For low mechanical demands in the house, kitchen and office, for small equipment such as, for example, office machines, radios, table and stranded lamps.

Not suitable for:

Cooking and heating equipment, use in high temperature areas (for example, in lighting equipment), outside use, industrial use or industrial electrical tools, cables with a nominal cross-section of 0,75 mm² comply with the same recommendations as for cable (H)05Z1Z1-F.

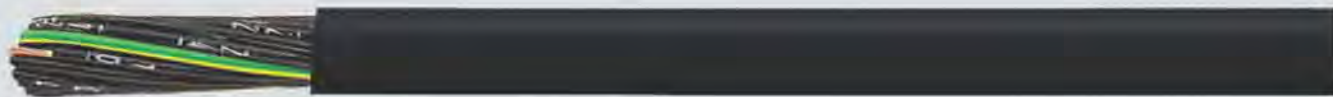
CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3233x	2 x 0,5	5,1	9,6	39,0	20
3234x	3 G 0,5	5,4	14,4	46,0	20
3235x	4 G 0,5	5,9	19,2	56,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3236x	2 x 0,75	5,4	14,4	47,0	19
3237x	3 G 0,75	5,7	21,6	55,0	19
3238x	4 G 0,75	6,3	29,0	69,0	19

Dimensions and specifications may be changed without prior notice. (RA03)

JZ-500 black flexible, meter marking


Technical data

- Control cables, special PVC
- adapted to DIN VDE 0281, 0293, 0295
- **Temperature range**
flexing -15 °C¹⁾ to +80 °C
fixed installation -40 °C to +80 °C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable ø
fixed installation 4x cable ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)
- ¹⁾ cold bending test, impact resistance test at low temperatures, elongation test at low temperatures. Tested according VDE 0473 part 811-1-4, EN 60811-1-4

Cable structure

- Bare copper, fine wire conductors, according to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Core insulation of special PVC Z 7225
- Black cores with continuous white numbering according to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC, TM2 to DIN VDE 0281 part 1 and HD 21.1
- colour black (RAL 9005)
- with meter marking

Properties

- Extensively oil resistant, oil-/ chemical Resistance - see table Technical Informations
- PVC self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- **UV- resistant**

Note

- G = with green-yellow earth core;
- x = without green-yellow earth core (OZ).
- **screened analogue type:**
JZ-500-C black, see page A 24

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms and **in open air**. Must not be laid directly in soil or water. When screened for measurement, control and control line etc. in mechanical and plant engineering, machine tools, production lines and conveyor belts.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10340	2 x 0,5	5,5	9,6	40,0	20
10341	3 G 0,5	5,8	14,4	46,0	20
10342	4 G 0,5	6,2	19,0	56,0	20
10343	5 G 0,5	6,9	24,0	65,0	20
10344	7 G 0,5	7,5	33,6	80,0	20
10345	12 G 0,5	9,8	58,0	135,0	20
10346	18 G 0,5	11,8	86,0	196,0	20
10347	25 G 0,5	13,7	120,0	270,0	20
10348	2 x 0,75	5,9	14,4	46,0	20
10349	3 G 0,75	6,2	21,6	54,0	20
10350	4 G 0,75	6,7	28,8	66,0	20
10351	5 G 0,75	7,5	36,0	80,0	20
10352	7 G 0,75	8,3	50,0	110,0	20
10353	12 G 0,75	10,8	86,0	179,0	20
10354	18 G 0,75	12,8	130,0	257,0	20
10355	25 G 0,75	15,1	180,0	365,0	20
10356	2 x 1	6,2	19,2	60,0	20
10357	3 G 1	6,5	29,0	72,0	20
10358	4 G 1	7,2	38,4	86,0	20
10359	5 G 1	7,9	48,0	104,0	20
10360	7 G 1	8,7	67,0	141,0	20
10361	12 G 1	11,4	115,0	230,0	20
10362	18 G 1	13,7	173,0	343,0	20
10363	25 G 1	16,2	240,0	485,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10364	2 x 1,5	7,0	29,0	70,0	20
10365	3 G 1,5	7,4	43,0	90,0	20
10366	4 G 1,5	8,2	58,0	109,0	20
10367	5 G 1,5	9,1	72,0	131,0	20
10368	7 G 1,5	9,8	101,0	184,0	20
10369	12 G 1,5	13,6	173,0	309,0	20
10370	18 G 1,5	15,6	259,0	440,0	20
10371	25 G 1,5	18,4	360,0	620,0	20
10372	2 x 2,5	8,4	48,0	112,0	20
10373	3 G 2,5	8,9	72,0	148,0	20
10374	4 G 2,5	9,8	96,0	178,0	20
10375	5 G 2,5	10,9	120,0	221,0	20
10376	7 G 2,5	12,0	168,0	306,0	20
10377	12 G 2,5	15,9	288,0	498,0	20
10378	18 G 2,5	19,0	432,0	764,0	20
10379	25 G 2,5	22,6	600,0	1044,0	20
10380	4 G 4	11,6	154,0	295,0	20
10381	5 G 4	12,9	192,0	361,0	20
10382	4 G 6	13,1	230,0	424,0	20
10383	5 G 6	14,5	288,0	525,0	20
10384	4 G 10	17,0	384,0	701,0	20
10385	4 G 16	20,9	614,0	1035,0	20
10386	4 G 25	25,6	960,0	1582,0	20
10387	4 G 35	30,0	1344,0	2105,0	20

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / Halogen-free Control Cables

JB-750 HMMH-C flexible control cable, coloured core, halogen-free, screened, extremely fire resistant, oil resistant¹⁾, EMC-preferred type, meter marking



Technical data

- Halogen-free core flexible control cable, adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51 and DIN VDE 0285-525-3-11 / DIN EN 50525-3-11
- **Temperature range**
flexing -15°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U₀/U 450/750 V
- **Test voltage** 3000 V
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 12,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of halogen-free polymer compound type T16 to DIN VDE 0207-363-7 / DIN EN 50363-7
- Core identification to DIN VDE 0293-308
- GN-YE conductor
- Cores stranded in layers with optimal lay-length
- Separating foil
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of halogen-free polymer compound type TM7 to DIN VDE 0207-363-8 / DIN EN 50363-8
- Sheath colour grey (RAL 7001)
- with meter marking
- **LSOH**= Low Smoke Zero Halogen

Properties

- ¹⁾ For the critical applications we advise for consultation
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- Flame test acc. to DIN VDE 0482-332-3, BS 4066 part 3, DIN EN 60332-3, IEC 60332-3 (previously DIN VDE 0472 part 804 test method C)
- Self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2 / IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Corrosiveness of combustion gases acc. to DIN VDE 0482 part 267 / DIN EN 50267-2-2 / IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- Halogen-free acc. to DIN VDE 0482 part 267 / DIN EN 50267-2-1 / IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Smoke density acc. to DIN VDE 0482 part 1034-1+2, DIN EN 61034-1+2, IEC 61034-1+2, BS 7622 part 1+2 (previously DIN VDE 0472 part 816)

Note

- G = with green-yellow conductor
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
JB-750 HMMH, confer page 93

Application

Halogen-free, flame retardant control cables are used for instrumentation and control cables in tooling machinery, conveyor and transportation belts, production lines, in plant construction, air-conditioning systems as well as in iron and steel works. For fixed installation or for flexing applications, for casual, not constantly recurring free movement without forced motion and without tensile stress for medium mechanical loads. The cable is suitable for use in dry, damp and wet environments and for installation on plaster. An interference-free transmission of signals and pulse is assured by the high degree of screening.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11942	3 G 1,5	8,4	80,0	125,0	16
11943	4 G 1,5	9,3	97,0	160,0	16
11944	5 G 1,5	10,2	119,0	193,0	16
11945	3 G 2,5	9,9	144,0	198,0	14
11946	4 G 2,5	11,0	148,0	240,0	14
11947	5 G 2,5	12,2	181,0	280,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11948	3 G 4	12,1	174,0	251,0	12
11949	4 G 4	13,3	230,0	315,0	12
11950	5 G 4	14,7	273,0	396,0	12
11951	4 G 6	15,0	305,0	430,0	10
11952	5 G 6	16,6	439,0	524,0	10



Flexible Control Cables / Halogen-free Control Cables

JB-750 HMM-C flexible control cable, coloured core, halogen-free, screened, extremely fire resistant, oil resistant¹⁾, EMC-preferred type, meter marking



Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11953	4 G 10	18,9	535,0	804,0	8
11954	5 G 10	21,1	592,0	942,0	8
11955	4 G 16	21,9	740,0	1190,0	6
11956	5 G 16	24,3	895,0	1370,0	6
11957	4 G 25	27,0	1140,0	1968,0	4
11958	5 G 25	30,0	1380,0	2514,0	4

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11959	4 G 35	29,6	1576,0	2540,0	2
11960	5 G 35	32,9	1930,0	3260,0	2
11961	4 G 50	35,3	2155,0	3668,0	1
11962	4 G 70	39,0	3120,0	5076,0	2/0
11963	4 G 95	45,6	4043,0	6807,0	3/0
11964	4 G 120	50,8	5069,0	8612,0	4/0

Dimensions and specifications may be changed without prior notice. (RA03)



Flexible Control Cables / Halogen-free Control Cables

JB-750 HMMH-C flexible control cable, coloured core, halogen-free, screened,
extremely fire resistant, oil resistant¹⁾, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11953	4 G 10	18,9	535,0	804,0	8
11954	5 G 10	21,1	592,0	942,0	8
11955	4 G 16	21,9	740,0	1190,0	6
11956	5 G 16	24,3	895,0	1370,0	6
11957	4 G 25	27,0	1140,0	1968,0	4
11958	5 G 25	30,0	1380,0	2514,0	4

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11959	4 G 35	29,6	1576,0	2540,0	2
11960	5 G 35	32,9	1930,0	3260,0	2
11961	4 G 50	35,3	2155,0	3668,0	1
11962	4 G 70	39,0	3120,0	5076,0	2/0
11963	4 G 95	45,6	4043,0	6807,0	3/0
11964	4 G 120	50,8	5069,0	8612,0	4/0

Dimensions and specifications may be changed without prior notice. (RA03)



Flexible Control Cables / PVC Control Cables

JZ-500 orange

 flexible, orange cores, control cable for interlocking purposes,
meter marking**Technical data**

- Special-PVC control cable for interlocking purposes adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80x10⁶ cI/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 orange cores with continuous black numbering
- JZ-version with GN-YE conductor 3 cores and above
- OZ-version without GN-YE conductor
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1
- Sheath colour orange (RAL 2003)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
- x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air, as control cable acc. to EN 60204 part 1 and VDE 0113 part 1. As per recommendation of the specified standards the insulated conductors of control current circuits should be coloured orange, when they are used for interlocking purposes. These control circuits are supplied with an external power and remain active under current when the main switch is disconnected or switched off.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10537	2 x 1	5,6	19,2	60,0	18
10538	3 G 1	5,9	29,0	72,0	18
10539	3 x 1	5,9	29,0	72,0	18
10541	4 x 1	6,6	38,4	86,0	18
10540	4 G 1	6,6	38,4	86,0	18
10542	5 G 1	7,3	48,0	104,0	18
10544	2 x 1,5	6,4	29,0	70,0	16
10545	3 G 1,5	6,8	43,0	90,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10546	4 G 1,5	7,4	58,0	109,0	16
10547	5 G 1,5	8,3	72,0	131,0	16
10747	3 G 2,5	8,3	72,0	148,0	14
10748	4 G 2,5	9,2	96,0	178,0	14
10749	5 G 2,5	10,1	120,0	221,0	14

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

H05VV5-F (NYSLYÖ-JZ) flexible, number coded, oil resistant, meter marking



Technical data

- Spezial-PVC control cable with oil resistant outer sheath acc. to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51 and IEC 60227/75
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage** 2 kV, 5 minutes
- **Breakdown voltage** min. 4000 V
- **Insulation resistance**
min. 20 MΩm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Outer sheath of special PVC compound type TM5 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- with meter marking

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Oil resistant to DIN EN 60811-404

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
H05VVC4V5-K (NYSLYCYÖ-JZ),
confer page 57

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air. These are designed as control and connecting cables to machines, tool machineries, conveyor belts and production lines.

These cables are not effected to the chemical influences. Cables for moist and wet rooms, specially used for machines in breweries, bottling plants and car washing stations.

These cables may be allowed to move once installed provided that the cables are not mechanically stressed during movement.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13122	2 x 0,5	5,2 - 6,6	9,7	46,0	20
13001	3 G 0,5	5,5 - 7,0	14,4	54,0	20
13002	4 G 0,5	6,2 - 7,9	19,0	65,0	20
13003	5 G 0,5	6,8 - 8,6	24,0	80,0	20
13004	6 G 0,5	7,6 - 9,6	29,0	104,0	20
13005	7 G 0,5	8,3 - 10,4	33,6	119,0	20
13920	8 G 0,5	9,2 - 11,5	38,0	134,0	20
13006	9 G 0,5	10,1 - 12,5	43,0	136,0	20
13921	10 G 0,5	10,9 - 13,6	48,0	166,0	20
13007	12 G 0,5	10,4 - 12,9	58,0	186,0	20
13922	14 G 0,5	10,9 - 13,6	67,0	215,0	20
13008	18 G 0,5	12,3 - 15,3	86,0	251,0	20
13009	25 G 0,5	14,8 - 18,2	120,0	349,0	20
13923	27 G 0,5	15,1 - 18,6	129,6	373,0	20
13010	34 G 0,5	17,2 - 21,2	163,0	480,0	20
13924	36 G 0,5	17,0 - 20,9	172,0	510,0	20
13125	41 G 0,5	18,8 - 23,1	196,0	570,0	20
13011	50 G 0,5	20,5 - 25,2	240,0	658,0	20
13012	61 G 0,5	22,0 - 26,9	293,0	780,0	20
13925	65 G 0,5	22,8 - 28,0	312,0	810,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13123	2 x 0,75	5,7 - 7,2	14,1	52,0	19
13013	3 G 0,75	6,0 - 7,6	21,6	68,0	19
13014	4 G 0,75	6,6 - 8,3	29,0	82,0	19
13015	5 G 0,75	7,4 - 9,3	36,0	107,0	19
13016	6 G 0,75	8,1 - 10,1	43,0	132,0	19
13017	7 G 0,75	9,0 - 11,3	50,0	145,0	19
13926	8 G 0,75	9,9 - 12,3	58,0	189,0	19
13018	9 G 0,75	10,6 - 13,2	65,0	194,0	19
13019	12 G 0,75	11,0 - 13,7	86,0	231,0	19
13927	14 G 0,75	11,7 - 14,5	101,0	274,0	19
13020	18 G 0,75	13,2 - 16,4	130,0	313,0	19
13021	25 G 0,75	15,8 - 19,5	180,0	461,0	19
13928	27 G 0,75	16,2 - 19,9	195,0	493,0	19
13022	34 G 0,75	18,4 - 22,6	245,0	614,0	19
13929	36 G 0,75	18,2 - 22,4	259,0	646,0	19
13126	41 G 0,75	20,1 - 24,6	295,0	730,0	19
13023	50 G 0,75	21,9 - 26,8	360,0	896,0	19
13024	61 G 0,75	23,4 - 28,7	439,0	1030,0	19
13930	65 G 0,75	24,4 - 29,8	468,0	1071,0	19

Continuation ▶



Flexible Control Cables / PVC Control Cables

H05VV5-F (NYSLYÖ-JZ) flexible, number coded, oil resistant, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13119	2 x 1	5,9 - 7,5	19,0	66,0	18
13025	3 G 1	6,3 - 8,0	29,0	78,0	18
13026	4 G 1	6,9 - 8,7	38,0	104,0	18
13027	5 G 1	7,8 - 9,8	48,0	123,0	18
13028	6 G 1	8,7 - 10,8	58,0	152,0	18
13029	7 G 1	9,5 - 11,8	67,0	183,0	18
13931	8 G 1	10,5 - 13,0	77,0	220,0	18
13030	9 G 1	11,4 - 14,0	86,0	230,0	18
13031	12 G 1	11,8 - 14,6	115,0	269,0	18
13932	14 G 1	12,6 - 14,6	134,0	361,0	18
13032	18 G 1	14,0 - 17,2	173,0	400,0	18
13933	19 G 1	13,6 - 16,8	183,0	413,0	18
13033	25 G 1	16,9 - 20,8	240,0	546,0	18
13934	27 G 1	17,0 - 21,0	259,0	582,0	18
13034	34 G 1	19,7 - 24,1	326,0	724,0	18
13124	36 G 1	19,4 - 23,8	348,0	775,0	18
13935	37 G 1	19,4 - 23,8	355,0	785,0	18
13127	41 G 1	21,4 - 26,2	392,0	822,0	18
13035	50 G 1	23,3 - 28,5	480,0	1052,0	18
13036	61 G 1	25,0 - 30,6	586,0	1265,0	18
13936	65 G 1	25,2 - 30,8	624,0	1315,0	18
13120	2 x 1,5	6,8 - 8,6	29,0	77,0	16
13037	3 G 1,5	7,4 - 9,4	43,0	97,0	16
13038	4 G 1,5	8,2 - 10,2	58,0	128,0	16
13039	5 G 1,5	9,1 - 11,4	72,0	149,0	16
13040	6 G 1,5	10,2 - 12,6	86,0	196,0	16
13041	7 G 1,5	11,3 - 14,1	101,0	216,0	16
13937	8 G 1,5	12,2 - 15,1	115,0	271,0	16
13042	9 G 1,5	13,3 - 16,5	130,0	282,0	16
13043	12 G 1,5	13,8 - 17,0	173,0	324,0	16
13121	14 G 1,5	14,7 - 18,1	202,0	372,0	16
13044	18 G 1,5	16,5 - 20,3	259,0	485,0	16
13938	19 G 1,5	16,7 - 20,5	274,0	495,0	16
13045	25 G 1,5	19,9 - 24,4	360,0	671,0	16
13939	27 G 1,5	20,3 - 24,9	389,0	695,0	16
13046	32 G 1,5	22,2 - 27,1	461,0	820,0	16
13047	34 G 1,5	23,0 - 28,2	490,0	881,0	16
13940	36 G 1,5	23,0 - 28,2	518,0	905,0	16
13941	37 G 1,5	23,0 - 28,2	532,0	920,0	16
13128	41 G 1,5	25,2 - 30,9	590,0	1085,0	16
13048	50 G 1,5	27,7 - 33,9	720,0	1381,0	16
13049	61 G 1,5	29,4 - 35,8	878,0	1640,0	16
13942	65 G 1,5	30,3 - 37,0	963,0	1730,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13943	2 x 2,5	8,4 - 10,6	48,0	110,0	14
13050	3 G 2,5	9,2 - 11,4	72,0	154,0	14
13051	4 G 2,5	10,1 - 12,5	96,0	212,0	14
13052	5 G 2,5	11,2 - 13,9	120,0	242,0	14
13053	7 G 2,5	13,6 - 16,8	168,0	350,0	14
13945	8 G 2,5	14,9 - 18,3	192,0	379,0	14
13054	12 G 2,5	16,8 - 20,6	288,0	543,0	14
13946	14 G 2,5	17,8 - 20,6	336,0	611,0	14
13055	18 G 2,5	20,2 - 24,8	432,0	787,0	14
13056	25 G 2,5	24,2 - 29,6	600,0	1175,0	14
13947	27 G 2,5	24,7 - 30,2	648,0	1280,0	14
13057	34 G 2,5	28,2 - 34,5	816,0	1529,0	14
13948	36 G 2,5	28,0 - 34,2	864,0	1791,0	14
13949	41 G 2,5	30,4 - 37,1	984,0	1905,0	14
13058	50 G 2,5	33,0 - 40,3	1200,0	2290,0	14
13059	61 G 2,5	35,0 - 42,7	1464,0	2724,0	14

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

(H)05VV5-F ((N)YSLYÖ-JZ) flexible, number coded, oil resistant,
meter marking**Technical data**

- Spezial-PVC control cable with oil resistant outer sheath adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51 and IEC 60227/75 deviation of conductor cross sections
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 2 kV, 5 minutes
- **Breakdown voltage** min. 4000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80x10⁶ cl/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM5 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- with meter marking

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Oil resistant to DIN EN 60811-404

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
(H)05VVC4V5-K, confer page 59

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air. These are designed as control and connecting cables to machines, tool machineries, conveyor belts and production lines.

These cables are not effected to the chemical influences. Cables for moist and wet rooms, specially used for machines in breweries, bottling plants and car washing stations.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13133	2 x 4	10,7	77,0	195,0	12
13134	3 G 4	11,3	115,0	230,0	12
13135	4 G 4	12,4	154,0	295,0	12
13136	5 G 4	13,9	192,0	361,0	12
13138	7 G 4	16,6	269,0	466,0	12
13141	12 G 4	20,8	461,0	810,0	12
13142	2 x 6	12,0	116,0	280,0	10
13143	3 G 6	12,9	173,0	358,0	10
13144	4 G 6	14,2	230,0	424,0	10
13145	5 G 6	15,9	288,0	525,0	10
13146	7 G 6	18,9	403,0	625,0	10
13148	3 G 10	16,3	288,0	540,0	8
13149	4 G 10	18,1	384,0	701,0	8
13150	5 G 10	20,3	480,0	858,0	8
13151	7 G 10	24,3	672,0	1106,0	8

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13153	3 G 16	18,8	461,0	827,0	6
13154	4 G 16	20,9	614,0	1035,0	6
13155	5 G 16	23,4	768,0	1259,0	6
13156	7 G 16	28,5	1075,0	1780,0	6
13159	4 G 25	26,3	960,0	1582,0	4
13160	5 G 25	29,5	1200,0	1852,0	4
13161	3 G 35	26,5	1008,0	1614,0	2
13162	4 G 35	29,5	1344,0	2110,0	2
13163	5 G 35	32,8	1680,0	2652,0	2
13164	3 G 50	32,2	1440,0	2560,0	1
13165	4 G 50	36,1	1920,0	2972,0	1
13166	5 G 50	40,3	2400,0	3948,0	1

Dimensions and specifications may be changed without prior notice. (RAD1)



Flexible Control Cables / PVC Control Cables

JZ-750 flexible, number coded, 750 V, meter marking



Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 450/750 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3/DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air, wherever internationally recognized PVC cables are required. E. g. as a control or measurements cable on industrial machinery, on conveyor systems or in industrial plants, etc. The number coding has been brought onto the cores in such a way that it is easily identifiable and the core numbers are individually underlined to avoid confusion. The green-yellow earth core is laid in the outer layer

CE= The product is conformed with the EC Low Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10800	2 x 0,5	5,7	9,6	48,0	20	10834	3 G 1	7,0	29,0	92,0	18
10801	3 G 0,5	6,0	14,5	65,0	20	10835	3 x 1	7,0	29,0	92,0	18
10802	4 G 0,5	6,8	20,0	81,0	20	10836	4 G 1	7,8	39,0	122,0	18
10803	5 G 0,5	7,4	24,0	98,0	20	10837	4 x 1	7,8	39,0	122,0	18
10804	7 G 0,5	8,3	34,0	123,0	20	10838	5 G 1	8,6	48,0	137,0	18
10805	8 G 0,5	9,1	38,0	155,0	20	10839	7 G 1	9,5	68,0	186,0	18
10806	10 G 0,5	10,0	48,0	180,0	20	10840	7 x 1	9,5	68,0	186,0	18
10807	12 G 0,5	10,8	58,0	208,0	20	10841	8 G 1	10,3	77,0	240,0	18
10808	14 G 0,5	11,7	67,0	248,0	20	10842	12 G 1	12,7	116,0	293,0	18
10809	16 G 0,5	12,5	76,0	260,0	20	10843	14 G 1	13,4	134,0	340,0	18
10810	18 G 0,5	13,2	87,0	285,0	20	10844	16 G 1	14,4	154,0	400,0	18
10811	21 G 0,5	13,8	96,0	375,0	20	10845	18 G 1	15,1	173,0	437,0	18
10812	25 G 0,5	15,5	118,0	400,0	20	10846	21 G 1	16,1	205,0	505,0	18
10813	30 G 0,5	16,6	144,0	475,0	20	10847	25 G 1	18,0	240,0	606,0	18
10814	40 G 0,5	18,7	192,0	590,0	20	10848	34 G 1	20,9	326,0	770,0	18
10815	50 G 0,5	21,5	240,0	710,0	20	10849	41 G 1	22,6	394,0	880,0	18
10816	61 G 0,5	23,0	293,0	880,0	20	10850	50 G 1	24,8	480,0	1400,0	18
10817	2 x 0,75	6,2	15,0	60,0	19	10851	61 G 1	26,5	586,0	1450,0	18
10818	3 G 0,75	6,5	22,0	78,0	19	10852	2 x 1,5	7,2	29,0	90,0	16
10819	4 G 0,75	7,3	29,0	104,0	19	10853	3 G 1,5	7,8	43,0	120,0	16
10820	5 G 0,75	8,0	36,0	116,0	19	10854	3 x 1,5	7,8	43,0	120,0	16
10821	7 G 0,75	8,9	51,0	148,0	19	10855	4 G 1,5	8,5	58,0	150,0	16
10822	8 G 0,75	9,6	58,0	160,0	19	10856	4 x 1,5	8,5	58,0	155,0	16
10823	10 G 0,75	10,7	72,0	195,0	19	10857	5 G 1,5	9,6	72,0	177,0	16
10824	12 G 0,75	11,6	87,0	248,0	19	10858	7 G 1,5	10,4	101,0	220,0	16
10825	15 G 0,75	13,2	108,0	295,0	19	10859	8 G 1,5	11,4	115,0	248,0	16
10826	18 G 0,75	14,1	130,0	346,0	19	10860	9 G 1,5	12,5	130,0	278,0	16
10827	21 G 0,75	14,8	151,0	395,0	19	10861	12 G 1,5	14,1	173,0	364,0	16
10828	25 G 0,75	16,6	180,0	505,0	19	10862	14 G 1,5	14,9	202,0	390,0	16
10829	34 G 0,75	19,3	245,0	684,0	19	10863	16 G 1,5	16,0	230,0	490,0	16
10830	41 G 0,75	20,9	296,0	780,0	19	10864	18 G 1,5	17,0	259,0	550,0	16
10831	50 G 0,75	22,9	360,0	940,0	19	10865	21 G 1,5	18,0	302,0	670,0	16
10832	61 G 0,75	24,5	440,0	1125,0	19	10866	25 G 1,5	20,2	360,0	745,0	16
10833	2 x 1	6,6	20,0	80,0	18	10867	32 G 1,5	22,6	461,0	810,0	16



Flexible Control Cables / PVC Control Cables

JZ-750 flexible, number coded, 750 V, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10868	34 G 1,5	23,4	490,0	1010,0	16
10869	42 G 1,5	25,5	605,0	1115,0	16
10870	50 G 1,5	27,9	720,0	1430,0	16
10871	61 G 1,5	30,0	878,0	1750,0	16
10872	2 x 2,5	8,6	48,0	110,0	14
10873	3 G 2,5	9,3	72,0	190,0	14
10874	4 G 2,5	10,2	96,0	240,0	14
10875	5 G 2,5	11,4	120,0	270,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10876	7 G 2,5	12,6	168,0	350,0	14
10877	12 G 2,5	16,9	288,0	600,0	14
10878	14 G 2,5	18,2	336,0	870,0	14
10879	18 G 2,5	20,4	432,0	1050,0	14
10880	25 G 2,5	24,4	600,0	1170,0	14

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

JZ-600 flexible, number coded, 0,6/1kV, meter marking



Technical data

- Special PVC control cable adapted to DIN VDE 0262 and DIN VDE 0285-525-2-51 / DIN EN 50525-2-51, with insulation wall thickness for 1 kV
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** $U_0/U_0,6/1$ kV
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80×10^6 cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour black (RAL 9005)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- **UV-resistant**
- **Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
JZ-600-Y-CY, confer page 60

Application

Wiring cable for measuring and controlling purposes in tool machinery, conveyor belts and production lines, for plant installations, air conditioning and in steel production plants and rolling mills. Suitable for installation for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms as well as outside (fixed installation). Is not suitable to be used as direct burria (suitable from an outer diameter of 18,0 mm for direct burial) or as underwater cable. The cores have been numbered in such a way that the numbers are easily identifiable, even if the cable has only been stripped back a few cm. The core numbers have been underlined to avoid confusion. The earth core is located in the outer layer. The black, special PVC outer sheath is resistant to the ultra violet radiation. Mainly used in South-European, Eastern and Arabian countries.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10550	2 x 0,5	6,3	9,6	56,0	20
10551	3 G 0,5	6,6	14,4	68,0	20
10552	3 x 0,5	6,6	14,4	68,0	20
10553	4 G 0,5	7,2	19,0	100,0	20
10554	4 x 0,5	7,2	19,0	100,0	20
10555	5 G 0,5	8,0	24,0	117,0	20
10556	5 x 0,5	8,0	24,0	117,0	20
10557	6 G 0,5	8,7	29,0	126,0	20
10558	7 G 0,5	8,7	33,6	138,0	20
10559	7 x 0,5	8,7	33,6	138,0	20
10560	8 G 0,5	9,5	38,0	150,0	20
10561	8 x 0,5	9,5	38,0	150,0	20
10562	10 G 0,5	10,3	48,0	176,0	20
10563	12 G 0,5	11,2	58,0	200,0	20
10564	12 x 0,5	11,2	58,0	200,0	20
10565	14 G 0,5	12,3	67,0	230,0	20
10566	16 G 0,5	12,9	76,0	250,0	20
10567	18 G 0,5	13,8	86,0	276,0	20
10568	20 G 0,5	14,4	96,0	293,0	20
10569	21 G 0,5	14,4	96,0	305,0	20
10570	25 G 0,5	16,1	120,0	335,0	20
10571	30 G 0,5	17,2	144,0	348,0	20
10572	32 G 0,5	18,0	154,0	355,0	20
10573	34 G 0,5	18,7	163,0	520,0	20
10574	40 G 0,5	19,5	192,0	590,0	20
10575	42 G 0,5	20,1	202,0	595,0	20
10576	50 G 0,5	22,1	240,0	715,0	20
10577	52 G 0,5	22,1	252,0	740,0	20
10578	61 G 0,5	23,6	293,0	840,0	20
10579	65 G 0,5	24,4	312,0	880,0	20
10580	80 G 0,5	27,2	384,0	960,0	20
10581	100 G 0,5	31,2	480,0	1050,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10582	2 x 0,75	6,6	14,4	66,0	19
10583	3 G 0,75	6,9	21,6	74,0	19
10584	3 x 0,75	6,9	21,6	74,0	19
10585	4 G 0,75	7,5	29,0	126,0	19
10586	4 x 0,75	7,5	29,0	126,0	19
10587	5 G 0,75	8,4	36,0	140,0	19
10588	5 x 0,75	8,4	36,0	140,0	19
10589	6 G 0,75	9,3	43,0	170,0	19
10590	6 x 0,75	9,3	43,0	170,0	19
10591	7 G 0,75	9,3	50,0	190,0	19
10592	7 x 0,75	9,3	50,0	190,0	19
10593	8 G 0,75	10,3	58,0	212,0	19
10594	8 x 0,75	10,3	58,0	212,0	19
10595	9 G 0,75	11,0	65,0	227,0	19
10596	10 G 0,75	11,0	72,0	238,0	19
10597	12 G 0,75	12,0	86,0	257,0	19
10598	12 x 0,75	12,0	86,0	257,0	19
10599	14 G 0,75	12,9	101,0	286,0	19
10600	15 G 0,75	13,8	108,0	319,0	19
10601	18 G 0,75	14,5	130,0	362,0	19
10602	20 G 0,75	15,4	144,0	394,0	19
10603	21 G 0,75	15,4	151,0	422,0	19
10604	25 G 0,75	17,2	180,0	486,0	19
10605	32 G 0,75	19,0	230,0	595,0	19
10606	34 G 0,75	19,9	245,0	638,0	19
10607	37 G 0,75	19,9	260,0	696,0	19
10608	40 G 0,75	20,7	288,0	726,0	19
10609	41 G 0,75	21,6	296,0	750,0	19
10610	42 G 0,75	21,6	302,0	770,0	19
10611	50 G 0,75	23,7	360,0	895,0	19
10612	61 G 0,75	25,3	439,0	1070,0	19
10613	65 G 0,75	26,3	468,0	1110,0	19
10614	80 G 0,75	28,9	576,0	1500,0	19
10615	100 G 0,75	32,2	720,0	1889,0	19



Flexible Control Cables / PVC Control Cables

JZ-600 flexible, number coded, 0,6/1kV, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10616	2 x 1	7,0	19,2	80,0	18
10617	3 G 1	7,4	29,0	96,0	18
10618	3 x 1	7,4	29,0	96,0	18
10619	4 G 1	8,2	38,4	100,0	18
10620	4 x 1	8,2	38,4	100,0	18
10621	5 G 1	9,2	48,0	130,0	18
10622	5 x 1	9,2	48,0	130,0	18
10623	6 G 1	9,9	58,0	150,0	18
10624	7 G 1	9,9	67,0	170,0	18
10625	7 x 1	9,9	67,0	170,0	18
10626	8 G 1	10,9	77,0	230,0	18
10627	9 G 1	11,9	86,0	250,0	18
10628	10 G 1	11,9	96,0	270,0	18
10629	10 x 1	11,9	96,0	270,0	18
10630	12 G 1	12,8	115,0	290,0	18
10631	12 x 1	12,8	115,0	290,0	18
10632	14 G 1	14,0	134,0	320,0	18
10633	16 G 1	14,8	154,0	360,0	18
10634	18 G 1	15,7	173,0	405,0	18
10635	18 x 1	15,7	173,0	405,0	18
10636	20 G 1	16,7	192,0	450,0	18
10637	20 x 1	16,7	192,0	480,0	18
10638	21 G 1	16,7	205,0	510,0	18
10639	24 G 1	18,4	236,0	550,0	18
10640	25 G 1	18,6	240,0	570,0	18
10641	25 x 1	18,6	240,0	570,0	18
10642	26 G 1	18,8	252,0	590,0	18
10643	30 x 1	19,8	308,0	650,0	18
10644	34 G 1	21,5	326,0	750,0	18
10645	36 G 1	21,5	346,0	790,0	18
10646	40 G 1	22,5	384,0	850,0	18
10647	40 x 1	22,5	384,0	850,0	18
10648	41 G 1	23,3	394,0	890,0	18
10649	42 G 1	23,3	403,0	900,0	18
10650	50 G 1	25,6	480,0	1100,0	18
10651	56 G 1	26,4	538,0	1190,0	18
10652	61 G 1	27,3	586,0	1266,0	18
10653	65 G 1	28,3	628,0	1560,0	18
10654	80 G 1	31,4	786,0	1810,0	18
10655	100 G 1	35,0	960,0	1950,0	18
10656	2 x 1,5	8,2	29,0	95,0	16
10657	3 G 1,5	8,6	43,0	112,0	16
10658	3 x 1,5	8,6	43,0	112,0	16
10659	4 G 1,5	9,6	58,0	139,0	16
10660	4 x 1,5	9,6	58,0	139,0	16
10661	5 G 1,5	10,7	72,0	170,0	16
10662	5 x 1,5	10,7	72,0	170,0	16
10663	6 G 1,5	11,6	86,0	190,0	16
10664	7 G 1,5	11,6	101,0	225,0	16
10665	7 x 1,5	11,6	101,0	225,0	16
10666	8 G 1,5	12,9	115,0	250,0	16
10667	9 G 1,5	13,9	130,0	280,0	16
10668	10 G 1,5	13,9	144,0	300,0	16
10669	11 G 1,5	14,8	158,0	330,0	16
10670	12 G 1,5	15,0	173,0	370,0	16
10671	12 x 1,5	15,5	173,0	370,0	16
10672	14 G 1,5	16,6	202,0	400,0	16
10673	16 G 1,5	17,5	230,0	450,0	16
10674	18 G 1,5	18,6	259,0	520,0	16
10675	19 G 1,5	18,6	279,0	550,0	16
10676	20 G 1,5	19,7	288,0	600,0	16
10677	21 G 1,5	19,7	302,0	600,0	16
10678	25 G 1,5	22,5	360,0	730,0	16
10679	32 G 1,5	24,3	461,0	880,0	16
10680	34 G 1,5	25,3	490,0	950,0	16
10681	40 G 1,5	26,6	576,0	990,0	16
10682	42 G 1,5	27,4	605,0	1120,0	16
10683	50 G 1,5	30,2	720,0	1400,0	16
10684	56 G 1,5	31,2	806,0	1530,0	16
10685	61 G 1,5	32,2	878,0	1700,0	16
10686	65 G 1,5	33,5	936,0	1900,0	16
10687	80 G 1,5	36,9	1152,0	2300,0	16
10688	100 G 1,5	41,3	1440,0	2700,0	16
10689	2 x 2,5	9,6	48,0	160,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10690	3 G 2,5	10,1	72,0	175,0	14
10691	3 x 2,5	10,1	72,0	175,0	14
10692	4 G 2,5	11,2	96,0	203,0	14
10693	4 x 2,5	11,2	96,0	203,0	14
10694	5 G 2,5	12,5	120,0	251,0	14
10695	5 x 2,5	12,5	120,0	251,0	14
10696	7 G 2,5	13,8	168,0	330,0	14
10697	7 x 2,5	13,8	168,0	330,0	14
10698	8 G 2,5	15,1	192,0	400,0	14
10699	12 G 2,5	18,3	288,0	553,0	14
10700	14 G 2,5	19,6	336,0	630,0	14
10701	18 G 2,5	22,0	432,0	795,0	14
10702	21 G 2,5	23,3	504,0	930,0	14
10703	25 G 2,5	26,2	600,0	1110,0	14
10704	34 G 2,5	30,4	816,0	1450,0	14
10705	42 G 2,5	33,0	1008,0	1750,0	14
10706	50 G 2,5	36,2	1200,0	2100,0	14
10707	61 G 2,5	38,8	1464,0	2540,0	14
10708	100 G 2,5	49,8	2400,0	3850,0	14
10709	2 x 4	11,0	77,0	180,0	12
10710	3 G 4	11,7	115,0	230,0	12
10711	4 G 4	12,9	154,0	310,0	12
10712	5 G 4	14,4	192,0	410,0	12
10713	7 G 4	15,8	269,0	540,0	12
10714	8 G 4	17,5	307,0	710,0	12
10715	12 G 4	21,0	461,0	860,0	12
10716	3 G 6	13,1	173,0	370,0	10
10717	4 G 6	14,5	230,0	430,0	10
10718	5 G 6	16,2	288,0	650,0	10
10719	7 G 6	18,0	403,0	860,0	10
10720	3 G 10	16,8	288,0	660,0	8
10721	4 G 10	18,5	384,0	790,0	8
10722	5 G 10	20,5	480,0	960,0	8
10723	7 G 10	22,5	672,0	1300,0	8
10724	3 G 16	20,2	461,0	700,0	6
10725	4 G 16	22,4	614,0	1100,0	6
10726	5 G 16	25,0	768,0	1600,0	6
10727	7 G 16	27,4	1075,0	1890,0	6
10728	3 G 25	24,8	720,0	1450,0	4
10729	4 G 25	27,4	960,0	1600,0	4
10730	5 G 25	30,5	1200,0	2050,0	4
10731	7 G 25	33,8	1680,0	2900,0	4
10732	3 G 35	27,4	1008,0	1900,0	2
10733	4 G 35	30,3	1344,0	2400,0	2
10734	5 G 35	33,6	1680,0	2900,0	2
10735	3 G 50	32,4	1440,0	2700,0	1
10736	4 G 50	35,8	1920,0	3400,0	1
10742	5 G 50	40,0	2400,0	4361,0	1
10737	3 G 70	36,8	2016,0	3300,0	2/0
10738	4 G 70	40,8	2688,0	4400,0	2/0
10743	5 G 70	45,2	3360,0	5807,0	2/0
10739	3 G 95	41,7	2736,0	5050,0	3/0
10740	4 G 95	46,2	3648,0	6010,0	3/0
10744	5 G 95	51,7	4560,0	7752,0	3/0
10741	4 G 120	51,6	4608,0	7500,0	4/0
10745	4 G 150	58,5	5760,0	8640,0	300 kcmil
10746	4 G 185	63,3	7104,0	10380,0	350 kcmil

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

H03VV-F



Technical data

- PVC control cable acc. to DIN VDE 0285-525-2-11 / DIN EN 50525-2-11 and IEC 60227-5
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U₀/U 300/300 V
- **Test voltage** 2000 V
- **Breakdown voltage** min. 4000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293-308
- up to 5 cores coloured
- from 6 cores, black with continuous white numbering
- GN-YE conductor, 3 cores and above
- Cores stranded in layers with optimal lay-length
- Outer sheath of PVC compound type TM2 to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1
- Sheath colour black, white or in accordance to the customer

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- ### Tests
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor
- 5 core and above in adaption (H).
- The above list contains a selection of the types we carry es stock. Other sizes available on request.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

These cable types are especially suited to use on small appliances with low mechanical stress and for connection for light household appliances, e. g. kitchen utensils, desk lamps, floor lamps, vacuum cleaners, office machines, radios, etc. , as far as this cable is admitted to the relevant specifications of the equipment.

These cables are not permitted to use with cooking or heating apparatus.

Cables with cross-section 0,75 mm² are not suitable for outdoor use or use of industrial or farmer machineries.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Sheath colour	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No.cores x cross-sec. mm ²	Sheath colour	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
29736	2 x 0,5	black	4,6 - 5,9	9,6	40,0	20	29406	4 G 0,75	black	5,7 - 7,3	29,0	72,0	19
29737	2 x 0,5	white	4,6 - 5,9	9,6	40,0	20	29407	4 G 0,75	white	5,7 - 7,3	29,0	72,0	19
29738	2 x 0,5	other colours	4,6 - 5,9	9,6	40,0	20	29408	4 G 0,75	other colours	5,7 - 7,3	29,0	72,0	19
29739	3 G 0,5	black	4,9 - 6,3	14,4	49,0	20	29409	5 G 0,75	black	6,5 - 8,2	36,0	87,0	19
29740	3 G 0,5	white	4,9 - 6,3	14,4	49,0	20	29410	5 G 0,75	white	6,5 - 8,2	36,0	87,0	19
29741	3 G 0,5	other colours	4,9 - 6,3	14,4	49,0	20	29411	5 G 0,75	other colours	6,5 - 8,2	36,0	87,0	19
29742	4 G 0,5	black	5,4 - 6,9	19,2	61,0	20	29412	6 G 0,75	black	7,1 - 9,0	43,0	98,0	19
29743	4 G 0,5	white	5,4 - 6,9	19,2	61,0	20	29413	6 G 0,75	white	7,1 - 9,0	43,0	98,0	19
29744	4 G 0,5	other colours	5,4 - 6,9	19,2	61,0	20	29414	6 G 0,75	other colours	7,1 - 9,0	43,0	98,0	19
29400	2 x 0,75	black	4,9 - 6,3	14,4	49,0	19	29415	7 G 0,75	black	7,1 - 9,0	50,0	108,0	19
29401	2 x 0,75	white	4,9 - 6,3	14,4	49,0	19	29416	7 G 0,75	white	7,1 - 9,0	50,0	108,0	19
29402	2 x 0,75	other colours	4,9 - 6,3	14,4	49,0	19	29417	7 G 0,75	other colours	7,1 - 9,0	50,0	108,0	19
29403	3 G 0,75	black	5,2 - 6,7	21,6	59,0	19							
29404	3 G 0,75	white	5,2 - 6,7	21,6	59,0	19							
29405	3 G 0,75	other colours	5,2 - 6,7	21,6	59,0	19							

Dimensions and specifications may be changed without prior notice. (RA01)

H05VV-F according to DIN VDE 0281



Technical data

- PVC-control cables to DIN VDE 0281 part 5 and IEC 60227-5, HD 21.5 S3
- **Temperature range**
flexing -5 °C to +70 °C
fixed installation -40 °C to +70 °C
- **Nominal voltage**
U₀/U 300/500 V
- Max. permissible **operating voltage**
in three-phase and one-phase
a.c. system U₀/U 318/550 V
in direct current system
U₀/U 413/825 V
- **Test voltage** 2000 V
- **Breakdown voltage**
min. 4000 V
- **Insulation resistance**
min. 20 MΩm x km
- **Minimum bending radius**
flexing 7,5x cable ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5 and HD 383
- PVC core insulation T12 to DIN VDE 0281 part 1
- Cores colour coded to DIN VDE 0293-308
1x green-yellow earth core incl.
- Green-yellow earth core, 3 cores and above
- Cores stranded in layers with optimal lay-length
- PVC outer jacket in white or black
- PVC outer jacket TM2 to DIN VDE 0281 part 1

Properties

- PVC self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow earth core;
x = without green-yellow earth core.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- These types are also available with UL-approbation.
- The above list contains a selection of the types we carry in stock. Other sizes available on request.
- Cables with 7 cores are only available as "A"-type.
- 6 mm² in adaption (H).

Application

These cables are especially suited to use for the appliance with medium mechanical stress in households, kitchens and offices, also for household appliances in damp and wet areas, e.g. refrigerators, washing machines, spin-driver etc. As far as this cable is admitted to the relevant specifications of the equipment.

These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences of heat.

The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts.

They are not qualified for use in outdoors or for use with industrial and farmer machineries, exceptionally in tailoring, etc.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Jacket colour	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
29450	2 x 0,75	black	5,7 - 7,2	14,4	50,0	18
29451	2 x 0,75	white	5,7 - 7,2	14,4	50,0	18
29452	3 G 0,75	black	6,0 - 7,6	21,6	60,0	18
29453	3 G 0,75	white	6,0 - 7,6	21,6	60,0	18
29454	4 G 0,75	black	6,6 - 8,3	29,0	73,0	18
29455	4 G 0,75	white	6,6 - 8,3	29,0	73,0	18
29456	5 G 0,75	black	7,4 - 9,3	36,0	88,0	18
29457	5 G 0,75	white	7,4 - 9,3	36,0	88,0	18
29458	2 x 1	black	5,9 - 7,5	19,0	57,0	17
29459	2 x 1	white	5,9 - 7,5	19,0	57,0	17
29460	3 G 1	black	6,3 - 8,0	29,0	73,0	17
29461	3 G 1	white	6,3 - 8,0	29,0	73,0	17
29462	4 G 1	black	7,1 - 9,0	38,0	85,0	17
29463	4 G 1	white	7,1 - 9,0	38,0	85,0	17
29464	5 G 1	black	7,8 - 9,8	48,0	105,0	17
29465	5 G 1	white	7,8 - 9,8	48,0	105,0	17
29466	7 G 1	black	9,3 - 12,0	67,0	131,0	17
29467	7 G 1	white	9,3 - 12,0	67,0	131,0	17
29484	2 x 1,5	black	6,8 - 8,6	29,0	82,0	16
29485	2 x 1,5	white	6,8 - 8,6	29,0	82,0	16
29468	3 G 1,5	black	7,4 - 9,4	43,0	95,0	16
29469	3 G 1,5	white	7,4 - 9,4	43,0	95,0	16
29470	4 G 1,5	black	8,4 - 10,5	58,0	117,0	16
29471	4 G 1,5	white	8,4 - 10,5	58,0	117,0	16
29472	5 G 1,5	black	9,3 - 11,6	72,0	144,0	16
29473	5 G 1,5	white	9,3 - 11,6	72,0	144,0	16

Part no.	No. cores x cross-sec. mm ²	Jacket colour	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
29474	7 G 1,5	black	10,8 - 13,5	101,0	183,0	16
29475	7 G 1,5	white	10,8 - 13,5	101,0	183,0	16
29478	3 G 2,5	black	9,2 - 11,4	72,0	152,0	14
29479	3 G 2,5	white	9,2 - 11,4	72,0	152,0	14
29480	4 G 2,5	black	10,1 - 12,5	96,0	192,0	14
29481	4 G 2,5	white	10,1 - 12,5	96,0	192,0	14
29482	5 G 2,5	black	11,2 - 13,9	120,0	243,0	14
29483	5 G 2,5	white	11,2 - 13,9	120,0	243,0	14
29486	7 G 2,5	black	13,0 - 17,0	168,0	316,0	14
29487	7 G 2,5	white	13,0 - 17,0	168,0	316,0	14
29825	3 G 4	black	10,5 - 13,1	115,0	235,0	12
29826	3 G 4	white	10,5 - 13,1	115,0	235,0	12
29488	4 G 4	black	11,5 - 14,3	154,0	300,0	12
29489	4 G 4	white	11,5 - 14,3	154,0	300,0	12
29490	5 G 4	black	13,0 - 16,1	192,0	361,0	12
29491	5 G 4	white	13,0 - 16,1	192,0	361,0	12
29492	4 G 6	black	13,2 - 16,3	230,0	490,0	10
29493	4 G 6	white	13,2 - 16,3	230,0	490,0	10

H05VV-F according to DIN VDE 0281







Technical data

- PVC-control cables to DIN VDE 0281 part 5 and IEC 60227-5, HD 21.5 S3
- **Temperature range**
flexing -5 °C to +70 °C
fixed installation -40 °C to +70 °C
- **Nominal voltage** U_0/U 300/500 V
- Max. permissible **operating voltage**
in three-phase and one-phase
a.c. system U_0/U 318/550 V
in direct current system
 U_0/U 413/825 V
- **Test voltage** 2000 V
- **Breakdown voltage**
min. 4000 V
- **Insulation resistance**
min. 20 MΩm x km
- **Minimum bending radius**
flexing 7,5x cable \varnothing
- **Radiation resistance**
up to 80×10^6 cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5 and HD 383
- PVC core insulation TI2 to DIN VDE 0281 part 1
- Cores colour coded to DIN VDE 0293-308
- Green-yellow earth core, 3 cores and above
- Cores stranded in layers with optimal lay-length
- PVC outer jacket TM2 to DIN VDE 0281 part 1
- Jacket colour in accordance to the customer

Properties

- PVC self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow earth core;
x = without green-yellow earth core.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- **Colour code:**
0 = blue (approx. RAL 5015)
1 = green (approx. RAL 6018)
2 = brown (approx. RAL 8003)
3 = yellow (approx. RAL 1021)
4 = red (approx. RAL 3000)
5 = orange (approx. RAL 2003)
6 = violet (approx. RAL 4005)
7 = grey (approx. RAL 7001/7032)
8 = gold
9 = dusty gold
- Please add the individual part no. for order with the identification colour code. Further colours on request.

Application

These cable are especially suited to use for the appliance with medium mechanical stress in households, kitchens and offices, also for household appliances in damp and wet areas, e.g. refrigerators, washing machines, spin-driver etc. As far as this cable is admitted to the relevant specifications of the equipment.

These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences of heat.

The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts.

They are not qualified for use in outdoors or for use with industrial and farmer machineries, exceptionally in tailoring, etc.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Outer \varnothing min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3011	2 x 0,75	5,7 - 7,2	14,4	50,0	18
3012	3 G 0,75	6,0 - 7,6	21,6	60,0	18
3013	4 G 0,75	6,6 - 8,3	29,0	73,0	18
3014	5 G 0,75	7,4 - 9,3	36,0	88,0	18
3015	2 x 1	5,9 - 7,5	19,0	57,0	17
3016	3 G 1	6,3 - 8,0	29,0	73,0	17
3017	4 G 1	7,1 - 9,0	38,0	85,0	17
3018	5 G 1	7,8 - 9,8	48,0	105,0	17

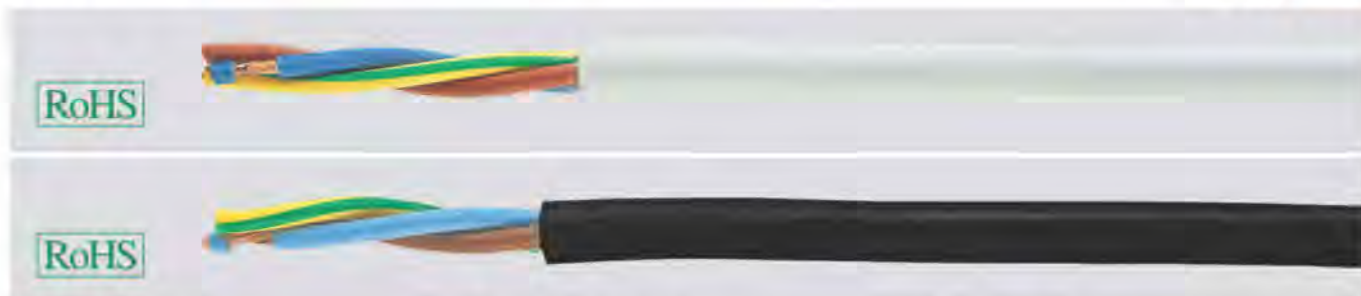
Part no.	No. cores x cross-sec. mm ²	Outer \varnothing min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3020	2 x 1,5	6,8 - 8,6	29,0	82,0	16
3021	3 G 1,5	7,4 - 9,4	43,0	95,0	16
3022	4 G 1,5	8,4 - 10,5	58,0	117,0	16
3023	5 G 1,5	9,3 - 11,6	72,0	144,0	16
3024	3 G 2,5	9,2 - 11,4	72,0	152,0	14
3025	4 G 2,5	10,1 - 12,5	96,0	192,0	14
3026	5 G 2,5	11,2 - 13,9	120,0	243,0	14

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

H05VV-F



Technical data

- PVC control cable acc. to DIN VDE 0285-525-2-11 / DIN EN 50525-2-11 and IEC 60227-5
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U_0/U 300/500 V
- **Max. permissible operating voltage** in three-phase and one-phase a.c. system U_0/U 318/550 V in direct current system U_0/U 413/825 V
- **Test voltage** 2000 V
- **Breakdown voltage** min. 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** flexing 7,5x cable Ø
- **Radiation resistance** up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293-308
- up to 5 cores coloured
- from 6 cores, black with continuous white numbering
- GN-YE conductor, 3 cores and above
- Cores stranded in layers with optimal lay-length
- Outer sheath of PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour black or white

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- ### Tests
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor
- These types are also available with UL-approbation.
- The above list contains a selection of the types we carry as stock. Other sizes available on request.
- Cables with 7 cores and cross-sec. 6 mm² are only available in adaption designation 05VV-F.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

These cables are especially suited to use for the appliance with medium mechanical stress in households, kitchens and offices, also for household appliances in damp and wet areas, e. g. refrigerators, washing machines, spin-driver etc. As far as this cable is admitted to the relevant specifications of the equipment.

These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences of heat.

The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts. They are not qualified for use in outdoors or for use with industrial and farmer machineries, exceptionally in tailoring, etc.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Sheath colour	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
29450	2 x 0,75	black	5,7 - 7,2	14,4	50,0	19
29451	2 x 0,75	white	5,7 - 7,2	14,4	50,0	19
29452	3 G 0,75	black	6,0 - 7,6	21,6	60,0	19
29453	3 G 0,75	white	6,0 - 7,6	21,6	60,0	19
29454	4 G 0,75	black	6,6 - 8,3	29,0	73,0	19
29455	4 G 0,75	white	6,6 - 8,3	29,0	73,0	19
29456	5 G 0,75	black	7,4 - 9,3	36,0	88,0	19
29457	5 G 0,75	white	7,4 - 9,3	36,0	88,0	19
29458	2 x 1	black	5,9 - 7,5	19,0	57,0	18
29459	2 x 1	white	5,9 - 7,5	19,0	57,0	18
29460	3 G 1	black	6,3 - 8,0	29,0	73,0	18
29461	3 G 1	white	6,3 - 8,0	29,0	73,0	18
29462	4 G 1	black	7,1 - 9,0	38,0	85,0	18
29463	4 G 1	white	7,1 - 9,0	38,0	85,0	18
29464	5 G 1	black	7,8 - 9,8	48,0	105,0	18
29465	5 G 1	white	7,8 - 9,8	48,0	105,0	18
29466	7 G 1	black	9,7 - 12,1	67,0	131,0	18
29467	7 G 1	white	9,7 - 12,1	67,0	131,0	18
29484	2 x 1,5	black	6,8 - 8,6	29,0	82,0	16
29485	2 x 1,5	white	6,8 - 8,6	29,0	82,0	16
29468	3 G 1,5	black	7,4 - 9,4	43,0	95,0	16
29469	3 G 1,5	white	7,4 - 9,4	43,0	95,0	16
29470	4 G 1,5	black	8,4 - 10,5	58,0	117,0	16
29471	4 G 1,5	white	8,4 - 10,5	58,0	117,0	16
29472	5 G 1,5	black	9,3 - 11,6	72,0	144,0	16
29473	5 G 1,5	white	9,3 - 11,6	72,0	144,0	16

Part no.	No. cores x cross-sec. mm ²	Sheath colour	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
29474	7 G 1,5	black	11,3 - 14,0	101,0	183,0	16
29475	7 G 1,5	white	11,3 - 14,0	101,0	183,0	16
29478	3 G 2,5	black	9,2 - 11,4	72,0	152,0	14
29479	3 G 2,5	white	9,2 - 11,4	72,0	152,0	14
29480	4 G 2,5	black	10,1 - 12,5	96,0	192,0	14
29481	4 G 2,5	white	10,1 - 12,5	96,0	192,0	14
29482	5 G 2,5	black	11,2 - 13,9	120,0	243,0	14
29483	5 G 2,5	white	11,2 - 13,9	120,0	243,0	14
29486	7 G 2,5	black	13,8 - 17,1	168,0	316,0	14
29487	7 G 2,5	white	13,8 - 17,1	168,0	316,0	14
29825	3 G 4	black	10,5 - 13,1	115,0	235,0	12
29826	3 G 4	white	10,5 - 13,1	115,0	235,0	12
29488	4 G 4	black	11,5 - 14,3	154,0	300,0	12
29489	4 G 4	white	11,5 - 14,3	154,0	300,0	12
29490	5 G 4	black	13,0 - 16,1	192,0	361,0	12
29491	5 G 4	white	13,0 - 16,1	192,0	361,0	12
29492	4 G 6	black	12,9 - 15,9	230,0	490,0	10
29493	4 G 6	white	12,9 - 15,9	230,0	490,0	10



Flexible Control Cables / PVC Control Cables

H05VV-F



Technical data

- PVC-control cables to DIN VDE 0285-525-2-11 / DIN EN 50525-2-11 and IEC 60227-5
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U_0/U 300/500 V
- Max. permissible **operating voltage** in three-phase and one-phase a.c. system U_0/U 318/550 V in direct current system U_0/U 413/825 V
- **Test voltage** 2000 V
- **Breakdown voltage** min. 4000 V
- **Insulation resistance** min. 20 MOhm x km
- **Minimum bending radius** flexing 7,5x cable Ø
- **Radiation resistance** up to 80x10⁵ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293-308
- up to 5 cores coloured
- from 6 cores, black with continuous white numbering
- GN-YE conductor, 3 cores and above
- Cores stranded in layers with optimal lay-length
- Outer sheath of PVC compound type TM2 to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1
- Sheath colour by request

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor
- Please add the individual part no. for order with the identification colour code:
0 = approx.RAL 5015 blue
1 = approx.RAL 6018 green
2 = approx.RAL 8003 brown
3 = approx.RAL 1021 yellow
4 = approx.RAL 3000 red
5 = approx.RAL 2003 orange
6 = approx.RAL 4005 violet
7 = approx.RAL 7001 / 7032 grey
8 = gold
9 = dusty gold
Further colours on request.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

These cable are especially suited to use for the appliance with medium mechanical stress in households, kitchens and offices, also for household appliances in damp and wet areas, e. g. refrigerators, washing machines, spin-driver etc. As far as this cable is admitted to the relevant specifications of the equipment. These cables are suited to be used for cooking and heating apparatus under the condition that cable does not come in direct contact with hot parts of the apparatus and no other influences of heat. The cables are suitable for fixed installation in furnitures, partition walls, decoration covering and in hollow spaces of prefabricated building parts.

They are not qualified for use in outdoors or for use with industrial and farmer machineries, exceptionally in tailoring, etc.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3011x	2 x 0,75	5,7 - 7,2	14,4	50,0	19
3012x	3 G 0,75	6,0 - 7,6	21,6	60,0	19
3013x	4 G 0,75	6,6 - 8,3	29,0	73,0	19
3014x	5 G 0,75	7,4 - 9,3	36,0	88,0	19
3015x	2 x 1	5,9 - 7,5	19,0	57,0	18
3016x	3 G 1	6,3 - 8,0	29,0	73,0	18
3017x	4 G 1	7,1 - 9,0	38,0	85,0	18
3018x	5 G 1	7,8 - 9,8	48,0	105,0	18

Part no.	No.cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3020x	2 x 1,5	6,8 - 8,6	29,0	82,0	16
3021x	3 G 1,5	7,4 - 9,4	43,0	95,0	16
3022x	4 G 1,5	8,4 - 10,5	58,0	117,0	16
3023x	5 G 1,5	9,3 - 11,6	72,0	144,0	16
3024x	3 G 2,5	9,2 - 11,4	72,0	152,0	14
3025x	4 G 2,5	10,1 - 12,5	96,0	192,0	14
3026x	5 G 2,5	11,2 - 13,9	120,0	243,0	14

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

JB-500 flexible, colour coded, metermarking



Technical data

- Adapted to DIN VDE 0285-525-2-11 / DIN EN 50525-2-11
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to JB/OB colour code
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- with meter marking
- from 5 cores with VDE-Reg-Nr.

Properties

- Extensively oil resistant, oil /chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OB)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
Y-CV-JB, confer page 62

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air, as measuring and control cables in tool machinery, conveyorbelts, production lines, as well as in machinery production, in air-conditioning and steel production plants. The earth core is located immediately below the outer sheath. JB cables are suitable for use in all electrical equipment either in dry or damp areas. They should not, however, be installed in the open air.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11001	2 x 0,5	4,8	9,6	40,0	20
11002	3 G 0,5	5,1	14,4	46,0	20
11003	3 x 0,5	5,1	14,4	46,0	20
11004	4 G 0,5	5,5	19,2	56,0	20
11005	4 x 0,5	5,5	19,2	56,0	20
11006	5 G 0,5	6,2	24,0	65,0	20
11007	5 x 0,5	6,2	24,0	65,0	20
11008	6 G 0,5	6,7	29,0	75,0	20
11009	7 G 0,5	6,7	34,0	80,0	20
11010	7 x 0,5	6,7	34,0	84,0	20
11011	8 G 0,5	7,4	38,0	97,0	20
11012	10 G 0,5	8,2	48,0	116,0	20
11013	12 G 0,5	8,7	58,0	135,0	20
11014	14 G 0,5	9,5	67,0	150,0	20
11015	16 G 0,5	10,0	77,0	172,0	20
11019	30 G 0,5	13,5	144,0	310,0	20
11026	2 x 0,75	5,3	14,4	46,0	19
11027	3 G 0,75	5,6	21,6	54,0	19
11028	3 x 0,75	5,6	21,6	54,0	19
11029	4 G 0,75	6,3	28,8	66,0	19
11030	4 x 0,75	6,3	28,8	66,0	19
11031	5 G 0,75	6,9	36,0	80,0	19
11032	5 x 0,75	6,9	36,0	80,0	19
11033	6 G 0,75	7,5	43,2	99,0	19
11034	7 G 0,75	7,5	50,0	110,0	19
11035	7 x 0,75	7,5	50,0	110,0	19
11036	8 G 0,75	8,3	58,0	130,0	19
11037	9 G 0,75	8,9	65,0	153,0	19
11038	10 G 0,75	9,2	72,0	162,0	19
11039	12 G 0,75	9,8	86,0	179,0	19
11040	15 G 0,75	11,4	108,0	218,0	19
11041	18 G 0,75	12,2	130,0	257,0	19
11042	21 G 0,75	12,7	151,0	320,0	19
11043	25 G 0,75	14,3	180,0	365,0	19
11050	2 x 1	5,6	19,2	60,0	18
11051	3 G 1	5,9	29,0	72,0	18
11052	3 x 1	5,9	29,0	72,0	18
11053	4 G 1	6,6	38,4	86,0	18
11054	4 x 1	6,6	38,4	86,0	18
11055	5 G 1	7,3	48,0	104,0	18
11056	5 x 1	7,3	48,0	104,0	18

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11057	6 G 1	8,1	58,0	125,0	18
11058	6 x 1	8,1	58,0	125,0	18
11059	7 G 1	8,1	67,0	141,0	18
11060	7 x 1	8,1	67,0	141,0	18
11061	8 G 1	8,8	77,0	175,0	18
11062	9 G 1	9,7	87,0	200,0	18
11063	10 G 1	9,8	96,0	207,0	18
11064	12 G 1	10,4	115,0	230,0	18
11065	14 G 1	11,4	134,0	271,0	18
11066	16 G 1	12,3	154,0	300,0	18
11067	18 G 1	12,9	173,0	343,0	18
11068	20 G 1	13,8	192,0	375,0	18
11069	24 G 1	15,1	230,0	468,0	18
11070	25 G 1	15,4	240,0	485,0	18
11077	2 x 1,5	6,4	29,0	70,0	16
11078	3 G 1,5	6,8	43,0	90,0	16
11079	3 x 1,5	6,8	43,0	90,0	16
11080	4 G 1,5	7,4	58,0	109,0	16
11081	4 x 1,5	7,4	58,0	109,0	16
11082	5 G 1,5	8,3	72,0	131,0	16
11083	5 x 1,5	8,3	72,0	131,0	16
11084	6 G 1,5	9,2	86,4	157,0	16
11085	7 G 1,5	9,2	101,0	184,0	16
11086	7 x 1,5	9,2	101,0	184,0	16
11087	8 G 1,5	10,0	115,0	216,0	16
11088	11 G 1,5	11,6	158,0	300,0	16
11089	12 G 1,5	11,8	173,0	309,0	16
11090	14 G 1,5	13,0	202,0	345,0	16
11091	16 G 1,5	13,9	230,0	386,0	16
11092	18 G 1,5	14,6	259,0	440,0	16
11093	20 G 1,5	15,6	288,0	490,0	16
11094	25 G 1,5	17,4	360,0	620,0	16
11104	2 x 2,5	7,8	48,0	112,0	14
11105	3 G 2,5	8,3	72,0	148,0	14
11106	3 x 2,5	8,3	72,0	148,0	14
11107	4 G 2,5	9,2	96,0	178,0	14
11108	4 x 2,5	9,2	96,0	178,0	14
11109	5 G 2,5	10,1	120,0	221,0	14
11110	5 x 2,5	10,1	120,0	221,0	14
11111	6 G 2,5	11,2	144,0	293,0	14
11112	7 G 2,5	11,2	168,0	306,0	14



Flexible Control Cables / PVC Control Cables

JB-750 flexible, colour coded, 750 V, meter marking



Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-11 / DIN EN 50525-2-11 and IEC 60227-5
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage**
U₀/U 450/750 V
fixed installation, under protection
U₀/U 600/1000 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80x10⁵ J/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to JB/OB colour code
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OB).
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
Y-CV-JB, confer page 62

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air, as measuring and control cables in tool machinery, conveyor belts, production lines, as well as in machinery production, in air-conditioning and steel production plants. The earth core is located immediately below the outer sheath. JB cables are suitable for use in all electrical equipment either in dry or damp areas. They should not, however, be installed in the open air.

☑ = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11161	2 x 2,5	8,6	48,0	130,0	14
11162	3 G 2,5	9,3	72,0	164,0	14
11163	3 x 2,5	9,3	72,0	164,0	14
11164	4 G 2,5	10,2	96,0	200,0	14
11165	4 x 2,5	10,2	96,0	200,0	14
11166	5 G 2,5	11,4	120,0	247,0	14
11167	5 x 2,5	11,4	120,0	247,0	14
11168	6 G 2,5	12,6	144,0	301,0	14
11169	7 G 2,5	12,6	168,0	321,0	14
11121	2 x 4	10,6	76,8	195,0	12
11144	3 G 4	11,3	115,0	235,0	12
11122	4 G 4	12,5	154,0	295,0	12
11123	5 G 4	13,9	192,0	361,0	12
11124	7 G 4	15,4	269,0	498,0	12
11125	11 G 4	20,2	422,0	767,0	12
11126	3 G 6	12,8	173,0	355,0	10
11127	4 G 6	14,2	230,0	424,0	10
11128	5 G 6	15,8	288,0	525,0	10
11129	7 G 6	17,4	403,0	625,0	10
11153	3 G 10	16,2	290,0	611,0	8
11130	4 G 10	18,1	384,0	701,0	8
11131	5 G 10	20,1	480,0	858,0	8
11132	7 G 10	22,2	672,0	1106,0	8
11154	3 G 16	19,8	461,0	912,0	6
11133	4 G 16	22,0	614,0	1035,0	6
11134	5 G 16	24,4	768,0	1259,0	6
11135	7 G 16	27,0	1075,0	1780,0	6

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11155	3 G 25	24,4	720,0	1388,0	4
11136	4 G 25	27,1	960,0	1581,0	4
11137	5 G 25	30,1	1200,0	1997,0	4
11156	3 G 35	27,0	1008,0	1767,0	2
11138	4 G 35	29,9	1344,0	2105,0	2
11139	5 G 35	33,4	1680,0	2636,0	2
11157	3 G 50	31,9	1440,0	2556,0	1
11140	4 G 50	35,5	1920,0	2940,0	1
11145	5 G 50	39,2	2400,0	3936,0	1
11158	3 G 70	36,4	2016,0	3182,0	2/0
11141	4 G 70	40,2	2688,0	4090,0	2/0
11146	5 G 70	44,9	3360,0	5443,0	2/0
11159	3 G 95	41,5	2736,0	4676,0	3/0
11142	4 G 95	46,0	3648,0	5540,0	3/0
11147	5 G 95	51,3	4560,0	6931,0	3/0
11160	3 G 120	45,9	3456,0	5630,0	4/0
11143	4 G 120	51,3	4608,0	7000,0	4/0
11148	4 G 150	58,7	5760,0	8340,0	300 kcmil
11149	4 G 185	64,3	7104,0	9904,0	350 kcmil



Flexible Control Cables / PVC Control Cables

JB-750 yellow 750 V, connection cable für warning indication, flexible, colour coded, meter marking



Technical data

- Special-PVC connection cable for warning indication adapted to DIN VDE 0285-525-2-11 / DIN EN 50525-2-11
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U_0/U 450/750 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 80×10^6 cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293
- GN-YE conductor
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour yellow (RAL 1016)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air, as connection cable with yellow outer sheath as a special warning indication. Recommendation in accordance to EN 60204 part 1 and DIN VDE 0113 part 1.

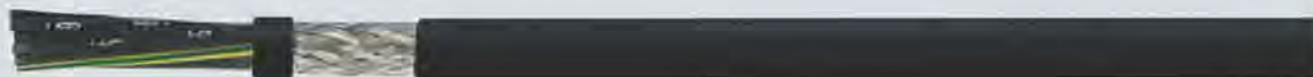
CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10334	3 G 1,5	7,8	43,0	100,0	16	10337	3 G 2,5	9,3	72,0	154,0	14
10335	4 G 1,5	8,5	58,0	121,0	16	10338	4 G 2,5	10,2	96,0	208,0	14
10336	5 G 1,5	9,6	72,0	148,0	16	10339	5 G 2,5	11,4	120,0	229,0	14

Dimensions and specifications may be changed without prior notice. (RA01)

JZ-500-C black EMC-preferred type, Cu-screened, flexible, meter marking

new!



RoHS

Technical data

- Special PVC control cables, adapted to DIN VDE 0245, 0281, 0293, 0295
- **Temperature range**
flexing -5 °C to +80 °C
fixed installation -40 °C to +80 °C
- **Nominal voltage** U_b/U 300/500 V
- **Test voltage**
core/core 4000 V
core/screen 2000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable ø
fixed installation 5x cable ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Core insulation of special PVC Z 7225
- Black cores with continuous white figure imprint to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Foil separator
- Tinned copper braided screening, approx. 85% coverage
- Special PVC outer sheath TM2, to special PVC, TM2 to DIN VDE 0281 part 1 and HD 21.1
- Colour black (RAL 9005)
- with meter marking

Properties

- Extensively oil resistant, oil-/ chemical Resistance - see table Technical Informations
- PVC self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- **UV- resistant**

Note

- G = with green-yellow earth core;
x = without green-yellow earth core (OZ).
- **unscreened analogue type:**
JZ-500 black, see page A 9

Application

For medium mechanical stress for flexible use with free movement without tensile stress or forced movements in dry, damp, wet rooms and in **open air**. Must not be laid directly in soil or water. When screened for measurement, control and control line etc. in mechanical and plant engineering, machine tools, production lines and conveyor belts.

EMC = Electromagnetic compatibility

To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

CE The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10934	2 x 0,5	6,1	35,0	45,0	20
10935	3 G 0,5	6,4	42,0	55,0	20
10936	4 G 0,5	6,8	47,0	61,0	20
10937	5 G 0,5	7,5	56,0	74,0	20
10938	7 G 0,5	8,1	69,0	98,0	20
10939	12 G 0,5	10,4	108,0	157,0	20
10940	18 G 0,5	12,6	145,0	217,0	20
10941	25 G 0,5	14,5	240,0	314,0	20
10942	2 x 0,75	6,5	40,0	59,0	20
10943	3 G 0,75	6,8	52,0	66,0	20
10944	4 G 0,75	7,3	60,0	77,0	20
10945	5 G 0,75	8,1	71,0	93,0	20
10946	7 G 0,75	8,9	91,0	130,0	20
10947	12 G 0,75	11,6	142,0	202,0	20
10948	18 G 0,75	13,6	212,0	292,0	20
10949	25 G 0,75	15,9	281,0	415,0	20
10950	2 x 1	6,8	50,0	65,0	20
10951	3 G 1	7,1	60,0	80,0	20
10952	4 G 1	7,8	71,0	98,0	20
10953	5 G 1	8,5	88,0	127,0	20
10954	7 G 1	9,3	111,0	158,0	20
10955	12 G 1	12,2	184,0	260,0	20
10956	18 G 1	14,5	260,0	380,0	20
10957	25 G 1	17,0	349,0	534,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
10958	2 x 1,5	7,6	63,0	88,0	20
10959	3 G 1,5	8,0	80,0	100,0	20
10960	4 G 1,5	8,8	97,0	126,0	20
10961	5 G 1,5	9,7	119,0	160,0	20
10962	7 G 1,5	10,4	147,0	208,0	20
10963	12 G 1,5	13,8	267,0	358,0	20
10964	18 G 1,5	16,4	374,0	479,0	20
10965	25 G 1,5	19,2	526,0	705,0	20
10966	2 x 2,5	9,0	96,0	130,0	20
10967	3 G 2,5	9,5	144,0	167,0	20
10968	4 G 2,5	10,4	148,0	195,0	20
10969	5 G 2,5	11,7	181,0	223,0	20
10970	7 G 2,5	12,8	255,0	344,0	20
10971	12 G 2,5	16,7	441,0	570,0	20
10972	18 G 2,5	19,8	570,0	681,0	20
10973	4 G 4	12,4	230,0	310,0	20
10974	5 G 4	13,7	273,0	385,0	20
10975	4 G 6	13,9	305,0	415,0	20
10976	5 G 6	15,3	439,0	509,0	20
10977	4 G 10	17,8	535,0	783,0	20
10978	4 G 16	23,3	740,0	880,0	20
10979	4 G 25	28,4	1140,0	1570,0	20
10980	4 G 35	31,0	1576,0	2070,0	20

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

F-CY-OZ (LiY-CY) flexible, Cu-screened, EMC-preferred type, meter marking



Technical data

- Special-PVC data cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -10°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage**
for 1-core (LiYDY) 1200 V
from 2-cores U₀/U 300/500 V
- **Test voltage** core/core 4000 V
core/screen 2000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Mutual capacitance**
acc. to different cross-sections
core/core approx. 150 nF/km
core/screen approx. 270 nF/km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80x 10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- Cores stranded in layers with optimal lay-length
- Core wrapping with foil
- - for **1-core** (LiYDY) copper screen of helically wound, approx. 85% coverage
- - from **2-cores** tinned copper braided screen, approx. 85% coverage
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- x = without green-yellow conductor (OZ)
- Designation: LiYDY for **1-core** cable.
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
For more information, see introduction
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
JZ-500, confer page 30

Application

For flexible use with free movement without tensile stress or forced movements in dry, moist and wet rooms but not in open air, as data cable in the control and regulation technology, tool and machinery, in computer systems, as well as signal line in the electronic. A stabilizing foil separator between wire bound and braid reduces the outer diameter essentially and allows smaller bending radius, lower weight etc. The disturbance free transmission of signals and impulses is ensured due to the high degree of screening. This is an ideal disturbance-free control cable for the above applications

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16531	1 x 0,5	3,7	15,0	41,0	20	16544	20 x 0,5	12,3	172,0	240,0	20
16532	2 x 0,5	5,7	35,0	45,0	20	16545	21 x 0,5	12,3	188,0	250,0	20
16533	3 x 0,5	5,9	42,0	55,0	20	16546	24 x 0,5	13,6	235,0	300,0	20
16534	4 x 0,5	6,4	47,0	61,0	20	16547	25 x 0,5	13,7	240,0	314,0	20
16535	5 x 0,5	6,9	56,0	74,0	20	16548	30 x 0,5	14,4	295,0	360,0	20
16536	6 x 0,5	7,6	67,0	89,0	20	16549	32 x 0,5	14,9	301,0	425,0	20
16537	7 x 0,5	7,6	69,0	98,0	20	16550	34 x 0,5	15,5	312,0	433,0	20
16538	8 x 0,5	8,1	80,0	117,0	20	16551	36 x 0,5	15,5	318,0	446,0	20
16539	10 x 0,5	9,6	94,0	135,0	20	16552	40 x 0,5	16,5	343,0	475,0	20
16540	12 x 0,5	9,7	108,0	157,0	20	16553	50 x 0,5	18,5	406,0	573,0	20
16541	14 x 0,5	10,2	116,0	190,0	20	16554	61 x 0,5	19,7	508,0	653,0	20
16542	16 x 0,5	11,0	129,0	210,0	20	16555	80 x 0,5	22,6	680,0	784,0	20
16543	18 x 0,5	11,5	145,0	217,0	20	16556	100 x 0,5	24,9	804,0	995,0	20

Continuation ▶



Flexible Control Cables / PVC Control Cables

F-CY-OZ (LiY-CY) flexible, Cu-screened, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16557	1 x 0,75	4,0	19,0	44,0	19
16558	2 x 0,75	6,1	40,0	59,0	19
16559	3 x 0,75	6,3	52,0	66,0	19
16560	4 x 0,75	6,8	60,0	77,0	19
16561	5 x 0,75	7,4	71,0	93,0	19
16562	6 x 0,75	8,2	80,0	113,0	19
16563	7 x 0,75	8,2	91,0	130,0	19
16564	8 x 0,75	9,0	110,0	145,0	19
16565	10 x 0,75	10,3	137,0	180,0	19
16566	12 x 0,75	10,5	142,0	202,0	19
16567	14 x 0,75	11,3	180,0	225,0	19
16568	16 x 0,75	11,9	200,0	275,0	19
16569	18 x 0,75	12,7	212,0	292,0	19
16570	19 x 0,75	12,7	230,0	308,0	19
16571	20 x 0,75	13,6	238,0	320,0	19
16572	21 x 0,75	13,6	246,0	378,0	19
16573	24 x 0,75	14,9	270,0	435,0	19
16574	25 x 0,75	15,0	281,0	415,0	19
16575	27 x 0,75	15,1	304,0	435,0	19
16576	30 x 0,75	16,0	320,0	450,0	19
16577	32 x 0,75	16,7	342,0	484,0	19
16578	34 x 0,75	17,2	345,0	502,0	19
16579	36 x 0,75	17,4	350,0	535,0	19
16580	37 x 0,75	17,4	361,0	592,0	19
16581	40 x 0,75	18,1	369,0	610,0	19
16582	50 x 0,75	20,3	461,0	777,0	19
16583	61 x 0,75	22,0	540,0	900,0	19
16584	80 x 0,75	25,3	711,0	1210,0	19
16585	100 x 0,75	28,0	900,0	1445,0	19
16050	1 x 1	4,1	21,0	47,0	18
16051	2 x 1	6,4	50,0	65,0	18
16052	3 x 1	6,7	60,0	81,0	18
16053	4 x 1	7,2	71,0	98,0	18
16054	5 x 1	8,0	88,0	127,0	18
16055	6 x 1	8,7	97,0	144,0	18
16056	7 x 1	8,7	111,0	158,0	18
16057	8 x 1	9,6	127,0	197,0	18
16058	10 x 1	11,2	150,0	232,0	18
16059	12 x 1	11,4	184,0	260,0	18
16060	14 x 1	12,0	196,0	302,0	18
16061	16 x 1	12,8	209,0	345,0	18
16062	18 x 1	13,6	260,0	380,0	18
16063	20 x 1	14,3	317,0	440,0	18
16064	24 x 1	16,0	320,0	495,0	18
16065	25 x 1	16,2	349,0	534,0	18
16066	28 x 1	17,0	408,0	595,0	18
16067	30 x 1	17,2	441,0	616,0	18
16068	34 x 1	18,5	486,0	741,0	18
16069	40 x 1	19,4	510,0	835,0	18
16070	50 x 1	22,0	625,0	1025,0	18
16071	61 x 1	23,5	702,0	1200,0	18
16072	80 x 1	26,9	920,0	1440,0	18
16073	100 x 1	30,2	1120,0	1610,0	18

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16074	1 x 1,5	4,6	27,0	70,0	16
16075	2 x 1,5	7,0	63,0	88,0	16
16076	3 x 1,5	7,4	80,0	100,0	16
16077	4 x 1,5	8,1	97,0	126,0	16
16078	5 x 1,5	9,0	119,0	160,0	16
16079	7 x 1,5	9,8	147,0	208,0	16
16080	8 x 1,5	10,8	170,0	244,0	16
16081	10 x 1,5	12,6	193,0	316,0	16
16082	12 x 1,5	12,8	267,0	338,0	16
16083	14 x 1,5	13,5	283,0	383,0	16
16084	16 x 1,5	14,6	315,0	424,0	16
16085	18 x 1,5	15,6	374,0	479,0	16
16086	20 x 1,5	16,6	396,0	545,0	16
16087	24 x 1,5	18,1	458,0	690,0	16
16088	25 x 1,5	18,4	526,0	705,0	16
16089	28 x 1,5	19,3	541,0	810,0	16
16090	30 x 1,5	19,6	555,0	830,0	16
16091	35 x 1,5	21,2	645,0	890,0	16
16092	40 x 1,5	22,0	725,0	1060,0	16
16093	50 x 1,5	25,0	885,0	1440,0	16
16094	61 x 1,5	26,8	1100,0	1700,0	16
16095	80 x 1,5	30,8	1324,0	2000,0	16
16096	100 x 1,5	34,1	1641,0	2500,0	16
16097	1 x 2,5	5,4	39,0	50,0	14
16098	2 x 2,5	8,4	96,0	130,0	14
16099	3 x 2,5	8,8	144,0	167,0	14
16100	4 x 2,5	9,8	148,0	195,0	14
16101	5 x 2,5	10,8	181,0	223,0	14
16102	7 x 2,5	11,9	255,0	344,0	14
16103	12 x 2,5	15,8	441,0	522,0	14
16104	2 x 4	10,0	120,0	185,0	12
16105	3 x 4	10,6	174,0	240,0	12
16106	4 x 4	11,6	230,0	310,0	12
16107	5 x 4	12,8	273,0	400,0	12
16108	7 x 4	14,2	316,0	500,0	12
16109	2 x 6	11,7	173,0	268,0	10
16110	3 x 6	12,5	240,0	330,0	10
16111	4 x 6	13,8	305,0	415,0	10
16112	5 x 6	15,4	439,0	509,0	10
16113	7 x 6	17,0	505,0	672,0	10
16114	2 x 10	14,5	255,0	425,0	8
16115	3 x 10	15,6	350,0	500,0	8
16116	4 x 10	17,2	535,0	783,0	8
16117	5 x 10	19,1	592,0	856,0	8
16118	7 x 10	21,2	810,0	1300,0	8

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

F-CY-JZ flexible, Cu-screened, EMC-preferred type, meter marking



Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -10°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage**
core/core 4000 V
core/screen 2000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Mutual capacitance**
acc. to different cross-sections
0,5 up to 2,5 mm²:
core/core approx. 150 nF/km
core/screen approx. 270 nF/km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Foil separator
- Tinned copper braided screening, approx. 85% coverage
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- With meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- Please note the cleanroom qualification when ordering. For more information, see introduction.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type: **JZ-500**, confer page 30

Application

For use as a cable in control circuits, in tool-making and machine industries as well as a signal cable in computer systems and electronics. The more usual PVC inner sheath has been replaced in these cables by a stabilising foil separator, thus reducing the total diameter of the cables considerably and thereby reducing the bending radius, total weight etc. The high covering percentage of the copper screening offers interference-free signal transfer etc. The dense screening assures disturbance-free transmission of all signals and impulses. An ideal disturbance-free control cable for the above application.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16320	2 x 0,5	5,7	35,0	45,0	20	16333	21 G 0,5	12,3	188,0	250,0	20
16321	3 G 0,5	5,9	42,0	55,0	20	16334	24 G 0,5	13,6	235,0	300,0	20
16322	4 G 0,5	6,4	47,0	61,0	20	16335	25 G 0,5	13,7	240,0	314,0	20
16323	5 G 0,5	6,9	56,0	74,0	20	16336	30 G 0,5	14,4	295,0	360,0	20
16324	6 G 0,5	7,6	67,0	89,0	20	16337	32 G 0,5	14,9	301,0	425,0	20
16325	7 G 0,5	7,6	69,0	98,0	20	16165	34 G 0,5	15,6	312,0	433,0	20
16326	8 G 0,5	8,1	80,0	117,0	20	16338	36 G 0,5	15,6	318,0	446,0	20
16327	10 G 0,5	9,6	94,0	135,0	20	16339	40 G 0,5	16,4	343,0	475,0	20
16328	12 G 0,5	9,7	108,0	157,0	20	16490	41 G 0,5	16,5	348,0	486,0	20
16329	14 G 0,5	10,2	116,0	190,0	20	16340	50 G 0,5	18,5	406,0	573,0	20
16330	16 G 0,5	11,0	129,0	210,0	20	16341	61 G 0,5	19,7	508,0	653,0	20
16331	18 G 0,5	11,5	145,0	217,0	20	16342	80 G 0,5	22,6	680,0	784,0	20
16332	20 G 0,5	12,3	172,0	240,0	20	16343	100 G 0,5	24,9	804,0	995,0	20

Continuation •



Flexible Control Cables / PVC Control Cables

F-CY-JZ flexible, Cu-screened, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16344	2 x 0,75	6,1	40,0	59,0	19	16393	2 x 1,5	7,0	63,0	88,0	16
16345	3 G 0,75	6,3	52,0	66,0	19	16394	3 G 1,5	7,4	80,0	100,0	16
16346	4 G 0,75	6,8	60,0	77,0	19	16395	4 G 1,5	8,1	97,0	126,0	16
16347	5 G 0,75	7,4	71,0	93,0	19	16396	5 G 1,5	9,0	119,0	160,0	16
16348	6 G 0,75	8,2	80,0	113,0	19	16397	7 G 1,5	9,8	147,0	208,0	16
16349	7 G 0,75	8,2	91,0	130,0	19	16398	8 G 1,5	10,8	170,0	244,0	16
16350	8 G 0,75	9,0	110,0	145,0	19	16399	10 G 1,5	12,6	193,0	315,0	16
16351	10 G 0,75	10,3	137,0	180,0	19	16400	12 G 1,5	12,8	267,0	338,0	16
16353	12 G 0,75	10,5	142,0	202,0	19	16401	14 G 1,5	13,5	283,0	383,0	16
16354	14 G 0,75	11,3	180,0	225,0	19	16402	16 G 1,5	14,6	315,0	424,0	16
16355	16 G 0,75	11,9	200,0	275,0	19	16403	18 G 1,5	15,6	374,0	479,0	16
16356	18 G 0,75	12,7	212,0	292,0	19	16449	19 G 1,5	15,6	386,0	508,0	16
16447	19 G 0,75	12,7	230,0	308,0	19	16404	20 G 1,5	16,6	396,0	545,0	16
16357	20 G 0,75	13,6	238,0	320,0	19	16405	21 G 1,5	16,6	425,0	560,0	16
16358	21 G 0,75	13,6	246,0	378,0	19	16406	24 G 1,5	18,1	458,0	690,0	16
16359	24 G 0,75	14,9	270,0	435,0	19	16407	25 G 1,5	18,4	526,0	705,0	16
16360	25 G 0,75	15,0	281,0	415,0	19	16450	27 G 1,5	18,5	531,0	774,0	16
16361	27 G 0,75	15,0	304,0	435,0	19	16408	28 G 1,5	19,6	541,0	810,0	16
16362	30 G 0,75	16,0	320,0	450,0	19	16409	30 G 1,5	19,6	555,0	830,0	16
16363	32 G 0,75	16,7	342,0	484,0	19	16410	35 G 1,5	21,4	645,0	890,0	16
16166	34 G 0,75	17,2	345,0	502,0	19	16451	37 G 1,5	21,4	674,0	945,0	16
16364	36 G 0,75	17,4	350,0	535,0	19	16411	40 G 1,5	22,0	725,0	1060,0	16
16448	37 G 0,75	17,4	361,0	592,0	19	16493	41 G 1,5	22,2	801,0	1071,0	16
16365	40 G 0,75	18,1	369,0	610,0	19	16412	50 G 1,5	25,0	885,0	1290,0	16
16491	41 G 0,75	18,2	400,0	622,0	19	16413	61 G 1,5	26,8	1100,0	1705,0	16
16366	50 G 0,75	20,3	461,0	777,0	19	16414	80 G 1,5	30,8	1324,0	2010,0	16
16367	61 G 0,75	22,0	540,0	900,0	19	16415	100 G 1,5	34,1	1641,0	2505,0	16
16368	80 G 0,75	25,3	711,0	1210,0	19	16416	2 x 2,5	8,4	96,0	130,0	14
16369	100 G 0,75	28,0	900,0	1445,0	19	16417	3 G 2,5	8,8	144,0	167,0	14
16370	2 x 1	6,4	50,0	65,0	18	16418	4 G 2,5	9,8	148,0	195,0	14
16371	3 G 1	6,7	60,0	80,0	18	16419	5 G 2,5	10,8	181,0	223,0	14
16372	4 G 1	7,2	71,0	98,0	18	16420	7 G 2,5	11,9	255,0	344,0	14
16373	5 G 1	8,0	88,0	127,0	18	16421	10 G 2,5	15,5	340,0	460,0	14
16374	6 G 1	8,7	97,0	144,0	18	16438	12 G 2,5	15,8	441,0	570,0	14
16375	7 G 1	8,7	111,0	158,0	18	16452	18 G 2,5	19,0	570,0	681,0	14
16376	8 G 1	9,6	127,0	197,0	18	16422	2 x 4	10,0	120,0	185,0	12
16377	10 G 1	11,2	150,0	232,0	18	16423	3 G 4	10,6	174,0	240,0	12
16378	12 G 1	11,4	184,0	260,0	18	16424	4 G 4	11,6	230,0	310,0	12
16379	14 G 1	12,0	196,0	302,0	18	16425	5 G 4	12,8	273,0	385,0	12
16380	16 G 1	12,8	209,0	346,0	18	16426	7 G 4	14,2	316,0	500,0	12
16381	18 G 1	13,6	260,0	380,0	18	16427	2 x 6	11,7	173,0	268,0	10
16352	19 G 1	13,6	280,0	412,0	18	16428	3 G 6	12,5	240,0	330,0	10
16382	20 G 1	14,3	317,0	440,0	18	16429	4 G 6	13,8	305,0	415,0	10
16383	24 G 1	16,0	320,0	493,0	18	16430	5 G 6	15,4	439,0	509,0	10
16384	25 G 1	16,2	349,0	534,0	18	16431	7 G 6	17,0	505,0	672,0	10
16439	27 G 1	16,4	400,0	562,0	18	16432	2 x 10	14,5	255,0	425,0	8
16385	28 G 1	17,0	408,0	595,0	18	16433	3 G 10	15,6	350,0	500,0	8
16386	30 G 1	17,2	441,0	616,0	18	16434	4 G 10	17,2	535,0	783,0	8
16387	34 G 1	18,5	486,0	741,0	18	16435	5 G 10	19,1	592,0	856,0	8
16446	37 G 1	18,6	519,0	790,0	18	16436	7 G 10	21,2	810,0	1305,0	8
16388	40 G 1	19,4	510,0	835,0	18	16440	4 G 16	20,3	740,0	880,0	6
16492	41 G 1	19,5	531,0	843,0	18	16437	5 G 16	22,2	895,0	1295,0	6
16389	50 G 1	22,0	625,0	1025,0	18	16441	4 G 25	24,7	1140,0	1570,0	4
16390	61 G 1	23,5	702,0	1205,0	18	16442	5 G 25	27,4	1380,0	1965,0	4
16391	80 G 1	26,9	920,0	1445,0	18	16443	4 G 35	28,4	1576,0	2070,0	2
16392	100 G 1	30,2	1120,0	1613,0	18	16444	5 G 35	31,6	1930,0	2690,0	2
						16445	4 G 50	34,2	2155,0	3015,0	1

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

H05VVC4V5-K (NYSLYCYÖ-JZ) flexible, number coded, oil resistant, EMC-preferred type



Technical data

- Spezial-PVC control cable with oil resistant outer sheath acc. to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51 and IEC 60227/74
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage**
core/core 2 kV, 5 minutes
core/screen 2 kV, 5 minutes
- **Breakdown voltage** min. 4000 V
- **Coupling resistance**
at 30 MHz 250 Ohm/km
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Tinned copper braided screening, covering approx. 85%
- Outer sheath of special PVC compound type TM5 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Oil resistant to DIN EN 60811-404

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
H05VV5-F (NYSLYÖ-JZ), confer page 35

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air. These are designed as control and connecting cables to machines, tool machineries, conveyor belts and production lines.

These cables are not effected to the chemical influences. Cables for moist and wet rooms, specially used for machines in breweries, bottling plants and car washing stations.

These cables may be allowed to move once installed provided that the cables are not mechanically stressed during movement. The interconnection of parts of machines used for manufacturing purposes including machine tools where some degree of protection against electromagnetic interference is required.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13951	2 x 0,5	7,7 - 9,6	41,0	97,0	20	13957	2 x 0,75	8,0 - 10,0	46,0	102,0	19
13060	3 G 0,5	8,0 - 10,0	45,0	109,0	20	13072	3 G 0,75	8,3 - 10,4	57,0	115,0	19
13061	4 G 0,5	8,5 - 10,7	54,0	126,0	20	13073	4 G 0,75	9,1 - 11,3	63,0	150,0	19
13062	5 G 0,5	9,3 - 11,6	66,0	156,0	20	13074	5 G 0,75	9,7 - 12,1	76,0	173,0	19
13063	6 G 0,5	9,9 - 12,4	73,0	176,0	20	13075	6 G 0,75	10,5 - 13,1	82,0	195,0	19
13064	7 G 0,5	10,8 - 13,5	79,0	192,0	20	13076	7 G 0,75	11,5 - 14,3	100,0	235,0	19
13952	8 G 0,5	11,7 - 14,5	82,0	211,0	20	13958	8 G 0,75	12,1 - 15,0	112,0	268,0	19
13065	9 G 0,5	12,8 - 15,8	94,0	230,0	20	13077	9 G 0,75	13,3 - 16,5	130,0	285,0	19
13066	12 G 0,5	13,3 - 16,5	137,0	280,0	20	13078	12 G 0,75	13,9 - 17,2	175,0	327,0	19
13953	14 G 0,5	13,4 - 16,6	142,0	302,0	20	13959	14 G 0,75	14,4 - 17,7	190,0	362,0	19
13067	18 G 0,5	15,1 - 18,6	156,0	384,0	20	13079	18 G 0,75	16,2 - 19,9	240,0	488,0	19
13068	25 G 0,5	17,7 - 21,7	250,0	556,0	20	13080	25 G 0,75	18,7 - 22,6	306,0	654,0	19
13954	27 G 0,5	18,0 - 22,1	255,0	599,0	20	13960	27 G 0,75	19,3 - 23,7	326,0	708,0	19
13069	34 G 0,5	20,1 - 24,7	316,0	634,0	20	13081	34 G 0,75	21,3 - 26,2	346,0	821,0	19
13955	36 G 0,5	20,1 - 24,7	320,0	620,0	20	13961	36 G 0,75	21,3 - 26,2	358,0	899,0	19
13129	41 G 0,5	21,7 - 26,6	348,0	770,0	20	13130	41 G 0,75	23,1 - 28,3	403,0	970,0	19
13070	50 G 0,5	24,0 - 29,3	407,0	970,0	20	13082	50 G 0,75	25,3 - 31,0	470,0	1160,0	19
13071	61 G 0,5	25,5 - 31,1	520,0	1072,0	20	13083	61 G 0,75	27,0 - 32,9	550,0	1402,0	19
13956	65 G 0,5	26,1 - 31,9	563,0	1198,0	20	13962	65 G 0,75	27,8 - 34,0	594,0	1504,0	19



Flexible Control Cables / PVC Control Cables

H05VVC4V5-K (NYSLYCYÖ-JZ) flexible, number coded, oil resistant, EMC-preferred type



Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13963	2 x 1	8,2 - 10,3	54,0	114,0	18
13084	3 G 1	8,8 - 11,0	64,0	142,0	18
13085	4 G 1	9,4 - 11,7	76,0	175,0	18
13086	5 G 1	10,3 - 12,8	89,0	205,0	18
13087	6 G 1	11,0 - 13,6	101,0	236,0	18
13088	7 G 1	12,2 - 15,1	114,0	264,0	18
13964	8 G 1	13,1 - 16,2	130,0	301,0	18
13089	9 G 1	13,9 - 17,2	144,0	335,0	18
13090	12 G 1	14,7 - 18,1	186,0	420,0	18
13965	14 G 1	15,3 - 18,8	198,0	433,0	18
13091	18 G 1	16,9 - 20,8	284,0	561,0	18
13966	19 G 1	16,9 - 20,8	307,0	584,0	18
13092	25 G 1	19,8 - 24,2	387,0	766,0	18
13967	27 G 1	20,2 - 24,7	410,0	822,0	18
13093	34 G 1	22,5 - 27,6	500,0	996,0	18
13968	36 G 1	22,5 - 27,6	511,0	1001,0	18
13969	37 G 1	22,5 - 27,6	523,0	1018,0	18
13131	41 G 1	24,7 - 30,2	578,0	1155,0	18
13094	50 G 1	26,8 - 32,7	681,0	1300,0	18
13095	61 G 1	28,5 - 34,7	710,0	1500,0	18
13970	65 G 1	29,4 - 35,8	769,0	1510,0	18
13971	2 x 1,5	9,3 - 11,6	64,0	146,0	16
13096	3 G 1,5	9,7 - 12,1	82,0	176,0	16
13097	4 G 1,5	10,7 - 13,2	99,0	207,0	16
13098	5 G 1,5	11,8 - 14,7	123,0	235,0	16
13099	6 G 1,5	12,7 - 15,7	125,0	279,0	16
13100	7 G 1,5	14,1 - 17,4	148,0	314,0	16
13972	8 G 1,5	14,9 - 18,3	172,0	345,0	16
13101	9 G 1,5	16,0 - 19,7	187,0	380,0	16
13102	12 G 1,5	16,7 - 20,5	274,0	500,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13973	14 G 1,5	17,6 - 21,6	294,0	560,0	16
13103	18 G 1,5	19,6 - 24,1	386,0	707,0	16
13974	19 G 1,5	19,6 - 24,1	394,0	723,0	16
13104	25 G 1,5	22,7 - 27,8	531,0	950,0	16
13975	27 G 1,5	23,4 - 28,6	546,0	1014,0	16
13105	32 G 1,5	25,4 - 31,1	638,0	1133,0	16
13106	34 G 1,5	26,6 - 32,5	671,0	1204,0	16
13976	36 G 1,5	26,6 - 32,5	700,0	1261,0	16
13977	37 G 1,5	26,6 - 32,5	720,0	1300,0	16
13132	41 G 1,5	28,5 - 34,8	840,0	1453,0	16
13107	50 G 1,5	31,2 - 38,0	997,0	1663,0	16
13108	61 G 1,5	32,7 - 39,9	1120,0	1852,0	16
13978	65 G 1,5	33,4 - 40,7	1197,0	1971,0	16
13985	2 x 2,5	10,7 - 13,3	110,0	190,0	14
13109	3 G 2,5	11,3 - 14,0	148,0	243,0	14
13110	4 G 2,5	12,6 - 15,5	169,0	280,0	14
13111	5 G 2,5	13,9 - 17,2	220,0	342,0	14
13112	7 G 2,5	16,5 - 20,3	284,0	439,0	14
13979	8 G 2,5	17,7 - 21,8	314,0	489,0	14
13113	12 G 2,5	19,9 - 24,4	470,0	760,0	14
13980	14 G 2,5	20,9 - 25,6	504,0	890,0	14
13114	18 G 2,5	23,3 - 28,5	572,0	1052,0	14
13115	25 G 2,5	27,4 - 33,5	740,0	1375,0	14
13981	27 G 2,5	28,2 - 34,5	971,0	1507,0	14
13116	34 G 2,5	31,5 - 38,5	1179,0	1892,0	14
13982	36 G 2,5	31,5 - 38,5	1268,0	1998,0	14
13983	41 G 2,5	33,5 - 40,8	1473,0	2286,0	14
13117	50 G 2,5	36,5 - 44,4	1660,0	2673,0	14
13118	61 G 2,5	38,8 - 47,2	1992,0	3085,0	14

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

(H)05VVC4V5-K ((N)YSLYCYÖ-JZ) number coded, screened, oil resistant, EMC-preferred type



Technical data

- Spezial-PVC control cable with oil resistant outer sheath adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51 and IEC 60227/74 deviation of conductor cross-sections
- **Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage**
core/core 2 kV, 5 min
core/screen 2 kV, 5 min
- **Breakdown voltage** min. 4000 V
- **Coupling resistance**
at 30 MHz 250 Ohm/km
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special PVC compound type TM5 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour grey (RAL 7001)
- with meter marking

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Oil resistant to DIN EN 60811-404

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
(H)05VV5-F (N)YSLYÖ-JZ, confer page 37

Application

These cables are used for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms but not suitable for open air. These are designed as control and connecting cables to machines, tool machineries, conveyor belts and production lines.

These cables are not effected to the chemical influences. Cables for moist and wet rooms, specially used for machines in breweries, bottling plants and car washing stations.

These cables may be allowed to move once installed provided that the cables are not mechanically stressed during movement.

The interconnection of parts of machines used for manufacturing purposes including machine tools where some degree of protection against electromagnetic interference is required.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13170	2 x 4	12,8	124,0	236,0	12
13171	3 G 4	13,8	178,0	361,0	12
13172	4 G 4	14,9	234,0	430,0	12
13173	5 G 4	16,3	284,0	509,0	12
13175	7 G 4	19,5	321,0	660,0	12
13178	12 G 4	23,5	581,0	979,0	12
13179	2 x 6	14,2	176,0	296,0	10
13180	3 G 6	15,2	245,0	420,0	10
13181	4 G 6	16,5	316,0	579,0	10
13182	5 G 6	18,3	442,0	719,0	10
13183	7 G 6	21,7	530,0	1031,0	10
13185	3 G 10	18,8	367,0	655,0	8
13186	4 G 10	20,7	549,0	894,0	8
13187	5 G 10	22,7	604,0	927,0	8
13188	7 G 10	27,8	820,0	1518,0	8

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
13190	3 G 16	23,0	653,0	993,0	6
13191	4 G 16	25,2	807,0	1340,0	6
13192	5 G 16	27,8	940,0	1626,0	6
13193	7 G 16	33,9	1345,0	2080,0	6
13196	4 G 25	30,7	1169,0	1692,0	4
13197	5 G 25	34,1	1420,0	1972,0	4
13198	3 G 35	31,0	1250,0	1704,0	2
13199	4 G 35	34,1	1680,0	2320,0	2
13189	5 G 35	37,3	2020,0	2780,0	2
13194	3 G 50	35,7	1887,0	2661,0	1
13195	4 G 50	37,7	2370,0	3194,0	1
13184	5 G 50	42,7	2880,0	4247,0	1

Dimensions and specifications may be changed without prior notice. (RAD1)



Flexible Control Cables / PVC Control Cables

Y-CY-JZ flexible, Cu-screened, transparent, EMC-preferred type, meter marking



Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Mutual capacitance**
acc. to different cross-sections
0,5 up to 2,5 mm²:
core/core approx. 150 nF/km
core/screen approx. 270 nF/km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of PVC, grey
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special PVC
- Sheath colour transparent
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- ### Tests
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
JZ-500, confer page 30

Application

For use as a data and control cable in machinery, computer systems etc. as well as a signal cable for electronics. The high level of screening ensures a high degree of interference protection. The screening density assures disturbancefree transmission of all signals and impulses. The PVC-inner sheaths of those cables raise the mechanical stress. The applied clear transparent PVC outer sheath accentuates the optical view of the tinned copper braid.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16200	2 x 0,5	7,0	41,0	67,0	20
16201	3 G 0,5	7,3	45,0	83,0	20
16169	3 x 0,5	7,3	45,0	83,0	20
16202	4 G 0,5	7,9	54,0	94,0	20
16170	4 x 0,5	7,9	54,0	94,0	20
16203	5 G 0,5	8,4	66,0	108,0	20
16171	5 x 0,5	8,4	66,0	108,0	20
16204	6 G 0,5	9,1	73,0	125,0	20
16205	7 G 0,5	9,1	79,0	136,0	20
17172	7 x 0,5	9,1	79,0	136,0	20
16206	8 G 0,5	9,7	82,0	150,0	20
16207	10 G 0,5	10,7	107,0	170,0	20
16208	12 G 0,5	11,5	137,0	195,0	20
16209	14 G 0,5	12,2	142,0	223,0	20
16210	16 G 0,5	12,7	147,0	250,0	20
16211	18 G 0,5	13,5	156,0	277,0	20
16212	20 G 0,5	14,2	173,0	310,0	20
16315	21 G 0,5	14,2	189,0	331,0	20
16213	24 G 0,5	15,5	236,0	390,0	20
16214	25 G 0,5	15,7	250,0	407,0	20
16215	30 G 0,5	16,2	297,0	520,0	20
16216	32 G 0,5	17,0	312,0	550,0	20
16217	36 G 0,5	17,7	320,0	585,0	20
16218	40 G 0,5	18,4	345,0	654,0	20
16453	41 G 0,5	18,9	348,0	671,0	20

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16219	50 G 0,5	20,7	407,0	740,0	20
16220	61 G 0,5	22,0	520,0	850,0	20
16221	80 G 0,5	25,0	690,0	1080,0	20
16222	100 G 0,5	27,4	805,0	1350,0	20
16223	2 x 0,75	7,7	46,0	87,0	19
16224	3 G 0,75	8,0	57,0	98,0	19
16173	3 x 0,75	8,0	57,0	98,0	19
16225	4 G 0,75	8,5	63,0	113,0	19
16196	4 x 0,75	8,5	63,0	113,0	19
16226	5 G 0,75	9,3	76,0	130,0	19
16174	5 x 0,75	9,3	76,0	130,0	19
16227	6 G 0,75	9,9	82,0	156,0	19
16228	7 G 0,75	9,9	100,0	184,0	19
16175	7 x 0,75	9,9	100,0	184,0	19
16229	8 G 0,75	10,6	112,0	221,0	19
16230	10 G 0,75	11,8	140,0	270,0	19
16231	12 G 0,75	12,7	175,0	292,0	19
16232	14 G 0,75	13,3	190,0	315,0	19
16233	16 G 0,75	14,1	204,0	335,0	19
16234	18 G 0,75	14,9	240,0	358,0	19
16235	20 G 0,75	15,4	262,0	420,0	19
16316	21 G 0,75	15,4	274,0	454,0	19
16236	24 G 0,75	17,3	291,0	480,0	19
16237	25 G 0,75	17,5	306,0	508,0	19
16238	27 G 0,75	17,7	326,0	535,0	19
16239	30 G 0,75	18,3	340,0	640,0	19



Flexible Control Cables / PVC Control Cables

Y-CY-JZ flexible, Cu-screened, transparent, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16240	32 G 0,75	18,9	349,0	688,0	19
16241	36 G 0,75	19,7	358,0	730,0	19
16242	40 G 0,75	20,4	371,0	950,0	19
16454	41 G 0,75	21,0	403,0	971,0	19
16243	50 G 0,75	23,2	470,0	1100,0	19
16244	61 G 0,75	24,6	550,0	1290,0	19
16245	80 G 0,75	28,3	715,0	1510,0	19
16246	100 G 0,75	31,1	910,0	1640,0	19
16248	2 x 1	8,0	54,0	97,0	18
16249	3 G 1	8,3	64,0	103,0	18
16176	3 x 1	8,3	64,0	103,0	18
16250	4 G 1	9,0	76,0	146,0	18
16177	4 x 1	9,0	76,0	146,0	18
16251	5 G 1	9,7	89,0	169,0	18
16178	5 x 1	9,7	89,0	169,0	18
16252	6 G 1	10,3	101,0	199,0	18
16253	7 G 1	10,3	114,0	219,0	18
16179	7 x 1	10,3	114,0	219,0	18
16254	8 G 1	11,2	130,0	270,0	18
16255	10 G 1	12,6	156,0	330,0	18
16256	12 G 1	13,3	186,0	350,0	18
16257	14 G 1	14,1	198,0	400,0	18
16258	16 G 1	14,8	214,0	422,0	18
16259	18 G 1	15,6	284,0	514,0	18
16260	20 G 1	16,4	325,0	545,0	18
16261	24 G 1	18,2	366,0	640,0	18
16262	25 G 1	18,5	387,0	689,0	18
16263	28 G 1	19,1	421,0	710,0	18
16264	30 G 1	19,2	457,0	762,0	18
16265	34 G 1	20,9	500,0	910,0	18
16266	40 G 1	21,5	536,0	1070,0	18
16455	41 G 1	22,2	578,0	1092,0	18
16267	50 G 1	24,8	681,0	1315,0	18
16268	61 G 1	26,0	710,0	1370,0	18
16269	80 G 1	30,0	940,0	1610,0	18
16270	100 G 1	33,1	1180,0	1840,0	18
16271	2 x 1,5	8,6	64,0	130,0	16
16272	3 G 1,5	9,2	82,0	152,0	16
16180	3 x 1,5	9,2	82,0	152,0	16
16273	4 G 1,5	9,8	99,0	168,0	16
16181	4 x 1,5	9,8	99,0	168,0	16
16274	5 G 1,5	10,8	123,0	202,0	16
16182	5 x 1,5	10,8	123,0	202,0	16
16275	7 G 1,5	11,7	148,0	304,0	16
16183	7 x 1,5	11,7	148,0	304,0	16
16276	8 G 1,5	12,6	172,0	336,0	16
16277	10 G 1,5	14,2	198,0	420,0	16
16278	12 G 1,5	14,9	274,0	434,0	16
16279	14 G 1,5	15,8	294,0	480,0	16
16280	16 G 1,5	16,7	318,0	525,0	16
16281	18 G 1,5	17,4	386,0	640,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16282	20 G 1,5	18,5	401,0	690,0	16
16317	21 G 1,5	18,5	447,0	720,0	16
16283	24 G 1,5	20,4	487,0	770,0	16
16284	25 G 1,5	20,8	531,0	805,0	16
16285	28 G 1,5	21,4	562,0	900,0	16
16286	30 G 1,5	21,6	598,0	950,0	16
16287	35 G 1,5	23,2	685,0	1100,0	16
16288	40 G 1,5	24,5	759,0	1350,0	16
16456	41 G 1,5	25,0	840,0	1381,0	16
16289	50 G 1,5	27,4	997,0	1675,0	16
16290	61 G 1,5	29,2	1120,0	1800,0	16
16291	80 G 1,5	33,4	1360,0	2300,0	16
16292	100 G 1,5	36,8	1690,0	2600,0	16
16293	2 x 2,5	10,1	110,0	180,0	14
16294	3 G 2,5	10,8	148,0	216,0	14
16295	4 G 2,5	11,5	169,0	267,0	14
16296	5 G 2,5	12,8	220,0	347,0	14
16297	7 G 2,5	14,0	284,0	407,0	14
16298	10 G 2,5	16,8	369,0	660,0	14
16318	12 G 2,5	17,9	470,0	722,0	14
16299	2 x 4	11,6	124,0	302,0	12
16300	3 G 4	12,5	178,0	340,0	12
16301	4 G 4	13,7	234,0	410,0	12
16302	5 G 4	14,9	284,0	502,0	12
16303	7 G 4	16,2	321,0	638,0	12
16304	2 x 6	13,7	176,0	350,0	10
16305	3 G 6	14,4	245,0	450,0	10
16306	4 G 6	15,7	316,0	559,0	10
16307	5 G 6	17,3	442,0	702,0	10
16308	7 G 6	19,0	530,0	907,0	10
16309	2 x 10	16,6	260,0	500,0	8
16310	3 G 10	17,6	367,0	750,0	8
16311	4 G 10	19,4	549,0	1020,0	8
16312	5 G 10	21,3	604,0	1115,0	8
16313	7 G 10	23,4	820,0	1500,0	8
16460	4 G 16	23,4	807,0	1380,0	6
16314	5 G 16	26,0	940,0	1553,0	6
16461	4 G 25	28,3	1169,0	1890,0	4
16462	5 G 25	31,5	1420,0	2270,0	4
16463	4 G 35	32,9	1680,0	2390,0	2
16464	5 G 35	36,9	2020,0	2885,0	2
16465	4 G 50	38,6	2370,0	3315,0	1
16157	5 G 50	43,5	2880,0	4150,0	1
16466	4 G 70	46,1	3257,0	4600,0	2/0
16158	5 G 70	50,5	4032,0	5750,0	2/0
16467	4 G 95	51,1	4060,0	6060,0	3/0
16159	5 G 95	56,0	5244,0	7580,0	3/0
16468	4 G 120	56,5	5231,0	7315,0	4/0
16160	5 G 120	62,1	6624,0	9150,0	4/0
16167	4 G 150	64,6	7760,0	9680,0	300 kcmil
16168	5 G 150	70,6	8496,0	10170,0	300 kcmil

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

SY-JZ flexible, number coded, with steel wire braiding, meter marking



Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 20x cable Ø
fixed installation 6x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of special PVC
- Galvanized steel wire braid
- Outer sheath of special PVC
- Sheath colour transparent
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- Further dimensions available on request.
- These cables can be also delivered with coloured conductors (SY-JB).
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
SY-JB, confer page 64

Application

SY-JZ cables are used as measuring and control cables in tool machinery, plant installation, power stations and in data equipment. The braided screen offers best possible protection against mechanical damage. The galvanized coating on the steel wire braiding not only helps protect against corrosion, but also notably improves the soldering performance.

The clear transparent outer sheath gives the cable in addition an optical revaluation.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12001	2 x 0,5	7,2	9,6	80,0	20	12027	18 G 0,75	15,0	130,0	388,0	19
12002	3 G 0,5	7,5	14,4	92,0	20	12028	21 G 0,75	15,5	151,0	474,0	19
12003	4 G 0,5	8,1	19,2	102,0	20	12029	25 G 0,75	17,5	180,0	503,0	19
12004	5 G 0,5	8,6	24,0	119,0	20	12030	32 G 0,75	18,9	230,0	644,0	19
12005	7 G 0,5	9,3	33,6	157,0	20	12031	34 G 0,75	19,9	245,0	663,0	19
12006	10 G 0,5	10,7	48,0	205,0	20	12032	41 G 0,75	21,2	296,0	741,0	19
12007	12 G 0,5	11,7	58,0	218,0	20	12033	50 G 0,75	23,2	360,0	925,0	19
12008	14 G 0,5	12,3	67,0	242,0	20	12034	61 G 0,75	25,2	439,0	1082,0	19
12009	18 G 0,5	13,4	86,0	340,0	20	12035	2 x 1	8,2	19,2	112,0	18
12010	21 G 0,5	14,2	101,0	370,0	20	12036	3 G 1	8,5	28,8	132,0	18
12114	25 G 0,5	15,7	120,0	406,0	20	12037	4 G 1	9,2	38,4	143,0	18
12012	30 G 0,5	16,2	144,0	439,0	20	12038	5 G 1	9,9	48,0	166,0	18
12013	35 G 0,5	17,5	168,0	500,0	20	12039	6 G 1	10,5	58,0	22,0	18
12014	40 G 0,5	18,2	192,0	565,0	20	12040	7 G 1	10,5	67,0	227,0	18
12015	42 G 0,5	19,0	202,0	593,0	20	12041	8 G 1	11,4	77,0	277,0	18
12016	50 G 0,5	20,7	240,0	690,0	20	12042	9 G 1	12,8	86,0	295,0	18
12017	61 G 0,5	22,0	293,0	843,0	20	12043	12 G 1	13,4	115,0	340,0	18
12018	80 G 0,5	25,0	384,0	1050,0	20	12044	14 G 1	14,2	134,0	420,0	18
12011	100 G 0,5	27,4	480,0	1240,0	20	12045	18 G 1	15,7	173,0	500,0	18
12019	2 x 0,75	7,9	14,4	98,0	19	12046	20 G 1	16,4	192,0	532,0	18
12020	3 G 0,75	8,2	21,6	103,0	19	12047	25 G 1	18,4	240,0	664,0	18
12021	4 G 0,75	8,7	28,8	122,0	19	12048	34 G 1	20,8	326,0	845,0	18
12022	5 G 0,75	9,5	36,0	142,0	19	12049	36 G 1	20,9	346,0	857,0	18
12112	6 G 0,75	10,1	43,2	180,0	19	12050	41 G 1	22,2	394,0	993,0	18
12023	7 G 0,75	10,1	50,0	185,0	19	12051	50 G 1	24,4	480,0	1112,0	18
12188	8 G 0,75	10,8	57,6	201,0	19	12052	56 G 1	25,5	538,0	1225,0	18
12024	9 G 0,75	11,8	65,0	249,0	19	12053	61 G 1	26,1	586,0	1306,0	18
12113	10 G 0,75	12,0	72,0	252,0	19	12054	65 G 1	26,9	624,0	1504,0	18
12025	12 G 0,75	12,8	86,0	292,0	19	12055	80 G 1	30,0	768,0	1750,0	18
12026	15 G 0,75	14,2	108,0	335,0	19	12056	100 G 1	33,1	960,0	1950,0	18



Flexible Control Cables / PVC Control Cables

SY-JZ flexible, number coded, with steel wire braiding, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12057	2 x 1,5	8,8	29,0	129,0	16
12058	3 G 1,5	9,4	43,0	149,0	16
12059	4 G 1,5	10,0	58,0	185,0	16
12060	5 G 1,5	10,9	72,0	205,0	16
12109	6 G 1,5	11,8	87,0	255,0	16
12061	7 G 1,5	11,8	101,0	285,0	16
12062	8 G 1,5	12,7	115,0	340,0	16
12063	9 G 1,5	13,9	130,0	347,0	16
12064	10 G 1,5	14,3	144,0	418,0	16
12065	11 G 1,5	14,8	158,0	430,0	16
12066	12 G 1,5	15,0	173,0	444,0	16
12067	14 G 1,5	15,8	202,0	533,0	16
12068	18 G 1,5	17,4	259,0	593,0	16
12069	25 G 1,5	20,8	360,0	781,0	16
12070	32 G 1,5	22,3	461,0	1015,0	16
12071	34 G 1,5	23,2	490,0	1124,0	16
12072	42 G 1,5	25,2	605,0	1401,0	16
12073	50 G 1,5	27,6	720,0	1583,0	16
12074	61 G 1,5	29,4	878,0	1810,0	16
12075	80 G 1,5	33,8	1152,0	2316,0	16
12076	100 G 1,5	37,2	1440,0	2900,0	16
12077	2 x 2,5	10,2	48,0	185,0	14
12078	3 G 2,5	10,9	72,0	248,0	14
12079	4 G 2,5	11,6	96,0	290,0	14
12080	5 G 2,5	12,9	120,0	347,0	14
12081	7 G 2,5	14,2	168,0	420,0	14
12082	12 G 2,5	17,7	288,0	660,0	14
12083	14 G 2,5	18,8	336,0	750,0	14
12084	18 G 2,5	21,0	432,0	893,0	14
12085	20 G 2,5	22,3	480,0	1169,0	14
12086	25 G 2,5	24,8	600,0	1458,0	14
12087	30 G 2,5	26,0	720,0	1686,0	14
12088	34 G 2,5	28,4	816,0	1869,0	14
12089	50 G 2,5	34,0	1200,0	2200,0	14
12090	61 G 2,5	36,2	1464,0	3000,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12115	3 G 4	12,6	117,0	350,0	12
12091	4 G 4	13,7	154,0	428,0	12
12092	5 G 4	14,9	192,0	504,0	12
12093	7 G 4	16,2	269,0	640,0	12
12094	11 G 4	21,2	422,0	1204,0	12
12095	4 G 6	15,8	230,0	571,0	10
12096	5 G 6	17,3	288,0	671,0	10
12097	7 G 6	19,0	403,0	845,0	10
12098	4 G 10	19,4	384,0	943,0	8
12099	5 G 10	21,3	480,0	1065,0	8
12100	7 G 10	23,4	672,0	1551,0	8
12101	4 G 16	23,6	614,0	1360,0	6
12102	5 G 16	26,4	768,0	1740,0	6
12103	7 G 16	29,0	1075,0	2166,0	6
12104	4 G 25	28,5	960,0	2020,0	4
12105	5 G 25	31,7	1200,0	2465,0	4
12106	4 G 35	32,9	1344,0	2570,0	2
12107	5 G 35	36,9	1680,0	3185,0	2
12108	4 G 50	38,8	1920,0	3513,0	1
12116	5 G 50	43,7	2400,0	4248,0	1
12111	4 G 70	46,3	2688,0	4810,0	2/0
12117	5 G 70	50,5	3360,0	5880,0	2/0
12110	4 G 95	51,2	3648,0	6360,0	3/0
12118	5 G 95	56,1	4560,0	8071,0	3/0
12119	4 G 120	56,6	4608,0	8170,0	4/0
12327	4 G 150	64,7	5760,0	9970,0	300 kcmil

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

JZ-600-Y-CY flexible, number coded, 0,6/1kV, Cu screened meter marking, EMC-preferred type



Technical data

- Adapted to DIN VDE 0262 and DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U_0/U 0,6/1 kV
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80x10⁶ cl/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of Special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of PVC
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1
- Sheath colour black (RAL 9005)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- **UV resistant**
- **Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- Further sizes are available on request.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
JZ-600, confer page 40

Application

Wiring cable for measuring and controlling purposes in tool machinery, conveyor belts and production lines, for plant installations, air conditioning and in steel production plants and rolling mills. Suitable for installation for flexible use for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms as well as outside (fixed installation). Is not suitable to be used as direct burial- or as underwater cable. The cores have been numbered in such a way that the numbers are easily identifiable, even if the cable has only been stripped back a few cm. The core numbers have been underlined to avoid confusion. The earth core is located in the outer layer. The black, special PVC outer sheath is resistant to the ultra violet radiation. Mainly used in South-European, Eastern and Arabian countries. Interference-free transmission of signals and pulses is assured by the high degree of screening.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11464	2 x 0,5	8,5	41,0	129,0	20	11516	2 x 1	9,2	54,0	150,0	18
11465	3 G 0,5	8,8	45,0	150,0	20	11517	3 G 1	9,8	64,0	163,0	18
11466	4 G 0,5	9,4	54,0	170,0	20	11518	4 G 1	10,4	76,0	200,0	18
11467	5 G 0,5	10,2	66,0	199,0	20	11519	5 G 1	11,4	89,0	239,0	18
11469	7 G 0,5	10,8	79,0	235,0	20	11521	7 G 1	12,3	114,0	289,0	18
11472	12 G 0,5	14,3	137,0	320,0	20	11525	12 G 1	15,9	186,0	464,0	18
11475	18 G 0,5	16,4	156,0	428,0	20	11528	18 G 1	18,2	284,0	628,0	18
11478	25 G 0,5	19,3	250,0	503,0	20	11532	25 G 1	22,0	387,0	855,0	18
11489	2 x 0,75	8,8	46,0	143,0	19	11546	2 x 1,5	10,4	64,0	162,0	16
11490	3 G 0,75	9,1	57,0	155,0	19	11547	3 G 1,5	10,8	82,0	187,0	16
11491	4 G 0,75	9,9	63,0	190,0	19	11548	4 G 1,5	11,5	99,0	240,0	16
11492	5 G 0,75	10,6	76,0	228,0	19	11549	5 G 1,5	13,0	123,0	289,0	16
11494	7 G 0,75	11,5	100,0	323,0	19	11551	7 G 1,5	14,2	148,0	383,0	16
11498	12 G 0,75	15,0	175,0	410,0	19	11556	12 G 1,5	18,4	274,0	592,0	16
11501	18 G 0,75	17,2	240,0	560,0	19	11559	18 G 1,5	21,3	386,0	806,0	16
11504	25 G 0,75	20,6	306,0	730,0	19	11563	25 G 1,5	25,4	531,0	1241,0	16

Continuation ▶



Flexible Control Cables / PVC Control Cables

JZ-600-Y-CY flexible, number coded, 0,6/1kV, Cu screened meter marking, EMC-preferred type



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11574	2 x 2,5	11,8	110,0	272,0	14
11575	3 G 2,5	12,8	148,0	298,0	14
11576	4 G 2,5	13,8	169,0	345,0	14
11577	5 G 2,5	15,0	220,0	427,0	14
11578	7 G 2,5	16,3	284,0	561,0	14
11580	12 G 2,5	21,6	470,0	857,0	14
11582	18 G 2,5	25,2	572,0	1355,0	14
11584	25 G 2,5	30,0	740,0	1995,0	14
11590	2 x 4	13,6	124,0	306,0	12
11591	3 G 4	14,6	178,0	391,0	12
11592	4 G 4	15,7	234,0	527,0	12
11593	5 G 4	17,2	284,0	700,0	12
11594	7 G 4	18,9	321,0	920,0	12
11596	12 G 4	24,5	581,0	1510,0	12
11597	2 x 6	14,9	176,0	420,0	10
11598	3 G 6	15,9	245,0	629,0	10
11599	4 G 6	17,4	316,0	731,0	10
11600	5 G 6	19,2	442,0	1105,0	10
11601	7 G 6	20,9	530,0	1465,0	10
11602	2 x 10	18,6	260,0	845,0	8
11603	3 G 10	19,8	367,0	1125,0	8
11604	4 G 10	21,5	549,0	1345,0	8
11605	5 G 10	23,5	604,0	1635,0	8
11606	7 G 10	25,6	820,0	2210,0	8
11607	2 x 16	21,8	491,0	1150,0	6

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11608	3 G 16	23,4	653,0	1395,0	6
11609	4 G 16	25,7	807,0	1870,0	6
11610	5 G 16	28,5	940,0	2720,0	6
11611	7 G 16	31,4	1345,0	3213,0	6
11612	3 G 25	28,2	920,0	2465,0	4
11613	4 G 25	31,3	1169,0	2750,0	4
11614	5 G 25	34,5	1420,0	3490,0	4
11615	7 G 25	37,8	1921,0	4980,0	4
11616	3 G 35	31,2	1250,0	3230,0	2
11617	4 G 35	34,5	1680,0	4100,0	2
11618	5 G 35	38,0	2020,0	4950,0	2
11619	3 G 50	36,5	1887,0	4590,0	1
11620	4 G 50	40,5	2370,0	5780,0	1
11621	5 G 50	45,2	2880,0	7210,0	1
11622	3 G 70	41,8	2516,0	5610,0	2/0
11623	4 G 70	46,0	3257,0	7480,0	2/0
11624	5 G 70	50,4	4032,0	9390,0	2/0
11625	3 G 95	46,8	3086,0	8585,0	3/0
11626	4 G 95	51,3	4060,0	10220,0	3/0
11627	5 G 95	56,1	5244,0	13800,0	3/0
11628	3 G 120	51,8	4176,0	11105,0	4/0
11629	4 G 120	56,3	5231,0	13750,0	4/0
13137	4 G 150	64,4	7760,0	15990,0	300 kcmil
13147	4 G 185	69,5	8104,0	18470,0	350 kcmil

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

Y-CY-JB flexible, Cu-screened, transparent, EMC-preferred type, meter marking



Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51/ DIN EN 50525-2-51
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage**
up to 1,5 mm² U₀/U 300/500 V
from 2,5 mm² U₀/U 450/750 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Mutual capacitance**
acc. to different cross-sections
0,5 up to 2,5 mm²:
core/core approx. 150 nF/km
core/screen approx. 270 nF/km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl.5, BS 6360 cl.5 and IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to JB/OB colour code
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of PVC
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special PVC
- Sheath colour transparent
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OB).
- up to 5 cores and conductor cross-section up to 1,5 mm² with VDE-Reg. No.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
JB-500, confer page 42
JB-750, confer page 43

Application

For use as a data and control cable in machinery, computer systems etc. as well as a signal cable for electronics. The high level of screening ensures a high degree of interference protection. The screening density assures disturbance-free transmission of all signals and impulses. The PVC-inner sheaths of those cables raise the mechanical stress. The applied clear transparent PVC outer sheath accentuates the optical view of the tinned copper braid. These cables are suitable for flexible use for medium mechanical stresses with free movements. The dense screening assures disturbance-free transmission of all signals and impulses. An ideal disturbance-free control cable for the above application.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16121	2 x 0,5	7,0	41,0	67,0	20	16137	2 x 2,5	11,1	110,0	180,0	14
16122	3 G 0,5	7,3	45,0	83,0	20	16138	3 G 2,5	11,6	148,0	216,0	14
16123	4 G 0,5	7,9	54,0	94,0	20	16139	4 G 2,5	12,7	169,0	267,0	14
16124	5 G 0,5	8,4	66,0	108,0	20	16140	5 G 2,5	14,1	220,0	347,0	14
16125	2 x 0,75	7,7	46,0	87,0	19	16141	2 x 4	13,3	124,0	302,0	12
16126	3 G 0,75	8,0	57,0	98,0	19	16142	3 G 4	14,0	178,0	340,0	12
16127	4 G 0,75	8,5	63,0	113,0	19	16143	4 G 4	15,3	234,0	410,0	12
16128	5 G 0,75	9,3	76,0	130,0	19	16144	5 G 4	16,7	284,0	502,0	12
16129	2 x 1	8,0	54,0	97,0	18	16145	2 x 6	14,7	176,0	350,0	10
16130	3 G 1	8,3	64,0	103,0	18	16146	3 G 6	15,6	245,0	450,0	10
16131	4 G 1	9,0	76,0	146,0	18	16147	4 G 6	17,0	316,0	559,0	10
16132	5 G 1	9,7	89,0	169,0	18	16148	5 G 6	18,6	442,0	702,0	10
16133	2 x 1,5	8,6	64,0	130,0	16	16149	2 x 10	18,0	260,0	500,0	8
16134	3 G 1,5	9,2	82,0	152,0	16	16150	3 G 10	19,0	367,0	750,0	8
16135	4 G 1,5	9,8	99,0	168,0	16	16151	4 G 10	21,1	549,0	1020,0	8
16136	5 G 1,5	10,8	123,0	202,0	16	16152	5 G 10	23,1	604,0	1115,0	8

Continuation ▶



Flexible Control Cables / PVC Control Cables

Y-CY-JB flexible, Cu-screened, transparent, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16153	4 G 16	25,3	807,0	1380,0	6
16154	5 G 16	28,0	940,0	1553,0	6
16469	4 G 25	31,1	1169,0	1890,0	4
16155	5 G 25	34,3	1420,0	2270,0	4
16470	4 G 35	33,9	1680,0	2390,0	2
16156	5 G 35	37,8	2020,0	2885,0	2

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
16471	4 G 50	40,1	2370,0	3315,0	1
16119	5 G 50	45,0	2880,0	4150,0	1
16472	4 G 70	46,0	3257,0	4600,0	2/0
16473	4 G 95	51,2	4060,0	6060,0	3/0
16474	4 G 120	56,3	5231,0	7315,0	4/0
16247	4 G 150	64,7	7760,0	9340,0	300 kcmil
16319	4 G 185	69,5	8104,0	11120,0	350 kcmil

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PVC Control Cables

SY-JB flexible, colour coded, with steel wire braiding, meter marking



Technical data

- Special-PVC control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage**
up to 2,5 mm² U₀/U 300/500 V
from 4,0 mm² U₀/U 450/750 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 20x cable Ø
fixed installation 6x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to JB/OB colour code
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of special PVC
- Galvanized steel wire screening
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour transparent
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OB).
- up to 5 cores and conductor cross-section up to 2,5 mm² with VDE Reg.-No.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- Please note the cleanroom qualification when ordering.
- screened analogue type:
SY-JZ, confer page 55

Application

SY-JB cables are used as measuring and control cables in tool machinery, plant installation, power stations and in data equipment. The braided screen offers best possible protection against mechanical damage. The galvanized coating on the steel wire braiding not only helps protect against corrosion, but also notably improves the soldering performance.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12200	2 x 0,5	7,2	9,6	80,0	20	12277	2 x 2,5	10,2	48,0	185,0	14
12201	3 G 0,5	7,5	14,4	92,0	20	12278	3 G 2,5	10,9	72,0	248,0	14
12202	4 G 0,5	8,1	19,2	102,0	20	12279	4 G 2,5	11,6	96,0	290,0	14
12203	5 G 0,5	8,6	24,0	119,0	20	12280	5 G 2,5	12,9	120,0	347,0	14
12204	7 G 0,5	9,3	33,6	157,0	20	12281	7 G 2,5	14,2	168,0	420,0	14
12205	10 G 0,5	10,7	48,0	205,0	20	12282	12 G 2,5	17,7	288,0	660,0	14
12206	12 G 0,5	11,7	58,0	218,0	20	12291	2 x 4	13,6	77,0	330,0	12
12218	2 x 0,75	7,9	14,4	98,0	19	12318	3 G 4	14,3	115,0	375,0	12
12219	3 G 0,75	8,2	21,6	103,0	19	12292	4 G 4	15,4	154,0	428,0	12
12220	4 G 0,75	8,7	28,8	122,0	19	12293	5 G 4	16,9	192,0	504,0	12
12221	5 G 0,75	9,5	36,0	142,0	19	12294	7 G 4	18,4	269,0	640,0	12
12312	6 G 0,75	10,1	43,2	180,0	19	12295	3 G 6	15,6	173,0	543,0	10
12222	7 G 0,75	10,1	50,0	185,0	19	12296	4 G 6	17,0	230,0	571,0	10
12223	9 G 0,75	11,8	65,0	249,0	19	12297	5 G 6	18,6	288,0	671,0	10
12313	10 G 0,75	12,0	72,0	252,0	19	12298	7 G 6	20,6	403,0	845,0	10
12224	12 G 0,75	12,8	86,0	292,0	19	12319	3 G 10	19,2	288,0	735,0	8
12234	2 x 1	8,2	19,2	112,0	18	12299	4 G 10	21,1	384,0	943,0	8
12235	3 G 1	8,5	28,8	132,0	18	12300	5 G 10	23,3	480,0	1065,0	8
12236	4 G 1	9,2	38,4	143,0	18	12301	7 G 10	25,4	672,0	1551,0	8
12237	5 G 1	9,9	48,0	166,0	18	12320	3 G 16	23,0	461,0	1080,0	6
12238	6 G 1	10,5	58,0	220,0	18	12302	4 G 16	25,5	614,0	1360,0	6
12239	7 G 1	10,5	67,0	227,0	18	12303	5 G 16	28,2	768,0	1740,0	6
12240	8 G 1	11,4	77,0	277,0	18	12304	7 G 16	30,8	1075,0	2166,0	6
12241	9 G 1	12,8	86,0	295,0	18	12321	3 G 25	28,2	720,0	1630,0	4
12242	12 G 1	13,4	115,0	340,0	18	12305	4 G 25	31,0	960,0	2020,0	4
12256	2 x 1,5	8,8	29,0	129,0	16	12306	5 G 25	34,3	1200,0	2465,0	4
12257	3 G 1,5	9,4	43,0	149,0	16	12322	3 G 35	31,0	1008,0	1932,0	2
12258	4 G 1,5	10,0	58,0	185,0	16	12307	4 G 35	34,0	1344,0	2570,0	2
12259	5 G 1,5	10,9	72,0	205,0	16	12308	5 G 35	38,0	1680,0	3185,0	2
12260	6 G 1,5	11,8	87,0	255,0	16	12323	3 G 50	36,7	1440,0	2679,0	1
12261	7 G 1,5	11,8	101,0	285,0	16	12309	4 G 50	40,4	1920,0	3513,0	1
12262	8 G 1,5	12,7	115,0	340,0	16	12314	5 G 50	45,2	2400,0	4248,0	1
12263	9 G 1,5	13,9	130,0	347,0	16	12324	3 G 70	42,3	2016,0	2790,0	2/0
12264	10 G 1,5	14,3	144,0	418,0	16	12310	4 G 70	46,2	2688,0	4810,0	2/0
12265	11 G 1,5	14,8	158,0	430,0	16	12315	5 G 70	50,5	3360,0	5880,0	2/0
12266	12 G 1,5	15,0	173,0	444,0	16						



Flexible Control Cables / PVC Control Cables

SY-JB flexible, colour coded, with steel wire braiding, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12325	3 G 95	47,2	2736,0	4870,0	3/0
12311	4 G 95	51,3	3648,0	6360,0	3/0
12316	5 G 95	56,3	4560,0	8071,0	3/0

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12326	3 G 120	51,9	3456,0	6230,0	4/0
12317	4 G 120	56,4	4608,0	8170,0	4/0
12328	4 G 150	64,4	5760,0	9970,0	300 kcmil

Dimensions and specifications may be changed without prior notice. (RA01)



Flexible Control Cables / PUR Control Cables

JZ-500 PUR **tear and coolant resistant, meter marking**



Technical data

- Special-PUR control cable adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3/ DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special **full-polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour grey (RAL 7001) also available in other colours
- with meter marking

Properties

- **Resistant to**
UV-Radiation, Oxygene, Ozone and Hydrolysis, Microbes
- Low adhesion, matt surface
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type: **JZ-500-FC-PUR**, confer page 76

Application

JZ-500 PUR is an extremely robust control cable with high abrasion and tear resistant properties. Due to its high resistance coolant emulsions, it is especially suited for use in the machine, tool making and plant industries as well as in the steel industry for difficult and problem areas. The high flexibility of this cable type makes it quick and easy to install. Suitable for outdoor lying.

CE – The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
23314	2 x 0,5	4,8	9,6	45,0	20
23315	3 G 0,5	5,1	14,4	55,0	20
23316	3 x 0,5	5,1	14,4	55,0	20
23317	4 G 0,5	5,5	19,0	65,0	20
23318	4 x 0,5	5,5	19,0	65,0	20
23319	5 G 0,5	6,2	24,0	75,0	20
23320	5 x 0,5	6,2	24,0	75,0	20
23321	7 G 0,5	6,7	33,6	90,0	20
23322	7 x 0,5	6,7	33,6	90,0	20
23323	10 G 0,5	8,3	48,0	120,0	20
23324	12 G 0,5	8,7	58,0	135,0	20
23325	18 G 0,5	10,7	86,0	205,0	20
23326	25 G 0,5	12,6	120,0	270,0	20
23327	34 G 0,5	14,3	163,0	380,0	20
23328	42 G 0,5	15,8	202,0	415,0	20
23329	2 x 0,75	5,3	14,4	44,0	19
23330	3 G 0,75	5,6	21,6	53,0	19
23331	3 x 0,75	5,6	21,6	53,0	19
23332	4 G 0,75	6,3	29,0	64,0	19
23333	4 x 0,75	6,3	29,0	64,0	19
23334	5 G 0,75	6,9	36,0	76,0	19
23335	5 x 0,75	6,9	36,0	76,0	19
23336	7 G 0,75	7,5	50,0	96,0	19
23337	7 x 0,75	7,5	50,0	96,0	19
23338	10 G 0,75	9,2	72,0	140,0	19
23339	12 G 0,75	9,8	86,0	170,0	19
23340	18 G 0,75	12,2	130,0	260,0	19
23341	25 G 0,75	14,3	180,0	282,0	19
23342	34 G 0,75	16,5	245,0	475,0	19
23343	42 G 0,75	18,1	302,0	600,0	19
23344	2 x 1	5,6	19,0	53,0	18
23345	3 G 1	5,6	29,0	63,0	18
23346	3 x 1	5,9	29,0	63,0	18
23347	4 G 1	6,6	38,0	75,0	18
23348	4 x 1	6,6	38,0	75,0	18
23349	5 G 1	7,3	48,0	89,0	18
23350	5 x 1	7,3	48,0	89,0	18
23351	7 G 1	8,1	67,0	115,0	18

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
23352	7 x 1	8,1	67,0	115,0	18
23353	10 G 1	9,8	96,0	166,0	18
23354	12 G 1	10,4	115,0	201,0	18
23355	18 G 1	12,9	173,0	289,0	18
23356	25 G 1	15,4	240,0	380,0	18
23357	34 G 1	17,7	326,0	645,0	18
23358	42 G 1	19,5	403,0	730,0	18
23359	50 G 1	21,3	480,0	890,0	18
23360	2 x 1,5	6,4	29,0	68,0	16
23361	3 G 1,5	6,8	43,0	87,0	16
23362	3 x 1,5	6,8	43,0	87,0	16
23363	4 G 1,5	7,4	58,0	106,0	16
23364	4 x 1,5	7,4	58,0	106,0	16
23365	5 G 1,5	8,3	72,0	131,0	16
23366	5 x 1,5	8,3	72,0	131,0	16
23367	7 G 1,5	9,2	101,0	173,0	16
23368	7 x 1,5	9,2	101,0	173,0	16
23369	12 G 1,5	11,8	173,0	293,0	16
23370	18 G 1,5	14,6	259,0	454,0	16
23371	25 G 1,5	17,4	360,0	641,0	16
23372	30 G 1,5	18,6	410,0	800,0	16
23373	2 x 2,5	7,8	48,0	110,0	14
23374	3 G 2,5	8,3	72,0	146,0	14
23375	4 G 2,5	9,2	96,0	183,0	14
23376	5 G 2,5	10,1	120,0	222,0	14
23377	7 G 2,5	11,2	168,0	293,0	14
23378	12 G 2,5	14,8	288,0	512,0	14
23379	4 G 4	10,9	154,0	291,0	12
23380	5 G 4	12,1	192,0	355,0	12
23381	7 G 4	13,2	269,0	503,0	12
23382	4 G 6	13,0	230,0	468,0	10
23383	5 G 6	14,5	288,0	570,0	10
23384	7 G 6	16,2	403,0	808,0	10
23385	4 G 10	16,5	384,0	720,0	8
23386	5 G 10	18,3	480,0	894,0	8
23387	7 G 10	20,2	672,0	1295,0	8
23388	4 G 16	20,1	614,0	1063,0	6



Flexible Control Cables / PUR Control Cables

PURö-JZ **tear and coolant resistant, increased oil resistant, meter marking**



Technical data

- Special-PUR control cable adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -20°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of **oil resistant PVC** compound type T12 adapted to DIN VDE 0207-363-3 / DIN EN 50363-3, for better sliding abilities
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special **full-polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour grey (RAL 7001) also available in other colours on request
- with meter marking

Properties

- **Resistant to**
UV-Radiation, Oxygene, Ozone
Hydrolysis, Microbes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
F-C-PURö-JZ, confer page 78,
Yö-C-PURö-JZ, confer page 80

Application

PURö-JZ is an extremely robust control cable with high abrasion and tear resistant properties. With high-grade oil resistant PVC core insulation. Due to its high resistance to mineral oils and especially to coolant emulsions, it is especially suited for use in the machine, tool making, plant construction as well as in the steel industry for difficult and problem areas. For medium mechanical stress for flexible use with free movement without tensile stress or forced movements in dry, damp and wet rooms and in open air. The high flexibility of this cable type makes it quick and easy to install.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22100	2 x 0,5	4,8	9,6	45,0	20	22132	2 x 1	5,6	19,0	53,0	18
22101	3 G 0,5	5,1	14,4	55,0	20	22133	3 G 1	5,9	29,0	63,0	18
22102	4 G 0,5	5,5	19,0	65,0	20	22134	4 G 1	6,6	38,0	75,0	18
22103	5 G 0,5	6,2	24,0	75,0	20	22135	5 G 1	7,3	48,0	89,0	18
22104	7 G 0,5	6,7	33,6	90,0	20	22136	7 G 1	8,1	67,0	115,0	18
22105	8 G 0,5	7,4	38,0	105,0	20	22137	8 G 1	8,8	77,0	131,0	18
22106	10 G 0,5	8,3	48,0	120,0	20	22138	10 G 1	9,8	96,0	166,0	18
22107	12 G 0,5	8,7	58,0	135,0	20	22139	12 G 1	10,4	115,0	201,0	18
22108	14 G 0,5	9,5	67,0	170,0	20	22140	14 G 1	11,4	134,0	230,0	18
22109	18 G 0,5	10,7	86,0	205,0	20	22141	18 G 1	12,9	173,0	289,0	18
22110	21 G 0,5	11,3	96,0	225,0	20	22142	21 G 1	13,8	196,0	306,0	18
22111	25 G 0,5	12,6	120,0	270,0	20	22143	25 G 1	15,4	240,0	380,0	18
22112	30 G 0,5	13,5	144,0	315,0	20	22144	32 G 1	17,1	308,0	620,0	18
22113	34 G 0,5	14,3	163,0	380,0	20	22145	34 G 1	17,7	326,0	645,0	18
22114	42 G 0,5	15,8	202,0	415,0	20	22146	42 G 1	19,5	403,0	730,0	18
22115	50 G 0,5	17,5	240,0	550,0	20	22147	50 G 1	21,3	480,0	890,0	18
22116	2 x 0,75	5,3	14,4	44,0	19	22148	2 x 1,5	6,4	29,0	68,0	16
22117	3 G 0,75	5,6	21,6	53,0	19	22149	3 G 1,5	6,8	43,0	87,0	16
22118	4 G 0,75	6,3	29,0	64,0	19	22150	4 G 1,5	7,4	58,0	106,0	16
22119	5 G 0,75	6,9	36,0	76,0	19	22151	5 G 1,5	8,3	72,0	131,0	16
22120	7 G 0,75	7,5	50,0	96,0	19	22152	7 G 1,5	9,2	101,0	173,0	16
22121	8 G 0,75	8,3	58,0	111,0	19	22153	8 G 1,5	10,0	115,0	199,0	16
22122	10 G 0,75	9,2	72,0	140,0	19	22154	10 G 1,5	10,9	144,0	245,0	16
22123	12 G 0,75	9,8	86,0	170,0	19	22155	12 G 1,5	11,8	173,0	293,0	16
22124	14 G 0,75	10,6	101,0	202,0	19	22156	14 G 1,5	13,0	202,0	347,0	16
22125	18 G 0,75	12,2	130,0	260,0	19	22157	18 G 1,5	14,6	259,0	454,0	16
22126	21 G 0,75	12,7	151,0	269,0	19	22158	21 G 1,5	15,6	302,0	534,0	16
22127	25 G 0,75	14,3	180,0	282,0	19	22159	25 G 1,5	17,4	360,0	641,0	16
22128	30 G 0,75	15,3	216,0	400,0	19	22160	30 G 1,5	18,6	410,0	800,0	16
22129	34 G 0,75	16,5	245,0	475,0	19	22161	34 G 1,5	20,0	490,0	945,0	16
22130	42 G 0,75	18,1	302,0	600,0	19	22162	42 G 1,5	21,8	605,0	1100,0	16
22131	50 G 0,75	19,8	360,0	720,0	19	22163	50 G 1,5	24,2	720,0	1250,0	16



Flexible Control Cables / PUR Control Cables

PURÖ-JZ tear and coolant resistant, increased oil resistant, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22164	2 x 2,5	7,8	48,0	110,0	14
22165	3 G 2,5	8,3	72,0	146,0	14
22166	4 G 2,5	9,2	96,0	183,0	14
22167	5 G 2,5	10,1	120,0	222,0	14
22168	7 G 2,5	11,2	168,0	293,0	14
22169	12 G 2,5	14,8	288,0	512,0	14
22170	18 G 2,5	18,2	432,0	740,0	14
22171	25 G 2,5	21,6	600,0	940,0	14
22172	2 x 4	9,2	77,0	147,0	12
22173	3 G 4	9,8	115,0	228,0	12
22174	4 G 4	10,9	154,0	291,0	12
22175	5 G 4	12,1	192,0	355,0	12
22176	7 G 4	13,2	269,0	503,0	12
22177	3 G 6	11,9	173,0	362,0	10
22178	4 G 6	13,0	230,0	468,0	10
22179	5 G 6	14,5	288,0	570,0	10
22180	7 G 6	16,2	403,0	808,0	10

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22181	3 G 10	14,9	288,0	555,0	8
22182	4 G 10	16,5	384,0	720,0	8
22183	5 G 10	18,3	480,0	894,0	8
22184	7 G 10	20,2	672,0	1295,0	8
22185	4 G 16	20,1	614,0	1063,0	6
22186	5 G 16	22,6	768,0	1400,0	6
22187	7 G 16	24,8	1075,0	1800,0	6
22188	4 G 25	25,0	960,0	1590,0	4
22189	4 G 35	28,7	1344,0	2200,0	2
22190	4 G 50	34,1	1920,0	2400,0	1
22191	4 G 70	40,2	2688,0	4400,0	2/0
22192	4 G 95	46,0	3648,0	6000,0	3/0

Dimensions and specifications may be changed without prior notice. (RA02)



Flexible Control Cables / PUR Control Cables

PUR-ORANGE high abrasion, coolant resistant, meter marking



Technical data

- Special-PVC/PUR control cable adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 3000 V
- **Breakdown voltage** min. 6000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cl/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 adapted to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293-308
JZ/OZ-version: black cores with continuous white numbering
JB/OB-version: coloured cores
- GN-YE conductor, 3 cores and above
- Cores stranded in layers with optimal lay-length
- Inner sheath of PVC guarantees easy cable stripping
- Outer sheath of PUR compound type TPU to DIN EN 50363-10-2
- Sheath colour orange (RAL 2003)
- with meter marking

Properties

- High flexibility at low temperature
- High abrasion resistance
- **Resistant to**
Oils and fats
Non-alcoholic fuels and kerosene
Atmospheric influences
UV-radiation
Oxygene and ozone
Microbes and rotting
Sea and waste water
Vibrations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ/OB)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

Robust control cable with an outstanding resistance to oil and abrasion. Suitable for use in tool making and machine industries, steel works, on building sites and in the oil and coal industries. The cable can also be used for portable tools etc. To be recommended if the cable comes into contact with chemical agents.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

JZ/OZ-version: cores numbered

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22001	2 x 0,75	6,4	14,4	50,0	19
22002	3 G 0,75	6,8	21,6	70,0	19
22003	4 G 0,75	7,3	28,8	80,0	19
22004	5 G 0,75	8,2	36,0	100,0	19
22005	7 G 0,75	9,2	50,0	140,0	19
22006	2 x 1	7,2	19,2	63,0	18
22007	3 G 1	7,6	29,0	76,0	18
22008	4 G 1	8,0	38,0	95,0	18
22009	5 G 1	8,8	48,0	120,0	18
22010	7 G 1	10,0	67,0	170,0	18
22015	2 x 1,5	7,8	29,0	80,0	16
22016	3 G 1,5	8,3	43,0	105,0	16
22017	4 G 1,5	9,0	58,0	135,0	16
22018	5 G 1,5	9,7	72,0	158,0	16
22019	7 G 1,5	11,2	101,0	221,0	16
22025	2 x 2,5	9,2	48,0	150,0	14
22026	3 G 2,5	9,6	72,0	173,0	14
22027	4 G 2,5	11,0	96,0	203,0	14
22028	5 G 2,5	12,0	120,0	253,0	14
22029	7 G 2,5	13,7	168,0	356,0	14
22033	3 G 4	11,8	115,0	250,0	12
22034	4 G 4	13,2	154,0	300,0	12
22035	5 G 4	14,8	192,0	370,0	12
22036	7 G 4	16,1	269,0	500,0	12
22037	4 G 6	15,4	230,0	480,0	10
22038	5 G 6	17,0	288,0	583,0	10
22039	7 G 6	20,8	403,0	780,0	10
22040	4 G 10	20,8	384,0	740,0	8
22041	5 G 10	22,6	480,0	920,0	8
22042	4 G 16	23,0	614,0	1100,0	6
22043	5 G 16	27,4	768,0	1400,0	6

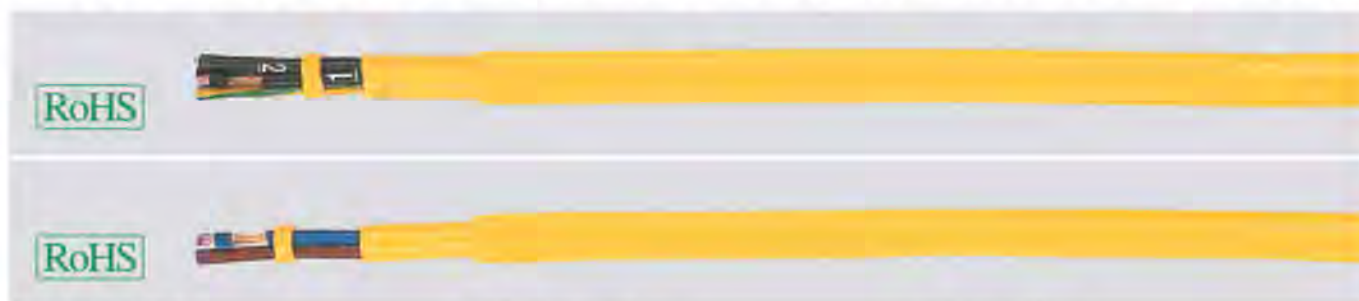
JB/OB-version: cores colour coded

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22250	2 x 0,75	6,4	14,4	50,0	19
22251	3 G 0,75	6,8	21,6	70,0	19
22252	4 G 0,75	7,3	28,8	80,0	19
22253	5 G 0,75	8,2	36,0	100,0	19
22254	2 x 1	7,2	19,2	63,0	18
22255	3 G 1	7,6	29,0	76,0	18
22256	4 G 1	8,0	38,0	95,0	18
22257	5 G 1	8,8	48,0	120,0	18
22258	2 x 1,5	7,8	29,0	80,0	16
22259	3 G 1,5	8,3	43,0	105,0	16
22260	4 G 1,5	9,0	58,0	135,0	16
22261	5 G 1,5	9,7	72,0	158,0	16
22262	2 x 2,5	9,2	48,0	150,0	14
22263	3 G 2,5	9,6	72,0	173,0	14
22264	4 G 2,5	11,0	96,0	203,0	14
22265	5 G 2,5	12,0	120,0	253,0	14
22266	4 G 4	13,2	154,0	300,0	12
22267	5 G 4	14,8	192,0	370,0	12
22268	4 G 6	15,4	230,0	480,0	10
22269	5 G 6	17,0	288,0	583,0	10
22270	4 G 10	20,8	384,0	740,0	8
22271	5 G 10	22,6	480,0	920,0	8
22272	4 G 16	23,0	614,0	1100,0	6
22273	5 G 16	27,4	768,0	1400,0	6
22044	4 G 25	30,0	960,0	1600,0	4
22045	5 G 25	32,2	1200,0	2000,0	4
22046	4 G 35	33,0	1344,0	2100,0	2



Flexible Control Cables / PUR Control Cables

PUR-YELLOW PVC-inner sheath, high abrasion, coolant resistant, meter marking EAC



Technical data

- Special-PVC/PUR control cable adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 3000 V
- **Breakdown voltage** min. 6000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cI/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type TI2 adapted to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293-308
- up to 5 cores coloured
- from 6 cores, black with continuous white numbering
- GN-YE conductor, 3 cores and above
- Cores stranded in layers with optimal lay-length
- Inner sheath of PVC guarantees easy cable stripping
- Outer sheath of PUR compound type TMPU to DIN EN 50363-10-2
- Sheath colour yellow (RAL 1021) also available in other colours on request
- with meter marking

Properties

- High flexibility at low temperature
- High abrasion resistance
- **Resistant to**
Oils and fats
Non-alcoholic fuels and kerosene
Atmospheric influences
UV-radiation
Oxygene and ozone
Microbes and rotting
Sea and waste water
Vibrations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OB).
- Art.no. 22212 = JB-version.
- Art.no. 22220 = JZ-version.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

Robust control cable with an outstanding resistance to oil and abrasion. Suitable for use in tool making and machine industries, steel works, on building sites and in the oil and coal industries. The cable can also be used for portable tools, etc. To be recommended if the cable comes into contact with chemical agents.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22200	2 x 0,75	6,4	14,4	50,0	19
22201	3 G 0,75	6,8	21,6	70,0	19
22202	4 G 0,75	7,3	28,8	80,0	19
22203	5 G 0,75	8,2	36,0	100,0	19
22204	7 G 0,75	9,2	50,0	140,0	19
22205	2 x 1	7,2	19,2	63,0	18
22206	3 G 1	7,6	29,0	76,0	18
22207	4 G 1	8,0	38,0	95,0	18
22208	5 G 1	8,8	48,0	120,0	18
22209	7 G 1	10,0	67,0	170,0	18
22210	2 x 1,5	7,8	29,0	80,0	16
22211	3 G 1,5	8,3	43,0	105,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22212	4 G 1,5	9,0	58,0	135,0	16
22220	4 G 1,5	9,7	58,0	135,0	16
22213	5 G 1,5	11,2	72,0	158,0	16
22214	7 G 1,5	9,2	101,0	221,0	16
22215	2 x 2,5	9,6	48,0	150,0	14
22216	3 G 2,5	11,0	72,0	173,0	14
22217	4 G 2,5	12,0	96,0	203,0	14
22218	5 G 2,5	13,7	120,0	253,0	14
22219	7 G 2,5	9,0	168,0	356,0	14
22221	4 G 4	14,6	153,6	310,0	12
22222	5 G 4	14,8	192,0	370,0	12
22233	4 G 35	33,0	1344,0	2100,0	7

Dimensions and specifications may be changed without prior notice. (RA02)

H05 BQ-F / H07 BQ-F (NGMH11YÖ)



Technical data

- EPR/PUR-insulated power cable according to DIN VDE 0282 part 10 and HD 22.10 S1
- Temperature range**
flexing -40 °C to +80 °C
fixed installation -50 °C to +90 °C
- Permissible **operating temperature** at conductor 90 °C
- Nominal voltage** a.c., 50 Hz
H05BQ-F: U_0/U 300/500 V up to 1 mm²
H07BQ-F: U_0/U 450/750 V as of 1,5 mm²
- Test voltage**
H05BQ-F: 2000 V up to 1 mm²
H07BQ-F: 2500 V as of 1,5 mm²
- Minimum bending radius**
flexing 5x cable \varnothing
fixed installation 3x cable \varnothing
- Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Plain copper conductor, stranded according to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and HD 383 cl. 5
- Insulating jacket of rubber, compound EI6 according to DIN VDE 0282 part 1
- Core identification according to DIN VDE 0293-308 and HD308 S2
- Green-yellow earth core in the outer layer
- Cores stranded in layers with optimal lay-length (inner fill compound permissible)
- PUR-insulated outer jacket TPU, to DIN EN 50363-10-2
- Colour orange (RAL 2003)
- Minimum imprinted designation BQ

Properties

- Abrasion resistant
- Notch resistant
- Resistant to tearing and cutting
- Resistant to**
Oils, fats, Petrol
Water and weathering effects
Oxygene and ozone
UV-radiation, Hydrolysis and Microbial attack
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow earth core;
x = without green-yellow earth core.
- 7 G 1,5 mm² and 12 G 1,5 mm² are not contained in VDE, adapted to VDE, (H)07BQ.

Application

These cables can be used for medium mechanical loads in dry, damp or wet environments, e.g. for connecting agricultural and commercial equipment and heaters provided there is no danger of contact with the hot parts or by radiation of heat. These robust and flexible cables are used for electrical tools such as drills and hand-held circular saws, as well as for portable motors and machinery in agriculture, at building sites, docks and refrigeration plants.

☞ The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

H05BQ-F

Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22050	2 x 0,75	5,7 - 7,4	14,4	52,0	18
22051	3 G 0,75	6,2 - 8,1	21,6	63,0	18
22052	4 G 0,75	6,8 - 8,8	29,0	80,0	18
22053	5 G 0,75	7,6 - 9,9	36,0	96,0	18
22054	2 x 1	6,1 - 8,0	19,2	59,0	17
22055	3 G 1	6,5 - 8,5	29,0	71,0	17
22056	4 G 1	7,1 - 9,3	38,4	89,0	17
22057	5 G 1	8,0 - 10,3	48,0	112,0	17

H07BQ-F

Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22058	2 x 1,5	7,6 - 9,8	29,0	92,0	16
22059	3 G 1,5	8,0 - 10,4	43,0	109,0	16
22060	4 G 1,5	9,0 - 11,6	58,0	145,0	16
22061	5 G 1,5	9,8 - 12,7	72,0	169,0	16
22062	7 G 1,5	12,5 - 16,3	101,0	230,0	16
22063	12 G 1,5	16,5 - 21,5	173,0	398,0	16
22064	2 x 2,5	9,0 - 11,6	48,0	121,0	14
22065	3 G 2,5	9,6 - 12,4	72,0	164,0	14
22066	4 G 2,5	10,7 - 13,8	96,0	207,0	14
22067	5 G 2,5	11,9 - 15,3	120,0	262,0	14
22072	2 x 4	10,6 - 13,7	77,0	194,0	12
22068	3 G 4	11,3 - 14,5	115,0	224,0	12
22069	4 G 4	12,7 - 16,2	154,0	327,0	12
22080	5 G 4	14,1 - 17,9	192,0	415,0	12
22073	2 x 6	11,8 - 15,1	115,0	311,0	10
22070	3 G 6	12,8 - 16,3	173,0	310,0	10
22071	4 G 6	14,2 - 18,1	230,0	496,0	10
22081	5 G 6	15,7 - 20,0	288,0	586,0	10

H07BQ-F

Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22074	2 x 10	15,6 - 19,9	192,0	428,0	8
22076	3 G 10	16,8 - 21,4	288,0	640,0	8
22078	4 G 10	18,6 - 23,6	384,0	738,0	8
22082	5 G 10	20,4 - 25,9	480,0	968,0	8
22075	2 x 16	17,9 - 22,8	307,0	600,0	6
22077	3 G 16	19,5 - 24,7	461,0	758,0	6
22079	4 G 16	21,3 - 27,0	614,0	1187,0	6
22083	5 G 16	23,7 - 30,0	768,0	1475,0	6
22828	4 G 25	26,8 - 31,9	960,0	1550,0	16
22829	5 G 25	29,0 - 35,0	1220,0	1920,0	16
22830	4 G 35	29,0 - 35,0	1344,0	2120,0	16
22831	5 G 35	33,3 - 39,7	1680,0	2600,0	16
22832	4 G 50	34,8 - 41,2	1920,0	2920,0	16
22833	5 G 50	39,7 - 46,7	2400,0	3700,0	16
22835	4 G 70	39,5 - 46,5	2688,0	3900,0	16
22836	5 G 70	46,3 - 53,3	3368,0	5020,0	16
22837	4 G 95	45,5 - 52,5	3648,0	5150,0	16
22838	5 G 95	52,0 - 60,0	4560,0	6520,0	16
22839	4 G 120	51,5 - 60,5	4608,0	6550,0	16
22840	5 G 120	56,7 - 65,7	5760,0	8050,0	16
22841	4 G 150	56,3 - 65,3	5760,0	7950,0	16
22842	5 G 185	59,5 - 68,5	7104,0	9350,0	16
22843	4 G 240	68,3 - 77,3	9216,0	12200,0	16



Flexible Control Cables / PUR Control Cables

H05BQ-F / H07BQ-F (NGMH11YÖ)



Technical data

- EPR/PUR-insulated power cable acc. to DIN VDE 0285-525-2-21 / DIN EN 50525-2-21
- **Temperature range**
flexing -40°C to +80°C
fixed installation -50°C to +90°C
- **Permissible operating temperature**
at conductor +90°C
- **Nominal voltage**
H05BQ-F U₀/U 300/500 V
H07BQ-F U₀/U 450/750 V
- **Test voltage**
H05BQ-F 2000 V
H07BQ-F 2500 V
- **Minimum bending radius**
flexing 5x cable Ø
fixed installation 3x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of rubber compound type E16 to DIN VDE 0207-363-1 / DIN EN 50363-1
- Core identification to DIN VDE 0293-308
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length (inner fill compound permissible *)
- Outer sheath of PUR compound type TMPU to DIN EN 50363-10-2
- Sheath colour orange (RAL 2003)

Properties

- Abrasion resistant
- Notch resistant
- Resistant to tearing and cutting
- **Resistant to**
Oils, fats, Petrol
Water and weathering effects
Oxygene and ozone
UV-radiation, Hydrolysis and Microbial attack
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor
- adapted to VDE
7G1,5 mm², 12G1,5 mm² and cross-section > 16 mm² designation 07BQ-F
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- *) Version with filler compound

Application

These cables can be used for medium mechanical loads in dry, damp or wet environments, e. g. for connecting agricultural and commercial equipment and heaters provided there is no danger of contact with the hot parts or by radiation of heat. These robust and flexible cables are used for electrical tools such as drills and hand-held circular saws, as well as for portable motors and machinery in agriculture, at building sites, docks and refrigeration plants.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

H05BQ-F

Part no.	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22050	2 x 0,75	5,7 - 7,4	14,4	52,0	19
22051	3 G 0,75	6,2 - 8,1	21,6	63,0	19
22052	4 G 0,75	6,8 - 8,8	29,0	80,0	19
22053	5 G 0,75	7,6 - 9,9	36,0	96,0	19
22054	2 x 1	6,1 - 8,0	19,2	59,0	18
22055	3 G 1	6,5 - 8,5	29,0	71,0	18
22056	4 G 1	7,1 - 9,3	38,4	89,0	18
22057	5 G 1	8,0 - 10,3	48,0	112,0	18

H07BQ-F

Part no.	*)	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22058	220958	2 x 1,5	7,6 - 9,8	29,0	92,0	16
22059	220959	3 G 1,5	8,0 - 10,4	43,0	109,0	16
22060	220960	4 G 1,5	9,0 - 11,6	58,0	145,0	16
22061	220961	5 G 1,5	9,8 - 12,7	72,0	169,0	16
22062	220962	7 G 1,5	12,2 - 15,1	101,0	230,0	16
22063	220963	12 G 1,5	15,0 - 18,4	173,0	398,0	16
22064	220964	2 x 2,5	9,0 - 11,6	48,0	121,0	14
22065	220965	3 G 2,5	9,6 - 12,4	72,0	164,0	14
22066	220966	4 G 2,5	10,7 - 13,8	96,0	207,0	14
22067	220967	5 G 2,5	11,9 - 16,3	120,0	262,0	14
22072	220972	2 x 4	10,6 - 13,7	77,0	194,0	12
22068	220968	3 G 4	11,3 - 14,5	115,0	224,0	12
22069	220969	4 G 4	12,7 - 16,2	154,0	327,0	12
22080	220980	5 G 4	14,1 - 17,9	192,0	415,0	12
22073	220973	2 x 6	11,8 - 15,1	115,0	311,0	10
22070	220970	3 G 6	12,8 - 16,3	173,0	310,0	10
22071	220971	4 G 6	14,2 - 18,1	230,0	496,0	10
22081	220981	5 G 6	15,7 - 20,0	288,0	586,0	10

H07BQ-F

Part no.	*)	No. cores x cross-sec. mm ²	Outer Ø min. - max. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22074	220974	2 x 10	15,6 - 19,9	192,0	428,0	8
22076	220976	3 G 10	16,8 - 21,4	288,0	640,0	8
22078	220978	4 G 10	18,6 - 23,6	384,0	738,0	8
22082	220982	5 G 10	20,4 - 25,9	480,0	968,0	8
22075	220975	2 x 16	17,9 - 22,8	307,0	600,0	6
22077	220977	3 G 16	19,5 - 24,7	461,0	758,0	6
22079	220979	4 G 16	21,3 - 27,0	614,0	1187,0	6
22083	220983	5 G 16	23,7 - 30,0	768,0	1475,0	6
22828	228928	4 G 25	26,7 - 32,6	960,0	1550,0	4
22829	228929	5 G 25	29,6 - 36,1	1220,0	1920,0	4
22830	228930	4 G 35	31,3 - 38,2	1344,0	2120,0	2
22831	228931	5 G 35	34,5 - 42,0	1680,0	2600,0	2
22832	228932	4 G 50	34,9 - 42,6	1920,0	2920,0	1
22833	228933	5 G 50	38,6 - 47,0	2400,0	3700,0	1
22835	228935	4 G 70	38,9 - 47,3	2688,0	3900,0	2/0
22836	228936	5 G 70	43,0 - 52,3	3368,0	5020,0	2/0
22837	228937	4 G 95	44,9 - 54,6	3648,0	5150,0	3/0
22838	228938	5 G 95	49,7 - 60,4	4560,0	6520,0	3/0
22839	228939	4 G 120	47,9 - 58,2	4608,0	6550,0	4/0
22840	228940	5 G 120	53,1 - 64,5	5760,0	8050,0	4/0
22841	228941	4 G 150	53,5 - 65,0	5760,0	7950,0	300 kcmil
22842	228942	5 G 185	65,6 - 79,6	7104,0	9350,0	350 kcmil
22843	228943	4 G 240	68,1 - 82,6	9216,0	12200,0	500 kcmil



Flexible Control Cables / PUR Control Cables

UNIPUR® flexible at low temperature, with customer markings, halogen-free,
wear resistant, robust, meter marking**Technical data**

- Spezial TPE/PUR connecting cable adapted to DIN VDE 0285-525-2-21 / DIN EN 50525-2-21
- **Temperature range** flexing -40°C to +90°C
- **Nominal voltage** up to 1 mm² U₀/U 300/500 V from 1,5 mm² U₀/U 450/750 V
- **Test voltage** 3000 V
- **Minimum bending radius** flexing 10x cable Ø fixed installation 5x cable Ø
- **Radiation resistance** up to 100x10⁵ cl/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of thermoplastic elastomere (TPE)
- Core identification to DIN VDE 0293-308 - up to 5 cores coloured - from 6 cores, black with continuous white numbering
- GN-YE conductor, 3 cores and above
- Cores stranded in layers with optimal lay-length
- Outer sheath of PUR compound type Tmpu adapted to DIN EN 50363-10-2
- Sheath colour by request
- with meter marking

Properties

- Abrasion resistant, Notch resistant
- Resistant to tearing and cutting
- Good flexibility at low temperatures down to -40°C
- **Resistant to** Oils and fats Water and weathering effects Ozone and oxygen UV-radiation Hydrolysis Microbial attack
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor x = without green-yellow conductor (OB).
- Please add the individual part no. for order with the identification colour code:
0 = approx.RAL 5015 blue
1 = approx.RAL 6018 green
2 = approx.RAL 8003 brown
3 = approx.RAL 1021 yellow*
4 = approx.RAL 3000 red
5 = approx.RAL 2003 orange
6 = approx.RAL 4005 violet
7 = approx.RAL 7001/7032 grey
Further colours on request.
*with yellow outer sheath as storage types
- VDE-Reg.No. cable with 2-7 cores
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
UNIPUR®-CP, confer page 82

Application

These robust and flexible cables are used for electrical tools such as drills, hand-held circular saws, and garden equipment as well as for portable motors and machinery in agriculture, at building sites, for hobbies, docks and refrigeration plants.

Extremely good mechanical characteristics e. g. compressive load, good abrasion and near-resistant.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
1812x	2 x 0,5	5,8	9,6	40,0	20	1822x	2 x 0,75	6,3	14,0	52,0	19
1813x	3 G 0,5	6,1	14,4	47,0	20	1823x	3 G 0,75	6,9	21,6	62,0	19
1814x	4 G 0,5	6,7	19,0	57,0	20	1824x	4 G 0,75	7,5	28,8	80,0	19
1815x	5 G 0,5	7,5	24,0	65,0	20	1825x	5 G 0,75	8,3	36,0	94,0	19
1816x	7 G 0,5	9,0	33,6	94,0	20	1826x	6 G 0,75	9,0	43,0	111,0	19
1817x	12 G 0,5	10,7	58,0	150,0	20	1827x	7 G 0,75	9,8	50,0	160,0	19
1818x	18 G 0,5	13,0	86,0	208,0	20	1828x	12 G 0,75	11,6	86,0	191,0	19
1819x	25 G 0,5	15,6	120,0	276,0	20	1829x	18 G 0,75	14,1	130,0	267,0	19
1820x	34 G 0,5	17,9	163,0	393,0	20	1830x	25 G 0,75	17,0	180,0	376,0	19
1821x	41 G 0,5	19,6	197,0	460,0	20	1831x	34 G 0,75	19,5	245,0	506,0	19
						1832x	41 G 0,75	21,2	296,0	596,0	19

Continuation ▶



Flexible Control Cables / PUR Control Cables

UNIPUR® flexible at low temperature, with customer markings, halogen-free,
wear resistant, robust, meter marking



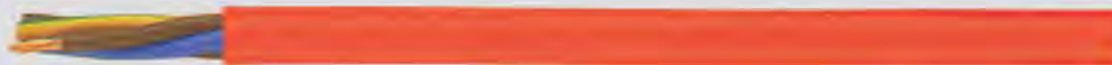
Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
1833x	2 x 1	6,8	19,2	59,0	18	1855x	2 x 2,5	9,9	48,0	120,0	14
1834x	3 G 1	7,2	29,0	70,0	18	1856x	3 G 2,5	10,5	72,0	148,0	14
1835x	4 G 1	7,8	38,0	87,0	18	1857x	4 G 2,5	11,6	96,0	184,0	14
1836x	5 G 1	8,8	48,0	100,0	18	1858x	5 G 2,5	13,0	120,0	224,0	14
1837x	6 G 1	9,7	58,0	131,0	18	1859x	7 G 2,5	15,5	168,0	301,0	14
1838x	7 G 1	10,6	67,0	182,0	18	1860x	12 G 2,5	19,2	288,0	489,0	14
1839x	12 G 1	12,6	115,0	230,0	18	1861x	2 x 4	11,5	77,0	149,0	12
1840x	18 G 1	15,3	173,0	325,0	18	1862x	3 G 4	12,2	115,0	240,0	12
1841x	25 G 1	18,3	240,0	476,0	18	1863x	4 G 4	13,5	154,0	297,0	12
1842x	34 G 1	21,0	326,0	616,0	18	1864x	5 G 4	15,0	192,0	360,0	12
1843x	41 G 1	22,9	394,0	724,0	18	1865x	7 G 4	18,3	268,0	540,0	12
1844x	2 x 1,5	8,3	29,0	92,0	16	1866x	2 x 6	13,1	115,0	240,0	10
1845x	3 G 1,5	8,8	43,0	108,0	16	1867x	3 G 6	14,1	173,0	370,0	10
1846x	4 G 1,5	9,7	58,0	144,0	16	1868x	4 G 6	15,6	230,0	472,0	10
1847x	5 G 1,5	10,7	72,0	168,0	16	1869x	5 G 6	17,3	288,0	581,0	10
1848x	6 G 1,5	11,8	86,0	201,0	16	1870x	7 G 6	21,0	403,0	698,0	10
1849x	7 G 1,5	12,9	101,0	230,0	16	1871x	3 G 10	18,0	288,0	560,0	8
1850x	12 G 1,5	15,5	173,0	306,0	16	1872x	4 G 10	20,1	384,0	718,0	8
1851x	18 G 1,5	18,7	259,0	464,0	16	1873x	5 G 10	22,2	480,0	896,0	8
1852x	25 G 1,5	22,9	360,0	641,0	16	1874x	3 G 16	23,4	461,0	940,0	6
1853x	34 G 1,5	25,9	490,0	857,0	16	1875x	4 G 16	25,5	614,0	1068,0	6
1854x	41 G 1,5	28,3	590,0	1010,0	16	1876x	5 G 16	28,3	768,0	1810,0	6

Dimensions and specifications may be changed without prior notice. (RA02)



Flexible Control Cables / PUR Control Cables

PUR-750 halogen-free, meter marking



Technical data

- Special-PUR control cable adapted to DIN VDE 0285 525-2-21 / DIN EN 50525-2-21
- **Temperature range**
flexing -40°C to +80°C
(up to +100°C for short periods)
- **Nominal voltage**
up to 1 mm² U₀/U 300/500 V
from 1,5 mm² U₀/U 450/750 V
- **Test voltage**
up to 1 mm² 2000 V
from 1,5 mm² 2500 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation PUR
- Core identification to DIN VDE 0293-308
- for 2 cores, BN, BU
- up to 5 cores coloured
- from 6 cores, black with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of halogen-free PUR
- Sheath colour orange (RAL 2004)
- with meter marking

Properties

- High flexibility at low temperature
- Usable for foodstuffs
- High abrasion resistance
- **Resistant to**
Oils and fats
Non-alcoholic fuels and kerosene
Atmospheric influences, UV-radiation
Oxygene and ozone
Microbes and rotting
Sea and waste water vibrations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

Especially suited for installation in all areas demanding good performance under extreme conditions. These cable types have been successfully in use in areas such as steel works, heating and air-conditioning systems, in machinery and industrial plant equipment and on building sites etc.

☑ The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. approx. weight kg / km	Weight approx. kg / km	AWG-No.
49700	2 x 0,75	6,3	15,0	44,0	19
49701	3 G 0,75	6,8	22,0	55,0	19
49702	4 G 0,75	7,4	29,0	70,0	19
49703	5 G 0,75	8,3	36,0	91,0	19
49704	7 G 0,75	9,7	50,0	130,0	19
49705	12 G 0,75	12,1	86,0	192,0	19
49706	18 G 0,75	14,2	130,0	290,0	19
49707	25 G 0,75	17,6	180,0	405,0	19
49708	2 x 1	6,8	20,0	50,0	18
49709	3 G 1	7,2	29,0	65,0	18
49710	4 G 1	7,8	38,0	87,0	18
49711	5 G 1	8,8	48,0	106,0	18
49712	6 G 1	9,5	58,0	135,0	18
49713	7 G 1	10,4	67,0	160,0	18
49714	8 G 1	11,4	77,0	185,0	18
49715	10 G 1	12,8	96,0	210,0	18
49716	12 G 1	12,8	115,0	240,0	18
49717	16 G 1	14,4	154,0	310,0	18
49718	18 G 1	15,3	173,0	353,0	18
49719	20 G 1	16,4	192,0	390,0	18
49720	25 G 1	18,8	240,0	495,0	18
49721	2 x 1,5	8,2	29,0	70,0	16
49722	3 G 1,5	8,7	43,0	95,0	16
49723	4 G 1,5	9,7	58,0	120,0	16
49724	5 G 1,5	10,6	72,0	164,0	16
49725	7 G 1,5	12,8	101,0	210,0	16
49726	10 G 1,5	15,8	150,0	290,0	16
49727	12 G 1,5	15,8	172,0	340,0	16
49728	16 G 1,5	17,9	230,0	440,0	16
49729	18 G 1,5	18,8	259,0	508,0	16
49730	20 G 1,5	20,0	300,0	560,0	16
49731	25 G 1,5	23,5	360,0	722,0	16
49732	2 x 2,5	9,8	48,0	110,0	14
49733	3 G 2,5	10,5	72,0	150,0	14
49734	4 G 2,5	11,6	96,0	180,0	14
49735	5 G 2,5	13,0	120,0	240,0	14
49736	7 G 2,5	15,5	168,0	340,0	14
49737	12 G 2,5	19,3	288,0	520,0	14
49738	16 G 2,5	21,6	394,0	680,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. approx. weight kg / km	Weight approx. kg / km	AWG-No.
49739	18 G 2,5	23,0	432,0	778,0	14
49740	20 G 2,5	24,4	480,0	860,0	14
49741	25 G 2,5	28,5	600,0	1083,0	14
49742	3 G 4	12,2	115,0	220,0	12
49743	4 G 4	13,4	154,0	280,0	12
49744	5 G 4	15,1	192,0	350,0	12
49745	7 G 4	18,2	269,0	470,0	12
49746	4 G 6	15,8	230,0	400,0	10
49747	5 G 6	17,3	288,0	500,0	10
49748	7 G 6	21,0	403,0	700,0	10
49749	4 G 10	20,4	384,0	640,0	8
49750	5 G 10	22,5	480,0	800,0	8
49751	7 G 10	26,6	672,0	1180,0	8
49752	4 G 16	23,3	614,0	920,0	6
49753	5 G 16	25,9	768,0	1180,0	6
49754	4 G 25	27,3	960,0	1400,0	4
49755	5 G 25	30,4	1200,0	1740,0	4
49756	4 G 35	31,0	1344,0	1870,0	2
49757	5 G 35	34,8	1680,0	2320,0	2
49758	4 G 50	36,8	1920,0	2700,0	1
49759	5 G 50	41,2	2400,0	3300,0	1
49760	4 G 70	43,2	2688,0	3700,0	2/0
49761	5 G 70	48,2	3660,0	4900,0	2/0
49918	4 G 95	48,7	3648,0	4850,0	3/0
49762	5 G 95	54,5	4560,0	6000,0	3/0
49763	4 G 120	54,9	4610,0	6005,0	4/0



Flexible Control Cables / PUR Control Cables

JZ-500-FC-PUR EMC-preferred type, tear and coolant resistant, screened, without inner sheath, meter marking



Technical data

- Special-PUR control cable adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -10°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage** 3000 V
- **Breakdown voltage** min. 6000 V
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable \varnothing
fixed installation 5x cable \varnothing
- **Radiation resistance**
up to 100×10^6 cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Separating foil
- Tinned copper braided screen, approx. 85% coverage
- Core wrapping of fleece guarantees easy cable stripping
- Outer sheath from special **full polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour grey (RAL 7001) also available in other colours on request
- with meter marking

Properties

- **Resistant to**
UV-radiation, Oxygen, Ozone, Hydrolyse and Microbes
- Low adhesion, matt surface
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm^2 .
- unscreened analogue type:
JZ-500-PUR, confer page 67

Application

Extremely robust cable noted for its good abrasion resistance and notch resistance. Due to its resistance to coolant emulsions, this cable is well suited for use in mechanical engineering, tool making, and systems engineering, and in steel mills and rolling mills in particularly critical areas. Good flexibility means that installation is quick and easy. Suitable for medium mechanical stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms, and in open air (fixed installation). The dense screening assures interference-free transmission of all signals and impulses. An ideal interference-free control cable for the above applications.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm^2	Outer \varnothing approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm^2	Outer \varnothing approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
23414	2 x 0,5	5,7	35,0	47,0	20	23429	2 x 0,75	6,1	40,0	60,0	19
23415	3 G 0,5	5,9	42,0	57,0	20	23430	3 G 0,75	6,3	52,0	67,0	19
23416	3 x 0,5	5,9	42,0	57,0	20	23431	3 x 0,75	6,3	52,0	67,0	19
23417	4 G 0,5	6,4	47,0	60,0	20	23432	4 G 0,75	6,8	60,0	76,0	19
23418	4 x 0,5	6,4	47,0	60,0	20	23433	4 x 0,75	6,8	60,0	76,0	19
23419	5 G 0,5	6,9	56,0	75,0	20	23435	5 x 0,75	7,4	71,0	92,0	19
23420	5 x 0,5	6,9	56,0	75,0	20	23434	5 G 0,75	7,4	71,0	92,0	19
23421	7 G 0,5	7,6	69,0	97,0	20	23437	7 x 0,75	8,2	91,0	131,0	19
23422	7 x 0,5	7,6	69,0	97,0	20	23436	7 G 0,75	8,2	91,0	131,0	19
23423	10 G 0,5	9,6	94,0	133,0	20	23438	10 G 0,75	10,3	137,0	180,0	19
23424	12 G 0,5	9,7	108,0	158,0	20	23439	12 G 0,75	10,5	142,0	204,0	19
23425	18 G 0,5	11,5	145,0	218,0	20	23440	18 G 0,75	12,7	212,0	290,0	19
23426	25 G 0,5	13,7	240,0	315,0	20	23441	25 G 0,75	15,0	281,0	413,0	19
23427	34 G 0,5	15,5	312,0	420,0	20	23442	34 G 0,75	17,2	345,0	492,0	19
23428	42 G 0,5	16,9	355,0	487,0	20	23443	42 G 0,75	18,8	407,0	624,0	19

Continuation ▶



Flexible Control Cables / PUR Control Cables

JZ-500-FC-PUR

EMC-preferred type, tear and coolant resistant, screened, without inner sheath, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
23444	2 x 1	6,4	50,0	66,0	18
23445	3 G 1	6,7	60,0	82,0	18
23446	3 x 1	6,7	60,0	82,0	18
23447	4 G 1	7,2	71,0	100,0	18
23448	4 x 1	7,2	71,0	100,0	18
23449	5 G 1	8,0	88,0	128,0	18
23450	5 x 1	8,0	88,0	128,0	18
23451	7 G 1	8,7	111,0	157,0	18
23452	7 x 1	8,7	111,0	157,0	18
23453	10 G 1	11,2	150,0	230,0	18
23454	12 G 1	11,4	184,0	262,0	18
23455	18 G 1	13,6	260,0	381,0	18
23456	25 G 1	16,2	349,0	535,0	18
23457	34 G 1	18,5	486,0	740,0	18
23458	42 G 1	20,2	545,0	867,0	18
23459	50 G 1	22,0	625,0	1027,0	18
23460	2 x 1,5	7,0	63,0	87,0	16
23461	3 G 1,5	7,4	80,0	102,0	16
23462	3 x 1,5	7,4	80,0	102,0	16
23463	4 G 1,5	8,1	97,0	127,0	16
23464	4 x 1,5	8,1	97,0	127,0	16
23465	5 G 1,5	9,0	119,0	159,0	16
23466	5 x 1,5	9,0	119,0	159,0	16
23467	7 G 1,5	9,8	147,0	207,0	16
23468	7 x 1,5	9,8	147,0	207,0	16
23469	12 G 1,5	12,8	267,0	340,0	16
23470	18 G 1,5	15,6	374,0	480,0	16
23471	25 G 1,5	18,4	526,0	704,0	16
23472	30 G 1,5	19,6	555,0	817,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
23473	2 x 2,5	8,4	96,0	131,0	14
23474	3 G 2,5	8,8	144,0	168,0	14
23475	4 G 2,5	9,8	148,0	194,0	14
23476	5 G 2,5	10,8	181,0	222,0	14
23477	7 G 2,5	11,9	255,0	345,0	14
23478	12 G 2,5	15,8	441,0	570,0	14
23479	4 G 4	11,6	230,0	310,0	12
23480	5 G 4	12,9	273,0	386,0	12
23481	7 G 4	14,2	316,0	498,0	12
23482	4 G 6	13,8	305,0	414,0	10
23483	5 G 6	15,4	439,0	510,0	10
23484	7 G 6	17,0	505,0	673,0	10
23485	4 G 10	17,2	535,0	591,0	8
23486	5 G 10	19,1	592,0	768,0	8
23487	7 G 10	21,2	810,0	976,0	8
23488	4 G 16	20,3	740,0	1196,0	6

Dimensions and specifications may be changed without prior notice. (RA02)



Flexible Control Cables / PUR Control Cables

F-C-PURö-JZ

tear and coolant resistant, Cu-screened, without inner sheath, increased oil resistant, EMC-preferred type, meter marking



Technical data

- Special-PUR control cable adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -20°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage** 3000 V
- **Breakdown voltage** min. 6000 V
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 100×10^6 cl/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of **oil resistant** PVC compound type T12 adapted to DIN VDE 0207-363-3 / DIN EN 50363-3 for better sliding abilities
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Separating foil
- Tinned copper braided screen, approx. 85% coverage
- Core wrapping of fleece guarantees easy cable stripping
- Outer sheath of special **full-polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour grey (RAL 7001) also available in other colours on request
- with meter marking

Properties

- **Resistant to**
UV-Radiation
Oxygene
Ozone
Hydrolysis
Microbes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm^2 .
- unscreened analogue type:
PURö-JZ, confer page 68

Application

Extremely robust control cable characterised by high abrasion and notch resistance properties. Used for critical areas in such applications as machinery, tooling and plant construction, in rolling mills and steel works because of the resistance to mineral oils and to coolant emulsions in particular. Rapid and safe installation assured by the good flexibility of the cable. Suitable for outdoor installation.

An interference-free transmission of signals and pulses is assured by the high screening density. The ideal interference-protected control cable for such applications as given above.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21200	2 x 0,5	5,7	35,0	44,0	20	21227	2 x 0,75	6,1	40,0	60,0	19
21201	3 G 0,5	5,9	42,0	56,0	20	21228	3 G 0,75	6,3	52,0	67,0	19
21202	4 G 0,5	6,4	47,0	60,0	20	21229	4 G 0,75	6,8	60,0	76,0	19
21203	5 G 0,5	6,9	56,0	75,0	20	21230	5 G 0,75	7,4	71,0	92,0	19
21205	7 G 0,5	7,6	69,0	97,0	20	21232	7 G 0,75	8,2	91,0	131,0	19
21207	10 G 0,5	9,6	94,0	133,0	20	21234	10 G 0,75	10,3	137,0	180,0	19
21208	12 G 0,5	9,7	108,0	158,0	20	21235	12 G 0,75	10,5	142,0	204,0	19
21209	14 G 0,5	10,2	116,0	190,0	20	21236	14 G 0,75	11,3	180,0	226,0	19
21211	18 G 0,5	11,5	145,0	218,0	20	21238	18 G 0,75	12,7	212,0	290,0	19
21213	21 G 0,5	12,3	188,0	252,0	20	21240	21 G 0,75	13,6	246,0	376,0	19
21215	25 G 0,5	13,7	240,0	315,0	20	21242	25 G 0,75	15,0	281,0	413,0	19
21217	30 G 0,5	14,4	295,0	362,0	20	21245	32 G 0,75	16,7	342,0	485,0	19
21220	36 G 0,5	15,6	318,0	447,0	20	21249	41 G 0,75	18,2	400,0	611,0	19
21221	40 G 0,5	16,4	343,0	475,0	20	21251	50 G 0,75	20,3	461,0	775,0	19
21224	50 G 0,5	18,5	406,0	572,0	20						



Flexible Control Cables / PUR Control Cables

F-C-PURÖ-JZ tear and coolant resistant, Cu-screened, without inner sheath, increased
oil resistant, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21253	2 x 1	6,4	50,0	66,0	18
21254	3 G 1	6,7	60,0	82,0	18
21255	4 G 1	7,2	71,0	100,0	18
21256	5 G 1	8,0	88,0	128,0	18
21257	6 G 1	8,7	97,0	145,0	18
21258	7 G 1	8,7	111,0	157,0	18
21259	8 G 1	9,6	127,0	198,0	18
21261	10 G 1	11,2	150,0	230,0	18
21262	12 G 1	11,4	184,0	262,0	18
21263	14 G 1	12,0	196,0	302,0	18
21264	16 G 1	12,8	209,0	345,0	18
21265	18 G 1	13,6	260,0	381,0	18
21267	21 G 1	14,3	319,0	480,0	18
21268	25 G 1	16,2	349,0	535,0	18
21273	34 G 1	18,5	486,0	740,0	18
21276	41 G 1	19,5	531,0	855,0	18
21278	50 G 1	22,0	625,0	1027,0	18
21280	2 x 1,5	7,0	63,0	87,0	16
21281	3 G 1,5	7,4	80,0	102,0	16
21282	4 G 1,5	8,1	97,0	127,0	16
21283	5 G 1,5	9,0	119,0	159,0	16
21285	7 G 1,5	9,8	147,0	207,0	16
21286	8 G 1,5	10,8	170,0	245,0	16
21287	10 G 1,5	12,6	193,0	313,0	16
21288	12 G 1,5	12,8	267,0	340,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21290	14 G 1,5	13,5	283,0	384,0	16
21291	16 G 1,5	14,6	315,0	425,0	16
21292	18 G 1,5	15,6	374,0	480,0	16
21295	21 G 1,5	16,6	425,0	563,0	16
21296	25 G 1,5	18,5	526,0	704,0	16
21297	34 G 1,5	21,2	629,0	870,0	16
21298	42 G 1,5	22,2	819,0	1040,0	16
21299	50 G 1,5	25,0	885,0	1292,0	16
21300	2 x 2,5	8,4	96,0	131,0	14
21301	3 G 2,5	8,8	144,0	168,0	14
21302	4 G 2,5	9,8	148,0	194,0	14
21303	5 G 2,5	10,8	181,0	222,0	14
21304	7 G 2,5	11,9	255,0	345,0	14
21305	10 G 2,5	15,5	340,0	462,0	14
21306	12 G 2,5	15,8	441,0	570,0	14
21313	2 x 4	10,0	120,0	187,0	12
21314	3 G 4	10,6	174,0	243,0	12
21315	4 G 4	11,6	230,0	310,0	12
21316	5 G 4	12,8	273,0	386,0	12
21317	7 G 4	14,2	316,0	498,0	12
21319	3 G 6	12,5	240,0	333,0	10
21320	4 G 6	13,8	305,0	414,0	10
21321	5 G 6	15,4	439,0	510,0	10
21322	7 G 6	17,0	505,0	673,0	10

Dimensions and specifications may be changed without prior notice. (RA02)

Yö-C-PURÖ-JZ tear and coolant resistant, Cu-screened, with inner sheath,
increased oil resistant, EMC-preferred type, meter marking



Technical data

- Special polyurethane-sheathed multicore cable on the basis of DIN VDE 0245 part 202/03.92 up to 1,5 mm², on the basis of DIN VDE 0281 part 13 as of 2,5 mm²
- **Temperature range**
flexing -5 °C to +80 °C
fixed installation -40 °C to +80 °C
- **Nominal voltage** U₀/U 300/500 V
as of cross section 4 mm²
U₀/U 450/750 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Minimum bending radius**
flexing 10x cable ø
fixed installation 5x cable ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)
- **Coupling resistance**
max. 250 Ohm/km

Cable structure

- Plain copper conductor, finely stranded, according to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- **Oil resistant** PVC core insulation TI2, in adapted to DIN VDE 0281 part 1, for better sliding abilities
- Cores black with sequential numbering imprinted in white according to DIN VDE 0293
- Green-yellow earth core in the outer layer (3 cores and above)
- Cores stranded in layers with optimal lay-length
- **Oil resistant** PVC inner sheath
- Screen of tinned Cu braid, coverage approx. 85%
- Fleece separator, ensure good dismantling ability
- Special **full-polyurethane** outer jacket TPU, to DIN EN 50363-10-2
- Sheath colour grey (RAL 7001)
- with meter marking, change-over in 2011

Properties

- **Resistant to**
UV-Radiation
Oxygene
Ozone and hydrolysis
Microbes
- self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow earth core;
x = without green-yellow earth core (OZ).
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- **unscreened analogue type:**
PURÖ-JZ, see page A 44

Application

Extremely robust control cable characterised by high abrasion and notch resistance properties. Used for critical areas in such applications as machinery, tooling and plant construction, in rolling mills and steel works because of the resistance to mineral oils and to coolant emulsions in particular. The mechanical strength of the cable is increased by the additional oil-resistant inner sheath. The ideal interference-protected control cable for such applications as given above. Suitable for outdoor installation. These screened cables are particularly suitable for the interference-free transmission in instrumentation and control engineering applications (electromagnetic compatibility).

EMC = Electromagnetic compatibility

To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21400	2 x 0,5	6,6	41,0	68,0	20
21401	3 G 0,5	7,1	45,0	84,0	20
21402	4 G 0,5	7,6	54,0	95,0	20
21403	5 G 0,5	8,2	66,0	107,0	20
21405	7 G 0,5	9,4	79,0	135,0	20
21407	10 G 0,5	11,2	107,0	170,0	20
21408	12 G 0,5	11,3	137,0	195,0	20
21409	14 G 0,5	11,9	142,0	222,0	20
21411	18 G 0,5	12,9	156,0	278,0	20
21413	21 G 0,5	14,7	189,0	330,0	20
21415	25 G 0,5	15,9	250,0	406,0	20
21416	30 G 0,5	16,2	297,0	520,0	20
21419	36 G 0,5	17,8	320,0	587,0	20
21420	40 G 0,5	19,1	345,0	655,0	20
21421	50 G 0,5	20,9	407,0	742,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21425	2 x 0,75	7,2	46,0	88,0	18
21426	3 G 0,75	7,7	57,0	98,0	18
21427	4 G 0,75	8,2	63,0	112,0	18
21428	5 G 0,75	8,8	76,0	130,0	18
21430	7 G 0,75	10,1	100,0	185,0	18
21432	10 G 0,75	12,2	140,0	270,0	18
21433	12 G 0,75	12,3	175,0	294,0	18
21434	14 G 0,75	13,0	190,0	317,0	18
21436	18 G 0,75	14,6	240,0	357,0	18
21438	21 G 0,75	16,0	274,0	455,0	18
21440	25 G 0,75	17,8	306,0	510,0	18
21443	32 G 0,75	18,7	349,0	688,0	18
21446	41 G 0,75	21,5	403,0	951,0	18
21447	50 G 0,75	23,1	470,0	1100,0	18

Continuation ▶

YÖ-C-PURÖ-JZ

tear and coolant resistant, Cu-screened, with inner sheath,
increased oil resistant, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21451	2 x 1	7,7	54,0	98,0	17
21452	3 G 1	8,0	64,0	102,0	17
21453	4 G 1	8,6	76,0	145,0	17
21454	5 G 1	9,1	89,0	170,0	17
21456	7 G 1	11,0	114,0	220,0	17
21457	8 G 1	11,6	130,0	270,0	17
21458	10 G 1	12,6	156,0	330,0	17
21459	12 G 1	13,1	186,0	350,0	17
21460	14 G 1	13,8	198,0	402,0	17
21461	16 G 1	14,6	214,0	420,0	17
21462	18 G 1	15,6	284,0	515,0	17
21463	20 G 1	16,4	325,0	545,0	17
21465	25 G 1	18,9	387,0	690,0	17
21468	34 G 1	20,9	500,0	912,0	17
21469	41 G 1	22,3	578,0	1070,0	17
21470	50 G 1	24,6	681,0	1318,0	17
21474	2 x 1,5	8,2	64,0	130,0	16
21475	3 G 1,5	8,6	82,0	152,0	16
21476	4 G 1,5	9,3	99,0	167,0	16
21477	5 G 1,5	10,4	123,0	203,0	16
21479	7 G 1,5	12,0	148,0	305,0	16
21480	8 G 1,5	12,9	172,0	335,0	16
21481	10 G 1,5	14,2	198,0	422,0	16
21482	12 G 1,5	14,6	274,0	435,0	16
21483	14 G 1,5	15,4	294,0	480,0	16
21484	16 G 1,5	16,1	318,0	525,0	16
21485	18 G 1,5	17,2	386,0	642,0	16
21487	21 G 1,5	19,0	447,0	722,0	16
21489	25 G 1,5	20,8	531,0	803,0	16
21492	34 G 1,5	23,2	671,0	1068,0	16
21494	42 G 1,5	26,1	890,0	1370,0	16
21495	50 G 1,5	27,4	997,0	1677,0	16
21499	2 x 2,5	9,8	110,0	180,0	14
21500	3 G 2,5	10,7	148,0	215,0	14
21501	4 G 2,5	11,4	169,0	268,0	14
21502	5 G 2,5	12,5	220,0	349,0	14
21503	7 G 2,5	14,9	284,0	406,0	14
21504	12 G 2,5	18,4	470,0	720,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
21507	2 x 4	12,0	124,0	300,0	12
21508	3 G 4	12,6	178,0	340,0	12
21509	4 G 4	14,2	234,0	408,0	12
21510	5 G 4	15,6	284,0	504,0	12
21511	7 G 4	17,1	321,0	640,0	12
21512	3 G 6	14,8	245,0	453,0	10
21513	4 G 6	16,1	316,0	560,0	10
21514	5 G 6	18,0	442,0	700,0	10
21515	7 G 6	19,6	530,0	905,0	10
21516	3 G 10	18,2	367,0	750,0	8
21517	4 G 10	20,3	549,0	1023,0	8
21518	5 G 10	22,4	604,0	1114,0	8
21519	7 G 10	24,7	820,0	1505,0	8
21521	4 G 16	23,4	807,0	1385,0	6
21522	5 G 16	26,0	940,0	1550,0	6
21524	4 G 25	29,7	1169,0	1894,0	4
21525	5 G 25	33,0	1420,0	2272,0	4
21526	4 G 35	33,9	1680,0	2395,0	2
21527	5 G 35	37,5	2020,0	2890,0	2
21528	4 G 50	39,0	2370,0	3312,0	1
21529	5 G 50	43,4	2880,0	4100,0	1
21530	4 G 70	46,6	3257,0	4605,0	2/0
21531	5 G 70	51,1	4032,0	5710,0	2/0
21532	4 G 95	50,9	4060,0	6055,0	3/0
21533	5 G 95	55,9	5244,0	7520,0	3/0
21534	4 G 120	55,5	5231,0	7318,0	4/0

Dimensions and specifications may be changed without prior notice. (RA02)



Flexible Control Cables / PUR Control Cables

UNIPUR®-CP flexible at low temperature, with customer markings, halogen-free, wear resistant, robust, screened, EMC-preferred type, meter marking



Technical data

- Special TPE/PUR screened connecting cable adapted to DIN VDE 0285-525-2-21 / DIN EN 50525-2-21
- **Temperature range** flexing -40°C to +90°C
- **Nominal voltage** up to 1 mm² U₀/U 300/500 V from 1,5 mm² U₀/U 450/750 V
- **Test voltage** 3000 V
- **Coupling resistance** max. 250 Ohm/km
- **Minimum bending radius** flexing 12,5x cable Ø fixed installation 7,5x cable Ø
- **Radiation resistance** up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of thermoplastic elastomere (TPE)
- Core identification to DIN VDE 0293-308 - up to 5 cores coloured - from 6 cores, black with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Separating foil
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of PUR compound type TMPU adapted to DIN EN 50363-10-2
- Sheath colour by request
- with meter marking

Properties

- Resistant to
- Oils and fats
- Water and weathering effects
- Ozone and oxygen
- UV-radiation
- Hydrolysis
- Microbial attack
- Abrasion resistant
- Notch resistant
- Resistant to tearing and cutting
- Good flexibility at low temperatures down to -40°C
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
- x = without green-yellow conductor (OB).
- Please complete the part number for these cables by adding the suffix for the colour required as per the list:
0 = approx. RAL 5015, blue
1 = approx. RAL 6018, green
2 = approx. RAL 8003, brown
3 = approx. RAL 1021, yellow
4 = approx. RAL 3000, red
5 = approx. RAL 2003, orange
6 = approx. RAL 4005, violet
7 = approx. RAL 7001/7032, grey
Further colours on request.
- unscreened analogue type: **UNIPUR®**, confer page 73

Application

These robust and flexible cables are used for electrical tools such as drills, hand-held circular saws, and garden equipment as well as for portable motors and machinery in agriculture, at building sites, for hobbies, docks and refrigeration plants.

Extremely good mechanical characteristics e. g. compressive load, good abrasion and near-resistant.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
1915x	2 x 0,5	6,4	35,0	46,0	20
1916x	3 G 0,5	6,8	42,0	56,0	20
1917x	4 G 0,5	7,3	47,0	62,0	20
1918x	5 G 0,5	7,9	56,0	75,0	20
1919x	7 G 0,5	9,4	69,0	98,0	20
1920x	12 G 0,5	11,3	108,0	158,0	20
1921x	18 G 0,5	13,7	145,0	216,0	20
1922x	25 G 0,5	16,3	240,0	315,0	20
1923x	34 G 0,5	18,6	312,0	371,0	20
1924x	41 G 0,5	20,4	348,0	442,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
1925x	2 x 0,75	6,8	40,0	60,0	19
1926x	3 G 0,75	7,1	52,0	68,0	19
1927x	4 G 0,75	7,7	60,0	78,0	19
1928x	5 G 0,75	8,6	71,0	95,0	19
1929x	6 G 0,75	9,3	80,0	112,0	19
1930x	7 G 0,75	10,3	91,0	138,0	19
1931x	12 G 0,75	12,5	142,0	207,0	19
1932x	18 G 0,75	14,8	212,0	293,0	19
1933x	25 G 0,75	17,9	281,0	413,0	19
1934x	34 G 0,75	20,3	345,0	523,0	19
1935x	41 G 0,75	22,1	400,0	609,0	19



Flexible Control Cables / PUR Control Cables

UNIPUR®-CP flexible at low temperature, with customer markings, halogen-free, wear resistant, robust, screened, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
1936x	2 x 1	7,2	50,0	65,0	18	1958x	2 x 2,5	10,2	96,0	129,0	14
1937x	3 G 1	7,6	60,0	76,0	18	1959x	3 G 2,5	10,9	144,0	158,0	14
1938x	4 G 1	8,4	71,0	89,0	18	1960x	4 G 2,5	11,9	148,0	196,0	14
1939x	5 G 1	9,2	88,0	108,0	18	1961x	5 G 2,5	13,2	181,0	241,0	14
1940x	6 G 1	10,1	97,0	141,0	18	1962x	7 G 2,5	16,3	255,0	317,0	14
1941x	7 G 1	11,2	111,0	187,0	18	1963x	12 G 2,5	20,0	441,0	496,0	14
1942x	12 G 1	13,5	184,0	240,0	18	1964x	2 x 4	11,8	120,0	158,0	12
1943x	18 G 1	16,1	260,0	335,0	18	1965x	3 G 4	12,7	174,0	261,0	12
1944x	25 G 1	19,4	349,0	484,0	18	1966x	4 G 4	14,2	230,0	316,0	12
1945x	34 G 1	22,2	486,0	627,0	18	1967x	5 G 4	15,7	273,0	384,0	12
1946x	41 G 1	24,0	531,0	738,0	18	1968x	7 G 4	19,3	316,0	592,0	12
1947x	2 x 1,5	8,6	63,0	97,0	16	1969x	2 x 6	13,6	173,0	259,0	10
1948x	3 G 1,5	9,1	80,0	119,0	16	1970x	3 G 6	14,6	240,0	394,0	10
1949x	4 G 1,5	10,1	97,0	152,0	16	1971x	4 G 6	16,1	305,0	483,0	10
1950x	5 G 1,5	11,2	119,0	168,0	16	1972x	5 G 6	18,0	439,0	592,0	10
1951x	6 G 1,5	12,1	121,0	218,0	16	1973x	7 G 6	21,8	505,0	714,0	10
1952x	7 G 1,5	13,6	147,0	243,0	16	1974x	3 G 10	18,0	350,0	576,0	8
1953x	12 G 1,5	16,3	267,0	317,0	16	1975x	4 G 10	19,9	535,0	729,0	8
1954x	18 G 1,5	19,6	374,0	481,0	16	1976x	5 G 10	22,2	592,0	914,0	8
1955x	25 G 1,5	23,8	526,0	674,0	16	1977x	3 G 16	20,8	585,0	960,0	6
1956x	34 G 1,5	27,0	629,0	881,0	16	1978x	4 G 16	23,1	740,0	1813,0	6
1957x	41 G 1,5	29,3	801,0	1027,0	16	1979x	5 G 16	25,5	895,0	1827,0	6

Dimensions and specifications may be changed without prior notice. (RA02)



Flexible Control Cables / PUR Control Cables

PUR-C-PUR

 Cu-screened, extrem conditions, halogen-free, EMC-preferred type, meter marking

Technical data

- Special PUR control cables, screened, adapted to DIN VDE 0250
- **Temperature range**
-40°C to +80°C
- **Nominal voltage**
up to 1 mm² U₀/U 300/500 V
from 1,5 mm² U₀/U 450/750 V
- **Test voltage**
to 1 mm² 2000 V
from 1,5 mm² 2500 V
- **Insulation resistance**
min. 20 MOhm x km
- **Mutual capacitance**(800 Hz)
core/core approx. 150 pF/m
core/screen approx. 320 pF/m
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Aderisolatio aus special PUR
- Core identification to DIN VDE 0293-308
- GN-YE conductor, 3 cores and above
- Cores stranded in layers with optimal lay-length
- Core wrapping with foil
- Tinned copper braided screen, approx. 85% coverage
- PUR outer sheath
- Sheath colour grey (RAL 7032)
- with meter marking

Properties

- High flexibility at low temperatures
- High abrasion resistance
- Break and cut resistant
- Tear resistant
- Halogen-free
- **Resistant to**
Oils and fats
Coolant and chemicals
Non-alcoholic fuels and kerosene
Atmospheric influences
UV-radiation
Oxygene and ozone
Microbes and rotting
Sea and waste water
Vibrations
Acids and Lyes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (O).
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

PUR-C-PUR screened cables are well suited as data transfer and connection cables for the machine and motor industries due to the good level of copper screening which blocks strong electrical disturbances.

This cable type has proven to be especially suited to use in extreme weather and environmental conditions due to its good thermal and chemical properties (Temperature range -40°C to +80°C). In addition to this it also possesses excellent mechanical properties, e. g. pressure resistance and good abrasive resistant qualities, all of which go to guarantee a long life.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22315	2 x 0,75	6,8	40,0	65,0	19
22316	3 G 0,75	7,2	52,0	80,0	19
22317	4 G 0,75	8,0	60,0	95,0	19
22318	5 G 0,75	8,6	71,0	126,0	19
22319	6 G 0,75	9,5	80,0	150,0	19
22339	2 x 1	7,2	50,0	80,0	18
22340	3 G 1	7,8	60,0	95,0	18
22341	4 G 1	8,4	71,0	106,0	18
22342	5 G 1	9,5	88,0	149,0	18

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22364	2 x 1,5	8,6	63,0	101,0	16
22365	3 G 1,5	9,3	80,0	125,0	16
22366	4 G 1,5	10,1	97,0	150,0	16
22367	5 G 1,5	11,2	119,0	210,0	16
22385	2 x 2,5	10,4	96,0	142,0	14
22386	3 G 2,5	11,0	144,0	169,0	14
22387	4 G 2,5	12,2	148,0	225,0	14
22388	5 G 2,5	13,6	181,0	275,0	14

Dimensions and specifications may be changed without prior notice. (RA02)

PUR-C-PUR Cu-screened, extrem conditions, halogen-free, EMC-preferred type, meter marking



Technical data

- Special PUR control cables, screened, adapted to DIN VDE 0250
- **Temperature range**
-40 °C to +80 °C
- **Nominal voltage**
U₀/U 300/500 V until 1 mm²
U₀/U 450/750 V from 1,5 mm²
- **Test voltage**
until 1 mm² 2000 V
from 1,5 mm² 2500 V
- **Insulation resistance**
min. 20 MΩm x km
- **Mutual capacitance** (800 Hz)
core/core approx. 150 pF/m
core/screen approx. 320 pF/m
- **Minimum bending radius**
flexing 10x cable ø
fixed installation 5x cable ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)
- **Coupling resistance**
max. 250 Ωm/km

Cable structure

- Bare copper, fine wire conductors, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Special PUR insulation
- Core identification according to DIN VDE 0293-308
- Green-yellow earth core (3 cores and above)
- Cores stranded in layers with optimal lay-length
- Foil taped
- Copper braided screening with 80-85% coverage
- PUR outer jacket
- Colour grey (RAL 7032)
- with meter marking, change-over in 2011

Properties

- High flexibility at low temperatures
- High abrasion resistance
- Break and cut resistant
- Tear resistant
- **Resistant to**
Oils and fats
Coolant and chemicals
Non-alcoholic fuels and kerosene
Atmospheric influences
UV-radiation
Oxygene and ozone
Microbes and rotting
Sea and waste water
Vibrations
Acids and Lyes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow earth core;
x = without green-yellow earth core (0).
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

PUR-C-PUR screened cables are well suited as data transfer and connection cables for the machine and motor industries due to the good level of copper screening which blocks strong electrical disturbances.

This cable type has proven to be especially suited to use in extreme weather and environmental conditions due to its good thermal and chemical properties. (Temperature range -40 °C to +80 °C). In addition to this it also possesses excellent mechanical properties, e.g. pressure resistance and good abrasive resistant qualities, all of which go to guarantee a long life.

EMC = Electromagnetic compatibility

To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22315	2 x 0,75	6,8	40,0	65,0	18
22316	3 G 0,75	7,4	52,0	80,0	18
22317	4 G 0,75	8,0	60,0	95,0	18
22318	5 G 0,75	8,8	71,0	126,0	18
22319	6 G 0,75	9,5	80,0	150,0	18
22339	2 x 1	7,3	50,0	80,0	17
22340	3 G 1	7,7	60,0	95,0	17
22341	4 G 1	8,3	71,0	106,0	17
22342	5 G 1	9,2	88,0	149,0	17

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
22364	2 x 1,5	8,8	63,0	101,0	16
22365	3 G 1,5	9,3	80,0	125,0	16
22366	4 G 1,5	10,3	97,0	150,0	16
22367	5 G 1,5	11,2	119,0	210,0	16
22385	2 x 2,5	10,2	96,0	142,0	14
22386	3 G 2,5	10,8	144,0	169,0	14
22387	4 G 2,5	12,0	148,0	225,0	14
22388	5 G 2,5	13,2	181,0	275,0	14

Dimensions and specifications may be changed without prior notice. (RA02)



Flexible Control Cables / Halogen-free Control Cables

JZ-500 HMH flexible control cable, halogen-free, extremely fire resistant, oil resistant¹⁾, meter marking



Technical data

- Halogen-free flexible control cable adapted to
DIN VDE 0285-525-2-51 /
DIN EN 50525-2-51 and
DIN VDE 0285-525-3-11 /
DIN EN 50525-3-11
- **Temperature range**
flexing -15°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 2000 V
- **Minimum bending radius**
flexing 12,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to
DIN VDE 0295 cl.5, fine-wire,
BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of halogen-free polymer compound type Tl6 to
DIN VDE 0207-363-7 / DIN EN 50363-7
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of halogen-free polymer compound type TM7 to
DIN VDE 0207-363-8 / DIN EN 50363-8
- Outer Sheath colour grey (RAL 7001)
- with meter marking
- **LSOH**= Low Smoke Zero Halogen

Properties

- ¹⁾ For the critical applications we advise for consultation
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- Flame test acc. to
DIN VDE 0482-332-3, BS 4066 part 3,
DIN EN 60332-3, IEC 60332-3 (previously
DIN VDE 0472 part 804 test method C)
- self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2,
DIN EN 60332-1-2, IEC 60332-1 (equivalent
DIN VDE 0472 part 804 test method B)
- Corrosiveness of combustion gases acc. to DIN VDE 0482 part 267,
DIN EN 50267-2-2, IEC 60754-2
(equivalent DIN VDE 0472 part 813)
- Halogen-free acc. to DIN VDE 0482 part 267, DIN EN 50267-2-1, IEC 60754-1
(equivalent DIN VDE 0472 part 815)
- Smoke density acc. to DIN VDE 0482 part 1034-1+2, DIN EN 61034-1+2,
IEC 61034-1+2, BS 7622 part 1+2
(previously DIN VDE 0472 part 816)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- Please note the cleanroom qualification when ordering.
- screened analogue type:
JZ-500 HMH-C, confer page 96

Application

Used as measuring, monitoring and control cables in tool machinery, conveyor belts, production lines, in plant, in air-conditioning, in foundries and steel mills. For fixed installation or flexible application, casual, not constantly recurring free movement without forced motion and without tensile stress, for medium mechanical stress. The cable is suitable for use in dry, damp and wet locations and on plaster.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11201	2 x 0,5	4,8	9,6	43,0	20
11202	3 G 0,5	5,1	14,4	50,0	20
11332	3 x 0,5	5,1	14,4	50,0	20
11203	4 G 0,5	5,6	19,0	60,0	20
11333	4 x 0,5	5,5	19,0	60,0	20
11204	5 G 0,5	6,2	24,0	71,0	20
11334	5 x 0,5	6,2	24,0	71,0	20
11205	7 G 0,5	6,7	33,6	84,0	20
11206	8 G 0,5	7,4	38,0	101,0	20
11207	10 G 0,5	8,3	48,0	121,0	20
11208	12 G 0,5	8,7	58,0	142,0	20
11209	16 G 0,5	10,0	76,0	183,0	20

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11210	18 G 0,5	10,7	86,0	204,0	20
11211	20 G 0,5	11,3	96,0	227,0	20
11212	25 G 0,5	12,6	120,0	283,0	20
11213	30 G 0,5	13,5	144,0	324,0	20
11214	34 G 0,5	14,3	163,0	367,0	20
11215	37 G 0,5	14,5	178,0	381,0	20
11216	41 G 0,5	15,8	197,0	417,0	20
11217	42 G 0,5	15,8	202,0	454,0	20
11218	50 G 0,5	17,5	240,0	519,0	20
11219	61 G 0,5	18,5	293,0	635,0	20
11220	65 G 0,5	19,4	312,0	694,0	20



Flexible Control Cables / Halogen-free Control Cables

JZ-500 HMH flexible control cable, halogen-free, extremely fire resistant, oil resistant¹⁾, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11221	2 x 0,75	5,3	14,4	47,0	19
11222	3 G 0,75	5,6	21,6	56,0	19
11335	3 x 0,75	5,6	21,6	56,0	19
11223	4 G 0,75	6,3	29,0	69,0	19
11336	4 x 0,75	6,3	29,0	69,0	19
11224	5 G 0,75	6,9	36,0	83,0	19
11337	5 x 0,75	6,9	36,0	83,0	19
11225	7 G 0,75	7,5	50,0	114,0	19
11338	7 x 0,75	7,5	50,0	114,0	19
11226	8 G 0,75	8,3	58,0	136,0	19
11227	10 G 0,75	9,2	72,0	172,0	19
11228	12 G 0,75	9,8	86,0	183,0	19
11229	16 G 0,75	11,4	115,0	241,0	19
11230	18 G 0,75	12,2	130,0	266,0	19
11231	20 G 0,75	12,7	144,0	291,0	19
11232	25 G 0,75	14,3	180,0	374,0	19
11233	30 G 0,75	15,3	216,0	450,0	19
11234	34 G 0,75	16,5	245,0	517,0	19
11235	37 G 0,75	16,7	260,0	541,0	19
11236	41 G 0,75	18,1	296,0	611,0	19
11237	42 G 0,75	18,1	302,0	621,0	19
11238	50 G 0,75	19,8	360,0	742,0	19
11239	61 G 0,75	21,2	439,0	853,0	19
11240	65 G 0,75	21,8	468,0	909,0	19
11241	2 x 1	5,6	19,2	63,0	18
11242	3 G 1	5,9	29,0	74,0	18
11339	3 x 1	5,9	29,0	74,0	18
11243	4 G 1	6,6	38,4	90,0	18
11340	4 x 1	6,6	38,4	90,0	18
11244	5 G 1	7,3	48,0	109,0	18
11245	7 G 1	8,1	67,0	151,0	18
11246	8 G 1	8,8	77,0	184,0	18
11247	10 G 1	9,8	96,0	224,0	18
11248	12 G 1	10,4	115,0	243,0	18
11249	16 G 1	12,3	154,0	314,0	18
11250	18 G 1	12,9	173,0	361,0	18
11251	20 G 1	13,8	192,0	387,0	18
11252	25 G 1	15,4	240,0	496,0	18
11253	34 G 1	17,7	326,0	670,0	18
11254	37 G 1	17,9	355,0	713,0	18
11255	41 G 1	19,5	394,0	784,0	18
11256	42 G 1	19,5	403,0	824,0	18
11257	50 G 1	21,3	480,0	952,0	18
11258	61 G 1	22,5	586,0	1140,0	18
11259	65 G 1	23,6	628,0	1201,0	18
11260	2 x 1,5	6,4	29,0	70,0	16
11261	3 G 1,5	6,8	43,0	94,0	16
11341	3 x 1,5	6,8	43,0	94,0	16
11262	4 G 1,5	7,4	58,0	112,0	16
11263	5 G 1,5	8,3	72,0	141,0	16
11264	7 G 1,5	9,2	101,0	191,0	16
11265	8 G 1,5	10,0	115,0	224,0	16
11266	10 G 1,5	10,9	144,0	282,0	16
11267	12 G 1,5	11,8	173,0	311,0	16
11268	16 G 1,5	13,9	230,0	392,0	16
11269	18 G 1,5	14,6	259,0	450,0	16
11270	20 G 1,5	15,6	288,0	497,0	16
11271	25 G 1,5	17,4	360,0	630,0	16
11272	34 G 1,5	20,2	490,0	842,0	16
11273	37 G 1,5	20,2	533,0	897,0	16
11274	50 G 1,5	24,2	720,0	1277,0	16
11275	61 G 1,5	25,8	878,0	1460,0	16
11276	65 G 1,5	26,8	936,0	1612,0	16

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11277	2 x 2,5	7,8	48,0	118,0	14
11278	3 G 2,5	8,3	72,0	151,0	14
11279	4 G 2,5	9,2	96,0	181,0	14
11280	5 G 2,5	10,1	120,0	224,0	14
11281	7 G 2,5	11,2	168,0	316,0	14
11282	8 G 2,5	12,3	192,0	370,0	14
11283	10 G 2,5	14,0	240,0	451,0	14
11284	12 G 2,5	14,8	288,0	499,0	14
11285	16 G 2,5	17,1	384,0	720,0	14
11286	18 G 2,5	18,2	432,0	769,0	14
11287	20 G 2,5	19,2	480,0	911,0	14
11288	25 G 2,5	21,6	600,0	1047,0	14
11289	30 G 2,5	23,0	720,0	1280,0	14
11290	2 x 4	9,3	77,0	199,0	12
11291	3 G 4	9,8	115,0	247,0	12
11292	4 G 4	10,9	154,0	299,0	12
11293	5 G 4	12,1	192,0	369,0	12
11294	7 G 4	13,2	269,0	463,0	12
11295	8 G 4	14,7	307,0	601,0	12
11296	10 G 4	17,5	384,0	698,0	12
11297	12 G 4	17,7	461,0	790,0	12
11298	16 G 4	20,3	614,0	1130,0	12
11299	18 G 4	21,6	691,0	1280,0	12
11300	2 x 6	11,0	115,0	266,0	10
11301	3 G 6	11,9	173,0	360,0	10
11302	4 G 6	13,0	230,0	429,0	10
11303	5 G 6	14,5	288,0	529,0	10
11304	7 G 6	16,2	403,0	631,0	10
11305	2 x 10	13,8	192,0	440,0	8
11306	3 G 10	14,9	288,0	550,0	8
11307	4 G 10	16,5	384,0	708,0	8
11308	5 G 10	18,3	480,0	862,0	8
11309	7 G 10	20,2	672,0	1124,0	8
11310	2 x 16	16,8	307,0	642,0	6
11311	3 G 16	18,3	461,0	830,0	6
11312	4 G 16	20,1	614,0	1060,0	6
11313	5 G 16	22,6	768,0	1270,0	6
11314	7 G 16	24,8	1075,0	1794,0	6
11315	3 G 25	22,3	720,0	1190,0	4
11316	4 G 25	25,0	960,0	1594,0	4
11317	5 G 25	27,7	1200,0	2014,0	4
11318	3 G 35	25,9	1008,0	1590,0	2
11319	4 G 35	28,7	1344,0	2200,0	2
11320	5 G 35	31,9	1680,0	2693,0	2
11321	3 G 50	30,8	1440,0	2571,0	1
11322	4 G 50	34,1	1920,0	3087,0	1
11323	5 G 50	38,1	2400,0	3980,0	1
11324	3 G 70	36,4	2016,0	3207,0	2/0
11325	4 G 70	40,2	2688,0	4077,0	2/0
11326	5 G 70	44,7	3360,0	5501,0	2/0
11327	3 G 95	41,3	2736,0	4708,0	3/0
11328	4 G 95	46,0	3648,0	5590,0	3/0
11329	5 G 95	50,7	4560,0	6972,0	3/0
11330	3 G 120	47,0	3456,0	5515,0	4/0
11331	4 G 120	51,0	4608,0	7100,0	4/0

Dimensions and specifications may be changed without prior notice. (RA03)



Cables according to international Approvals / Halogen-free Control Cables UL/CSA

MEGAFLEX® 500 halogen-free, flame retardant, oil-resistant, UV-resistant, flexible, meter marking



Technical data

- Halogen-free flexible control cable adapted to
DIN VDE 0285-525-3-11/
DIN EN 50525-3-11,
to UL-Style 20939, UL-Std.758
- **Temperature range**
flexing -30°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage**
U₀/U 300/500 V
UL/CSA 600 V
- **Test voltage** 3000 V
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 4x cable Ø
- **Flexibility**
Alternate bending test acc. to
DIN VDE 0473-396 / DIN EN 50396

Cable structure

- Bare copper-conductor, to
DIN VDE 0295 cl.5, fine-wire,
BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of halogen-free
special polymer
- Core identification to DIN VDE 0293
black cores with continuous white
numbering
- GN-YE conductor, 3 cores and above
in the outer layer
- Cores stranded in layers with
optimal lay-length
- Outer sheath of halogen-free
special polymer
- Sheath colour grey (RAL 7001)
- with meter marking
- **LSOH**= Low Smoke Zero Halogen

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- Also available as a 0,6/1 kV cable
MEGAFLEX® 600
- AWG sizes are approximate equivalent
values. The actual cross-section is in mm².
- screened analogue type:
MEGAFLEX® 500-C, confer page 398

Properties

- Highly flame-retardant
- Resistant to oils and greases
- Resistant to UV and weathering
- Hydrolysis resistant
- Flexible, abrasion- and wear-resistant
- Ozone-resistant, recycleable
- The materials used in manufacture are
cadmium-free and contain no silicone
and free from substances harmful to
the wetting properties of lacquers

Tests

- Flame test acc. to DIN VDE 0482-332-3-24,
BS 4066 part 3, DIN EN 60332-3-24,
IEC 60332-3-24 (previously DIN VDE 0472
part 804 test method C)
- Self-extinguishing and flame retardant
acc. to DIN VDE 0482-332-1-2,
DIN EN 60332-1-2 / IEC 60332-1 (previously
DIN VDE 0472 part 804 test method B),
CSA FT1
- Corrosiveness of combustion gases
acc. to NF X 10-702
- Halogen-free acc. to DIN VDE 0482
part 267 / DIN EN 50267-2-1 / IEC 60754-1
(equivalent DIN VDE 0472 part 815)
- Smoke density acc. to DIN VDE 0482
part 1034-1+2, DIN EN 61034-1+2,
IEC 61034-1+2, BS 7622 part 1+2
(previously DIN VDE 0472 part 816)
- Oil-resistant to DIN VDE 0473-811-404/
DIN EN 60811-404
- Hydrolysis-resistant to DIN EN 61234-1
- Ozone-resistant to
DIN VDE 0473-811-403/DIN EN 60811-403

Application

For fixed installation or flexible application, with free movements without forcing which do not constantly recur and without tensile stress, for high mechanical strain. As a measuring and control cable primarily in machinery and plant construction, in air-conditioning systems, at the warehouse and conveyor systems, in ship-building and in the renewable energies such as in the construction of wind power stations.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
13344	2 x 0,5	20	5,0	9,6	43,0
13345	3 G 0,5	20	5,3	14,4	50,0
13346	3 x 0,5	20	5,3	14,4	50,0
13347	4 G 0,5	20	5,7	19,0	60,0
13348	4 x 0,5	20	5,7	19,0	60,0
13349	5 G 0,5	20	6,2	24,0	71,0
13350	5 x 0,5	20	6,2	24,0	71,0
13351	7 G 0,5	20	7,4	33,6	84,0

Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
13352	8 G 0,5	20	8,0	38,0	101,0
13353	10 G 0,5	20	8,8	48,0	121,0
13354	12 G 0,5	20	9,1	58,0	142,0
13355	16 G 0,5	20	10,0	76,0	183,0
13356	18 G 0,5	20	10,7	86,0	204,0
13357	20 G 0,5	20	11,2	96,0	227,0
13359	25 G 0,5	20	12,7	120,0	283,0
13360	30 G 0,5	20	13,5	144,0	324,0

Continuation ▶



Cables according to international Approvals / Halogen-free Control Cables UL/CSA

MEGAFLEX® 500 halogen-free, flame retardant, oil-resistant, UV-resistant, flexible, meter marking



Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
13361	34 G 0,5	20	14,5	163,0	367,0
13362	37 G 0,5	20	14,5	178,0	381,0
13363	41 G 0,5	20	15,8	197,0	417,0
13364	42 G 0,5	20	15,8	202,0	454,0
13365	50 G 0,5	20	17,3	240,0	519,0
13366	61 G 0,5	20	18,5	293,0	635,0
13367	65 G 0,5	20	19,4	312,0	694,0
13368	2 x 0,75	19	5,4	14,4	47,0
13369	3 G 0,75	19	5,7	21,6	56,0
13370	3 x 0,75	19	5,7	21,6	56,0
13371	4 G 0,75	19	6,2	29,0	69,0
13372	4 x 0,75	19	6,2	29,0	69,0
13373	5 G 0,75	19	6,8	36,0	83,0
13374	5 x 0,75	19	6,8	36,0	83,0
13375	7 G 0,75	19	8,1	50,0	114,0
13376	7 x 0,75	19	8,1	50,0	114,0
13377	8 G 0,75	19	8,9	58,0	136,0
13378	10 G 0,75	19	9,6	72,0	172,0
13379	12 G 0,75	19	9,9	86,0	183,0
13380	16 G 0,75	19	11,2	115,0	241,0
13381	18 G 0,75	19	11,9	130,0	266,0
13382	20 G 0,75	19	12,6	144,0	291,0
13383	25 G 0,75	19	14,1	180,0	374,0
13384	30 G 0,75	19	15,4	216,0	450,0
13385	34 G 0,75	19	16,4	245,0	517,0
13386	37 G 0,75	19	16,4	260,0	541,0
13387	41 G 0,75	19	17,6	296,0	611,0
13388	42 G 0,75	19	17,6	302,0	621,0
13389	50 G 0,75	19	19,8	360,0	742,0
13390	61 G 0,75	19	20,9	439,0	853,0
13392	65 G 0,75	19	21,8	468,0	909,0
13393	2 x 1	18	5,7	19,2	63,0
13394	3 G 1	18	6,0	29,0	74,0
13395	3 x 1	18	6,0	29,0	74,0
13396	4 G 1	18	6,6	38,4	90,0
13397	4 x 1	18	6,6	38,4	90,0
13398	5 G 1	18	7,2	48,0	109,0
13399	7 G 1	18	8,6	67,0	151,0
13400	8 G 1	18	9,4	77,0	184,0
13401	10 G 1	18	10,4	96,0	224,0
13402	12 G 1	18	10,7	115,0	243,0
13403	16 G 1	18	12,0	154,0	314,0
13404	18 G 1	18	12,7	173,0	361,0
13405	20 G 1	18	13,5	192,0	387,0
13406	25 G 1	18	15,2	240,0	496,0
13407	34 G 1	18	17,4	326,0	670,0
13408	37 G 1	18	17,4	355,0	713,0
13409	41 G 1	18	18,9	394,0	784,0
13410	42 G 1	18	18,9	403,0	824,0
13411	50 G 1	18	21,0	480,0	952,0
13412	61 G 1	18	22,2	586,0	1140,0
13413	65 G 1	18	23,2	628,0	1201,0
13414	2 x 1,5	16	6,3	29,0	70,0
13415	3 G 1,5	16	6,6	43,0	94,0
13416	3 x 1,5	16	6,6	43,0	94,0
13417	4 G 1,5	16	7,2	58,0	112,0
13418	5 G 1,5	16	7,9	72,0	141,0
13419	7 G 1,5	16	9,5	101,0	191,0
13420	8 G 1,5	16	10,4	115,0	224,0
13421	10 G 1,5	16	11,3	144,0	282,0
13422	12 G 1,5	16	11,7	173,0	311,0
13423	16 G 1,5	16	13,3	230,0	392,0
13425	18 G 1,5	16	14,0	259,0	450,0
13426	20 G 1,5	16	14,9	288,0	497,0
13427	25 G 1,5	16	16,8	360,0	630,0
13428	34 G 1,5	16	19,4	490,0	842,0
13429	37 G 1,5	16	19,4	533,0	897,0
13430	50 G 1,5	16	23,4	720,0	1277,0
13431	61 G 1,5	16	24,8	878,0	1460,0
13432	65 G 1,5	16	25,8	936,0	1612,0
13433	2 x 2,5	14	7,6	48,0	118,0
13434	3 G 2,5	14	8,3	72,0	151,0
13435	4 G 2,5	14	9,1	96,0	181,0
13436	5 G 2,5	14	10,2	120,0	224,0

Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
13437	7 G 2,5	14	12,1	168,0	316,0
13438	8 G 2,5	14	13,2	192,0	370,0
13439	10 G 2,5	14	14,6	240,0	451,0
13440	12 G 2,5	14	15,2	288,0	499,0
13441	16 G 2,5	14	16,8	384,0	720,0
13442	18 G 2,5	14	18,1	432,0	769,0
13443	20 G 2,5	14	19,0	480,0	911,0
13444	25 G 2,5	14	22,2	600,0	1047,0
13445	30 G 2,5	14	22,9	720,0	1280,0
13446	2 x 4	12	9,2	77,0	199,0
13447	3 G 4	12	9,9	115,0	247,0
13448	4 G 4	12	11,0	154,0	299,0
13449	5 G 4	12	12,1	192,0	369,0
13450	7 G 4	12	13,3	269,0	463,0
13451	8 G 4	12	15,9	307,0	601,0
13452	10 G 4	12	17,3	384,0	698,0
13453	12 G 4	12	18,3	461,0	790,0
13454	16 G 4	12	20,2	614,0	1130,0
13455	18 G 4	12	21,8	691,0	1280,0
13456	2 x 6	10	10,8	115,0	266,0
13457	3 G 6	10	11,7	173,0	360,0
13458	4 G 6	10	13,0	230,0	429,0
13459	5 G 6	10	14,5	288,0	529,0
13460	7 G 6	10	16,0	403,0	631,0
13461	2 x 10	8	14,0	192,0	440,0
13462	3 G 10	8	15,0	288,0	550,0
13463	4 G 10	8	16,8	384,0	708,0
13464	5 G 10	8	18,7	480,0	862,0
13465	7 G 10	8	20,6	672,0	1124,0
13466	2 x 16	6	16,5	307,0	642,0
13467	3 G 16	6	17,6	461,0	830,0
13468	4 G 16	6	19,7	641,0	1060,0
13469	5 G 16	6	21,9	768,0	1270,0
13470	7 G 16	6	24,4	1075,0	1794,0
13471	3 G 25	4	22,5	720,0	1190,0
13472	4 G 25	4	25,2	960,0	1594,0
13473	5 G 25	4	27,9	1200,0	2014,0
13474	3 G 35	2	26,3	1008,0	1590,0
13475	4 G 35	2	28,5	1344,0	2200,0
13476	5 G 35	2	31,2	1680,0	2693,0
13477	3 G 50	1	30,2	1440,0	2571,0
13478	4 G 50	1	34,0	1920,0	3087,0
13479	5 G 50	1	37,8	2400,0	3980,0
13480	3 G 70	2/0	37,0	2016,0	3207,0
13481	4 G 70	2/0	41,5	2688,0	4077,0
13482	5 G 70	2/0	46,2	3360,0	5501,0
13483	3 G 95	3/0	41,4	2736,0	4708,0
13484	4 G 95	3/0	46,2	3648,0	5590,0
13485	5 G 95	3/0	51,5	4560,0	6972,0
13486	3 G 120	4/0	45,7	3456,0	5515,0
13487	4 G 120	4/0	51,2	4608,0	7100,0
13488	3 G 150	300 kcmil	52,8	4320,0	6279,0
13489	4 G 150	300 kcmil	58,3	5760,0	7781,0

Dimensions and specifications may be changed without prior notice. (RA03)



Flexible Control Cables / Halogen-free Control Cables

JZ-600 HMH flexible control cable, halogen-free, extremely fire resistant, oil resistant¹⁾, 0,6/1kV, meter marking



Technical data

- Halogen-free, flexible control cable, adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51 and DIN VDE 0285-525-3-11 / DIN EN 50525-3-11
- **Temperature range**
flexing -15°C to +70°C
fixed -40°C to +70°C
- **Nominal voltage** U₀/U 0,6/1 kV
- **Test voltage** 4000 V
- **Minimum bending radius**
flexing 15x cable Ø
fixed installation 7,5x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of halogen-free polymer compound type I16 to DIN VDE 0207-363-7 / DIN EN 50363-7
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of halogen-free polymer compound type TM7 to DIN VDE 0207-363-8 / DIN EN 50363-8
- Sheath colour black (RAL 9005)
- with meter marking
- **LSOH**= Low Smoke Zero Halogen

Properties

- ¹⁾ For critical applications, we recommend that you consult
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- ### Tests
- Flame test acc. to DIN VDE 0482-332-3, BS 4066 part 3, DIN EN 60332-3, IEC 60332-3 (previously DIN VDE 0472 part 804 test method C)
 - self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
 - Corrosiveness of combustion gases acc. to DIN VDE 0482 part 267, DIN EN 50267-2-2, IEC 60754-2 (equivalent DIN VDE 0472 part 813)
 - Halogen-free acc. to DIN VDE 0482 Part 267 / DIN EN 50267-2-1 / IEC 60754-1 (as per DIN VDE 0472, Part 815)
 - Smoke density acc. to DIN VDE 0482 part 1034-1+2, DIN EN 61034-1+2, IEC 61034-1+2, BS 7622 part 1+2 (previously DIN VDE 0472 part 816)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
JZ-600 HMH-C, confer page 100

Application

Halogen-free, flame retardant cables are used as measuring and control cable in machine tools, conveyor belts, production lines as well as in plant installations, in heating and air-conditioning systems and steel production works. For fixed installation or flexible application, directed without forcing by casual, constantly recurring free movements and without tensile stress, for medium mechanical strain. This cable is suitable for the application in dry, damp and wet environments, outdoors (fixed installation) and for laying on plaster.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12723	2 x 0,5	6,3	9,6	57,0	20	12735	2 x 0,75	6,6	14,4	68,0	19
12724	3 G 0,5	6,6	14,4	69,0	20	12736	3 G 0,75	6,9	21,6	77,0	19
12725	3 x 0,5	6,6	14,4	69,0	20	12737	3 x 0,75	6,9	21,6	77,0	19
12726	4 G 0,5	7,2	19,0	104,0	20	12738	4 G 0,75	7,5	29,0	136,0	19
12727	4 x 0,5	7,2	19,0	104,0	20	12739	4 x 0,75	7,5	29,0	136,0	19
12728	5 G 0,5	8,0	24,0	121,0	20	12740	5 G 0,75	8,4	36,0	152,0	19
12729	5 x 0,5	8,0	24,0	121,0	20	12741	5 x 0,75	8,4	36,0	152,0	19
12730	7 G 0,5	8,7	33,6	145,0	20	12742	7 G 0,75	9,3	50,0	208,0	19
12731	10 G 0,5	10,3	48,0	186,0	20	12743	10 G 0,75	11,4	72,0	250,0	19
12732	12 G 0,5	11,7	58,0	224,0	20	12744	12 G 0,75	12,2	86,0	271,0	19
12733	18 G 0,5	13,8	86,0	292,0	20	12745	18 G 0,75	14,5	130,0	387,0	19
12734	25 G 0,5	16,1	120,0	357,0	20	12746	25 G 0,75	17,2	180,0	498,0	19



Flexible Control Cables / Halogen-free Control Cables

JZ-600 HMH flexible control cable, halogen-free, extremely fire resistant, oil resistant¹⁾, 0,6/1kV, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12747	2 x 1	7,0	19,2	82,0	18
12748	3 G 1	7,4	29,0	99,0	18
12749	3 x 1	7,4	29,0	99,0	18
12750	4 G 1	8,2	38,4	140,0	18
12751	4 x 1	8,2	38,4	140,0	18
12752	5 G 1	9,2	48,0	160,0	18
12753	5 x 1	9,2	48,0	160,0	18
12754	7 G 1	9,9	67,0	217,0	18
12755	10 G 1	11,9	96,0	271,0	18
12756	12 G 1	12,8	115,0	301,0	18
12757	18 G 1	15,7	173,0	417,0	18
12758	25 G 1	18,6	240,0	576,0	18
12759	2 x 1,5	8,2	29,0	97,0	16
12760	3 G 1,5	8,6	43,0	119,0	16
12761	3 x 1,5	8,6	43,0	119,0	16
12762	4 G 1,5	9,6	58,0	148,0	16
12763	4 x 1,5	9,6	58,0	148,0	16
12764	5 G 1,5	10,7	72,0	172,0	16
12765	5 x 1,5	10,7	72,0	172,0	16
12766	7 G 1,5	11,6	101,0	243,0	16
12767	10 G 1,5	15,2	144,0	311,0	16
12768	12 G 1,5	15,5	173,0	392,0	16
12769	18 G 1,5	18,6	259,0	529,0	16
12770	25 G 1,5	22,5	360,0	741,0	16
12771	2 x 2,5	9,6	48,0	160,0	14
12772	3 G 2,5	10,1	72,0	177,0	14
12773	3 x 2,5	10,1	72,0	177,0	14
12774	4 G 2,5	11,2	96,0	209,0	14
12775	4 x 2,5	11,2	96,0	209,0	14
12776	5 G 2,5	12,5	120,0	272,0	14
12777	5 x 2,5	12,5	120,0	272,0	14
12778	7 G 2,5	13,8	168,0	340,0	14
12779	10 G 2,5	16,6	288,0	561,0	14
12780	12 G 2,5	18,3	432,0	799,0	14
12781	18 G 2,5	22,0	480,0	940,0	14
12782	25 G 2,5	26,2	600,0	1121,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12783	3 G 4	11,7	115,0	255,0	12
12784	4 G 4	12,9	154,0	319,0	12
12785	5 G 4	14,4	192,0	423,0	12
12786	3 G 6	13,1	173,0	380,0	10
12787	4 G 6	14,5	230,0	441,0	10
12788	5 G 6	16,2	288,0	657,0	10
12789	3 G 10	16,8	288,0	668,0	8
12790	4 G 10	18,5	384,0	796,0	8
12791	5 G 10	20,5	480,0	972,0	8
12792	3 G 16	20,2	461,0	832,0	6
12793	4 G 16	22,4	614,0	1122,0	6
12794	5 G 16	25,0	768,0	1604,0	6
12795	3 G 25	24,8	720,0	1457,0	4
12796	4 G 25	27,4	960,0	1611,0	4
12797	5 G 25	30,5	1200,0	2070,0	4
12798	3 G 35	27,4	1008,0	1914,0	2
12799	4 G 35	30,3	1344,0	2424,0	2
12800	5 G 35	33,6	1680,0	2970,0	2
12801	4 G 50	35,8	1920,0	3467,0	1
12802	4 G 70	40,8	2688,0	4491,0	2/0
12803	4 G 95	46,2	3648,0	6170,0	3/0
12804	4 G 120	51,6	4608,0	7618,0	4/0

Dimensions and specifications may be changed without prior notice. (RA03)

JB-750 HMH flexible control cable, coloured core, halogen-free, extremely fire resistant, oil resistant¹⁾, meter marking



Technical data

- Halogen-free flexible control cable, adapted to DIN VDE 0281 part 14 and DIN VDE 0281 part 13
- **Temperature range**
flexing -15 °C to +70 °C
fixed installation -40 °C to +70 °C
- **Nominal voltage** U₀/U 450/750 V
- **Test voltage** 3000 V
- **Minimum bending radius**
flexing approx. 12,5x cable ø
fixed installation approx. 4x cable ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper, fine wire conductors, to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Core insulation of halogen-free compound TI6, to E DIN VDE 0281 part 14
- Colour coded to DIN VDE 0293-308
- Green-yellow earth core in the outer layer
- Cores stranded in layer with optimal lay-length
- Halogen-free sheath compound TM7, to E DIN VDE 0281 part 14
- Outer jacket colour grey (RAL 7001)
- with meter marking, change-over in 2011
- **LSOH** = Low Smoke Zero Halogen-free.

Properties

- ¹⁾ For the critical applications we advise for consultation
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- Flame test to VDE 0482-332-3 BS 4066 part 3/ DIN EN 60332-3/IEC 60332-3 (equivalent DIN VDE 0472 part 804 test method C)
- self-extinguishing and flame retardant according to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Corrosiveness of combustion gases according to VDE 0482 part 267/ DIN EN 50267-2-2/ IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- Halogen-free according to VDE 0482 part 267/ DIN EN 50267-2-1/ IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Smoke density according to VDE 0482 part 1034-1+2 / IEC 61034-1+2 / DIN EN 61034-1+2 / BS 7622 part 1+2 (equivalent DIN VDE 0472 part 816)

Note

- G = with green-yellow earth core;
x = without green-yellow earth core (OZ)
- Please note the cleanroom qualification when ordering.
- **screened analogue type:**
JB-750 HMH-C, see page A 77

Application

Halogen-free, flame retardant cables are used as measuring and control cable in machine tools, conveyor belts, production lines as well as in plant installations, in air-conditioning and steel production works. For fixed installation or flexible application, directed without forcing by casual, not constantly recurring free movements and without tensile stress, for medium mechanical strain. This cable is suitable for the application in dry, damp and wet environments and also for laying on, in and under plaster as well as in concrete and masonry excluding in direct laying in shaken or stamped concrete, not suitable for imbedding in solidified or compressed concrete.

€= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11965	3 G 1,5	6,8	43,0	110,0	16
11966	4 G 1,5	7,4	58,0	140,0	16
11967	5 G 1,5	8,3	72,0	181,0	16
11968	3 G 2,5	8,3	72,0	181,0	14
11969	4 G 2,5	9,2	96,0	223,0	14
11970	5 G 2,5	10,1	120,0	269,0	14
11971	3 G 4	9,8	115,0	238,0	12
11972	4 G 4	11,0	154,0	292,0	12
11973	5 G 4	12,3	192,0	357,0	12
11974	4 G 6	13,0	230,0	392,0	10
11975	5 G 6	14,5	288,0	501,0	10

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11976	4 G 10	16,4	384,0	750,0	8
11977	5 G 10	18,3	480,0	916,0	8
11978	4 G 16	20,0	614,0	1037,0	6
11979	5 G 16	22,6	768,0	1280,0	6
11980	4 G 25	24,9	960,0	1504,0	4
11981	5 G 25	27,7	1200,0	1883,0	4
11982	4 G 35	28,4	1344,0	2057,0	2
11983	5 G 35	31,7	1680,0	2575,0	2
11984	4 G 50	34,2	1920,0	2808,0	1
11985	4 G 70	40,3	2688,0	3964,0	2/0
11986	4 G 95	45,8	3648,0	4951,0	3/0
11987	4 G 120	51,4	4608,0	6387,0	4/0

(H)03 Z1Z1-F halogen-free, meter marking

Technical data

- flexible halogen-free control cable according E DIN VDE 0281 part 14 pr HD 21.14 S1
- Temperature range**
flexing -5 °C to +70 °C
fixed installation -40 °C to +70 °C
- Nominal voltage**
U₀/U 300/300 V
- Test voltage** 2000 V
- Breakdown voltage** min. 4000 V
- Minimum bending radius**
approx. 7,5x cable ø
- Radiation resistance**
up to 20x10⁶ cJ/kg (up to 20 Mrad)

Cable structure

- Bare copper, fine wire conductor, bunch stranded to DIN VDE 0295 cl. 5, BS 6360 cl. 5, IEC 60228 cl. 5, HD 383
- Insulating jacket thermoplastic compound, Tl6 according to DIN VDE 0281 part 14, appendix A
- Core identification according to DIN VDE 0293-308
- Green-yellow earth core, 3 cores and above
- Core stranded with optimal lay-length
- Outer sheath, thermoplastic compound, TM7 according DIN VDE 0281 part 14, appendix B
- Jacket colour by request
- with meter marking, change-over in 2011

Properties

- Tests**
Tested for flame retardation to VDE 0482-332-1-2, DIN EN 60332-1-2/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Smoke density to VDE 0482 part 268-2
- Halogen-free to HD 21.14 appendix C
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

Note

- G = with green-yellow earth core;
x = without green-yellow earth core.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- Colour code:
0 = RAL 9005, black
1 = RAL 9003, white
2 = RAL 5015, blue
3 = RAL 6018, green
4 = RAL 8003, brown
5 = RAL 1021, yellow
6 = RAL 3000, red
7 = RAL 2003, orange
8 = RAL 4005, violet
9 = RAL 7001/7032, grey
- Please add the individual part no. for order with the identification colour code.
Further colours on request.

Application

These cables may be used when halogen-free, low smoke and corrosive gas properties are required in case of fire. For low mechanical demands in the house, kitchen and office, for small equipment such as, for example, office machines, radios, table and stranded lamps. Not suitable for:

Cooking and heating equipment, use in high temperature areas (for example, in lighting equipment), outside use, industrial use or industrial electrical tools, cables with a nominal cross-section of 0,75 mm² comply with the same recommendations as for cable (H)05 Z1Z1-F.

CE – The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3233_	2 x 0,5	5,0	9,6	39,0	20
3234_	3 G 0,5	5,3	14,4	46,0	20
3235_	4 G 0,5	5,8	19,2	56,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3236_	2 x 0,75	5,4	14,4	47,0	18
3237_	3 G 0,75	5,7	21,6	55,0	18
3238_	4 G 0,75	6,3	29,0	69,0	18

Dimensions and specifications may be changed without prior notice. (IRA03)



Flexible Control Cables / Halogen-free Control Cables

(H)05Z1Z1-F halogen-free, meter marking**Technical data**

- flexible halogen-free control cable adapted to DIN VDE 0285-525-3-11 / DIN EN 50525-3-11
- Temperature range**
flexing -5°C to +70°C
fixed installation -40°C to +70°C
- Nominal voltage** U_0/U 300/500 V
- Test voltage** 2000 V
- Breakdown voltage** min. 4000 V
- Minimum bending radius**
7,5x cable \varnothing
- Radiation resistance**
up to 20×10^6 cJ/kg (up to 20 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation thermoplastic compound
- Core identification to DIN VDE 0293-308
- GN-YE conductor, 3 cores and above
- Cores stranded with optimal lay-length
- Outer sheath of thermoplastic compound
- Sheath colour by request
- with meter marking

Properties

- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- Tested for flame retardation acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Smoke density acc. to DIN VDE 0482-1034-1+2, DIN EN 61034-1+2, IEC 61034-1+2
- Halogen-free acc. to DIN VDE 0285-525-1, DIN EN 50525-1

Note

- G = with green-yellow conductor
x = without green-yellow conductor
- Please complete the part number for these cables by adding the suffix for the colour required as per the list:
0 = ca. RAL 9005 black
1 = ca. RAL 9003 white
2 = ca. RAL 5015 blue
3 = ca. RAL 6018 green
4 = ca. RAL 8003 brown
5 = ca. RAL 1021 yellow
6 = ca. RAL 3000 red
7 = ca. RAL 2003 orange
8 = ca. RAL 4005 violet
9 = ca. RAL 7001/7032 grey
Further colours on request.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².

Application

These cables may be used when halogen-free, low smoke and corrosive gas properties are required in case of fire. For moderate mechanical demands in the house, kitchen and office, for house equipment in damp rooms (for example: washing machines, spin-dryers and refrigerators). Suitable for cooking and heating equipment, providing the cable is not in contact with hot components or heat radiation.

Not suitable for:

in high temperature areas (for example, in lighting equipment), outside buildings, in industrial or agricultural buildings, connection of electrical power tools.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer \varnothing approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3027x	2 x 0,75	6,3	14,4	58,0	19
3028x	3 G 0,75	6,6	21,6	68,0	19
3029x	4 G 0,75	7,2	29,0	81,0	19
3030x	5 G 0,75	8,0	36,0	102,0	19
3031x	2 x 1	6,5	19,0	67,0	18
3032x	3 G 1	6,9	29,0	81,0	18
3034x	4 G 1	7,7	38,0	101,0	18
3035x	5 G 1	8,4	48,0	107,0	18
3036x	2 x 1,5	7,4	29,0	87,0	16
3037x	3 G 1,5	8,0	43,0	109,0	16
3038x	4 G 1,5	9,1	58,0	117,0	16
3039x	5 G 1,5	10,0	72,0	169,0	15
3040x	2 x 2,5	9,1	48,0	138,0	14
3041x	3 G 2,5	9,9	72,0	172,0	14
3042x	4 G 2,5	10,8	96,0	210,0	14

Part no.	No. cores x cross-sec. mm ²	Outer \varnothing approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
3043x	5 G 2,5	12,0	120,0	260,0	14
3044x	2 x 4	10,4	76,8	190,0	12
3045x	3 G 4	11,3	115,2	242,0	12
3046x	4 G 4	12,3	153,6	298,0	12
3047x	5 G 4	13,9	192,0	371,0	12



Flexible Control Cables / Halogen-free Control Cables

JZ-500 HMH-C flexible control cable, halogen-free, extremely fire resistant, oil resistant¹⁾, Cu-screened, EMC-preferred type, meter marking



Technical data

- Halogen-free core flexible control cable adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51 and DIN VDE 0285-525-3-11 / DIN EN 50525-3-11
- **Temperature range**
flexing -15°C to +70°C
fixed installation -40°C to +70°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 2000 V
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 12,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of halogen-free polymer compound type TI6 to DIN VDE 0207-363-7 / DIN EN 50363-7
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Separating foil
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of halogen-free spolymer compound type TM7 to DIN VDE 0207-363-8 / DIN EN 50363-8
- Sheath colour grey (RAL 7001)
- with meter marking
- **LSOH**= Low Smoke Zero Halogen

Properties

- ¹⁾ We recommend you for critical applications a consultation
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- ### Tests
- Flame test acc. to DIN VDE 0482-332-3, BS 4066 part 3, DIN EN 60332-3, IEC 60332-3 (previously DIN VDE 0472 part 804 test method C)
 - self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
 - Corrosiveness of combustion gases acc. to DIN VDE 0482 part 267, DIN EN 50267-2-2, IEC 60754-2 (equivalent DIN VDE 0472 part 813)
 - Halogen-free acc. to DIN VDE 0482 part 267, DIN EN 50267-2-1, IEC 60754-1 (equivalent DIN VDE 0472 part 815)
 - Smoke density acc. to DIN VDE 0482 part 1034-1+2, DIN EN 61034-1+2, IEC 61034-1+2, BS 7622 part 1+2 (previously DIN VDE 0472 part 816)

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
JZ-500 HMH, confer page 86

Application

Halogen-free, flame retardant control cables are used for instrumentation and control cables in tooling machinery, conveyor and transportation belts, production lines, in plant construction, air-conditioning systems as well as in iron and steel works. For fixed installation or for flexing applications, for casual, not constantly recurring free movement without forced motion and without tensile stress for medium mechanical loads. The cable is suitable for use in dry, damp and wet environments and on plaster. An interference-free transmission of signals and pulse is assured by the high degree of screening.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11656	2 x 0,5	5,7	35,0	46,0	20
11657	3 G 0,5	5,9	42,0	56,0	20
11342	3 x 0,5	5,9	42,0	56,0	20
11658	4 G 0,5	6,4	47,0	62,0	20
11343	4 x 0,5	6,4	47,0	62,0	20
11659	5 G 0,5	6,9	56,0	75,0	20
11660	7 G 0,5	7,6	69,0	98,0	20
11663	12 G 0,5	9,7	108,0	158,0	20
11665	18 G 0,5	11,5	145,0	216,0	20
11667	25 G 0,5	13,7	240,0	315,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11678	2 x 0,75	6,1	40,0	60,0	19
11679	3 G 0,75	6,3	52,0	68,0	19
11344	3 x 0,75	6,3	52,0	68,0	19
11680	4 G 0,75	6,8	60,0	78,0	19
11345	4 x 0,75	6,8	60,0	78,0	19
11681	5 G 0,75	7,4	71,0	95,0	19
11346	5 x 0,75	7,4	71,0	95,0	19
11682	7 G 0,75	8,2	91,0	130,0	19
11347	7 x 0,75	8,2	91,0	130,0	19
11685	12 G 0,75	10,5	142,0	203,0	19



Flexible Control Cables / Halogen-free Control Cables

JZ-500 HMH-C flexible control cable, halogen-free, extremely fire resistant, oil resistant¹⁾, Cu-screened, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11687	18 G 0,75	12,7	212,0	290,0	19
11689	25 G 0,75	15,0	281,0	413,0	19
11700	2 x 1	6,4	50,0	66,0	18
11701	3 G 1	6,7	60,0	80,0	18
11348	3 x 1	6,7	60,0	80,0	18
11702	4 G 1	7,2	71,0	100,0	18
11349	4 x 1	7,2	71,0	100,0	18
11703	5 G 1	8,0	88,0	130,0	18
11704	7 G 1	8,7	111,0	160,0	18
11707	12 G 1	11,4	184,0	260,0	18
11709	18 G 1	13,6	260,0	382,0	18
11711	25 G 1	16,2	349,0	540,0	18
11722	2 x 1,5	7,0	63,0	88,0	16
11723	3 G 1,5	7,4	80,0	100,0	16
11350	3 x 1,5	7,4	80,0	100,0	16
11724	4 G 1,5	8,1	97,0	125,0	16
11725	5 G 1,5	9,0	119,0	158,0	16
11726	7 G 1,5	9,8	147,0	210,0	16
11729	12 G 1,5	12,8	267,0	340,0	16
11731	18 G 1,5	15,6	374,0	480,0	16
11733	25 G 1,5	18,4	526,0	702,0	16
11744	2 x 2,5	8,4	96,0	132,0	14
11745	3 G 2,5	8,8	144,0	168,0	14
11746	4 G 2,5	9,8	148,0	195,0	14
11747	5 G 2,5	10,8	181,0	222,0	14
11748	7 G 2,5	11,9	255,0	345,0	14
11751	12 G 2,5	15,8	441,0	572,0	14
11766	2 x 4	10,0	120,0	184,0	12
11768	3 G 4	10,6	174,0	238,0	12
11769	4 G 4	11,6	230,0	305,0	12
11770	5 G 4	12,8	273,0	388,0	12
11771	7 G 4	14,2	316,0	504,0	12

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11781	2 G 6	11,7	173,0	270,0	10
11782	3 G 6	12,5	240,0	328,0	10
11783	4 G 6	13,8	305,0	416,0	10
11784	5 G 6	15,4	439,0	510,0	10
11785	7 G 6	17,0	505,0	670,0	10
11786	2 x 10	14,5	255,0	420,0	8
11787	3 G 10	15,6	350,0	495,0	8
11788	4 G 10	17,2	535,0	785,0	8
11789	5 G 10	19,1	592,0	855,0	8
11790	7 G 10	21,2	810,0	1308,0	8
11793	4 G 16	20,3	740,0	882,0	6
11794	5 G 16	22,2	895,0	1293,0	6
11812	7 G 16	24,8	1282,0	2149,0	6
11795	3 G 25	22,5	1070,0	1432,0	4
11796	4 G 25	25,0	1140,0	1911,0	4
11797	5 G 25	27,5	1380,0	2414,0	4
11798	3 G 35	25,7	1240,0	1914,0	2
11799	4 G 35	28,5	1576,0	2542,0	2
11800	5 G 35	31,7	1930,0	3180,0	2
11801	3 G 50	30,8	1675,0	3080,0	1
11802	4 G 50	34,1	2155,0	3550,0	1
11803	5 G 50	38,1	2794,0	4753,0	1
11804	3 G 70	36,0	2288,0	3840,0	2/0
11805	4 G 70	40,0	3120,0	4939,0	2/0
11806	5 G 70	44,5	3705,0	6572,0	2/0
11807	3 G 95	41,1	3010,0	5651,0	3/0
11808	4 G 95	45,6	4043,0	6690,0	3/0
11809	5 G 95	50,7	5026,0	8370,0	3/0
11810	3 G 120	45,2	3812,0	6342,0	4/0
11811	4 G 120	50,1	5069,0	8453,0	4/0
11813	4 G 185	63,0	8040,0	10800,0	350 kcmil

Dimensions and specifications may be changed without prior notice. (RA03)



Cables according to International Approvals / Halogen-free Control Cables UL/CSA

MEGAFLEX® 500-C

halogen-free, flame retardant, oil-resistant,
UV-resistant, flexible, screened, EMC-preferred types, meter marking



Technical data

- Halogen-free flexible control cable adapted to DIN VDE 0285-525-3-11 / DIN EN 50525-3-11, to UL-Style 20939, UL-Std.758
- **Temperature range** flexing -30°C to +80°C fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V UL/CSA 600 V
- **Test voltage** 3000 V
- **Coupling resistance** max. 250 Ohm/km
- **Minimum bending radius** flexing 10x cable Ø fixed installation 4x cable Ø
- **Flexibility** Alternate bending test acc. to DIN VDE 0473-396 / DIN EN 50396

Cable structure

- Bare copper, fine wire conductors, to DIN VDE 0295 cl.5, BS 6360 cl.5 and IEC 60228 cl.5
- Core insulation of halogen-free special polymer
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Separating foil
- Tinned copper braided screen, approx. 85 % coverage
- Outer sheath of halogen-free special polymer
- Sheath colour grey (RAL 7001)
- with meter marking
- **LSOH**= Low Smoke Zero Halogen

Note

- G = with green-yellow conductor
- x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type: **MEGAFLEX® 500**, confer page 394

Properties

- Halogen-free
- Highly flame-retardant
- Resistant to oils and greases
- Resistant to UV and weathering
- Flexible, abrasion- and wear-resistant
- Ozone-resistant
- Recycleable
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- Flame test acc. to DIN VDE 0482-332-3-24, BS 4066 part 3, DIN EN 60332-3-24, IEC 60332-3-24 (previously DIN VDE 0472 part 804 test method C)
- Self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (previously DIN VDE 0472 part 804 test method B) CSA FT1
- Corrosiveness of combustion gases acc. to NF X 10-702
- Halogen-free acc. to DIN VDE 0482 part 267, DIN EN 50267-2-1, IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Smoke density acc. to DIN VDE 0482 part 1034-1+2, DIN EN 61034-1+2, IEC 61034-1+2, BS 7622 part 1+2 (previously DIN VDE 0472 part 816)
- Oil-resistant to DIN VDE 0473-811-404 / DIN EN 60811-404
- Hydrolysis resistant to DIN EN 61234-1
- Ozone-resistant to DIN VDE 0473-811-403 / DIN EN 60811-403

Application

For fixed installation or flexible application that does not permanently recurring free movement without forced motion and without tensile stress, for high mechanical strain. As a measuring and control cable e. g. in machine and plant engineering, air conditioning in the warehouse and materials handling, shipbuilding and in the newable energies such as wind power stations.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
13500	2 x 0,5	20	5,7	35,0	46,0
13501	3 G 0,5	20	6,0	42,0	56,0
13502	3 x 0,5	20	6,0	42,0	56,0
13503	4 G 0,5	20	6,5	47,0	62,0
13504	4 x 0,5	20	6,5	47,0	62,0
13505	5 G 0,5	20	7,0	56,0	75,0
13506	5 x 0,5	20	7,0	56,0	75,0
13507	7 G 0,5	20	7,9	69,0	98,0

Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
13508	8 G 0,5	20	8,5	80,0	116,0
13509	10 G 0,5	20	9,3	94,0	135,0
13510	12 G 0,5	20	9,6	108,0	158,0
13511	16 G 0,5	20	10,7	129,0	210,0
13512	18 G 0,5	20	11,2	145,0	216,0
13514	20 G 0,5	20	11,9	172,0	240,0
13515	25 G 0,5	20	13,4	240,0	315,0



Cables according to international Approvals / Halogen-free Control Cables UL/CSA

MEGAFLEX® 500-C halogen-free, flame retardant, oil-resistant, UV-resistant, flexible, screened, EMC-preferred types, meter marking



Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
13516	2 x 0,75	19	6,1	40,0	60,0
13517	3 G 0,75	19	6,4	52,0	68,0
13518	3 x 0,75	19	6,4	52,0	68,0
13519	4 G 0,75	19	6,9	60,0	78,0
13520	4 x 0,75	19	6,9	60,0	78,0
13521	5 G 0,75	19	7,4	71,0	95,0
13522	5 x 0,75	19	7,4	71,0	95,0
13523	7 G 0,75	19	8,6	91,0	130,0
13524	7 x 0,75	19	8,6	91,0	130,0
13525	8 G 0,75	19	9,4	110,0	145,0
13526	10 G 0,75	19	10,2	137,0	180,0
13527	12 G 0,75	19	10,4	142,0	203,0
13528	16 G 0,75	19	11,6	200,0	275,0
13529	18 G 0,75	19	12,4	212,0	290,0
13530	20 G 0,75	19	12,9	238,0	320,0
13531	25 G 0,75	19	14,8	281,0	413,0
13532	2 x 1	18	6,4	50,0	66,0
13533	3 G 1	18	6,7	60,0	80,0
13534	3 x 1	18	6,7	60,0	80,0
13535	4 G 1	18	7,3	71,0	100,0
13536	4 x 1	18	7,3	71,0	100,0
13537	5 G 1	18	7,8	88,0	130,0
13538	7 G 1	18	9,1	111,0	160,0
13539	8 G 1	18	9,9	127,0	197,0
13540	10 G 1	18	10,8	150,0	232,0
13541	12 G 1	18	11,2	184,0	260,0
13542	16 G 1	18	12,3	209,0	346,0
13543	18 G 1	18	13,2	260,0	382,0
13544	20 G 1	18	13,8	317,0	440,0
13545	25 G 1	18	15,8	349,0	540,0
13546	2 x 1,5	16	7,0	63,0	88,0
13547	3 G 1,5	16	7,3	80,0	100,0
13548	3 x 1,5	16	7,3	80,0	100,0
13549	4 G 1,5	16	7,9	97,0	125,0
13550	5 G 1,5	16	8,6	119,0	158,0
13552	7 G 1,5	16	10,2	147,0	210,0
13554	8 G 1,5	16	11,1	170,0	244,0
13556	10 G 1,5	16	12,0	193,0	315,0
13557	12 G 1,5	16	12,5	267,0	340,0
13558	16 G 1,5	16	13,8	315,0	424,0
13559	18 G 1,5	16	15,0	374,0	480,0
13560	20 G 1,5	16	15,7	396,0	545,0
13561	25 G 1,5	16	18,0	526,0	702,0
13562	2 x 2,5	14	8,3	96,0	132,0
13563	3 G 2,5	14	9,0	144,0	168,0
13565	4 G 2,5	14	9,8	148,0	195,0

Part no.	No. cores x cross-sec. mm ²	AWG-No.	Outer Ø app. mm	Cop. weight kg / km	Weight app. kg / km
13566	5 G 2,5	14	10,9	181,0	256,0
13567	7 G 2,5	14	12,9	255,0	345,0
13568	8 G 2,5	17	13,8	285,0	390,0
13569	10 G 2,5	14	15,8	340,0	482,0
13570	12 G 2,5	14	15,9	441,0	572,0
13571	2 x 4	12	9,8	120,0	220,0
13572	3 G 4	12	10,6	174,0	251,0
13573	4 G 4	12	11,5	230,0	305,0
13574	5 G 4	12	12,7	273,0	388,0
13575	7 G 4	12	13,9	316,0	504,0
13576	2 x 6	10	11,5	173,0	270,0
13577	3 G 6	10	12,4	240,0	351,0
13578	4 G 6	10	13,8	305,0	464,0
13579	5 G 6	10	15,7	439,0	546,0
13580	7 G 6	10	16,6	505,0	670,0
13581	2 x 10	8	14,9	255,0	461,0
13582	3 G 10	8	15,9	350,0	574,0
13583	4 G 10	8	17,8	535,0	785,0
13584	5 G 10	8	19,6	592,0	914,0
13585	7 G 10	8	21,6	810,0	1308,0
13586	2 x 16	6	17,3	422,0	670,0
13587	3 G 16	6	18,5	585,0	911,0
13588	4 G 16	6	20,8	740,0	1105,0
13589	5 G 16	6	22,9	895,0	1293,0
13590	7 G 16	6	25,0	1282,0	2149,0
13591	4 G 25	4	26,2	1140,0	1911,0
13592	4 x 35	2	30,4	1576,0	2542,0
13593	4 G 50	1	34,6	2155,0	3550,0
13594	4 G 70	2/0	41,3	3120,0	4939,0
13595	4 G 95	3/0	46,2	4043,0	6690,0
13596	4 G 120	4/0	51,0	5069,0	8453,0
13597	4 G 150	300 kcmil	59,0	5792,0	9104,0

Dimensions and specifications may be changed without prior notice. (RA03)



Flexible Control Cables / Halogen-free Control Cables

JZ-600 HMH-C flexible control cable, halogen-free, extremely fire resistant, oil resistant¹⁾, 0,6/1kV, screened, EMC-preferred type, meter marking



Technical data

- Halogen-free, flexible control cable, core construction adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51 and DIN VDE 0285-525-3-11 / DIN EN 50525-3-11
- **Temperature range**
flexing -15°C to +70°C
fixed -40°C to +70°C
- **Nominal voltage** U₀/U 0,6/1 kV
- **Test voltage** 4000 V
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 15x cable Ø
fixed installation 7,5x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of halogen-free polymer compound type T16 to DIN VDE 0207-363-7 / DIN EN 50363-7
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of halogen-free polymer compound type, TM7 to DIN VDE 0207-363-8 / DIN EN 50363-8
- Sheath colour black (RAL 9005)
- with meter marking

Properties

- ¹⁾ For critical applications recommend you request a consultation
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- Flame test acc. to DIN VDE 0482-332-3, BS 4066 part 3, DIN EN 60332-3, IEC 60332-3 (previously DIN VDE 0472 part 804 test method C)
- Self-extinguishing and flame-resistant acc. to DIN VDE 0482 Part 265-2-1 / EN 50265-2-1 / IEC 60332-1 (equivalent DIN VDE 0472 Part 804 test method B)
- Corrosiveness of corrosive gases acc. to DIN VDE 0482 part 267, DIN EN 50267-2-2, IEC 607542 (equivalent DIN VDE 0472 part 813)
- Halogen-free acc. to DIN VDE 0482, Part 267, DIN EN 50267-2-1, IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Smoke density acc. to DIN VDE 0482 part 1034-1+2, DIN EN 61034-1+2, IEC 61034-1+2, BS 7622 part 1+2 (previously DIN VDE 0472 part 816)

Note

- G = with green-yellow conductor
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
JZ-600 HMH, confer page 91

Application

Halogen-free, flame retardant cables are used as measuring and control cable in machine tools, conveyor belts, production lines as well as in plant installations, in heating and air-conditioning systems and steel production works. For fixed installation or flexible application, directed without forcing by casual, constantly recurring free movements and without tensile stress, for medium mechanical strain. This cable is suitable for the application in dry, damp and wet environments, outdoors (fixed installation) and for laying on plaster. The dense screening assures interference-free transmission of all signals and impulses.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12850	3 G 0,5	8,8	45,0	150,0	20
12851	4 G 0,5	9,4	54,0	170,0	20
12852	5 G 0,5	10,2	66,0	199,0	20
12853	7 G 0,5	10,8	79,0	235,0	20
12854	12 G 0,5	14,3	137,0	320,0	20
12855	18 G 0,5	16,4	156,0	428,0	20
12856	25 G 0,5	19,3	250,0	503,0	20
12857	3 G 0,75	9,1	57,0	155,0	19
12858	4 G 0,75	9,9	63,0	190,0	19
12859	5 G 0,75	10,6	76,0	228,0	19
12860	7 G 0,75	11,5	100,0	323,0	19
12861	12 G 0,75	14,9	175,0	410,0	19
12862	18 G 0,75	17,2	240,0	560,0	19
12863	25 G 0,75	20,6	306,0	730,0	19

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12864	3 G 1	9,8	64,0	163,0	18
12865	4 G 1	10,4	76,0	200,0	18
12866	5 G 1	11,4	89,0	239,0	18
12867	7 G 1	12,3	114,0	289,0	18
12868	12 G 1	15,9	186,0	464,0	18
12869	18 G 1	18,2	284,0	628,0	18
12870	25 G 1	22,0	387,0	855,0	18
12871	3 G 1,5	10,8	82,0	187,0	16
12872	4 G 1,5	11,5	99,0	240,0	16
12873	5 G 1,5	13,0	123,0	289,0	16
12874	7 G 1,5	14,2	148,0	383,0	16
12875	12 G 1,5	18,4	274,0	592,0	16
12876	18 G 1,5	21,3	386,0	806,0	16
12877	25 G 1,5	25,4	531,0	1241,0	16



Flexible Control Cables / Halogen-free Control Cables

JZ-600 HMH-C flexible control cable, halogen-free, extremely fire resistant, oil resistant¹⁾, 0,6/1kV, screened, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12878	3 G 2,5	12,8	148,0	298,0	14
12879	4 G 2,5	13,8	169,0	345,0	14
12880	5 G 2,5	15,0	220,0	427,0	14
12881	7 G 2,5	16,3	284,0	561,0	14
12882	12 G 2,5	21,6	470,0	857,0	14
12883	18 G 2,5	25,2	572,0	1355,0	14
12884	25 G 2,5	30,0	740,0	1995,0	14
12885	3 G 4	14,6	178,0	391,0	12
12886	4 G 4	15,7	234,0	527,0	12
12887	5 G 4	17,2	284,0	700,0	12
12888	3 G 6	15,9	245,0	629,0	10
12889	4 G 6	17,4	316,0	731,0	10
12890	5 G 6	19,2	442,0	1105,0	10
12891	3 G 10	19,8	367,0	1125,0	8
12892	4 G 10	21,5	549,0	1345,0	8
12893	5 G 10	23,5	604,0	1635,0	8

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
12894	4 G 16	25,7	807,0	1395,0	6
12895	5 G 16	28,5	940,0	1870,0	6
12896	7 G 16	31,4	1345,0	2720,0	6
12897	3 G 25	28,2	920,0	2465,0	4
12898	4 G 25	31,3	1169,0	2750,0	4
12899	5 G 25	34,5	1420,0	3490,0	4
12900	3 G 35	31,2	1250,0	3230,0	2
12901	4 G 35	34,5	1680,0	4100,0	2
12902	5 G 35	38,0	2020,0	4950,0	2
12903	4 G 50	40,5	2370,0	5780,0	1
12904	4 G 70	46,0	3257,0	7480,0	2/0
12905	4 G 95	51,3	4060,0	10220,0	3/0
12906	4 G 120	56,4	5231,0	13750,0	4/0
12907	4 G 150	64,4	6794,0	15900,0	4/0

Dimensions and specifications may be changed without prior notice. (RA03)

JB-750 HMM-C flexible control cable, coloured core, halogen-free, screened, extremely fire resistant, oil resistant¹⁾, EMC-preferred type, meter marking



Technical data

- Halogen-free core flexible control cable, adapted to E DIN VDE 0281 part 14 and DIN VDE 0281 part 13
- **Temperature range** flexing -15 °C to +70 °C fixed installation -40 °C to +70 °C
- **Nominal voltage** U₀/U 450/750 V
- **Test voltage** 3000 V
- **Minimum bending radius** flexing approx. 12,5x cable ø fixed installation approx. 4x cable ø
- **Coupling resistance** max. 250 Ohm/km
- **Radiation resistance** up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper, fine wire conductors, to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Core insulation of halogen-free compound TI6, to E DIN VDE 0281 part 14
- Colour coded to DIN VDE 0293-308
- Green-yellow earth core in the outer layer
- Cores laid up in layers with optimal lay-length
- Separating layer
- Screen braid of tinned copper wires, coverage approx. 85%
- Halogen-free sheath compound TM7, to E DIN VDE 0281 part 14
- Jacket colour grey (RAL 7001)
- with meter marking, change-over in 2011
- **LSOH** = Low Smoke Zero Halogen-free.

Properties

- ¹⁾ For the critical applications we advise for consultation
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- Flame test to DIN VDE 0482-332-3 BS 4066 part 3/ DIN EN 60332-3/IEC 60332-3 (equivalent DIN VDE 0472 part 804 test method C)
- Self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Corrosiveness of combustion gases according to DIN VDE 0482 part 267/ EN 50267-2-2/ IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- Halogen-free according to DIN VDE 0482 part 267/ EN 50267-2-1/ IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Smoke density according to VDE 0482 part 1034-1+2 / IEC 61034-1+2 / DIN EN 61034-1+2 / BS 7622 part 1+2 (equivalent DIN VDE 0472 part 816)

Note

- G = with green-yellow earth core
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
- **unscreened analogue type:** **JB-750 HMM**, see page A 68

Application

Halogen-free, flame retardant control cables are used for instrumentation and control cables in tooling machinery, conveyor and transportation belts, production lines, in plant construction, air-conditioning systems as well as in iron and steel works. For fixed installation or for flexing applications, for casual, not constantly recurring free movement without forced motion and without tensile stress for medium mechanical loads. The cable is suitable for use in dry, damp and wet environments for installation above, on, in and beneath plaster as well as in masonry and concrete walls except for direct embedding in vibrated, compacted or tamped concrete, not suitable for imbedding in solidified or compressed concrete.

An interference-free transmission of signals and pulse is assured by the high degree of screening.

EMC = Electromagnetic compatibility

To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11942	3 G 1,5	7,4	80,0	125,0	16
11943	4 G 1,5	8,1	97,0	160,0	16
11944	5 G 1,5	9,0	119,0	193,0	16
11945	3 G 2,5	8,8	144,0	198,0	14
11946	4 G 2,5	9,8	148,0	240,0	14
11947	5 G 2,5	10,8	181,0	280,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11948	3 G 4	10,4	174,0	251,0	12
11949	4 G 4	11,6	230,0	315,0	12
11950	5 G 4	12,9	273,0	396,0	12
11951	4 G 6	13,8	305,0	430,0	10
11952	5 G 6	15,3	439,0	524,0	10

JB-750 HMM-C flexible control cable, coloured core, halogen-free, screened, extremely fire resistant, oil resistant¹⁾, EMC-preferred type, meter marking



Technical data

- Halogen-free core flexible control cable, adapted to E DIN VDE 0281 part 14 and DIN VDE 0281 part 13
- **Temperature range** flexing -15 °C to +70 °C fixed installation -40 °C to +70 °C
- **Nominal voltage** U₀/U 450/750 V
- **Test voltage** 3000 V
- **Minimum bending radius** flexing approx. 12,5x cable ø fixed installation approx. 4x cable ø
- **Coupling resistance** max. 250 Ohm/km
- **Radiation resistance** up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper, fine wire conductors, to DIN VDE 0295 cl. 5, BS 6360 cl. 5 and IEC 60228 cl. 5
- Core insulation of halogen-free compound TI6, to E DIN VDE 0281 part 14
- Colour coded to DIN VDE 0293-308
- Green-yellow earth core in the outer layer
- Cores laid up in layers with optimal lay-length
- Separating layer
- Screen braid of tinned copper wires, coverage approx. 85%
- Halogen-free sheath compound TM7, to E DIN VDE 0281 part 14
- Jacket colour grey (RAL 7001)
- with meter marking, change-over in 2011
- **LSOH** = Low Smoke Zero Halogen-free.

Properties

- ¹⁾ For the critical applications we advise for consultation
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- Flame test to DIN VDE 0482-332-3 BS 4066 part 3/ DIN EN 60332-3/IEC 60332-3 (equivalent DIN VDE 0472 part 804 test method C)
- Self-extinguishing and flame retardant according to DIN VDE 0482 part 265-2-1/ EN 50265-2-1/ IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)
- Corrosiveness of combustion gases according to DIN VDE 0482 part 267/ EN 50267-2-2/ IEC 60754-2 (equivalent DIN VDE 0472 part 813)
- Halogen-free according to DIN VDE 0482 part 267/ EN 50267-2-1/ IEC 60754-1 (equivalent DIN VDE 0472 part 815)
- Smoke density according to VDE 0482 part 1034-1+2 / IEC 61034-1+2 / DIN EN 61034-1+2 / BS 7622 part 1+2 (equivalent DIN VDE 0472 part 816)

Note

- G = with green-yellow earth core
- Cleanroom qualification tested with analog type. Please note "cleanroom qualified" when ordering.
- **unscreened analogue type:** **JB-750 HMM**, see page A 68

Application

Halogen-free, flame retardant control cables are used for instrumentation and control cables in tooling machinery, conveyor and transportation belts, production lines, in plant construction, air-conditioning systems as well as in iron and steel works. For fixed installation or for flexing applications, for casual, not constantly recurring free movement without forced motion and without tensile stress for medium mechanical loads. The cable is suitable for use in dry, damp and wet environments for installation above, on, in and beneath plaster as well as in masonry and concrete walls except for direct embedding in vibrated, compacted or tamped concrete, not suitable for imbedding in solidified or compressed concrete.

An interference-free transmission of signals and pulse is assured by the high degree of screening.

EMC = Electromagnetic compatibility

To optimise the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EG.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11942	3 G 1,5	7,4	80,0	125,0	16
11943	4 G 1,5	8,1	97,0	160,0	16
11944	5 G 1,5	9,0	119,0	193,0	16
11945	3 G 2,5	8,8	144,0	198,0	14
11946	4 G 2,5	9,8	148,0	240,0	14
11947	5 G 2,5	10,8	181,0	280,0	14

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
11948	3 G 4	10,4	174,0	251,0	12
11949	4 G 4	11,6	230,0	315,0	12
11950	5 G 4	12,9	273,0	396,0	12
11951	4 G 6	13,8	305,0	430,0	10
11952	5 G 6	15,3	439,0	524,0	10



Flexible Control Cables / PVC Control Cables for Intrinsically Safe Circuits

OZ-BL outer sheath blue, intrinsic safety, flexible, meter marking



Technical data

- Control cable, special PVC with blue outer sheath for hazardous areas to hazard type -i- (= intrinsically safe)
- For intrinsically safe installation acc. to DIN EN 60079-14 and IEC 60079-14 section 12.2.2 (VDE 0165 part 1)
- Temperature range**
flexing -15°C to +80°C
fixed installation -40°C to +80°C
- Nominal voltage** U₀/U 300/500 V
- Test voltage** 3000 V
- Breakdown voltage** min. 6000 V
- Insulation resistance**
min. 20 MOhm x km
- Mutual capacitance**
core/core approx. 120 nF/km
- Inductance**
approx. 0,68 mH/km
- Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- without GN-YE conductor
- Cores stranded in layers with optimal lay-length
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour blue (RAL 5015)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2/IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- For underground laying use NYY with blue outer sheath.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- Instrumentation cable RE-2Y(St)Yv with blue outer sheath see Data and Computer Cables

Application

For hazardous areas the cables with special marking (blue) (hazard type -i-) used as flexible control and measuring cables to meet the requirements for the installation of electrical apparatus. These installations are not earthed and require a separate power circuit. Those cables are not suitable for underground laying.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
14001	2 x 0,75	5,3	14,4	46,0	19
14002	3 x 0,75	5,6	21,6	54,0	19
14003	4 x 0,75	6,3	29,0	66,0	19
14004	5 x 0,75	6,9	36,0	80,0	19
14075	7 x 0,75	7,5	52,0	110,0	19
14005	8 x 0,75	8,3	58,0	130,0	19
14076	12 x 0,75	9,8	88,0	179,0	19
14006	18 x 0,75	12,2	130,0	257,0	19
14007	25 x 0,75	14,3	180,0	365,0	19
14008	30 x 0,75	15,3	215,0	448,0	19
14009	34 x 0,75	16,5	245,0	510,0	19
14010	41 x 0,75	18,1	298,0	607,0	19
14011	2 x 1	5,6	19,0	60,0	18
14012	3 x 1	5,9	29,0	72,0	18
14013	4 x 1	6,6	38,0	86,0	18
14014	5 x 1	7,3	48,0	104,0	18
14015	7 x 1	8,1	67,0	141,0	18
14016	12 x 1	10,4	115,0	230,0	18
14017	18 x 1	12,9	173,0	343,0	18
14018	25 x 1	15,4	240,0	485,0	18

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
14019	2 x 1,5	6,4	29,0	70,0	16
14020	3 x 1,5	6,8	43,0	90,0	16
14021	4 x 1,5	7,4	58,0	109,0	16
14022	5 x 1,5	8,3	72,0	131,0	16
14023	7 x 1,5	9,2	101,0	184,0	16
14024	12 x 1,5	11,8	173,0	309,0	16
14025	18 x 1,5	14,6	259,0	440,0	16
14026	25 x 1,5	17,4	360,0	620,0	16
14027	30 x 1,5	18,6	440,0	842,0	16
14100	3 x 2,5	8,3	72,0	148,0	14
14101	4 x 2,5	9,2	96,0	178,0	14
14102	5 x 2,5	10,1	120,0	221,0	14

Dimensions and specifications may be changed without prior notice. (RA04)



Flexible Control Cables / PVC Control Cables for Intrinsically Safe Circuits

OZ-BL-CY outer sheath blue, intrinsic safety, flexible, meter marking**Technical data**

- Control cable, special PVC with blue outer sheath for hazardous areas to hazard type -i- (=intrinsically safe)
- For intrinsically safe installation acc. to DIN EN 60079-14 and IEC 60079-14 section 12.2.2. (VDE 0165 part 1)
- **Temperature range**
flexing -10°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U_0/U 300/500 V
- **Test voltage** 3000 V
- **Breakdown voltage** min. 6000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Mutual capacitance**
core/core approx. 140 nF/km
core/screen approx. 187 nF/km
- **Inductance**
approx. 0,68 mH/km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable \emptyset
fixed installation 5x cable \emptyset
- **Radiation resistance**
up to 80×10^6 cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type Z 7225
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- without GN-YE conductor
- Cores stranded in layers with optimal lay-length
- Separating foil
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1 / DIN EN 50363-4-1
- Sheath colour blue (RAL 5015)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Tests

- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2 / IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- For underground laying use NYY with blue outer sheath.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- Instrumentation cable RE-2Y(St)Yv with blue outer sheath see Data and Computer cables

Application

For hazardous areas the cables with special marking (blue) (hazard type-i-) used as flexible control and measuring cables to meet the requirements for the installation of electrical apparatus. These installations are not earthed and require a separate power circuit. Those cables are not suitable for underground laying. The copper braided screening ensures the transmission of data signals and free from interference.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer \emptyset approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
14028	2 x 0,75	6,1	40,0	59,0	19
14029	3 x 0,75	6,3	52,0	66,0	19
14030	4 x 0,75	6,8	60,0	77,0	19
14031	5 x 0,75	7,4	71,0	93,0	19
14088	7 x 0,75	8,2	91,0	130,0	19
14032	8 x 0,75	9,0	110,0	145,0	19
14033	10 x 0,75	10,3	137,0	180,0	19
14034	12 x 0,75	10,5	142,0	202,0	19
14035	18 x 0,75	12,7	212,0	292,0	19
14036	20 x 0,75	13,6	238,0	362,0	19
14037	25 x 0,75	15,0	281,0	415,0	19
14038	30 x 0,75	16,0	320,0	486,0	19
14039	34 x 0,75	17,2	345,0	523,0	19
14040	41 x 0,75	18,1	400,0	680,0	19
14041	2 x 1	6,4	50,0	65,0	18
14042	3 x 1	6,7	60,0	81,0	18
14043	4 x 1	7,2	71,0	98,0	18
14044	5 x 1	8,0	88,0	127,0	18
14045	7 x 1	8,7	111,0	158,0	18
14046	12 x 1	11,4	184,0	260,0	18
14047	18 x 1	13,6	260,0	380,0	18
14048	25 x 1	16,2	349,0	534,0	18
14049	34 x 1	18,5	486,0	741,0	18

Part no.	No. cores x cross-sec. mm ²	Outer \emptyset approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
14050	2 x 1,5	7,0	63,0	88,0	16
14051	3 x 1,5	7,4	80,0	100,0	16
14052	4 x 1,5	8,1	97,0	126,0	16
14053	5 x 1,5	9,0	119,0	160,0	16
14054	7 x 1,5	9,8	147,0	208,0	16
14055	12 x 1,5	12,8	267,0	338,0	16
14056	18 x 1,5	15,6	374,0	479,0	16
14057	25 x 1,5	18,4	526,0	705,0	16
14058	30 x 1,5	19,6	555,0	830,0	16
14059	34 x 1,5	21,2	629,0	900,0	16



Flexible Control Cables / PVC Control Cables for Intrinsically Safe Circuits

OB-BL-PAAR-CY outer sheath blue, intrinsic safety, EMC-preferred type, meter marking



Technical data

- Special PVC control cable with blue outer sheath for hazardous areas to hazard type -i- for intrinsically safe installation acc. to DIN EN 60079-14 and IEC 60079-14 section 12.2.2. (VDE 0165 part 1)
- **Conductor resistance**
at 0,5 mm² 37,8 Ohm/km
at 0,75 mm² 25,3 Ohm/km
- **Temperature range**
flexing -10°C to +80°C
fixed installation -30°C to +80°C
- **Operating peak voltage**
(not for heavy current installation purposes)
900 V
- **Test voltage**
core/core 2000 V
core/screen 1000 V
- **Breakdown voltage** min. 4000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Mutual capacitance**
core/core approx. 105 nF/km
core/screen approx. 145 nF/km
- **Inductance**
approx. 0,68 mH/km
- **Characteristic impedance**
approx. 80 Ohm
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 80x10⁶ cJ/kg (up to 80 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification (pair) to DIN 47100
- Cores twisted in pairs
- Pairs stranded in layers with optimal lay-length
- Separating foil
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special PVC compound type TM2 to DIN VDE 0207-363-4-1/DIN EN 50363-4-1
- Sheath colour blue (RAL 5015)
- with meter marking

Properties

- Extensively oil resistant, oil-/chemical resistance see table Technical Informations
 - The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Tests**
- PVC self-extinguishing and flame retardant acc. to DIN VDE 0482-332-1-2, DIN EN 60332-1-2, IEC 60332-1 (equivalent DIN VDE 0472 part 804 test method B)

Note

- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- Instrumentation cable RE-2Y(St)Yv with blue outer sheath see Data and Computer Cables

Application

For hazardous areas this flexible control cable has been constructed for closed circuit systems in accordance with VDE 0165 part 1, part 12. 2. 2. 6, which covers the requirements for the special marking (blue) of this type (hazard type -i-). The paired construction and the copper screening afford a good protection against electrical interference and ensure the transmission of data signals.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.pairs x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No.pairs x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
14077	2 x 2 x 0,5	7,6	47,0	89,0	20	14089	2 x 2 x 0,75	8,6	60,0	105,0	19
14078	3 x 2 x 0,5	8,2	67,0	104,0	20	14090	3 x 2 x 0,75	9,1	80,0	128,0	19
14079	4 x 2 x 0,5	9,0	80,0	126,0	20	14091	4 x 2 x 0,75	10,1	110,0	156,0	19
14080	6 x 2 x 0,5	10,9	108,0	171,0	20	14092	6 x 2 x 0,75	12,4	142,0	216,0	19
14081	8 x 2 x 0,5	12,3	129,0	251,0	20	14093	8 x 2 x 0,75	14,2	200,0	309,0	19
14082	10 x 2 x 0,5	14,2	172,0	282,0	20	14094	10 x 2 x 0,75	16,0	238,0	355,0	19
14083	12 x 2 x 0,5	14,7	235,0	261,0	20	14095	12 x 2 x 0,75	16,8	270,0	405,0	19
14084	16 x 2 x 0,5	16,3	301,0	445,0	20	14096	16 x 2 x 0,75	18,6	342,0	560,0	19
14085	20 x 2 x 0,5	17,7	343,0	525,0	20	14097	20 x 2 x 0,75	21,2	369,0	671,0	19
14086	24 x 2 x 0,5	20,2	394,0	590,0	20	14098	24 x 2 x 0,75	22,8	451,0	795,0	19
14087	25 x 2 x 0,5	20,6	406,0	622,0	20	14099	25 x 2 x 0,75	23,2	461,0	803,0	19



Flexible Control Cables / Bio-Oil and microbial resistant Cables

BIOFLEX-500®-JZ Bio-fuel resistant, abrasion resistant, recyclable environment friendly, bio-oil resistant¹⁾, meter marking



Technical data

- Bio-oil resistant, abrasion resistant special control cable in adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -20°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 3000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 15x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special polymer
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special polymer compound
- Sheath colour dark green
- with meter marking

Properties

- **Resistant to**
Bio-fuel (diesel and petrol), highly resistant to biologically decomposable oils, Oxygene, Ozone, Hydrolysis and Microbes
- Low adhesion

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- ¹⁾ For the critical applications we advise for consultation.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
BIOFLEX-500®-JZ-C, confer page 110

Application

BIOFLEX-500®-JZ is an extremely robust control cable with high abrasion and tear resistant properties. Due to its high resistance to Bio-fuel, Bio-oil and coolant emulsions. It is especially suited for use in the machine, tool making and plant industries as well as in the steel industry for difficult and problem areas. The high flexibility of this cable type makes it quick and easy to install. Suitable for outdoor lying.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
25620	2 x 0,5	5,4	9,6	45,0	20
25621	3 G 0,5	5,9	14,4	55,0	20
25622	4 G 0,5	6,3	19,0	65,0	20
25623	5 G 0,5	6,9	24,0	75,0	20
25624	7 G 0,5	7,8	33,6	90,0	20
25625	10 G 0,5	9,6	48,0	120,0	20
25626	12 G 0,5	10,0	58,0	135,0	20
25627	14 G 0,5	10,3	67,0	170,0	20
25628	18 G 0,5	11,5	86,0	205,0	20
25629	25 G 0,5	13,6	120,0	270,0	20
25630	2 x 0,75	5,4	14,4	44,0	19
25631	3 G 0,75	6,2	21,6	53,0	19
25632	4 G 0,75	6,7	29,0	64,0	19
25633	5 G 0,75	7,3	36,0	76,0	19
25634	7 G 0,75	8,8	50,0	96,0	19
25635	10 G 0,75	10,5	72,0	140,0	19
25636	12 G 0,75	11,0	86,0	170,0	19
25637	14 G 0,75	11,4	101,0	202,0	19
25638	18 G 0,75	12,6	130,0	260,0	19
25639	25 G 0,75	15,2	180,0	282,0	19
25640	41 G 0,75	18,0	296,0	600,0	19
25641	42 G 0,75	18,5	310,0	620,0	19
25642	2 x 1	6,6	19,0	53,0	18
25643	3 G 1	7,0	29,0	63,0	18
25644	4 G 1	7,6	38,0	75,0	18
25645	5 G 1	8,2	48,0	89,0	18
25646	7 G 1	9,6	67,0	115,0	18
25647	10 G 1	11,6	96,0	166,0	18
25648	12 G 1	12,0	115,0	201,0	18
25649	14 G 1	13,2	134,0	230,0	18
25650	18 G 1	14,5	173,0	289,0	18
25651	25 G 1	17,6	240,0	380,0	18
25652	41 G 1	21,1	394,0	720,0	18
25653	42 G 1	21,5	403,0	740,0	18

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
25654	2 x 1,5	7,2	29,0	68,0	16
25655	3 G 1,5	7,6	43,0	87,0	16
25656	4 G 1,5	8,2	58,0	106,0	16
25657	5 G 1,5	9,0	72,0	131,0	16
25658	7 G 1,5	10,7	101,0	173,0	16
25659	10 G 1,5	13,0	144,0	245,0	16
25660	12 G 1,5	13,4	173,0	293,0	16
25661	14 G 1,5	14,5	202,0	347,0	16
25662	18 G 1,5	16,0	259,0	454,0	16
25663	25 G 1,5	19,5	360,0	641,0	16
25664	42 G 1,5	23,8	605,0	1100,0	16
25665	2 x 2,5	8,6	48,0	110,0	14
25666	3 G 2,5	9,3	72,0	146,0	14
25667	4 G 2,5	10,3	96,0	183,0	14
25668	5 G 2,5	11,5	120,0	222,0	14
25669	7 G 2,5	13,4	168,0	293,0	14
25670	12 G 2,5	17,0	288,0	512,0	14
25671	18 G 2,5	20,0	432,0	740,0	14
25672	25 G 2,5	24,1	600,0	940,0	14
25673	2 x 4	10,4	77,0	147,0	12
25674	3 G 4	11,2	115,0	228,0	12
25675	4 G 4	12,5	154,0	291,0	12
25676	5 G 4	13,8	192,0	355,0	12
25677	3 G 6	13,0	173,0	362,0	10
25678	4 G 6	14,7	230,0	468,0	10
25679	5 G 6	16,0	288,0	570,0	10
25680	3 G 10	16,7	288,0	555,0	8
25681	4 G 10	18,3	384,0	720,0	8
25682	5 G 10	20,5	480,0	894,0	8
25683	4 G 16	21,1	614,0	1063,0	6
25684	5 G 16	23,6	768,0	1400,0	6
25685	4 G 25	29,4	960,0	1590,0	4
25686	4 G 35	32,8	1344,0	2200,0	2
25687	4 G 50	38,9	1920,0	2400,0	1
25688	4 G 70	44,7	2688,0	4400,0	2/0
25689	4 G 95	59,6	3648,0	6000,0	3/0
25690	4 G 120	64,5	4608,0	7400,0	4/0



Flexible Control Cables / Bio-Oil and microbial resistant Cables

BIOFLEX-500®-JZ-C Bio-fuel resistant, abrasion resistant, recyclable environment friendly, bio-oil resistant¹⁾, Cu-screened, EMC-preferred type, meter marking



Technical data

- Bio-oil resistant, abrasion resistant special control cable in adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -20°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 3000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 20x cable Ø
fixed installation 6x cable Ø
- **Radiation resistance**
up to 100x10⁵cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special polymer
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Special inner sheath
- Tinned copper braided screen, approx. 85% coverage
- Core wrapping of fleece guarantees easy cable stripping
- Outer sheath of special polymer compound
- Sheath colour dark green
- with meter marking

Properties

- **Resistant to**
Bio-fuel (diesel and petrol), highly resistant to biologically decomposable oils, Oxygene, Ozone, Hydrolysis and Microbes
- Low adhesion

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- ¹⁾ For the critical applications we advise for consultation.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
BIOFLEX-500®-JZ, confer page 109

Application

HELUKABEL® BIOFLEX-500®-JZ-C is an extremely robust control cable with high abrasion and tear resistant properties. Due to its high resistance to Bio-fuel, Bio-oil and coolant emulsions. It is especially suited for use in the machine, tool making and plant industries as well as in the steel industry for difficult and problem areas. The inner sheaths of those cables raise the mechanical stress. The high flexibility of this cable type makes it quick and easy to install. Suitable for outdoor lying. These screened cables are particularly suitable for the interference-free transmission in instrumentation and control engineering applications (electromagnetic compatibility). ¹⁾ For the critical applications we advise for consultation.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
25691	2 x 0,5	6,6	41,0	68,0	20	25713	2 x 1	8,1	54,0	98,0	18
25692	3 G 0,5	7,1	45,0	84,0	20	25714	3 G 1	8,5	64,0	102,0	18
25693	4 G 0,5	7,6	54,0	95,0	20	25715	4 G 1	9,0	76,0	145,0	18
25694	5 G 0,5	8,2	66,0	107,0	20	25716	5 G 1	9,9	89,0	170,0	18
25695	7 G 0,5	9,4	79,0	135,0	20	25717	7 G 1	11,6	114,0	220,0	18
25696	10 G 0,5	11,2	107,0	170,0	20	25718	10 G 1	14,0	156,0	330,0	18
25697	12 G 0,5	11,3	137,0	195,0	20	25719	12 G 1	14,4	186,0	350,0	18
25698	14 G 0,5	11,9	142,0	222,0	20	25720	14 G 1	15,0	198,0	402,0	18
25699	18 G 0,5	12,9	156,0	278,0	20	25721	18 G 1	17,0	284,0	515,0	18
25700	25 G 0,5	15,9	250,0	406,0	20	25722	25 G 1	20,6	387,0	690,0	18
25701	2 x 0,75	7,2	46,0	88,0	19	25723	41 G 1	25,0	578,0	1070,0	18
25702	3 G 0,75	7,7	57,0	98,0	19	25724	42 G 1	25,5	590,0	1096,0	18
25703	4 G 0,75	8,2	63,0	112,0	19	25725	2 x 1,5	8,5	64,0	130,0	16
25704	5 G 0,75	8,8	76,0	130,0	19	25726	3 G 1,5	8,9	82,0	152,0	16
25705	7 G 0,75	10,1	100,0	185,0	19	25727	4 G 1,5	9,7	99,0	167,0	16
25706	10 G 0,75	12,2	140,0	270,0	19	25728	5 G 1,5	10,8	123,0	203,0	16
25707	12 G 0,75	12,3	175,0	294,0	19	25729	7 G 1,5	12,5	148,0	305,0	16
25708	14 G 0,75	13,0	190,0	317,0	19	25730	10 G 1,5	15,1	198,0	422,0	16
25709	18 G 0,75	14,6	240,0	357,0	19	25731	12 G 1,5	15,5	274,0	435,0	16
25710	25 G 0,75	17,8	306,0	510,0	19	25732	14 G 1,5	16,1	294,0	480,0	16
25711	41 G 0,75	21,5	403,0	951,0	19	25733	18 G 1,5	18,6	386,0	642,0	16
25712	42 G 0,75	22,0	410,0	975,0	19	25734	25 G 1,5	22,1	531,0	803,0	16

Continuation ▶



Flexible Control Cables / Bio-Oil and microbial resistant Cables

BIOFLEX-500®-JZ-C Bio-fuel resistant, abrasion resistant, recyclable environment friendly, bio-oil resistant¹⁾, Cu-screened, EMC-preferred type, meter marking

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
25735	41 G 1,5	27,2	840,0	1360,0	16	25748	4 G 6	17,0	316,0	560,0	10
25736	42 G 1,5	27,5	890,0	1375,0	16	25749	5 G 6	18,6	442,0	700,0	10
25737	2 x 2,5	10,6	110,0	180,0	14	25750	3 G 10	19,5	367,0	750,0	8
25738	3 G 2,5	11,1	148,0	215,0	14	25751	4 G 10	21,5	549,0	1023,0	8
25739	4 G 2,5	12,1	169,0	268,0	14	25752	5 G 10	23,9	604,0	1114,0	8
25740	5 G 2,5	13,2	220,0	349,0	14	25753	4 G 16	24,6	807,0	1385,0	6
25741	7 G 2,5	15,9	284,0	406,0	14	25754	5 G 16	27,3	940,0	1550,0	6
25742	12 G 2,5	19,5	470,0	720,0	14	25755	4 G 25	30,6	1169,0	1894,0	4
25743	2 x 4	12,6	124,0	300,0	12	25756	4 G 35	36,9	1680,0	2395,0	2
25744	3 G 4	13,4	178,0	340,0	12	25757	4 G 50	41,3	2370,0	3312,0	1
25745	4 G 4	15,0	234,0	408,0	12	25758	4 G 70	48,8	3257,0	4605,0	2/0
25746	5 G 4	16,4	284,0	504,0	12	25759	4 G 95	61,8	4060,0	6055,0	3/0
25747	3 G 6	15,2	245,0	453,0	10	25760	4 G 120	65,7	5231,0	7318,0	4/0

Dimensions and specifications may be changed without prior notice. (RA05)



Flexible Control Cables / Bio-Oil and microbial resistant Cables

BIOFLEX-500®-JZ-C Bio-fuel resistant, abrasion resistant, recyclable environment friendly, bio-oil resistant¹⁾, Cu-screened, EMC-preferred type, meter marking



Technical data

- Bio-oil resistant, abrasion resistant special control cable in adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range** flexing -20°C to +80°C fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 3000 V
- **Insulation resistance** min. 20 MOhm x km
- **Coupling resistance** max. 250 Ohm/km
- **Minimum bending radius** flexing 20x cable Ø fixed installation 6x cable Ø
- **Radiation resistance** up to 100x10⁵cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special polymer
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Special inner sheath
- Tinned copper braided screen, approx. 85% coverage
- Core wrapping of fleece guarantees easy cable stripping
- Outer sheath of special polymer compound
- Sheath colour dark green
- with meter marking

Properties

- **Resistant to** Bio-fuel (diesel and petrol), highly resistant to biologically decomposable oils, Oxygene, Ozone, Hydrolysis and Microbes
- Low adhesion

Note

- G = with green-yellow conductor x = without green-yellow conductor (OZ)
- ¹⁾ For the critical applications we advise for consultation.
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type: **BIOFLEX-500®-JZ**, confer page 109

Application

HELUKABEL® BIOFLEX-500®-JZ-C is an extremely robust control cable with high abrasion and tear resistant properties. Due to its high resistance to Bio-fuel, Bio-oil and coolant emulsions. It is especially suited for use in the machine, tool making and plant industries as well as in the steel industry for difficult and problem areas. The inner sheaths of those cables raise the mechanical stress. The high flexibility of this cable type makes it quick and easy to install. Suitable for outdoor lying. These screened cables are particularly suitable for the interference-free transmission in instrumentation and control engineering applications (electromagnetic compatibility). ¹⁾ For the critical applications we advise for consultation.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
25691	2 x 0,5	6,6	41,0	68,0	20	25713	2 x 1	8,1	54,0	98,0	18
25692	3 G 0,5	7,1	45,0	84,0	20	25714	3 G 1	8,5	64,0	102,0	18
25693	4 G 0,5	7,6	54,0	95,0	20	25715	4 G 1	9,0	76,0	145,0	18
25694	5 G 0,5	8,2	66,0	107,0	20	25716	5 G 1	9,9	89,0	170,0	18
25695	7 G 0,5	9,4	79,0	135,0	20	25717	7 G 1	11,6	114,0	220,0	18
25696	10 G 0,5	11,2	107,0	170,0	20	25718	10 G 1	14,0	156,0	330,0	18
25697	12 G 0,5	11,3	137,0	195,0	20	25719	12 G 1	14,4	186,0	350,0	18
25698	14 G 0,5	11,9	142,0	222,0	20	25720	14 G 1	15,0	198,0	402,0	18
25699	18 G 0,5	12,9	156,0	278,0	20	25721	18 G 1	17,0	284,0	515,0	18
25700	25 G 0,5	15,9	250,0	406,0	20	25722	25 G 1	20,6	387,0	690,0	18
25701	2 x 0,75	7,2	46,0	88,0	19	25723	41 G 1	25,0	578,0	1070,0	18
25702	3 G 0,75	7,7	57,0	98,0	19	25724	42 G 1	25,5	590,0	1096,0	18
25703	4 G 0,75	8,2	63,0	112,0	19	25725	2 x 1,5	8,5	64,0	130,0	16
25704	5 G 0,75	8,8	76,0	130,0	19	25726	3 G 1,5	8,9	82,0	152,0	16
25705	7 G 0,75	10,1	100,0	185,0	19	25727	4 G 1,5	9,7	99,0	167,0	16
25706	10 G 0,75	12,2	140,0	270,0	19	25728	5 G 1,5	10,8	123,0	203,0	16
25707	12 G 0,75	12,3	175,0	294,0	19	25729	7 G 1,5	12,5	148,0	305,0	16
25708	14 G 0,75	13,0	190,0	317,0	19	25730	10 G 1,5	15,1	198,0	422,0	16
25709	18 G 0,75	14,6	240,0	357,0	19	25731	12 G 1,5	15,5	274,0	435,0	16
25710	25 G 0,75	17,8	306,0	510,0	19	25732	14 G 1,5	16,1	294,0	480,0	16
25711	41 G 0,75	21,5	403,0	951,0	19	25733	18 G 1,5	18,6	386,0	642,0	16
25712	42 G 0,75	22,0	410,0	975,0	19	25734	25 G 1,5	22,1	531,0	803,0	16

Continuation ▶



Flexible Control Cables / Bio-Oil and microbial resistant Cables

BIOFLEX-500®-JZ-C Bio-fuel resistant, abrasion resistant, recyclable environment friendly, bio-oil resistant¹⁾, Cu-screened, EMC-preferred type, meter marking

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
25735	41 G 1,5	27,2	840,0	1360,0	16	25748	4 G 6	17,0	316,0	560,0	10
25736	42 G 1,5	27,5	890,0	1375,0	16	25749	5 G 6	18,6	442,0	700,0	10
25737	2 x 2,5	10,6	110,0	180,0	14	25750	3 G 10	19,5	367,0	750,0	8
25738	3 G 2,5	11,1	148,0	215,0	14	25751	4 G 10	21,5	549,0	1023,0	8
25739	4 G 2,5	12,1	169,0	268,0	14	25752	5 G 10	23,9	604,0	1114,0	8
25740	5 G 2,5	13,2	220,0	349,0	14	25753	4 G 16	24,6	807,0	1385,0	6
25741	7 G 2,5	15,9	284,0	406,0	14	25754	5 G 16	27,3	940,0	1550,0	6
25742	12 G 2,5	19,5	470,0	720,0	14	25755	4 G 25	30,6	1169,0	1894,0	4
25743	2 x 4	12,6	124,0	300,0	12	25756	4 G 35	36,9	1680,0	2395,0	2
25744	3 G 4	13,4	178,0	340,0	12	25757	4 G 50	41,3	2370,0	3312,0	1
25745	4 G 4	15,0	234,0	408,0	12	25758	4 G 70	48,8	3257,0	4605,0	2/0
25746	5 G 4	16,4	284,0	504,0	12	25759	4 G 95	61,8	4060,0	6055,0	3/0
25747	3 G 6	15,2	245,0	453,0	10	25760	4 G 120	65,7	5231,0	7318,0	4/0

Dimensions and specifications may be changed without prior notice. (RA05)



Flexible Control Cables / microbial resistant Cables

KOMPOFLEX® JZ-500 halogen-free, microbes resistant, low adhesion, meter marking



Technical data

- Microbes resistant, halogen-free special control cable in adapted to DIN VDE 0285-525-2-51 /
- DIN EN 50525-2-51
- **Temperature range**
flexing -30°C to +90°C
fixed installation -40°C to +100°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 3000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Tinned copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special thermoplastic polymer
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special thermoplastic polymer
- Sheath colour black (RAL 9005)
- with meter marking

Properties

- **Resistant to**
UV-radiation, Oxygene, Ozone, Microbes,
- Hydrofluoric acid, Hydrochloric acid and diluted sulfuric acid
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Low adhesion

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
KOMPOLEX® JZ-500-C, confer page 113

Application

Extremely robust universal cable. This cable is specially installed in rubbish, sewage-treatment plants, composting works, animal stalls and greenhouses. Suitable for installation for flexible use for medium mechanical, stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms as well as outside.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

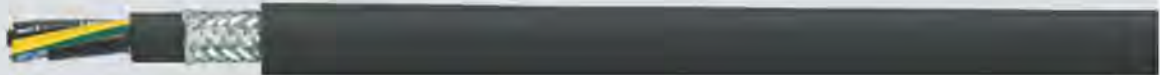
Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26125	2 x 0,5	4,8	9,6	41,0	20
26126	3 G 0,5	5,1	14,4	50,0	20
26127	4 G 0,5	5,7	19,0	61,0	20
26128	5 G 0,5	6,2	24,0	72,0	20
26129	7 G 0,5	7,4	33,6	86,0	20
26130	12 G 0,5	9,1	58,0	130,0	20
26131	18 G 0,5	10,7	86,0	198,0	20
26132	20 G 0,5	11,2	96,0	211,0	20
26133	25 G 0,5	13,0	120,0	260,0	20
26135	34 G 0,5	14,5	163,0	361,0	20
26136	42 G 0,5	15,8	202,0	405,0	20
26137	50 G 0,5	17,3	240,0	541,0	20
26138	61 G 0,5	19,4	293,0	670,0	20
26139	2 x 0,75	5,2	14,4	42,0	19
26140	3 G 0,75	5,5	21,6	49,0	19
26141	4 G 0,75	6,2	29,0	60,0	19
26142	5 G 0,75	6,8	36,0	71,0	19
26143	7 G 0,75	8,1	50,0	88,0	19
26144	12 G 0,75	9,9	86,0	161,0	19
26145	18 G 0,75	11,9	130,0	250,0	19
26146	20 G 0,75	12,6	144,0	266,0	19
26147	25 G 0,75	14,5	180,0	273,0	19
26149	34 G 0,75	16,4	245,0	501,0	19
26150	42 G 0,75	17,6	302,0	591,0	19
26151	50 G 0,75	19,8	360,0	712,0	19
26152	61 G 0,75	20,9	439,0	820,0	19
26153	2 x 1	5,5	19,0	48,0	18
26154	3 G 1	6,0	29,0	56,0	18
26155	4 G 1	6,6	38,0	70,0	18
26156	5 G 1	7,2	48,0	81,0	18
26157	7 G 1	8,6	67,0	109,0	18
26158	12 G 1	10,7	115,0	191,0	18
26159	18 G 1	12,7	173,0	274,0	18
26160	20 G 1	13,5	192,0	314,0	18
26162	30 G 1	16,0	288,0	492,0	18
26163	34 G 1	17,4	326,0	640,0	18
26164	42 G 1	18,9	403,0	804,0	18
26165	50 G 1	21,0	480,0	932,0	18
26166	61 G 1	22,2	586,0	1102,0	18
26167	2 x 1,5	6,3	29,0	60,0	16

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26168	3 G 1,5	6,7	43,0	79,0	16
26169	4 G 1,5	7,3	58,0	98,0	16
26170	5 G 1,5	8,2	72,0	112,0	16
26171	7 G 1,5	9,8	101,0	159,0	16
26172	12 G 1,5	12,1	173,0	280,0	16
26173	18 G 1,5	14,5	259,0	420,0	16
26174	20 G 1,5	15,2	288,0	480,0	16
26175	25 G 1,5	17,8	360,0	604,0	16
26176	34 G 1,5	19,8	490,0	812,0	16
26177	42 G 1,5	21,4	605,0	1002,0	16
26178	50 G 1,5	23,7	720,0	1240,0	16
26179	61 G 1,5	25,3	878,0	1421,0	16
26180	2 x 2,5	7,6	48,0	99,0	14
26181	3 G 2,5	8,3	72,0	136,0	14
26182	4 G 2,5	9,1	96,0	170,0	14
26183	5 G 2,5	10,2	120,0	204,0	14
26184	7 G 2,5	12,1	168,0	281,0	14
26185	12 G 2,5	15,2	288,0	487,0	14
26186	18 G 2,5	18,1	432,0	704,0	14
26187	25 G 2,5	22,2	600,0	909,0	14
26189	3 G 4	9,9	115,0	224,0	12
26190	4 G 4	11,0	154,0	289,0	12
26191	5 G 4	12,1	192,0	357,0	12
26192	7 G 4	13,3	269,0	451,0	12
26193	12 G 4	18,3	461,0	782,0	12
26195	3 G 6	11,7	173,0	345,0	10
26196	4 G 6	13,0	230,0	417,0	10
26197	5 G 6	14,5	288,0	521,0	10
26198	7 G 6	16,0	403,0	622,0	10
26199	3 G 10	15,0	288,0	537,0	8
26200	4 G 10	16,8	384,0	699,0	8
26201	5 G 10	18,7	480,0	851,0	8
26202	7 G 10	20,6	672,0	1102,0	8
26204	4 G 16	19,7	614,0	1028,0	6
26206	7 G 16	24,4	1075,0	1772,0	6
26208	4 G 25	25,2	960,0	1577,0	4
26212	4 G 35	29,0	1344,0	2097,0	2
26215	4 G 50	33,4	1920,0	2914,0	1
26216	5 G 50	37,2	2400,0	3919,0	1



Flexible Control Cables / microbial resistant Cables

KOMPOFLEX® JZ-500-C halogen-free, microbes resistant, Cu-screened, EMC-preferred type, meter marking



Technical data

- Screened microbes resistant, halogen-free special control cable in adapted to DIN VDE 0285-525-2-51/ DIN EN 50525-2-51
- **Temperature range**
flexing -30°C to +90°C
fixed installation -40°C to +100°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage**
core/core 4000 V
core/screen 2000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Tinned copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special thermoplastic polymer
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of special thermoplastic polymer
- Tinned copper braided screen, approx. 85% coverage
- Core wrapping of fleece guarantees easy cable stripping
- Outer sheath of special thermoplastic polymer
- Sheath colour black (RAL 9005)
- with meter marking

Properties

- **Resistant to**
UV-radiation, Oxygene, Ozone, Microbes, Hydrofluoric acid, Hydrochloric acid and diluted sulfuric acid
- Low adhesion
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
KOMPOFLEX® JZ-500, confer page 112

Application

Extremely robust universal cable. This cable is specially installed in rubbish, sewage-treatment plants, composting works, animal stalls and greenhouses. The inner sheaths of those cables raise the mechanical stress. Suitable for installation for flexible use for medium mechanical, stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms as well as outside. The high flexibility of this cable type makes it quick and easy to install. This screened cable is ideal for use in data signal transmission free from interferences for measurement and control engineering technology.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26217	2 x 0,5	6,9	41,0	68,0	20
26218	3 G 0,5	7,2	45,0	84,0	20
26219	4 G 0,5	7,8	54,0	95,0	20
26220	5 G 0,5	8,3	66,0	107,0	20
26221	7 G 0,5	9,5	79,0	135,0	20
26222	12 G 0,5	11,3	137,0	195,0	20
26223	18 G 0,5	13,1	156,0	278,0	20
26224	20 G 0,5	13,8	173,0	310,0	20
26225	25 G 0,5	15,7	250,0	406,0	20
26226	30 G 0,5	16,0	297,0	520,0	20
26227	34 G 0,5	17,4	316,0	571,0	20
26228	42 G 0,5	18,9	360,0	651,0	20
26229	50 G 0,5	20,9	407,0	760,0	20
26230	61 G 0,5	22,9	520,0	911,0	20
26231	2 x 0,75	7,6	46,0	88,0	19
26232	3 G 0,75	7,8	57,0	98,0	19
26233	4 G 0,75	8,3	63,0	112,0	19
26234	5 G 0,75	9,1	76,0	130,0	19
26235	7 G 0,75	10,4	100,0	185,0	19
26236	12 G 0,75	12,5	175,0	294,0	19
26237	18 G 0,75	14,3	240,0	357,0	19
26238	20 G 0,75	15,2	262,0	404,0	19
26239	25 G 0,75	17,6	306,0	510,0	19
26240	30 G 0,75	18,1	340,0	561,0	19
26241	34 G 0,75	19,5	346,0	670,0	19
26242	42 G 0,75	20,9	410,0	960,0	19
26243	50 G 0,75	23,2	470,0	1104,0	19
26244	61 G 0,75	25,0	550,0	1270,0	19

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26245	2 x 1	7,9	54,0	98,0	18
26246	3 G 1	8,2	64,0	102,0	18
26247	4 G 1	8,9	76,0	145,0	18
26248	5 G 1	9,5	89,0	171,0	18
26249	7 G 1	11,0	114,0	210,0	18
26250	12 G 1	13,1	186,0	330,0	18
26251	18 G 1	15,4	284,0	488,0	18
26252	20 G 1	16,0	325,0	545,0	18
26253	25 G 1	18,3	387,0	690,0	18
26254	30 G 1	18,8	457,0	770,0	18
26255	34 G 1	20,3	500,0	811,0	18
26256	42 G 1	21,8	590,0	996,0	18
26257	50 G 1	24,0	681,0	1320,0	18
26258	61 G 1	26,2	710,0	1480,0	18
26259	2 x 1,5	8,4	64,0	130,0	16
26260	3 G 1,5	9,0	82,0	154,0	16
26261	4 G 1,5	9,6	99,0	165,0	16
26262	5 G 1,5	10,5	123,0	197,0	16
26263	7 G 1,5	12,1	148,0	305,0	16
26264	12 G 1,5	14,9	274,0	435,0	16
26265	18 G 1,5	17,1	386,0	642,0	16
26266	20 G 1,5	18,0	401,0	718,0	16
26267	25 G 1,5	20,7	531,0	803,0	16
26268	30 G 1,5	21,1	598,0	961,0	16
26269	34 G 1,5	22,7	671,0	1060,0	16
26270	42 G 1,5	24,4	890,0	1300,0	16
26271	50 G 1,5	26,8	997,0	1677,0	16
26272	61 G 1,5	29,6	1120,0	1971,0	16



Flexible Control Cables / microbial resistant Cables

KOMPOFLEX® JZ-500-C halogen-free, microbes resistant, Cu-screened, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26273	2 x 2,5	10,0	110,0	180,0	14
26274	3 G 2,5	10,7	148,0	215,0	14
26275	4 G 2,5	11,4	169,0	268,0	14
26276	5 G 2,5	12,5	220,0	349,0	14
26277	7 G 2,5	15,0	284,0	404,0	14
26278	12 G 2,5	18,0	470,0	710,0	14
26279	18 G 2,5	21,2	572,0	891,0	14
26280	25 G 2,5	25,5	740,0	1104,0	14
26281	2 x 4	11,6	124,0	300,0	12
26282	3 G 4	12,3	178,0	340,0	12
26283	4 G 4	13,4	234,0	408,0	12
26284	5 G 4	14,8	284,0	504,0	12
26285	7 G 4	16,2	321,0	640,0	12
26286	12 G 4	21,8	581,0	894,0	12
26287	2 x 6	13,5	176,0	391,0	10
26288	3 G 6	14,2	245,0	453,0	10
26289	4 G 6	15,6	316,0	560,0	10
26290	5 G 6	17,0	442,0	680,0	10
26291	7 G 6	18,7	530,0	891,0	10

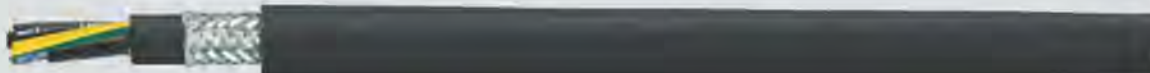
Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26292	3 G 10	17,8	367,0	730,0	8
26293	4 G 10	19,7	549,0	1004,0	8
26294	5 G 10	21,6	604,0	1170,0	8
26295	7 G 10	24,0	820,0	1405,0	8
26296	3 G 16	20,7	653,0	894,0	6
26297	4 G 16	22,6	807,0	1311,0	6
26298	5 G 16	25,2	940,0	1550,0	6
26299	7 G 16	27,6	1345,0	1820,0	6
26300	3 G 25	26,0	920,0	1430,0	4
26301	4 G 25	28,9	1159,0	1894,0	4
26302	5 G 25	31,8	1420,0	2272,0	4
26303	4 G 35	33,4	1680,0	2310,0	2
26304	5 G 35	37,2	2020,0	2740,0	2
26305	4 G 50	38,2	2370,0	3270,0	1
26306	5 G 50	43,0	2880,0	4080,0	1

Dimensions and specifications may be changed without prior notice. (RA05)



Flexible Control Cables / microbial resistant Cables

KOMPOFLEX® JZ-500-C halogen-free, microbes resistant, Cu-screened, EMC-preferred type, meter marking



Technical data

- Screened microbes resistant, halogen-free special control cable in adapted to DIN VDE 0285-525-2-51 / DIN EN 50525-2-51
- **Temperature range**
flexing -30°C to +90°C
fixed installation -40°C to +100°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage**
core/core 4000 V
core/screen 2000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Tinned copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special thermoplastic polymer
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Inner sheath of special thermoplastic polymer
- Tinned copper braided screen, approx. 85% coverage
- Core wrapping of fleece guarantees easy cable stripping
- Outer sheath of special thermoplastic polymer
- Sheath colour black (RAL 9005)
- with meter marking

Properties

- **Resistant to**
UV-radiation, Oxygene, Ozone, Microbes, Hydrofluoric acid, Hydrochloric acid and diluted sulfuric acid
- Low adhesion
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
KOMPOFLEX® JZ-500, confer page 112

Application

Extremely robust universal cable. This cable is specially installed in rubbish, sewage-treatment plants, composting works, animal stalls and greenhouses. The inner sheaths of those cables raise the mechanical stress. Suitable for installation for flexible use for medium mechanical, stresses with free movement without tensile stress or forced movements in dry, moist and wet rooms as well as outside. The high flexibility of this cable type makes it quick and easy to install. This screened cable is ideal for use in data signal transmission free from interferences for measurement and control engineering technology.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26217	2 x 0,5	6,9	41,0	68,0	20
26218	3 G 0,5	7,2	45,0	84,0	20
26219	4 G 0,5	7,8	54,0	95,0	20
26220	5 G 0,5	8,3	66,0	107,0	20
26221	7 G 0,5	9,5	79,0	135,0	20
26222	12 G 0,5	11,3	137,0	195,0	20
26223	18 G 0,5	13,1	156,0	278,0	20
26224	20 G 0,5	13,8	173,0	310,0	20
26225	25 G 0,5	15,7	250,0	406,0	20
26226	30 G 0,5	16,0	297,0	520,0	20
26227	34 G 0,5	17,4	316,0	571,0	20
26228	42 G 0,5	18,9	360,0	651,0	20
26229	50 G 0,5	20,9	407,0	760,0	20
26230	61 G 0,5	22,9	520,0	911,0	20
26231	2 x 0,75	7,6	46,0	88,0	19
26232	3 G 0,75	7,8	57,0	98,0	19
26233	4 G 0,75	8,3	63,0	112,0	19
26234	5 G 0,75	9,1	76,0	130,0	19
26235	7 G 0,75	10,4	100,0	185,0	19
26236	12 G 0,75	12,5	175,0	294,0	19
26237	18 G 0,75	14,3	240,0	357,0	19
26238	20 G 0,75	15,2	262,0	404,0	19
26239	25 G 0,75	17,6	306,0	510,0	19
26240	30 G 0,75	18,1	340,0	561,0	19
26241	34 G 0,75	19,5	346,0	670,0	19
26242	42 G 0,75	20,9	410,0	960,0	19
26243	50 G 0,75	23,2	470,0	1104,0	19
26244	61 G 0,75	25,0	550,0	1270,0	19

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26245	2 x 1	7,9	54,0	98,0	18
26246	3 G 1	8,2	64,0	102,0	18
26247	4 G 1	8,9	76,0	145,0	18
26248	5 G 1	9,5	89,0	171,0	18
26249	7 G 1	11,0	114,0	210,0	18
26250	12 G 1	13,1	186,0	330,0	18
26251	18 G 1	15,4	284,0	488,0	18
26252	20 G 1	16,0	325,0	545,0	18
26253	25 G 1	18,3	387,0	690,0	18
26254	30 G 1	18,8	457,0	770,0	18
26255	34 G 1	20,3	500,0	811,0	18
26256	42 G 1	21,8	590,0	996,0	18
26257	50 G 1	24,0	681,0	1320,0	18
26258	61 G 1	26,2	710,0	1480,0	18
26259	2 x 1,5	8,4	64,0	130,0	16
26260	3 G 1,5	9,0	82,0	154,0	16
26261	4 G 1,5	9,6	99,0	165,0	16
26262	5 G 1,5	10,5	123,0	197,0	16
26263	7 G 1,5	12,1	148,0	305,0	16
26264	12 G 1,5	14,9	274,0	435,0	16
26265	18 G 1,5	17,1	386,0	642,0	16
26266	20 G 1,5	18,0	401,0	718,0	16
26267	25 G 1,5	20,7	531,0	803,0	16
26268	30 G 1,5	21,1	598,0	961,0	16
26269	34 G 1,5	22,7	671,0	1060,0	16
26270	42 G 1,5	24,4	890,0	1300,0	16
26271	50 G 1,5	26,8	997,0	1677,0	16
26272	61 G 1,5	29,6	1120,0	1971,0	16



Flexible Control Cables / microbial resistant Cables

KOMPOFLEX® JZ-500-C halogen-free, microbes resistant, Cu-screened, EMC-preferred type, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26273	2 x 2,5	10,0	110,0	180,0	14
26274	3 G 2,5	10,7	148,0	215,0	14
26275	4 G 2,5	11,4	169,0	268,0	14
26276	5 G 2,5	12,5	220,0	349,0	14
26277	7 G 2,5	15,0	284,0	404,0	14
26278	12 G 2,5	18,0	470,0	710,0	14
26279	18 G 2,5	21,2	572,0	891,0	14
26280	25 G 2,5	25,5	740,0	1104,0	14
26281	2 x 4	11,6	124,0	300,0	12
26282	3 G 4	12,3	178,0	340,0	12
26283	4 G 4	13,4	234,0	408,0	12
26284	5 G 4	14,8	284,0	504,0	12
26285	7 G 4	16,2	321,0	640,0	12
26286	12 G 4	21,8	581,0	894,0	12
26287	2 x 6	13,5	176,0	391,0	10
26288	3 G 6	14,2	245,0	453,0	10
26289	4 G 6	15,6	316,0	560,0	10
26290	5 G 6	17,0	442,0	680,0	10
26291	7 G 6	18,7	530,0	891,0	10

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
26292	3 G 10	17,8	367,0	730,0	8
26293	4 G 10	19,7	549,0	1004,0	8
26294	5 G 10	21,6	604,0	1170,0	8
26295	7 G 10	24,0	820,0	1405,0	8
26296	3 G 16	20,7	653,0	894,0	6
26297	4 G 16	22,6	807,0	1311,0	6
26298	5 G 16	25,2	940,0	1550,0	6
26299	7 G 16	27,6	1345,0	1820,0	6
26300	3 G 25	26,0	920,0	1430,0	4
26301	4 G 25	28,9	1169,0	1894,0	4
26302	5 G 25	31,8	1420,0	2272,0	4
26303	4 G 35	33,4	1680,0	2310,0	2
26304	5 G 35	37,2	2020,0	2740,0	2
26305	4 G 50	38,2	2370,0	3270,0	1
26306	5 G 50	43,0	2880,0	4080,0	1

Dimensions and specifications may be changed without prior notice. (RA05)



Flexible Control Cables / Hygienic Cables

NANOFLEX® HC* 500 cut-resistant, meter marking



Technical data

- Special PUR sheathed cable acc. to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -5°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 4000 V
- **Breakdown voltage** min. 8000 V
- **Insulation resistance**
min. 20 MΩm x km
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Outer sheath of special **full-polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour light grey (RAL 7035)
- with meter marking

Properties

- Resistant to UV radiation, Oxygen, Ozone, Hydrolysis, Microbes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Good cleaning properties
- Resistent to all standard detergents

Note

- G = with green-yellow conductor
- x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- screened analogue type:
NANOFLEX®HC 500-C, confer page 117
- *Hygienic Cable

Application

Special PUR cable for the food and beverage industry; outer sheath with antimicrobial properties increases process reliability in all applications in which food and beverages are processed unpacked and unsealed, e. g. processing of dairy products, meat, fish; production of convenience foods, brewery and beverage industry.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27031	2 x 0,5	4,8	10,0	45,0	20
27032	3 G 0,5	5,1	14,0	55,0	20
27033	3 x 0,5	5,1	14,0	55,0	20
27034	4 G 0,5	5,5	19,0	65,0	20
27035	4 x 0,5	5,5	19,0	65,0	20
27036	5 G 0,5	6,2	24,0	75,0	20
27037	5 x 0,5	6,2	24,0	75,0	20
27038	7 G 0,5	7,2	34,0	90,0	20
27039	7 x 0,5	7,2	34,0	90,0	20
27040	10 G 0,5	8,3	48,0	120,0	20
27041	12 G 0,5	8,7	58,0	135,0	20
27042	18 G 0,5	10,7	86,0	205,0	20
27043	25 G 0,5	12,6	120,0	270,0	20
27044	2 G 0,75	5,3	14,0	44,0	19
27045	3 G 0,75	5,6	22,0	53,0	19
27046	3 G 0,75	5,6	22,0	53,0	19
27047	4 G 0,75	6,3	29,0	64,0	19
27048	4 x 0,75	6,3	29,0	64,0	19
27049	5 G 0,75	6,9	36,0	76,0	19
27050	5 x 0,75	6,9	36,0	76,0	19
27051	7 G 0,75	7,5	50,0	96,0	19
27052	7 x 0,75	7,5	50,0	96,0	19
27053	10 G 0,75	9,2	72,0	140,0	19
27054	12 G 0,75	9,8	86,0	170,0	19
27055	18 G 0,75	12,2	130,0	260,0	19
27056	25 G 0,75	14,3	180,0	282,0	19
27057	2 x 1	5,6	19,0	53,0	18
27058	3 G 1	5,9	29,0	63,0	18
27059	3 x 1	5,9	29,0	63,0	18
27060	4 G 1	6,6	38,0	75,0	18

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27061	4 x 1	6,6	38,0	75,0	18
27062	5 G 1	7,3	48,0	89,0	18
27063	5 x 1	7,3	48,0	89,0	18
27064	7 G 1	8,1	67,0	115,0	18
27065	7 x 1	8,1	67,0	115,0	18
27066	10 G 1	9,8	96,0	166,0	18
27067	12 G 1	10,4	115,0	201,0	18
27068	18 G 1	12,9	173,0	289,0	18
27069	25 G 1	15,4	240,0	380,0	18
27070	2 x 1,5	6,4	29,0	68,0	16
27071	3 G 1,5	6,8	43,0	87,0	16
27072	3 x 1,5	6,8	43,0	87,0	16
27073	4 G 1,5	7,4	58,0	106,0	16
27074	4 x 1,5	7,4	58,0	106,0	16
27075	5 G 1,5	8,3	72,0	131,0	16
27076	5 x 1,5	8,3	72,0	131,0	16
27077	7 G 1,5	10,9	101,0	173,0	16
27078	7 x 1,5	10,9	101,0	173,0	16
27079	12 G 1,5	11,8	173,0	293,0	16
27080	18 G 1,5	14,6	259,0	454,0	16
27081	25 G 1,5	17,4	360,0	641,0	16
27082	2 x 2,5	7,8	48,0	110,0	14
27083	3 G 2,5	8,3	72,0	146,0	14
27084	4 G 2,5	9,2	96,0	183,0	14
27085	5 G 2,5	10,1	120,0	222,0	14
27086	7 G 2,5	11,2	168,0	293,0	14
27087	12 G 2,5	14,8	288,0	512,0	14
27088	4 G 4	10,9	154,0	291,0	12
27089	5 G 4	12,1	192,0	355,0	12

Dimensions and specifications may be changed without prior notice. (RA02)



Flexible Control Cables / Hygienic Cables

NANOFLEX® HC* 500-C EMC preferred type, cut-resistant, screened, no inner sheath, meter marking



Technical data

- Special PUR sheathed cable adapted to DIN VDE 0285-525-1 / DIN EN 50525-1
- **Temperature range**
flexing -5°C to +80°C
fixed installation -40°C to +80°C
- **Nominal voltage** U₀/U 300/500 V
- **Test voltage** 3000 V
- **Breakdown voltage** min. 6000 V
- **Insulation resistance**
Min. 20 MOhm x km
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Core insulation special PVC compound type TI2 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN VDE 0293 black cores with continuous white numbering
- GN-YE conductor, 3 cores and above in the outer layer
- Cores stranded in layers with optimal lay-length
- Separating foil
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special **full-polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour light grey (RAL 7035)
- With meter marking

Properties

- Resistant to UV radiation, Oxygen, Ozone, Hydrolysis, Microbes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Good cleaning properties
- Resistant to all standard detergents

Note

- G = with green-yellow conductor
x = without green-yellow conductor (OZ)
- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- Unscreened analogue type:
NANOFLEX® HC 500, confer page 116
- *Hygienic Cable

Application

Screened special PUR cable for the food and beverage industry; outer sheath with antimicrobial properties increases process reliability in all applications in which food and beverages are processed unpacked and unsealed, e. g. processing of dairy products, meat, fish; production of convenience foods, brewery and beverage industry.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27105	2 x 0,5	5,7	35,0	47,0	20
27107	3 G 0,5	5,9	42,0	57,0	20
27106	3 x 0,5	5,9	42,0	57,0	20
27108	4 G 0,5	6,4	47,0	60,0	20
27109	4 x 0,5	6,4	47,0	60,0	20
27110	5 x 0,5	6,9	56,0	75,0	20
27111	5 G 0,5	6,9	56,0	75,0	20
27112	7 G 0,5	7,6	69,0	97,0	20
27113	7 x 0,5	7,6	69,0	97,0	20
27114	10 G 0,5	9,6	94,0	133,0	20
27115	12 G 0,5	9,7	108,0	158,0	20
27116	18 G 0,5	11,5	145,0	218,0	20
27117	25 G 0,5	13,7	240,0	315,0	20
27118	2 x 0,75	6,1	40,0	60,0	19
27119	3 x 0,75	6,3	52,0	67,0	19
27120	3 G 0,75	6,3	52,0	67,0	19
27121	4 G 0,75	6,8	60,0	76,0	19
27122	4 x 0,75	6,8	60,0	76,0	19
27123	5 x 0,75	7,4	71,0	92,0	19
27124	5 G 0,75	7,4	71,0	92,0	19
27125	7 G 0,75	8,2	91,0	131,0	19
27126	7 x 0,75	8,2	91,0	131,0	19
27127	10 G 0,75	10,3	137,0	180,0	19
27128	12 G 0,75	10,5	142,0	204,0	19
27129	18 G 0,75	12,7	212,0	290,0	19
27130	25 G 0,75	15,0	281,0	413,0	19
27131	2 x 1	6,4	50,0	66,0	18
27132	3 G 1	6,7	60,0	82,0	18
27133	3 x 1	6,7	60,0	82,0	18
27134	4 x 1	7,2	71,0	100,0	18

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27135	4 G 1	7,2	71,0	100,0	18
27136	5 x 1	8,0	88,0	128,0	18
27137	5 G 1	8,0	88,0	128,0	18
27138	7 x 1	8,7	111,0	157,0	18
27139	7 G 1	8,7	111,0	157,0	18
27140	10 G 1	11,2	150,0	230,0	18
27141	12 G 1	11,4	184,0	262,0	18
27142	18 G 1	13,6	260,0	381,0	18
27143	25 G 1	16,2	349,0	535,0	18
27144	2 x 1,5	7,0	63,0	87,0	16
27145	3 x 1,5	7,4	80,0	102,0	16
27146	3 G 1,5	7,4	80,0	102,0	16
27147	4 x 1,5	8,1	97,0	127,0	16
27148	4 G 1,5	8,1	97,0	127,0	16
27149	5 x 1,5	9,0	119,0	159,0	16
27150	5 G 1,5	9,0	119,0	159,0	16
27151	7 x 1,5	9,8	147,0	207,0	16
27152	7 G 1,5	9,8	147,0	207,0	16
27153	12 G 1,5	12,8	267,0	340,0	16
27154	18 G 1,5	15,6	374,0	480,0	16
27155	25 G 1,5	18,4	526,0	704,0	16
27156	2 x 2,5	8,4	96,0	131,0	14
27157	3 G 2,5	8,8	144,0	168,0	14
27158	4 G 2,5	9,8	148,0	194,0	14
27159	5 G 2,5	10,8	181,0	222,0	14
27160	7 G 2,5	11,9	255,0	345,0	14
27161	12 G 2,5	15,8	441,0	570,0	14
27162	4 G 4	11,6	230,0	310,0	12
27163	5 G 4	12,8	273,0	386,0	12



Flexible Control Cables / Hygienic Cables

NANOFLEX® HC*TRONIC flexible, colour code to DIN 47100, meter marking



Technical data

- Special-PUR data cable adapted to DIN VDE 0812
- **Temperature range**
flexing -5°C to +80°C
fixed installation -40°C to +80°C
- **Peak operating voltage**
(not for purposes of high current and power installation)
0,14 mm² = 350 V
≥ 0,25 mm² = 500 V
- **Test voltage**
up to 0,25 mm² 1200 V
from 0,34 mm² 2000 V
- **Breakdown voltage**
up to 0,25 mm² 2400 V
from 0,34 mm² 4000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Operating capacity**
(approx. value) at 800 Hz
0,14 mm² 120 pF/m
≥ 0,25 mm² 150 pF/m
- **Inductance**
approx. 0,65 mH/km
- **Impedance**
approx. 78 Ohm
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, from 0,5 mm² to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Conductor construction:
0,14 mm² = 18x0,1 mm
0,25 mm² = 14x0,15 mm
0,34 mm² = 7x0,25 mm
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN 47100, without colour repetition
- Cores stranded in layers with optimal lay-lengths
- Outer sheath of special **full polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour light grey (RAL 7035)
- with meter marking

Properties

- Resistant to UV radiation, oxygen, ozone, hydrolysis, microbes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Good cleaning properties
- Resistant to all standard detergents

Note

- Screened analogue type: **NANOFLEX®HC TRONIC-C**, confer page 120
- *Hygienic Cable

Application

Special PUR data cable for the food and beverage industry; outer sheath with antimicrobial properties increases process reliability in all applications in which food and beverages are processed unpacked and unsealed, e. g. processing of dairy products, meat, fish; production of convenience foods, brewery and beverage industry.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27164	2 x 0,14	3,5	3,0	13,0	26
27165	3 x 0,14	3,7	4,0	16,0	26
27166	4 x 0,14	3,9	5,0	19,0	26
27167	5 x 0,14	4,3	7,0	22,0	26
27168	6 x 0,14	4,6	8,0	25,0	26
27169	7 x 0,14	4,6	9,0	28,0	26
27170	8 x 0,14	5,5	11,0	35,0	26
27171	10 x 0,14	5,9	13,0	41,0	26
27172	12 x 0,14	6,1	16,0	48,0	26
27173	14 x 0,14	6,3	19,0	53,0	26
27174	16 x 0,14	6,9	22,0	59,0	26
27175	18 x 0,14	7,2	24,0	65,0	26
27176	20 x 0,14	7,5	27,0	70,0	26
27177	21 x 0,14	7,6	28,0	77,0	26
27178	24 x 0,14	8,5	32,0	87,0	26
27179	25 x 0,14	8,6	34,0	91,0	26

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27180	2 x 0,25	3,8	5,0	18,0	24
27181	3 x 0,25	4,0	7,0	22,0	24
27182	4 x 0,25	4,3	10,0	26,0	24
27183	5 x 0,25	4,7	12,0	30,0	24
27184	6 x 0,25	5,3	14,0	36,0	24
27185	7 x 0,25	5,3	17,0	42,0	24
27186	8 x 0,25	6,1	19,0	49,0	24
27187	10 x 0,25	6,8	24,0	57,0	24
27188	12 x 0,25	7,0	29,0	66,0	24
27189	14 x 0,25	7,3	34,0	75,0	24
27190	16 x 0,25	7,7	38,0	84,0	24
27191	18 x 0,25	8,3	43,0	92,0	24
27192	19 x 0,25	8,3	46,0	84,0	24
27193	20 x 0,25	8,7	48,0	101,0	24
27194	21 x 0,25	8,8	50,0	107,0	24
27195	24 x 0,25	9,8	60,0	120,0	24
27196	25 x 0,25	10,0	61,0	132,0	24



Flexible Control Cables / Hygienic Cables

NANOFLEX® HC*TRONIC flexible, colour code to DIN 47100, meter marking

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27197	2 x 0,34	4,2	7,0	22,0	22
27198	3 x 0,34	4,4	10,0	30,0	22
27199	4 x 0,34	4,8	13,0	43,0	22
27200	5 x 0,34	5,4	16,0	54,0	22
27201	6 x 0,34	5,9	20,0	58,0	22
27202	7 x 0,34	5,9	23,0	61,0	22
27203	8 x 0,34	7,1	26,0	73,0	22
27204	10 x 0,34	7,6	33,0	82,0	22
27205	12 x 0,34	7,8	39,0	102,0	22
27206	14 x 0,34	8,4	46,0	108,0	22
27207	16 x 0,34	8,8	52,0	126,0	22
27208	18 x 0,34	9,3	59,0	143,0	22
27209	20 x 0,34	1,0	65,0	160,0	22
27210	21 x 0,34	10,1	69,0	166,0	22
27211	24 x 0,34	11,2	78,0	186,0	22
27212	25 x 0,34	11,4	82,0	192,0	22
27213	2 x 0,5	4,6	10,0	40,0	20
27214	3 x 0,5	4,9	14,0	46,0	20
27215	4 x 0,5	5,5	19,0	55,0	20
27216	5 x 0,5	6,0	24,0	64,0	20
27217	6 x 0,5	6,8	29,0	73,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27218	7 x 0,5	6,8	34,0	81,0	20
27219	8 x 0,5	7,8	38,0	97,0	20
27220	10 x 0,5	8,7	48,0	116,0	20
27221	12 x 0,5	8,9	58,0	135,0	20
27222	16 x 0,5	10,0	77,0	168,0	20
27223	20 x 0,5	11,2	96,0	213,0	20
27224	24 x 0,5	12,7	116,0	241,0	20
27225	2 x 0,75	5,2	14,0	47,0	19
27226	3 x 0,75	5,5	22,0	54,0	19
27227	4 x 0,75	6,0	29,0	66,0	19
27228	5 x 0,75	6,7	36,0	80,0	19
27229	7 x 0,75	7,4	50,0	110,0	18
27230	8 x 0,75	8,7	58,0	125,0	19
27231	10 x 0,75	9,6	72,0	148,0	19
27232	12 x 0,75	9,9	86,0	176,0	19
27233	16 x 0,75	11,1	115,0	220,0	19
27234	20 x 0,75	12,5	144,0	276,0	19

Dimensions and specifications may be changed without prior notice. (RA02)



Flexible Control Cables / Hygienic Cables

NANOFLEX® HC*TRONIC flexible, colour code to DIN 47100, meter marking**Technical data**

- Special-PUR data cable adapted to DIN VDE 0812
- **Temperature range**
flexing -5°C to +80°C
fixed installation -40°C to +80°C
- **Peak operating voltage**
(not for purposes of high current and power installation)
0,14 mm² = 350 V
≥ 0,25 mm² = 500 V
- **Test voltage**
up to 0,25 mm² 1200 V
from 0,34 mm² 2000 V
- **Breakdown voltage**
up to 0,25 mm² 2400 V
from 0,34 mm² 4000 V
- **Insulation resistance**
min. 20 MOhm x km
- **Operating capacity**
(approx. value) at 800 Hz
0,14 mm² 120 pF/m
≥ 0,25 mm² 150 pF/m
- **Inductance**
approx. 0,65 mH/km
- **Impedance**
approx. 78 Ohm
- **Minimum bending radius**
flexing 7,5x cable Ø
fixed installation 4x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, from 0,5 mm² to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Conductor construction:
0,14 mm² = 18x0,1 mm
0,25 mm² = 14x0,15 mm
0,34 mm² = 7x0,25 mm
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN 47100, without colour repetition
- Cores stranded in layers with optimal lay-lengths
- Outer sheath of special **full polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour light grey (RAL 7035)
- with meter marking

Properties

- Resistant to UV radiation, oxygen, ozone, hydrolysis, microbes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Good cleaning properties
- Resistant to all standard detergents

Note

- Screened analogue type: **NANOFLEX®HC*TRONIC-C**, confer page 120
- *Hygienic Cable

Application

Special PUR data cable for the food and beverage industry; outer sheath with antimicrobial properties increases process reliability in all applications in which food and beverages are processed unpacked and unsealed, e. g. processing of dairy products, meat, fish; production of convenience foods, brewery and beverage industry.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27164	2 x 0,14	3,5	3,0	13,0	26
27165	3 x 0,14	3,7	4,0	16,0	26
27166	4 x 0,14	3,9	5,0	19,0	26
27167	5 x 0,14	4,3	7,0	22,0	26
27168	6 x 0,14	4,6	8,0	25,0	26
27169	7 x 0,14	4,6	9,0	28,0	26
27170	8 x 0,14	5,5	11,0	35,0	26
27171	10 x 0,14	5,9	13,0	41,0	26
27172	12 x 0,14	6,1	16,0	48,0	26
27173	14 x 0,14	6,3	19,0	53,0	26
27174	16 x 0,14	6,9	22,0	59,0	26
27175	18 x 0,14	7,2	24,0	65,0	26
27176	20 x 0,14	7,5	27,0	70,0	26
27177	21 x 0,14	7,6	28,0	77,0	26
27178	24 x 0,14	8,5	32,0	87,0	26
27179	25 x 0,14	8,6	34,0	91,0	26

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27180	2 x 0,25	3,8	5,0	18,0	24
27181	3 x 0,25	4,0	7,0	22,0	24
27182	4 x 0,25	4,3	10,0	26,0	24
27183	5 x 0,25	4,7	12,0	30,0	24
27184	6 x 0,25	5,3	14,0	36,0	24
27185	7 x 0,25	5,3	17,0	42,0	24
27186	8 x 0,25	6,1	19,0	49,0	24
27187	10 x 0,25	6,8	24,0	57,0	24
27188	12 x 0,25	7,0	29,0	66,0	24
27189	14 x 0,25	7,3	34,0	75,0	24
27190	16 x 0,25	7,7	38,0	84,0	24
27191	18 x 0,25	8,3	43,0	92,0	24
27192	19 x 0,25	8,3	46,0	84,0	24
27193	20 x 0,25	8,7	48,0	101,0	24
27194	21 x 0,25	8,8	50,0	107,0	24
27195	24 x 0,25	9,8	60,0	120,0	24
27196	25 x 0,25	10,0	61,0	132,0	24

Continuation ▶



Flexible Control Cables / Hygienic Cables

NANOFLEX® HC*TRONIC-C EMC preferred type, flexible, colour code to DIN 47100, screened, meter marking



Technical data

- Special-PUR data cable for electronic control adapted to DIN VDE 0812
- **Temperature range**
flexing -5°C to +80°C
fixed installation -40°C to +80°C
- **Peak operating voltage**
(not for purposes of high current and power installation)
0,14 mm² = 350 V
≥ 0,25 mm² = 500 V
- **Test voltage**
core/core 1200 V
core/screen 800 V
- **Breakdown voltage**
min. 2400 V
- **Insulation resistance**
min. 200 MOhm x km
- **Operating capacity**
(approx.-value) at 800 Hz
core/core at 0,14 mm² = 120 pF/m
core/core ≥ 0,25 mm² = 150 pF/m
core/screen at 0,14 mm² = 240 pF/m
core/screen ≥ 0,25 mm² = 270 pF/m
- **Inductance**
approx. 0,65 mH/km
- **Impedance**
approx. 78 Ohm
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 100x 10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, from 0,5 mm² to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Conductor construction:
0,14 mm² = 18x0,1 mm
0,25 mm² = 14x0,15 mm
0,34 mm² = 7x0,25 mm
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN 47100, without colour repetition
- Cores stranded in layers with optimal lay-length
- Separating foil
- Drain stranded wire, tinned copper
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special **full polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour light grey (RAL 7035)
- with meter marking

Properties

- Resistant to UV radiation, oxygen, ozone, hydrolysis, microbes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers
- Good cleaning properties
- Resistant to all standard detergents

Note

- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
NANOFLEX®HC TRONIC, confer page 118
- *Hygienic Cable

Application

Special PUR cable for the food and beverage industry; outer sheath with antimicrobial properties increases process reliability in all applications in which food and beverages are processed unpacked and unsealed, e. g. processing of dairy products, meat, fish; production of convenience foods, brewery and beverage industry.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE = The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27235	1 x 0,14	2,6	6,0	16,0	26	27252	1 x 0,25	3,0	7,0	27,0	24
27236	2 x 0,14	3,9	12,0	20,0	26	27253	2 x 0,25	4,3	16,0	31,0	24
27237	3 x 0,14	4,0	13,0	27,0	26	27254	3 x 0,25	4,5	19,0	36,0	24
27238	4 x 0,14	4,3	15,0	32,0	26	27255	4 x 0,25	4,8	22,0	40,0	24
27239	5 x 0,14	4,7	16,0	37,0	26	27256	5 x 0,25	5,4	27,0	51,0	24
27240	6 x 0,14	5,2	18,0	42,0	26	27257	6 x 0,25	5,8	32,0	58,0	24
27241	7 x 0,14	5,2	19,0	48,0	26	27258	7 x 0,25	5,8	35,0	64,0	24
27242	8 x 0,14	5,9	21,0	55,0	26	27259	8 x 0,25	7,0	42,0	82,0	24
27243	10 x 0,14	6,5	29,0	65,0	26	27260	10 x 0,25	7,3	50,0	85,0	24
27244	12 x 0,14	6,7	31,0	77,0	26	27261	12 x 0,25	7,5	58,0	90,0	24
27245	14 x 0,14	6,9	32,0	79,0	26	27262	14 x 0,25	8,1	62,0	144,0	24
27246	16 x 0,14	7,3	43,0	89,0	26	27263	16 x 0,25	8,5	67,0	110,0	24
27247	18 x 0,14	7,6	51,0	103,0	26	27264	18 x 0,25	9,1	78,0	142,0	24
27248	20 x 0,14	8,3	55,0	116,0	26	27265	19 x 0,25	9,1	79,0	146,0	24
27249	21 x 0,14	8,4	56,0	120,0	26	27266	20 x 0,25	9,5	152,0	88,0	24
27250	24 x 0,14	8,9	62,0	131,0	26	27267	21 x 0,25	9,6	91,0	150,0	24
27251	25 x 0,14	9,1	61,0	136,0	26	27268	24 x 0,25	10,4	96,0	163,0	24



Flexible Control Cables / Hygienic Cables

NANOFLEX® HC*TRONIC-C

EMC preferred type, flexible, colour code
to DIN 47100, screened, meter marking



Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27269	25 x 0,25	10,6	99,0	169,0	24
27270	1 x 0,34	3,2	13,0	24,0	22
27271	2 x 0,34	4,9	18,0	30,0	22
27272	3 x 0,34	5,1	22,0	37,0	22
27273	4 x 0,34	5,5	28,0	48,0	22
27274	5 x 0,34	6,0	31,0	54,0	22
27275	6 x 0,34	6,6	45,0	61,0	22
27276	7 x 0,34	6,6	51,0	67,0	22
27277	8 x 0,34	7,7	54,0	81,0	22
27278	10 x 0,34	8,4	65,0	103,0	22
27279	12 x 0,34	8,6	70,0	110,0	22
27280	14 x 0,34	9,0	81,0	153,0	22
27281	16 x 0,34	9,6	88,0	159,0	22
27282	18 x 0,34	10,1	103,0	172,0	22
27283	19 x 0,34	10,1	106,0	181,0	22
27284	20 x 0,34	10,8	112,0	191,0	22
27285	21 x 0,34	10,9	116,0	199,0	22
27286	24 x 0,34	11,7	129,0	229,0	22
27287	25 x 0,34	12,0	120,0	241,0	22
27288	1 x 0,5	3,5	15,0	40,0	20
27289	2 x 0,5	5,3	29,0	45,0	20
27290	3 x 0,5	5,6	39,0	55,0	20
27291	4 x 0,5	6,3	46,0	61,0	20
27292	5 x 0,5	6,8	52,0	76,0	20
27293	6 x 0,5	7,3	66,0	89,0	20

Part no.	No. cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27294	7 x 0,5	7,3	68,0	98,0	20
27295	8 x 0,5	8,6	80,0	117,0	20
27296	10 x 0,5	9,4	93,0	135,0	20
27297	12 x 0,5	9,6	117,0	157,0	20
27298	14 x 0,5	10,1	122,0	190,0	20
27299	16 x 0,5	10,6	129,0	210,0	20
27300	18 x 0,5	11,3	152,0	217,0	20
27301	19 x 0,5	11,3	156,0	246,0	20
27302	20 x 0,5	12,0	173,0	275,0	20
27303	24 x 0,5	13,2	256,0	337,0	20
27304	25 x 0,5	13,7	250,0	351,0	20
27305	1 x 0,75	4,0	19,0	41,0	19
27306	2 x 0,75	5,8	38,0	59,0	19
27307	3 x 0,75	6,3	50,0	66,0	19
27308	4 x 0,75	6,8	57,0	77,0	19
27309	5 x 0,75	7,4	70,0	93,0	19
27310	6 x 0,75	8,2	87,0	113,0	19
27311	7 x 0,75	8,2	96,0	130,0	19
27312	8 x 0,75	9,7	110,0	145,0	19
27313	10 x 0,75	10,3	140,0	180,0	19
27314	12 x 0,75	10,5	151,0	202,0	19
27315	14 x 0,75	11,3	167,0	225,0	19
27316	16 x 0,75	11,9	183,0	275,0	19
27317	18 x 0,75	12,7	207,0	292,0	19
27318	19 x 0,75	12,7	221,0	322,0	19
27319	20 x 0,75	13,6	238,0	362,0	19
27320	24 x 0,75	14,9	270,0	435,0	19
27321	25 x 0,75	15,0	278,0	415,0	19

Dimensions and specifications may be changed without prior notice. (RA02)



Flexible Control Cables / Hygienic Cables

NANOFLEX® HC*TRONIC-C EMC preferred type, flexible, colour code to DIN 47100, screened, meter marking



Technical data

- Special-PUR data cable for electronic control adapted to DIN VDE 0812
- **Temperature range**
flexing -5°C to +80°C
fixed installation -40°C to +80°C
- **Peak operating voltage**
(not for purposes of high current and power installation)
0,14 mm² = 350 V
≥ 0,25 mm² = 500 V
- **Test voltage**
core/core 1200 V
core/screen 800 V
- **Breakdown voltage**
min. 2400 V
- **Insulation resistance**
min. 200 MOhm x km
- **Operating capacity**
(approx.-value) at 800 Hz
core/core at 0,14 mm² = 120 pF/m
core/core ≥ 0,25 mm² = 150 pF/m
core/screen at 0,14 mm² = 240 pF/m
core/screen ≥ 0,25 mm² = 270 pF/m
- **Inductance**
approx. 0,65 mH/km
- **Impedance**
approx. 78 Ohm
- **Coupling resistance**
max. 250 Ohm/km
- **Minimum bending radius**
flexing 10x cable Ø
fixed installation 5x cable Ø
- **Radiation resistance**
up to 100x10⁶ cJ/kg (up to 100 Mrad)

Cable structure

- Bare copper-conductor, from 0,5 mm² to DIN VDE 0295 cl.5, fine-wire, BS 6360 cl.5, IEC 60228 cl.5
- Conductor construction:
0,14 mm² = 18x0,1 mm
0,25 mm² = 14x0,15 mm
0,34 mm² = 7x0,25 mm
- Core insulation of special PVC compound type T12 to DIN VDE 0207-363-3 / DIN EN 50363-3
- Core identification to DIN 47100, without colour repetition
- Cores stranded in layers with optimal lay-length
- Separating foil
- Drain stranded wire, tinned copper
- Tinned copper braided screen, approx. 85% coverage
- Outer sheath of special **full polyurethane** compound type TMPU to DIN EN 50363-10-2
- Sheath colour light grey (RAL 7035)
- with meter marking

Properties

- Resistant to UV radiation, oxygen, ozone, hydrolysis, microbes
- The materials used in manufacture are cadmium-free and contain no silicone and free from substances harmful to the wetting properties of lacquers.
- Good cleaning properties
- Resistant to all standard detergents

Note

- AWG sizes are approximate equivalent values. The actual cross-section is in mm².
- unscreened analogue type:
NANOFLEX®HC TRONIC, confer page 118
- *Hygienic Cable

Application

Special PUR cable for the food and beverage industry; outer sheath with antimicrobial properties increases process reliability in all applications in which food and beverages are processed unpacked and unsealed, e. g. processing of dairy products, meat, fish; production of convenience foods, brewery and beverage industry.

EMC = Electromagnetic compatibility

To optimize the EMC features we recommend a large round contact of the copper braiding on both ends.

CE= The product is conformed with the EC Low-Voltage Directive 2006/95/EC.

Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.	Part no.	No.cores x cross-sec. mm ²	Outer Ø approx. mm	Cop. weight kg / km	Weight approx. kg / km	AWG-No.
27235	1 x 0,14	2,6	6,0	16,0	26	27252	1 x 0,25	3,0	7,0	27,0	24
27236	2 x 0,14	3,9	12,0	20,0	26	27253	2 x 0,25	4,3	16,0	31,0	24
27237	3 x 0,14	4,0	13,0	27,0	26	27254	3 x 0,25	4,5	19,0	36,0	24
27238	4 x 0,14	4,3	15,0	32,0	26	27255	4 x 0,25	4,8	22,0	40,0	24
27239	5 x 0,14	4,7	16,0	37,0	26	27256	5 x 0,25	5,4	27,0	51,0	24
27240	6 x 0,14	5,2	18,0	42,0	26	27257	6 x 0,25	5,8	32,0	58,0	24
27241	7 x 0,14	5,2	19,0	48,0	26	27258	7 x 0,25	5,8	35,0	64,0	24
27242	8 x 0,14	5,9	21,0	55,0	26	27259	8 x 0,25	7,0	42,0	82,0	24
27243	10 x 0,14	6,5	29,0	65,0	26	27260	10 x 0,25	7,3	50,0	85,0	24
27244	12 x 0,14	6,7	31,0	77,0	26	27261	12 x 0,25	7,5	58,0	90,0	24
27245	14 x 0,14	6,9	32,0	79,0	26	27262	14 x 0,25	8,1	62,0	144,0	24
27246	16 x 0,14	7,3	43,0	89,0	26	27263	16 x 0,25	8,5	67,0	110,0	24
27247	18 x 0,14	7,6	51,0	103,0	26	27264	18 x 0,25	9,1	78,0	142,0	24
27248	20 x 0,14	8,3	55,0	116,0	26	27265	19 x 0,25	9,1	79,0	146,0	24
27249	21 x 0,14	8,4	56,0	120,0	26	27266	20 x 0,25	9,5	152,0	88,0	24
27250	24 x 0,14	8,9	62,0	131,0	26	27267	21 x 0,25	9,6	91,0	150,0	24
27251	25 x 0,14	9,1	61,0	136,0	26	27268	24 x 0,25	10,4	96,0	163,0	24