



A guide for all lighting designers and technicians wanting to discover the possibilities of ERCO Hi-trac track and light structure



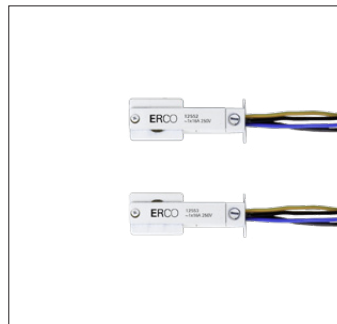
Installation

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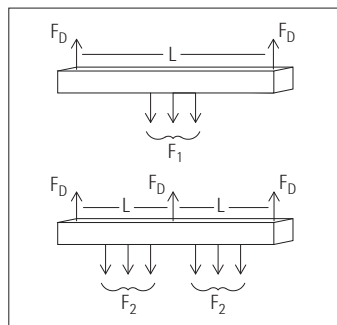
Hi-trac luminaires

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Electrical installation

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Static load

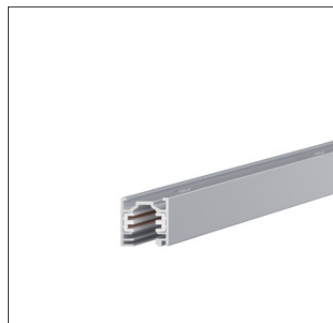
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An overview of our track



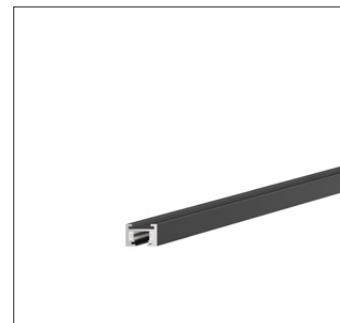
ERCO Hi-trac and light structure

For higher loads
Hi-trac and light structures are a heavy-duty track infrastructure for suspending spotlights, downlights, wallwashers and pendant luminaires. The Hi-trac profiles with wide spans of up to 4m are particularly recommended in rooms with just a few available suspension points. Two variants of the Hi-trac profile are available: either with an empty upper profile for further cable routing or with indirect luminaires for illuminating ceilings.



ERCO track, flanged track and singlet

Classic application
ERCO track is the flexible and sustainable infrastructure for spotlights, downlights, wallwashers and pendant luminaires. The track can be fixed to ceilings and walls and luminaires can be moved or replaced with ease. Luminaires from other manufacturers can also be used in ERCO track – appropriate adapters as OEM components are available from ERCO.



ERCO Minirail 48V track and singlet

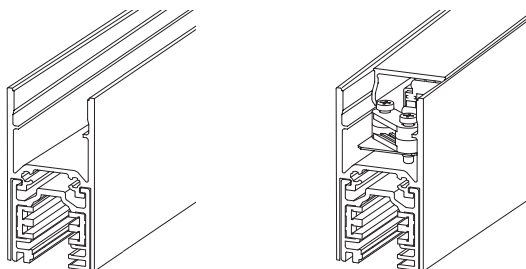
Miniaturised infrastructure
With Minirail 48V, ERCO offers a miniaturised alternative to the classic ERCO track as the basis for flexible, space-saving lighting installations. Minirail 48V with a profile width of just 22mm is ideal for all situations requiring the smallest possible system dimensions, whether for aesthetic or technical reasons.

	Hi-trac	Track and flanged track	Minirail 48V
Versions	Track Track with indirect distribution luminaire	Track Flanged track Singlets	Track Singlets
Types of mounting	Pendant	Recessed Surface-mounted Pendant	Recessed Surface-mounted Pendant
Control options for luminaires	Switchable Phase dimmable DALI Push Dim Multi-Dim Casambi Bluetooth Zigbee	Switchable Phase dimmable Push Dim DALI Multi-Dim Casambi Bluetooth Zigbee	Switchable DALI (via Gateway) Casambi Bluetooth Zigbee
Width x height	38 x 72mm	33.5 x 34mm	22 x 16mm
Length	2m 3m 4m (can be shortened on site)	1m 2m 3m 4m (can be shortened on site)	1m 2m 3m (can be shortened on site)
Accessories	Suspension equipment Connectors Adapters Adapters for safety sockets Mounting components Display hooks	Suspension equipment Plaster trim profile Connectors Adapters Adapters for safety sockets Mounting devices Display hooks	Suspension equipment Plaster trim profile Connectors Adapters Mounting devices Power supply units

ERCO Hi-trac system and accessories – a manufacturer-independent global standard.

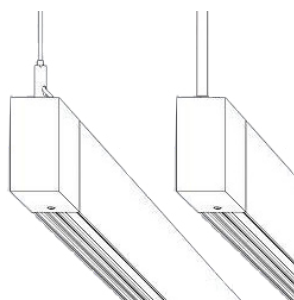
Hi-trac track

The Hi-trac track consists of the Hi-trac profile and an inserted ERCO track. Due to the H-shape of the profile, it is especially suitable for systems with wide load-bearing distances and can also accommodate power cables and data cables. The integrated track has the same connections and control options as the ERCO track.



Hi-trac luminaire

The Hi-trac luminaire consists of the Hi-trac track with an integrated indirect distribution luminaire. The indirect lighting to the ceiling creates a pleasant lighting atmosphere and reduces contrasts in the room.

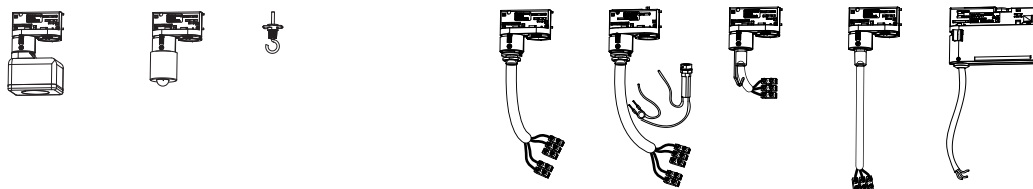
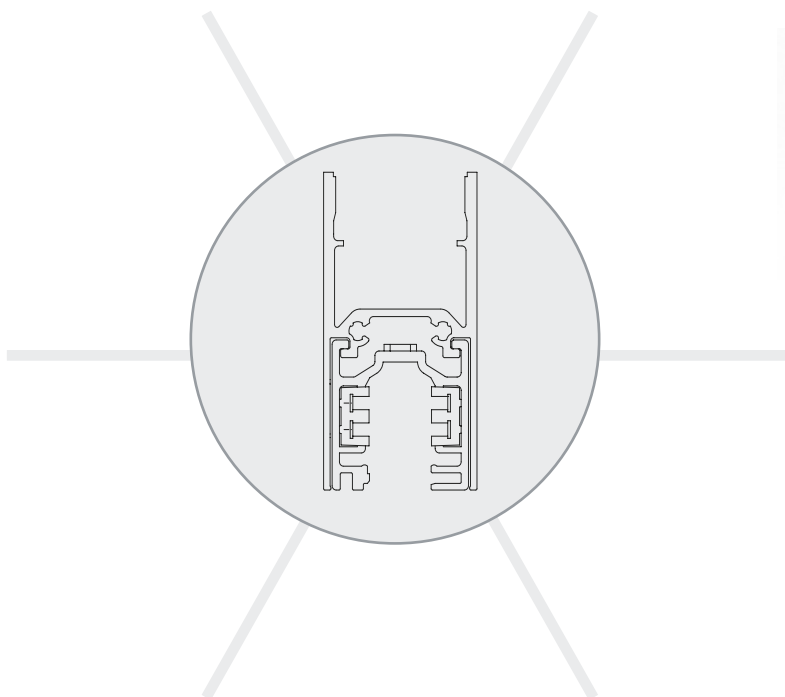


Wire rope or pendant tube

enable solid attachment to the ceiling and are available as accessories. The pendant tube enables discreet power supply of the Hi-trac system. Hi-trac is only suitable for suspended mounting.



Electrical and mechanical connectors provide the power supply and enable control types such as phase dimming, Multi Dim, DALI, Casambi and Zigbee. Mechanical connectors take the weight load and enable line, L, T and X geometries.



ERCO accessories

Electrical and mechanical accessories such as sensors, sockets and display hooks extend the range of applications.

OEM adapter for all luminaires

Use our track as a high quality infrastructure, and not only for ERCO luminaires. We supply matching adapters, for example for spotlights and pendant luminaires, as OEM components to other luminaire manufacturers.

Benefit from a long-term investment



Proven, future-proof and manufacturer-independent
 ERCO Hi-trac has been used around the globe for decades. An important plus: new spotlights mechanically fit into existing systems and luminaires put in operation years ago can be used in new systems. ERCO also offers adapters as OEM components for any other luminaire manufacturer.

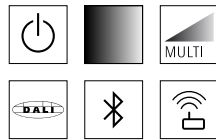


Very extensive accessories
 Use your ERCO track infrastructure for your individual needs. Accessories such as display hooks allow you to suspend paintings from the track, safety sockets can be used to operate AV equipment, and adapters for pendant luminaires allow you to install decorative luminaires.



Extremely stable and durable
 ERCO track is manufactured from high quality aluminium in the ERCO light factory in Germany. Simply install lengths up to 4m in a single piece. The spotlight adapters are similarly robust: designed for continuous use, they are not damaged by frequent insertion and removal.

Gain planning security



DALI, Zigbee, Casambi Bluetooth, phase dimming, Push Dim or simply switch on and off?
 ERCO track can be used to implement all common types of control. The DALI Casambi Gateway even allows DALI control of luminaires in an existing 3-circuit system.

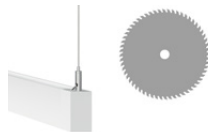
HCL

Support of Human Centric Lighting concepts
 Thanks to automated dimming and individual operation, the lighting can be flexibly controlled via the track. Motion sensors and control via Casambi Bluetooth make it possible to adjust the lighting according to personal preferences.



Straight ahead, around the corner or as a geometric shape?
 Design your track system without restrictions: L, X and T connectors and the electrical feedings enable diverse geometries. Suitable components are specified as accessories on the data sheet of the track.

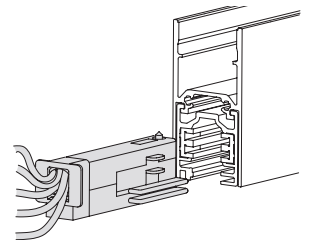
Save time and effort through simple mounting



Simply cut to size and install on site
 ERCO track is easily cut to size to the nearest millimetre on site using a mitre saw. There is no danger of damaging the conductor paths in the process.



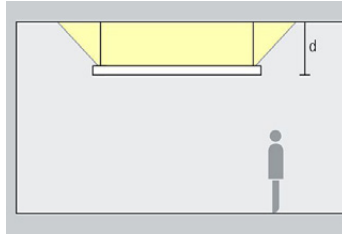
No special protective measures required for DALI track
 ERCO track also route the DALI conductors within the profile so that they cannot be touched. Normative requirements are thus fulfilled and no further measures are required.



Simple mounting
 The mechanical connectors and electrical feedings allow easy and quick installation on site. The mechanical coding prevents components from being incorrectly fitted together.

Seven steps to your track project

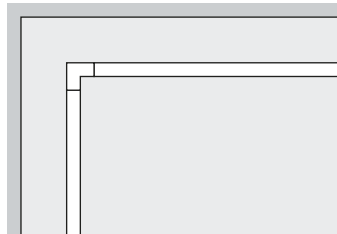
Step 1: The right arrangement



In museums and galleries, track usually runs parallel to the walls. For uniform wallwashing, you can apply approx. one third of the wall height as wall spacing; for accent lighting, the 30° museum angle helps with positioning.

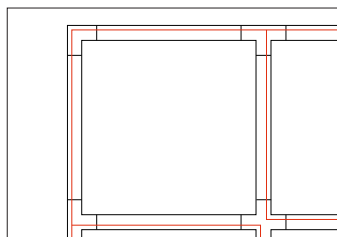
In offices, track often runs parallel to the alignment of the desks. Hi-Trac as a light structure also offers an integrated luminaire for illuminating the ceiling.

Step 2: Plan the layout



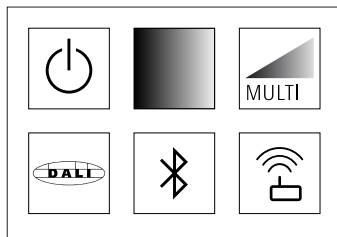
Draw the track layout in the ceiling plan of the room. Take into account that a single Hi-trac luminaire has a fixed length of 2m.

Step 3: Draw in the protective conductor



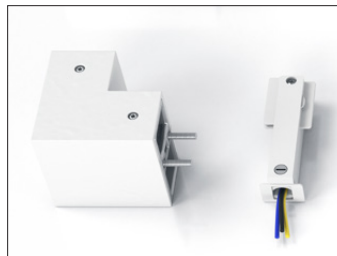
ERCO track has a groove on one side. The protective conductor is located on this. Draw in the protective conductor in your plan, e.g. as a red line, in order to correctly create the electrical connections later. Furthermore, this ensures that the groove is continuous as far as possible and that the luminaires can be aligned evenly.

Step 4: Determine the control



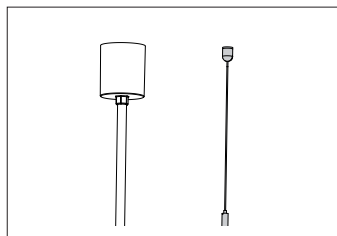
With the type of control (3-circuit or DALI) you define the type of connectors and electrical feedings as well as the required number of cores and thickness of the supply lines and control lines. The track itself is the same for all control types.

Step 5: Plan the live ends and connectors



Divide the track into segments depending on length and geometry. Please also observe the maximum electrical load (see from p. 18). Electrical feedings and connectors are available with right and left protective conductor routing (see p. 17) and as DALI and 3-circuit versions. Hi-trac luminaires can also be connected separately via the connectors.

Step 6: Select the pendant suspensions



Choose between pendant tube and wire rope suspensions. You can also attach Hi-trac to the wall via its face end using an accessory and feed it in from there. Take into account the mechanical load on the system. (see p. 23) With Hi-trac luminaires, intermediate suspensions cannot be mounted above the luminaire.

Step 7: Specify the components

Parts list for linear pendant mounting		
Number	Quantity	Description
1	1	Hi-trac track
2	1	Electrical feeding
4	1	Live-end housing
5	1	Pendant tube suspension
6	1	Wire rope suspension
8	1	Mounting device
9	1	End plate

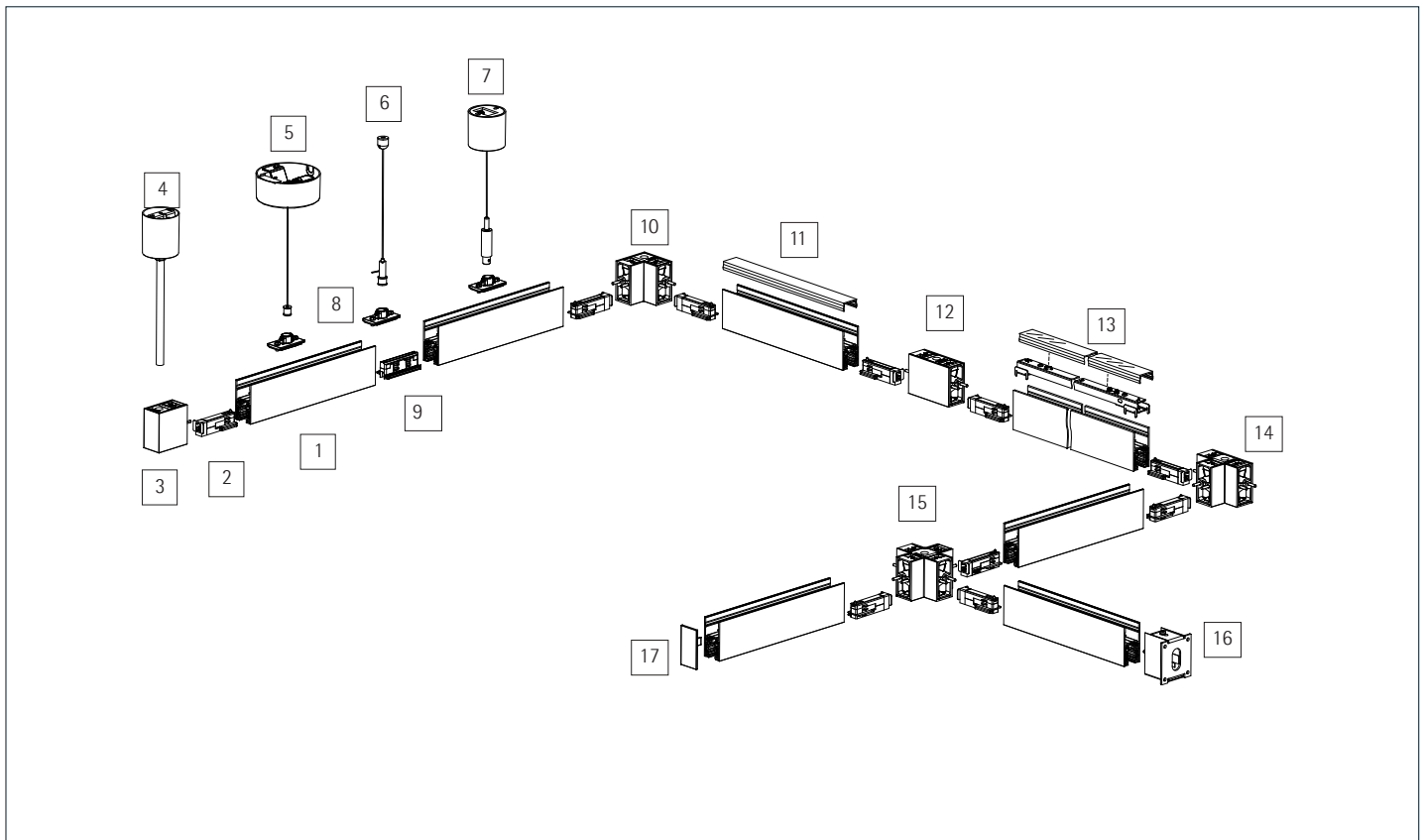
Enter the selected parts into a parts list. The accessories matching the track are specified on the data sheet of the track. The parts list and the planned track layout are an important basis for the later installation!

System overview

The Hi-trac system is only designed for suspended mounting. See below for an overview of available components. Hi-trac always consists of the Hi-trac track and an inserted ERCO track. The Hi-trac luminaire has an indirect distribution luminaire mounted in the upper part of the Hi-trac profile.



Overview of available components for pendant mounting



- | | | | | | |
|---|-------------------------|----|----------------------|----|-------------------|
| 1 | Hi-trac track | 7 | Wire rope suspension | 13 | Hi-trac luminaire |
| 2 | Electrical feeding | 8 | Mounting device | 14 | T-connector |
| 3 | Live-end housing | 9 | Coupler | 15 | X-connector |
| 4 | Pendant tube suspension | 10 | L-connector | 16 | Wall bracket |
| 5 | Wire rope suspension | 11 | Cover profile | 17 | End plate |
| 6 | Wire rope suspension | 12 | Coupler housing | | |

Sample installations

Sample installations

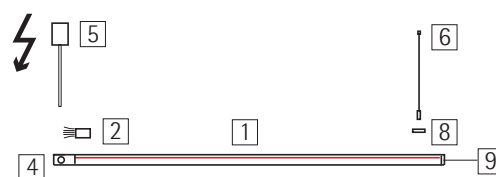
As examples, we have put together three common sample installations for you. In simple linear systems, routing of the protective conductor only plays a subordinate role and only influences the mounting direction of the luminaire. As soon as you use several mechanical connectors and electrical feedings you must coordinate them with regard to the protective conductor routing marked in red. The number of fixing points depends on the specific size and load of the system.

The information below shows a minimum configuration.



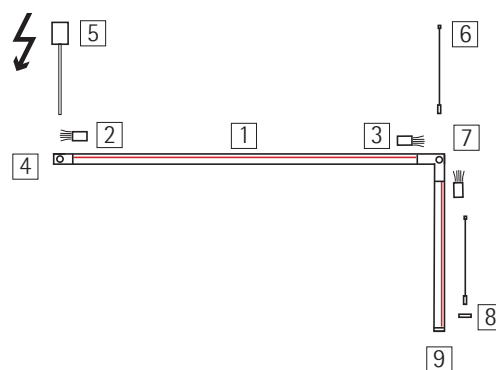
Parts list for linear pendant mounting

Number	Quantity	Description
1	1	Hi-trac track
2	1	Electrical feeding right
4	1	Live-end housing
5	1	Pendant tube suspension
6	1	Wire rope suspension
8	1	Mounting device
9	1	End plate



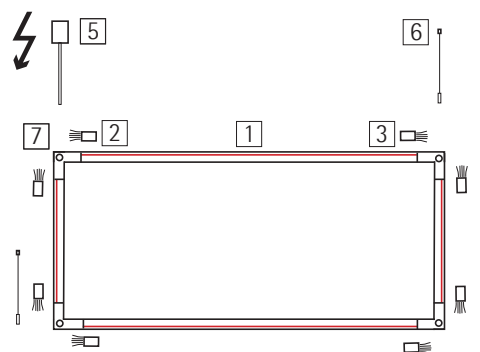
Parts list for angled pendant mounting

Number	Quantity	Description
1	2	Hi-trac track
2	2	Electrical feeding right
3	1	Electrical feeding left
4	1	Live-end housing
5	1	Pendant tube suspension
6	2	Wire rope suspension
7	1	L-connector
8	1	Mounting device
9	1	End plate



Parts list for rectangular pendant mounting

Number	Quantity	Description
1	4	Hi-trac track
2	4	Electrical feeding right
3	4	Electrical feeding left
5	1	Pendant tube suspension
6	2	Wire rope suspension
7	4	L-connector

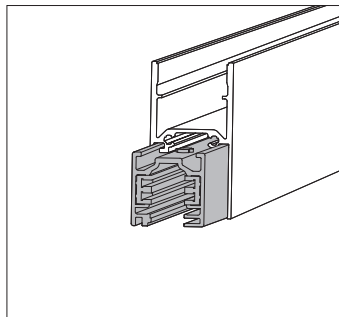


* No electrical ring must be created during DALI operation, therefore interrupt the DALI conductors at a suitable point. Depending on the planning of the interruption point, the number of electrical feedings can be reduced for this purpose.

Typical sequence of a Hi-trac installation

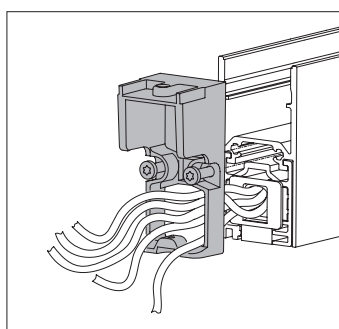
Below is some information on the typical installation procedure. Also note the following pages in this document and always follow the assembly instructions for the components.

Step 1:
Prepare/pre-assemble the Hi-trac track and suspensions



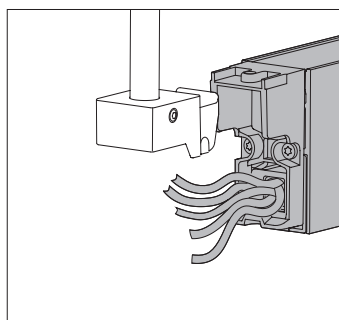
First shorten the Hi-trac profile and track to the desired length, then insert the track into the Hi-trac profile. Mount the suspensions and provide intermediate suspensions for lengths >2m (Rule of thumb, please check for each project!). Always mount a suspension above the flush coupler. Now mount the suspension-side fixing parts of the connector to the suspensions.

Step 2:
Mount the electrical feedings and fixing parts on the track side



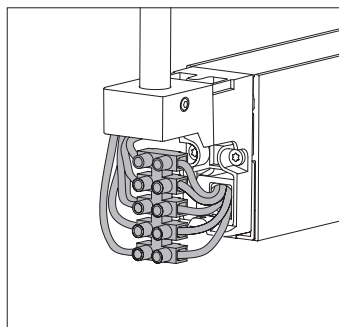
For each track section, except for the end section, you require a right and a left electrical feeding. Up to this point the track is still free to move in the Hi-trac profile until now; only when the fixing parts of the connector are mounted will the track be fixed in the Hi-trac profile.

Step 3:
Fit the Hi-trac or attach it to the mounting device of the wire rope suspension



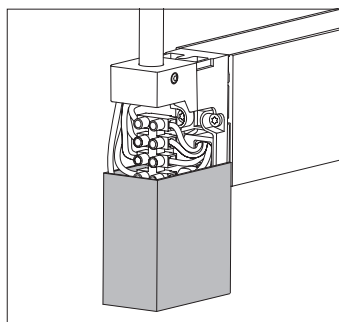
Fit the Hi-trac track prepared in this way into the mounting pieces that you have already attached to the pendant tube or wire rope suspension. Note the position of the groove / protective conductor in the track!

Step 4:
Wire the luminaires and connectors



If Hi-trac modules with integrated luminaires are used, wire these together with the connectors. Alternatively, you can also connect luminaires with a separate cable. If no luminaires are intended, you can also use the upper side of the Hi-trac track as a cable duct.

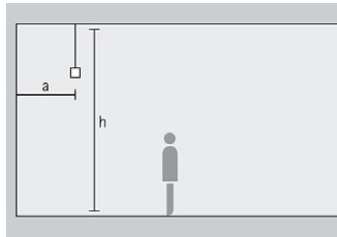
Step 5:
Check the system and mount the covers



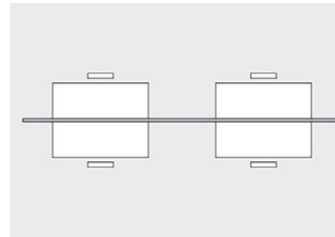
Check the system for short circuits and function and then fit the connector covers, the Hi-trac profile covers and, if required, the luminaire covers.

Mounting

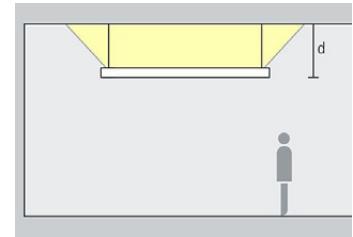
Mounting position



The best arrangement for track is parallel to the walls with a distance to the wall a of $1/3$ of the room height. In this way you can use spotlights and wallwashers to optimally illuminate the walls of museums, galleries and shops. If furniture such as shelves or cabinets are placed in front of the wall, the distance a should be modified according to the front plane of the furniture.

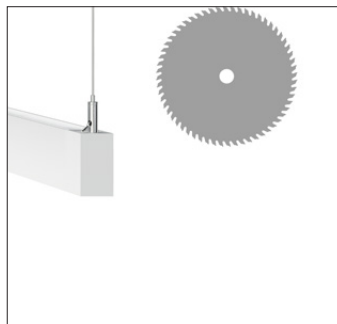


For optimum illumination of office workstations, it is recommended to position the track centred on the longitudinal axis of the desks.



The indirect distribution luminaire can be used to illuminate ceilings to emphasise the dimensions of high rooms. The ideal distance d of the light structure to the ceiling is 0.8 metres.

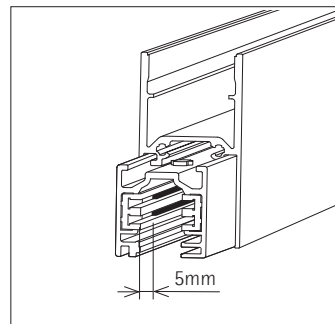
Planning and installation information



Shortening the track

You can order track cut to size. In many cases however it is advisable to shorten standard lengths directly on site, e.g. with a mitre saw. Make the cut square and clean so that there are no unsightly gaps at the joints.

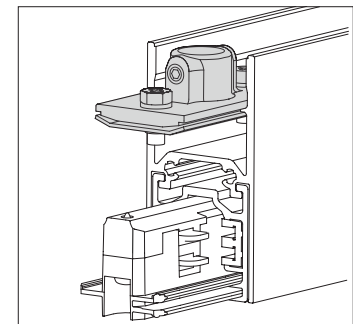
Tip: shorten the Hi-trac profile and track separately. The track should be approx. 1mm shorter on each side than the Hi-trac profile.



Shortening the conductors

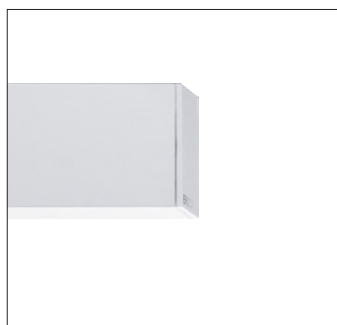
After shortening the Hi-trac track, always shorten all four conductors in the track by 5mm for safety reasons. The appropriate tool for this is available as an accessory.

To shorten the conductor, pull the track out of the Hi-trac profile a little.



Extending the track

If you need to lengthen a track, use the coupler for flush mounting and position the Hi-trac Mounting device with a suspension over the joint. This ensures that the coupler is not mechanically stressed, and at the same time you still have a fixing point to which you can attach on-site suspensions.



Using Hi-trac End plates

Always fit an end plate to the open end of a track for both safety and visual reasons.

Suspensions

Pendant tube suspensions

Concealed cable routing and high stability



Concealed cable routing

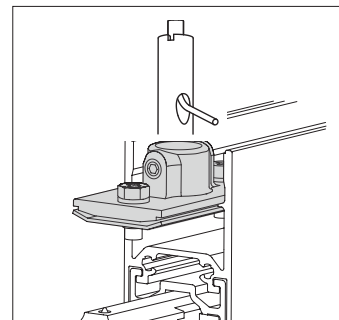
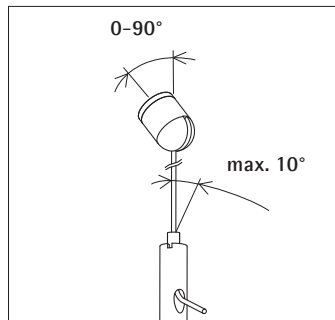
Pendant tube suspensions enable discreet power supply to your system. The pendant can take a sheathed cable up to a diameter of max. 10mm. With a 5-core connection, the individual cores are pulled through the pendant. Supply is without a cable. Pendants longer than 1.50m are also available on request.

Stable mounting

With suspended track installations, a dynamic load must be taken into account in addition to the static load. A draft for example can move the system. Asymmetric loads, e.g. caused by spotlights aligned on one side, can cause the track to tilt slightly, especially with linear systems. With a pendant tube suspension you bring rigidity into the system and prevent such effects. For longer track lengths, it is recommended to install every 2nd or 3rd suspension as a pendant tube suspension.

Wire rope suspensions

Elegant appearance and flexible use



Elegant appearance

Wire ropes are hardly noticeable from a distance and lend the track system a "floating" appearance. The following versions are available:

1. Wire rope suspension with canopy and feeding option for 3x1.5mm² cables. (1-circuit operation)
2. Wire rope suspension with canopy and feeding option for 5x1.5mm² cables (2-circuit operation)
3. Wire rope suspension with single point fixing. Discreet mounting option also for sloping ceilings
4. Version with rapid connector and cable gland for cables up to d 9.3mm. Supplied with 6 fixing clips

You can attach all wire rope suspensions to the connectors / live-end housings. For mounting in the profile you need the Hi-trac Mounting device (as accessory).

Flexible use

Single-point suspensions are suitable for sloping ceilings up to 10°. Rapid connectors ensure tool-free and particularly simple height adjustment.

Suspension from the track

The Hi-trac mounting device enables suspension directly from the Hi-trac profile. The flush coupler may only be mounted together with this mounting device and a suspension. Rule of thumb: Hi-trac up to 2m in length does not normally require intermediate suspension. For a more definitive statement, the actual load on the Hi-trac track must be determined. Information on static load can be found in the section of the same name in this document.

Hi-trac connectors

Construction of the Hi-trac connectors

Hi-trac uses mechanical connectors as well as separate electrical feedings



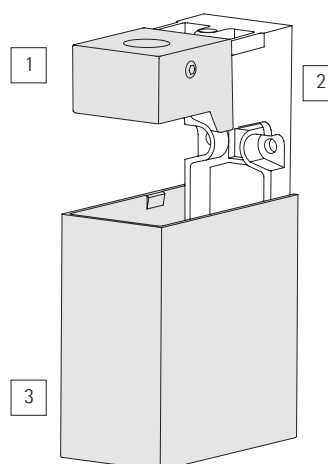
Mechanical connectors

Mechanical connectors consist of three components:

- 1 Mounting piece for attachment to the suspension
- 2 Mounting piece for attachment to the Hi-trac track
- 3 Housing cover

Mechanical connectors are available in the following variants:

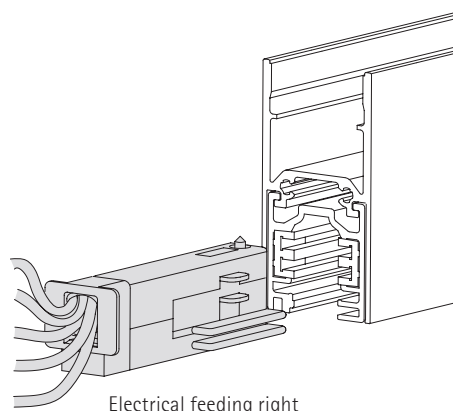
- Live-end housing
- T-connector
- L-connector
- X-connector
- Coupler housing
- Wall bracket



Electrical feedings

Electrical feedings form the centre of the Hi-trac system. They are all available in a right and a left version for 3-circuit operation and correspondingly also for DALI operation. They are supplied with open-ended wires and separate connection terminal.

The 3-circuit version and the DALI version differ in the colour coding of the wires. Always insert the electrical feeding into the track before mounting the mechanical connector piece. The connection is made after mounting the Hi-trac track on the suspension.



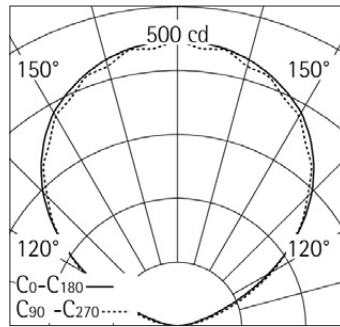
Hi-trac luminaire

Hi-trac module with integrated luminaire for Human Centric Lighting (HCL)

To achieve a pleasant lighting atmosphere in the room, you can supplement the spotlights and downlights for the track with the indirect distribution of the Hi-trac luminaire. The luminaire consists of the Hi-trac profile with inserted track and the luminaire itself. The electrical connection of the luminaire is made via a separate connection cable on-site or via the electrical feedings of the track.



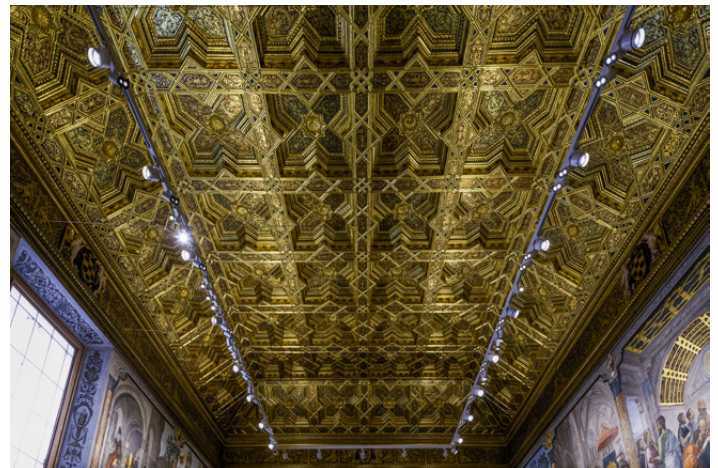
Possible applications and light distribution



Light distribution
The indirect light component lowers the contrasts in the room and is therefore just as suitable for museums as for office environments.



Specially designed ceilings, vaulted ceilings or ceiling paintings can also be ideally illuminated in this way.

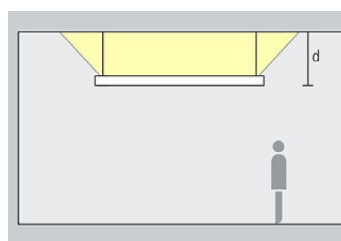
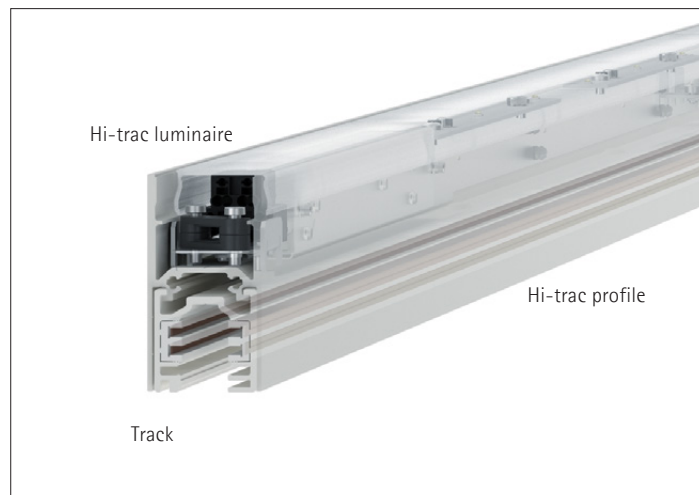


Hi-trac luminaire

Notes on planning a Hi-trac luminaire

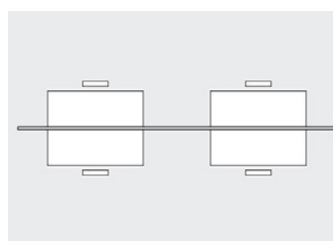
Planning information

When planning, take into account that the luminaire can not be shortened. It is only available in a length of 2m. You also cannot mount any mounting devices for a suspension above the luminaire – this is only possible via the mechanical connectors.

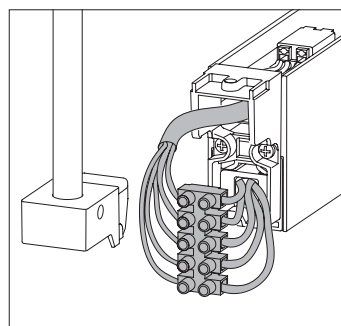


Positioning

The luminaire is designed for a pendant length (d) of approx. 0.8m. The pendant length should not be extended or shortened by more than 20%, as this will impair the quality of light. To avoid light beam scallops on the wall, do not mount the luminaire directly on the Hi-trac wall fixing. Allow for a distance of approx. 0.5m.

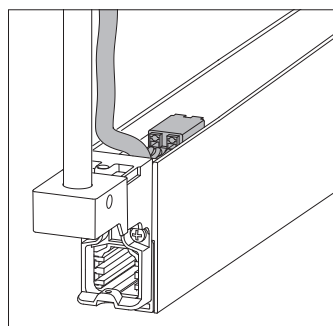


For optimum illumination of office workstations, it is recommended to position the track centred on the longitudinal axis of the desks.



Electrical connection via connector

Integrate the luminaire into the connector wiring.



Separate electrical connection

You can provide the luminaire with its own supply line. In this way the luminaire is electrically completely separate from the Hi-trac track.

Electrical installation

The track profile of ERCO track, ERCO flanged track and ERCO track used in Hi-trac are all identical. The decisive factor for the control options is the selection and connection of the connectors in combination with the appropriate adapters and luminaires. ERCO track is suitable for both 1-circuit and 3-circuit operation in the 250/440V mains supply. This section contains information on protective conductor routing, the electrical connection and the types of adapter that can be used. DALI and 3-circuit feedings differ in the colour coding of the connection wires.



Image
top: 3-circuit feeding right
below: DALI feeding left

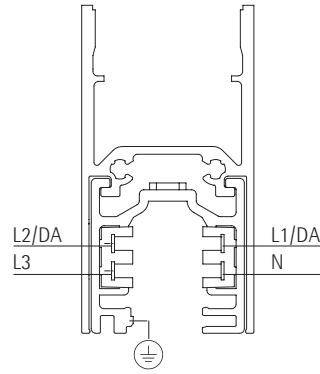
Operating mode	Circuits	Control
3-circuit	3	Switchable Phase dimmable On-board Dim Casambi Zigbee
DALI	64 (DALI bus)c	DALI
Multi-Dim (only ERCO luminaires with Intrack adapter)	2	Phase dimmable Push Dim On-board Dim Casambi Zigbee

Electrical installation

Protective conductor routing and alignment of the track

For simple, safe mounting, ERCO track is coded via the routing of the protective conductor and a groove, i.e. luminaires, with the exception of the InTrack adapter, can only be mounted in one position. This also applies to the electrical feedings, available in a left and a right version. Take into account the position of the groove and the protective conductor during planning and mounting.

The L2/DA and L3 conductors are always on the side of the protective conductor.



Right or left?

How to clearly identify the required electrical feedings.

Live end

The definition "right" or "left" is made looking from the track to the feeding. The groove and protective conductor run on the same side of the track.

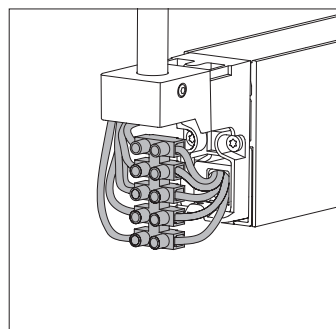


Live end right

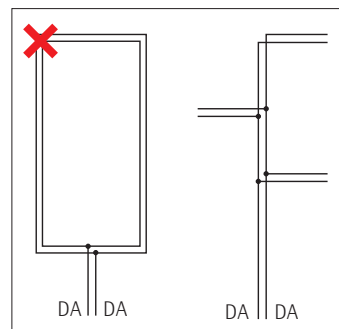


Live end left

Wiring the feedings



The Hi-trac electrical connectors must be wired manually. Use the colours of the conductors as a guide. The protective conductor must always also be connected to the connector itself. Observe the corresponding mounting instructions.



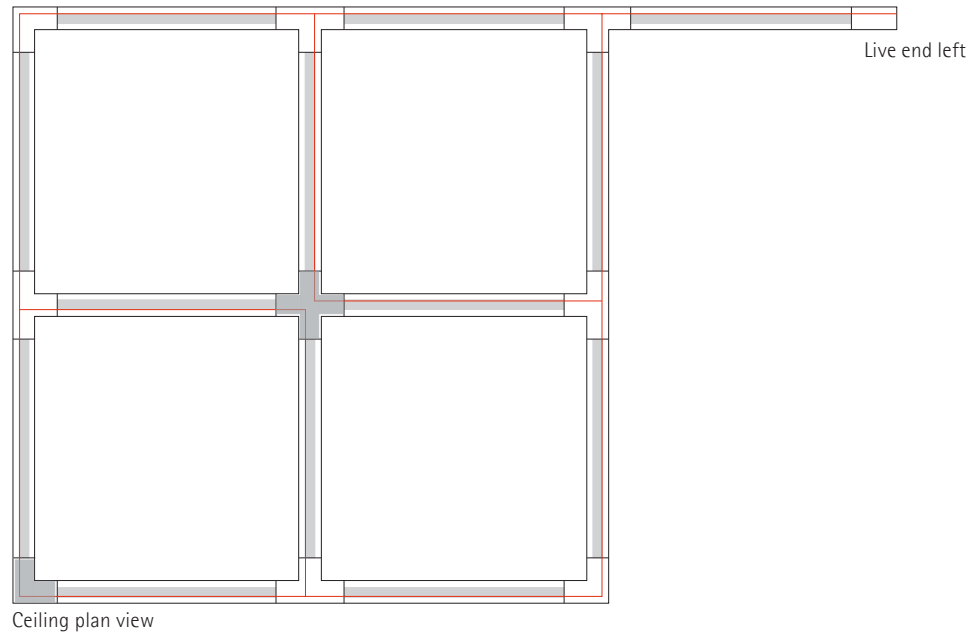
DALI

In DALI systems, the DALI conductors must not form electrically closed circuits, otherwise operating faults may occur. For this reason, disconnect a closed DALI circuit at a connection point. In the case of more complex systems, several separations may also be necessary. Branches and tree structures are straightforward.

Electrical installation

Planning

The electrical feedings are wired in the connector housings. As a rule of thumb, you need one right and one left feeding for each track section. For larger systems it is advisable to plan the system carefully and comprehensively so that the wiring can be carried out easily and safely.



Proceed as follows

- First sketch the track system in top view with all track and connecting parts and without protective conductors. Give the track and connectors a width that allows you to add the protective conductor routing in the next step.

DALI installations

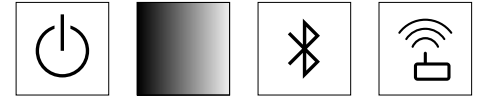
Note the instructions on the previous page. In the example above, it would be advisable to do without the wiring in the X-connector, as well as in the marked L-connector.

Tip: if there is a preferred viewing position, the groove should be on the side of the viewer.

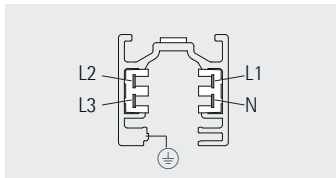
- Now draw in the protective conductor (on the side of the groove), e.g. as a red line. Start on the long side of a T-connector (if used) and draw the protective conductor as a continuous connection.

Electrical installation

Electrical connection of the Hi-trac track This section contains basic information for connection to a 1/3-circuit 250/440V mains supply. If you wish to install luminaires with Intrack adapter and Multi Dim in the track, please refer to the following pages.



1/3-circuit operation



Connection

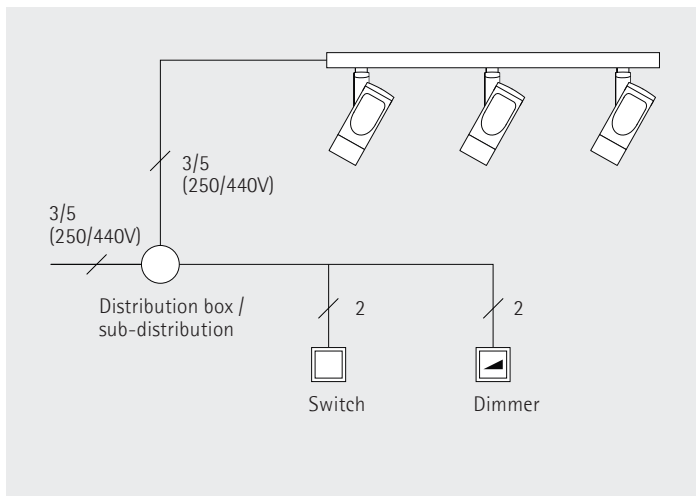
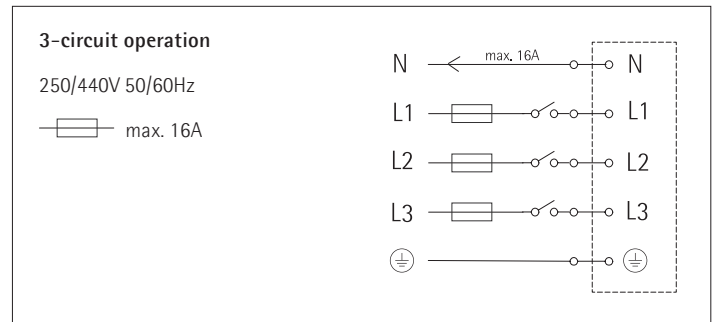
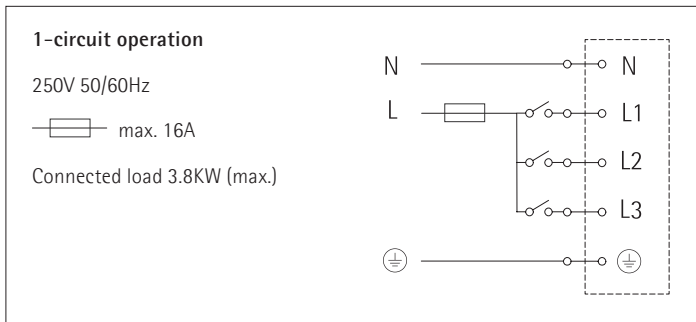
- L1 load circuit / control circuit 1
- L2 load circuit / control circuit 2
- L3 load circuit / control circuit 3
- N neutral conductor
- ⊕ protective conductor

Supported control types

- Switchable
- Phase dimmable
- Casambi Bluetooth
- Zigbee
- On-board Dim

Suitable adapters

- 3-circuit adapter
- Transadapter
- Intrack adapter
- OEM 3-circuit adapter



Notes on installation:

- Take into account conductors of the track with a cross-section of approx 4mm².
- The connection terminals of the live ends or connectors can each accept two conductors with a cross-section of up to 2.5mm². Through-wiring is thus possible.
- When planning, you must take into account the number of luminaires per circuit breaker. See the data sheet of the luminaire for details.

- For 3-circuit operation please note:
- The maximum current of the neutral conductor must not exceed 16A.
 - The neutral conductor must not be switched or routed via a separate fuse.

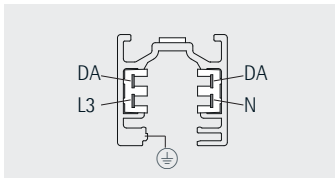
Electrical installation

Electrical connection of the Hi-trac track for DALI operation



This section contains basic information on connecting to a 1-circuit 240 V mains supply and a DALI light control system. The notes on this page also apply to luminaires with Intrack adapter with Multi Dim control type in the DALI setting.

DALI operation



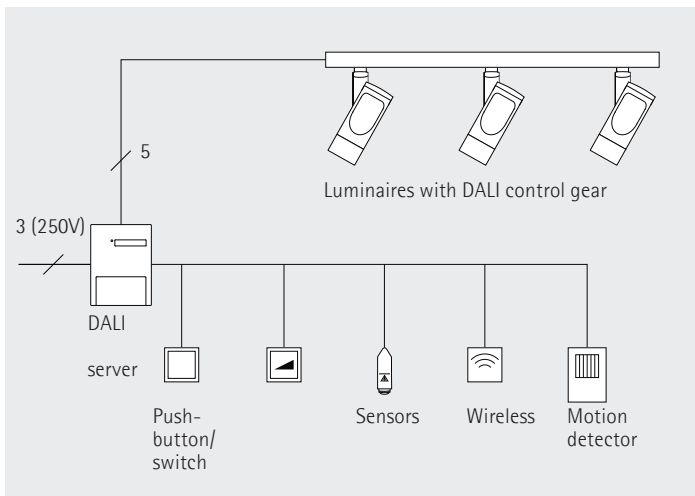
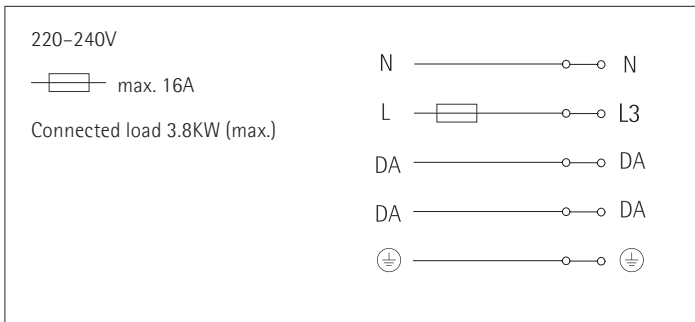
- Connection**
- DA DALI
 - DA DALI
 - L3 load circuit / control circuit 3
 - N neutral conductor
 - ⊕ protective conductor

Supported control types

- DALI
- On-board Dim

Suitable adapters

- DALI adapter
- DALI transadapter
- Intrack adapter Multi Dim (DALI operation)
- DALI adapter OEM



Notes on installation:

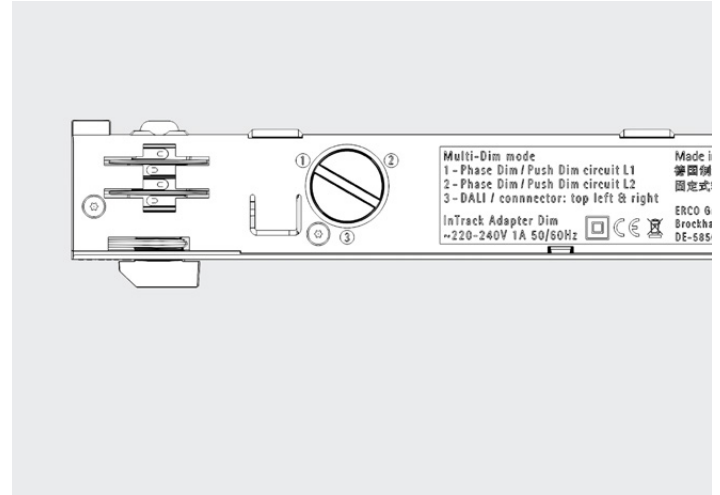
- The DALI signal is not SELV, i.e. the DALI conductors must be handled in the same way as a mains line.
- Unlike systems from other manufacturers, the DALI conductors in the ERCO track are integrated in such a way that no special measures need to be taken to protect against accidental contact.
- Take into account conductors of the track with a cross-section of approx 4mm².
- The connection terminals of the live ends can each accept two conductors with a cross-section of up to 2.5mm². Through-wiring is thus possible.
- When planning, you must take into account the number of luminaires per circuit breaker. See the data sheet of the luminaire for details.

- For trouble-free operation, only route DALI conductors in a linear structure or tree structure and avoid electrically closed rings on the DALI conductors.
- The distance between the DALI server and the most distant luminaire should not exceed 300m.

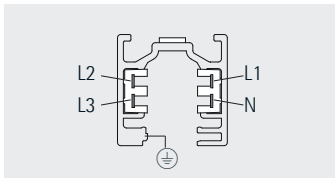
Electrical installation

Electrical connection of the Hi-trac track for operation with ERCO Multi Dim

This section contains basic information on connection to a 1/3-circuit 220/440V mains supply for using ERCO luminaires with Multi Dim control gear.



Multi Dim (phase dimming / Push Dim)



Connection

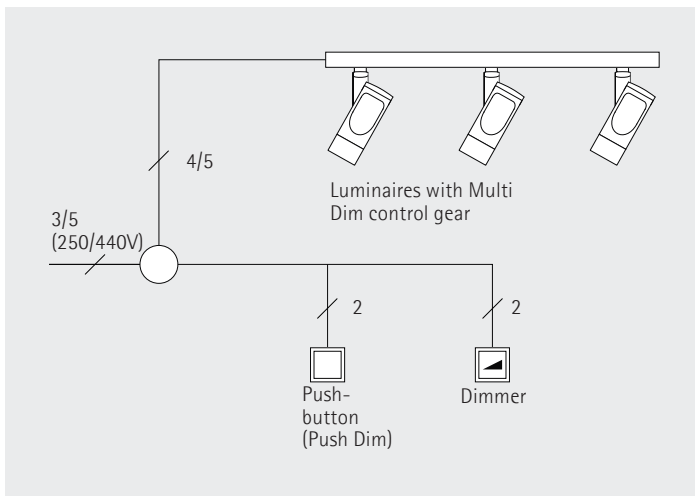
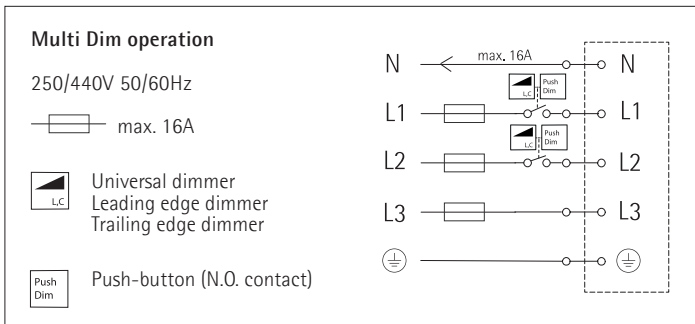
- L1 control circuit 1
- L2 control circuit 2
- L3 load circuit
- N neutral conductor
- ⊕ protective conductor

Supported control types

- Multi Dim
- Multi Dim + On-board Dim
- DALI

Suitable adapters

- Intrack adapter Multi Dim with setting: phase dimming or Push Dim operation



Installation instructions

Please observe the installation instructions for the 1/3-circuit connection. Luminaires with ERCO Multi Dim control gear, as with DALI control gear, require a permanent phase to be connected to L3. Either push-buttons or dimmers are connected to L1 and L2.

Notes on ERCO Intrack adapters:

The operating mode switch of an Intrack adapter of the Multi Dim control type allows 3 operating modes: Position 1 or 2: phase dimming or Push Dim
Position 3: DALI (connection as described above)

For operating modes 1 and 2 observe the following:

- Multi Dim control gear automatically detects whether the signal is a phase dimming or Push Dim signal.

- Push-button lines or dimmed switch lines are connected to L1 and L2. This means that 2 Multi Dim control circuits are available.
- Observe the dimmer requirements of the luminaire. An ERCO luminaire operated with Multi Dim does not absorb any significant base load in phase dimming mode!

Minimum number of cores for installation

4 or 5 cores to the track depending on whether 1 or 2 control circuits are required

ERCO phase dimming

2 cores to the dimmer

Push Dim

2 cores to the push-button

Electrical installation

Adapters for ERCO track and flanged track used on ERCO luminaires

All ERCO adapters are mounted in the track without tools. The necessary electrical connection of the track differs according to the control type of the luminaire.



Adapter types



3-circuit adapter

3-circuit adapters establish the electrical and mechanical connection to the luminaire, and enable selection of the switching/load circuits of which a maximum of three are available. Phase selection is possible with the installed luminaire.

You can only insert the adapter into the track in one direction. The adapter is suitable for mounting in the ERCO singlet.

DALI adapter

DALI adapters can be operated in a track for DALI installations. One load circuit is available.

These adapters can only be inserted in the track in one direction. The adapter is suitable for mounting in the ERCO DALI singlet.

ERCO transadapter

ERCO transadapters contain the control gear of the luminaire. For phase dimmable luminaires, the adapter also includes the controller for On-board Dim. Unlike the 3-circuit adapters, phase selection is carried out before insertion into the track.

Three switching circuits/load circuits are available to choose from. You can only insert the adapter into the track in one direction. Due to its size, the adapter is not suitable for mounting in the ERCO singlet.

DALI transadapter

DALI transadapters contain the control gear of the luminaire and can be operated in a track for DALI installations. One load circuit is available. You can only insert this adapter into the track in one direction. Due to its size, the adapter is not suitable for mounting in the ERCO DALI singlet.

Intrack adapter

ERCO Intrack adapters contain the power supply for the luminaire and disappear completely into the track. They enable the operation of 3 control/switching circuits.

You can insert the adapter into the track in any direction. Due to its size, the adapter is not suitable for mounting in the ERCO singlet.

Intrack adapter Multi Dim

ERCO Intrack adapters with Multi Dim provide one load circuit that requires a permanent phase on L3, analogous to the DALI application.

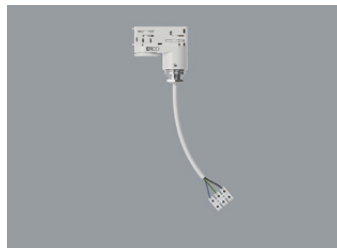
Depending on the operating mode, this adapter enables the control modes DALI and Push Dim or phase dimmable with 2 control circuits. You can insert this adapter into the track in any direction. Due to its size, the adapter is not suitable for mounting in the ERCO singlet.

Electrical installation

OEM adapters for ERCO track

ERCO track is a global standard across all manufacturers. ERCO provides matching adapters as OEM components for spotlights and pendant luminaires from other luminaire manufacturers. All adapters on this page can only be inserted into the track in one direction.

OEM adapter types



OEM 3-circuit adapter
Phase selection is already possible with the installed luminaire. The mechanical interface consists of a M16x1 thread with a length of 15mm. The load for ceiling mounting is 5kg. For wall mounting please refer to the mounting instructions of the adapter and installed luminaire. The cable that is led out has strain relief. Connection with max. 250V/10A. The adapter is suitable for mounting in the ERCO singlet.



OEM DALI adapter
This adapter enables operation of a DALI luminaire of another manufacturer in an ERCO DALI track in 1/3-circuit operation. The OEM adapters are supplied with a protective circuit that prevents the LED DALI control gear of the luminaire from being damaged by accidental insertion into a 3-circuit track. The load for ceiling mounting is 5kg. For wall mounting please refer to the instructions of the adapter and luminaire. The cable that is led out has strain relief. Connection with max. 240V/1A. The adapter is suitable for mounting in the ERCO DALI singlet.



OEM ERCO 3-circuit adapter for pendant luminaires
This adapter enables operation of an on-site pendant luminaire in an ERCO track in 1/3-circuit operation. Phase selection is already possible with the installed luminaire. The mechanical interface consists of a fixed hook to which a pendant luminaire can be connected. The mechanical load capacity is max. 10kg. Connection with maximum 250V/10A. The adapter is suitable for mounting in the ERCO singlet.



OEM 3-circuit adapter kit
This adapter enables operation of an on-site pendant luminaire in an ERCO track in 1/3-circuit operation. Phase selection is already possible with the installed luminaire. The connection cable of the adapter has a length of 1500mm and has strain relief. The mechanical load capacity is max. 3.3kg. Connection with max. 250V/10A. The adapter is suitable for mounting in the ERCO singlet.



OEM ERCO DALI adapter for pendant luminaires
This adapter enables operation of an on-site pendant luminaire in an ERCO DALI track. The connection cable has a length of approx. 1500mm and has strain relief. Connection with max. 250V/1A. Due to its size, the adapter is not suitable for mounting in the ERCO DALI singlet.

Static load

When planning a Hi-trac system, determination of the static load is important. It has a direct influence on the fixing points and on the subsequent equipping with luminaires. To avoid re-working, you should also take into account any planned future changes.



The maximum permissible weight load of the track results from the maximum permissible deflection of the profiles and the maximum permissible load of the suspensions. The load distribution is composed of the system's own weight and evenly distributed individual loads (point loads). You can determine the maximum permissible weights using the adjacent illustration and associated table.

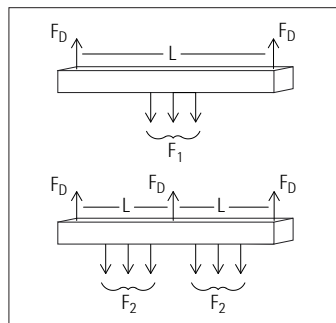
Here are the necessary parameters

L	(mm)	Length
f_e	(mm)	Deflection due to weight of profile
F_D	(kg)	Max. load of one suspension
F_e	(kg)	Weight of profile
F_1	(kg)	Max. permissible load with two-point suspension and permissible deflection (L/250) of 4mm per metre length
F_2	(kg)	Max. permissible load with multi-point suspension and permissible deflection (L/250) of 4mm per metre length

ERCO Hi-trac track

L (mm)	1000	2000	3000	4000
F_e (kg)	2.2	4.4	6.6	8.8
f_e (mm)	0.03	0.52	2.65	8.40

$F_D = 20$ kg				
F_1 (kg)	38	36	20	7.5
F_2 (kg)	18	16	14	7.5



Sample calculation

See below how to apply the load tables.

Determining the maximum number of luminaires for a given track length

A Hi-trac track of length 4m and suspended at 3 points is to be fitted with Eclipse size M. What is the maximum number of luminaires that can be mounted on this track? Proceed as follows:

1. Determine the weights

Weight of 1 luminaire	1.2kg
Weight of track (F_e)	8.8kg

2. Number of suspensions and distances

Number of suspensions	3
Distance between suspensions (L)	2000mm

3. Maximum weight between 2 suspensions with L=2000mm

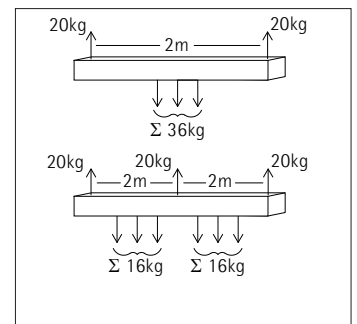
According to load table (F_2):	16.0kg
less track	
(F_e : 2000mm)	4.4kg
Remaining for luminaires	11.6kg

4. Determine the maximum number of luminaires

At 1.2kg/luminaire	9 luminaires
For the complete track	18 luminaires

Result:

A maximum of 18 luminaires can be installed here.



Check the possible combinations of the hi-trac accessories in the adjacent diagram.

