# Powel oil and gas components pocket guide



# Take Command Of Harsh Environments

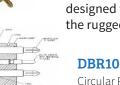
For over sixty years, Powell Electronics has been in the business of driving industry forward in the most extreme and challenging environments. From the corrosive salt spray's ever-present assault on windswept oil rigs, to the incredible temperatures and rough surfaces of deep wells, we have worked to provide each of our customers with a broad inventory of industry-leading suppliers and parts to keep their rigs running smoothly and safely.











AirBorn's DBR Connectors have been designed for reliable extended performance in extreme conditions. They have been primarily designed to withstand the high pressures and high temperatures of the rugged geophysical technology world.

#### **DBR10-18PA**

Circular Plug w/ Backshell 10 Banana Pin Contacts 18 #12 Contacts

#### **DBR10-18SA**

Circular Receptacle w/ Backshell 10 Banana Pin Contacts 18 #12 Contacts

#### **DBR32P-F14**

Circular Plug w/ Backshell 32 #12 Contacts Pre-wired with Deutsch M999

#### **DBR32S-D77**

Circular Receptacle w/ Backshell 32 #12 Contacts Pre-wired with Deutsch M999





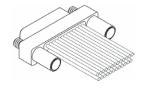
AirBorn's Nano (N-Series) product line is based on the contact spacing (contact pitch) of 0.025" (0.635mm) between contact. Small in both size and weight, these high temperature connectors are perfect for areas where space is a critical design consideration.

#### **NMHT**

I/O Cable Sizes: 9, 15, 21, 25, 31, 37, 51, 65, 69 2 Body Styles available 2 Body Materials available

#### **NKHT**

Right Angle, Board-Mount Sizes: 9, 15, 21, 25, 31, 37, 51, 65, 69 3 Termination Types available 2 Body Materials available



# <u>Amphenol</u>



Amphenol Oil & Gas Technologies' radically redesigned Downhole Rotatable (DHR) Connectors are made from Bakelite plastics and gold-plated BeCu contact bands. They are fully compatible with the existing Bluestar and Tensor Rotary Connectors housings and mountings, and offer a reliable high-temperate sealed connection standard in the downhole industry. The DHR series can withstand temperatures up to 200°C.

#### DHR-8-P

DHR Plug Injection molded Bakelite plastic insulation BeCu contacts Nylon Glass reinforced

#### DHR-8-S

DHR Socket
Injection molded
Bakelite plastic insulation
BeCu contacts
50 micron gold-plated bands



#### **Amphenol** Industrial



Amphenol Industrial Operations' offers the high-pressure-capable KTK downhole connector. The KTK series connectors are molded and machined glass-filled epoxy with gold contacts and a Viton O-ring. Medium and high temperature options allow you to go from 170°C to a maximum temperature of 200°C, and up to 20,000 PSI (137 MPA) bi-directional pressure.

C10-686909-000

6 pin/4 socket High Temperature

C10-686910-000

4 pin/6 socket High Temperature

C10-686926-000

10 pin solder to solder connector

C10-686927-000

6 pin/4 socket Med Temperature

C10-686928-000

4 pin/6 socket Med Temperature

C10-686929-000

10 pin solder to solder connector







Glenair's Series 22 Geo-Marine® Connectors are designed for use in geophysical, harsh marine and oil-patch applications. The stainless steel plugs and receptacles have a hydrostatic pressure sealing capability of up to 5000 psi, and are available in either glass-seal hermetic or rigid dielectric environmental insulators.



220-06 Cable Connector Plug

**220-00** Bulkhead Connector Receptacle, Front Mounted Jam-Nut

**220-01** Connector Receptacle, In-Line

**220-02** Connector Receptacle, Square Flange Mount

**220-03** Bulkhead Connector Receptacle, Solder Mount

**220-04** Connector Receptacle, Rear Mounted Jam-Nut Wall Mount

**220-07** Connector Receptacle, Rear Mounted Jam-Nut Box Mount

**220-09** Plug Connector, Flange Mount







Glenair's Well-Master™ 260 Micro-D Connector sets the bar for the Micro-D connector in oil, gas and geothermal wells. These special connectors can withstand a continuous operating temperature of 260°C, 60 degrees higher than most high temperature connectors. Rugged stainless steel shells and hardware, high temperature liquid crystal polymer insulators, and special epoxies allow the Well-Master™ series to survive the most extreme environments.



#### **GHTM Solder Cup Contacts**

High Temperature Micro-D with Solder Cups

#### **GHTM PCB Header**

Right Angle Printed Circuit Board Header

#### **GHTM Insulated Wire**

Pre-wired Connectors with Mil Spec PTFE/Polyimide Wire

#### **GHTM** Back to Back

Back to Back Micro-D Cable Assemblies





DEUTSCH DO3000 / TE Connectivity's D3000 Series Wet Mate Optical Connectors are high performance choices for optical and electrical applications in subsea environments. They are built to withstand depths up to 4500 m. and can run up to 12 channels.

#### DO3000

Connector Plug ROV Handle Optical Gel Reservoir 330mm x 290mm (max) Super Duplex for ROV Body

#### DO3000

Connector Receptacle Hose Interface Optical Gel Reservoir 396mm x Ø80mm (max) 316L for Diver & Stab Plate Body







TE Connectivity's P6-SW 400 Series Wet Mate Power Connectors are built to withstand pressures as high as 4,350 psi (300 bar). They are designed for wet and dry mate applications, allowing integrators several options for use in subsea power distribution or generation.

#### 376-1202-00

Female Wet Mate Connector Super Duplex Housing Silver Plated Copper Alloy Contact 213mm x Ø100mm (max)

#### 376-1201-00

Male Wet Mate Connector Optional Flange Available Rated Voltage 6 / 10 kV 256mm x Ø82mm (max)



AirBorn Flexible Circuits, Inc. (AFC) DuraFlex circuits are ideal for high-temperature applications where space is at a premium. Their unique composition allows them to operate in a sustained temperature of up to 230° C (446° F) for 500 continuous hours. DuraFlex is thinner than fixed or flexible cabling, yet performs at the same temperature and electrical specifications. There are four types of DuraFlex available to suit your application needs: Single-Sided Flex (ideal for HDEC applications); Double-Sided Flex (for wider circuit designs); Multilayer Flex (3D electronic interconnects); and Rigid Flex (for military grade applications).



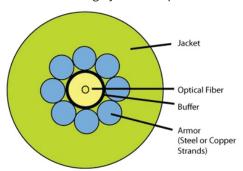


Glenair Duralectric™ weatherproof jacketing is halogen free, flame resistant, and functional to 260° C. It is also perfectly suited for immersion, chemical or caustic fluid exposure, temperature extremes, and UV radiation. Duralectric™ is ideally suited for use as an overmolding compound and extruded cable jacket material, as well as in blown-jacket applications. It is available in a broad range of colors, including safety orange and federal standards such as US Navy MIL-PRF-24758A Haze Gray and Fed Std #3446 Desert Tan.





TE Connectivity's Rochester brand STEEL-LIGHT optical cables were developed to meet the challenges posed by harsh undersea environments and rigorous operational scenarios faced in subsea applications. STEEL-LIGHT cable is constructed using strands of plow steel that are concentrically arranged around the fiber buffer, providing excellent protection to the fiber while still maintaining flexibility. The steel strands are precisely sized to protect the fiber from breakage and attenuation-inducing hydrostatic pressure.





TE Connectivity's Raychem brand SeaLAN family of waterblocked and non-waterblocked Ethernet cables, as described in MIL-DTL-24643/59 through /61, are qualified to meet the rigorous requirements of flammability, smoke emissions and halogen content. Waterblocked constructions meet severe waterblocking and humidity resistance requirements. SeaLAN cables are ideal for Ethernet applications on military vessels, freighters, tankers & cruise ships.





TE Connectivity's Raychem RT-555 High Temperature Heat Shrink Tape is a bi-layer, heat-recoverable sealing product whose length will shrink a predetermined percentage upon the application of heat in excess of 200° C. In other words, this tape is perfect sealing wire harness systems requiring high fluid and high temperature resistance, such as offshore drilling and down hole applications.



**RT-555-T.75** - 3/4" sealing tape

**RT-555-T1.0** - 1" sealing tape

**RT-555-T1.5** - 1.5" sealing tape

**RT-555-T2.0** - 2" sealing tape

All widths are available in continuous lengths of 25 and 50 feet.



TE Connectivity's Raychem C-Wrap Side Entry Repair Sleeve consists of two pieces: the outer tubing and an adhesive inner layer. It is a side-entry sleeve designed to repair and seal a damaged wire jacket that is either chafed, has a radial crack, or cut on the insulation. The wrap-around design eliminates de-pinning of the connector for repair, while its long term performance provides for a permanent repair.



**D-150-C-11** - Green Sleeve

**D-150-C-12** - Red Sleeve

**D-150-C-13** - Blue Sleeve

D-150-C-14 - Yellow Sleeve

## Ordering Connectors, Cables, and Repair Components

All of the listed parts are available through our website, **www.powell.com**. You may also order via phone or email through one of our dedicated sales representatives, located in nine branches throughout the US as well as several international contacts.

Toll Free: (800) 235-7880 Email: info@powell.com

Powell Electronics is an authorized distributor, which assures you of receiving all factory warranties, and post sales support with your order. We operate under the strictest quality control standards and have been successfully audited by UL to ISO 9001-2008, AS9100 Rev. C Standards.

## Value-Added Assembly

Powell Electronics offers the value-added services you need to reduce procurement costs and maintain a competitive advantage. Critical components are bonded for same day delivery, and 48 hour turnaround is available on stock to build designs.

### **Powell Quality Assurance**

Since 1946, Powell Electronics has been the premiere industry resource for all of your electronic components and value-added services. For over 60 years, we have brought a unique sense of purpose, expertise, and vision to electronics distribution. As a result, we understand the detriment counterfeit parts present to our clients and their projects, and maintain a 100% counterfeit-free environment.

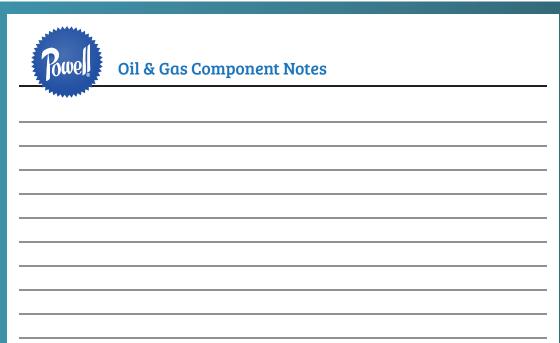






# Oil & Gas Component Notes

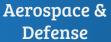
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