

Raw Data

IP68

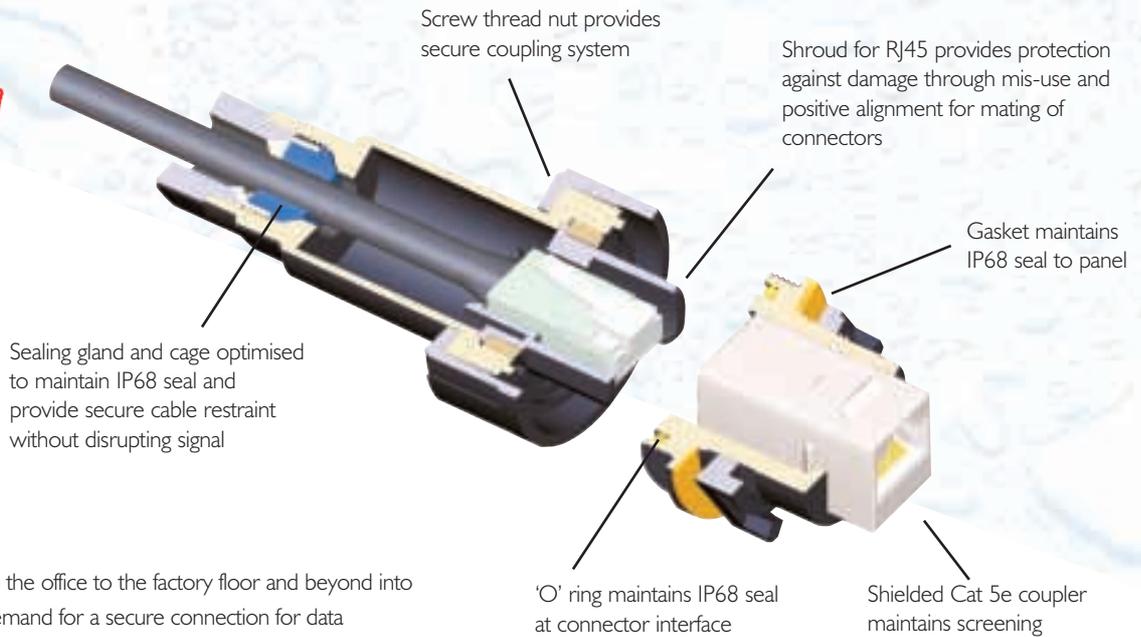


Ethernet Buccaneer® environmentally sealed connectors

B **BULGIN**

Ethernet Buccaneer®

IP68



With Ethernet extending from the office to the factory floor and beyond into external environments, the demand for a secure connection for data applications is dramatically increasing.

This system is based upon the tried and tested Standard Buccaneer connector. It offers a secure connection for Ethernet based networks running up to 100Mbps, using the industry standard RJ45 connector as the base connection. The system uses shielded connectors and couplers with S-FTP stranded cable to provide a high level of noise immunity.

PE jacket cables provides excellent water, chemical and ozone resistance and are suitable for continuous submersion or hostile external environments.

PUR jacket cables provide excellent abrasion, chemical and ozone resistance and are low smoke, low halogen flame retardant construction suitable for internal and external environments.

Patchcords have been independently tested to TIA/ EIA Cat 5e levels.

FEATURES AND BENEFITS

Compatible with standard shielded RJ45 components. Protection for RJ45 interface against contact damage/wear due to mechanical vibration.

- IP68 rated
- Cat 5e compliant
- PE or PUR jacket on cable
- Shielded system
- Cat 5e shielded coupler
- Shroud on RJ45
- Screw coupling
- Re-wireable version
- Earth lead
- ▷ Dust and water sealing
- ▷ Data rate up to 100MHz
- ▷ Good chemical and water resistance
- ▷ High noise immunity and EMI protection
- ▷ Maintains shielding
- ▷ Protection from abuse and mis-mating
- ▷ Secure, proven locking system
- ▷ Ability to 'field' terminate
- ▷ Maintains shielding of panel mount connector



PART NUMBERS

Re-wireable flex connectors

PX0834/A	Glnding optimised for use with PE Jacket cable to maintain Cat 5e performance
PX0834/B	Suitable for use with cables of diameter from 3.5 to 8mm dia
PX0834/C	Glnding optimised for use with PUR Jacket cable to maintain Cat 5e performance

Patch cord flex connectors - PE jacket cable

PX0830/2M00	Wire end	2m	RJ Buccaneer to bare end
PX0830/3M00	Wire end	3m	RJ Buccaneer to bare end
PX0830/5M00	Wire end	5m	RJ Buccaneer to bare end
PX0831/2M00	Single ended	2m	RJ Buccaneer to Shielded RJ45
PX0831/3M00	Single ended	3m	RJ Buccaneer to Shielded RJ45
PX0831/5M00	Single ended	5m	RJ Buccaneer to Shielded RJ45
PX0832/2M00	Double ended	2m	RJ Buccaneer to RJ Buccaneer
PX0832/3M00	Double ended	3m	RJ Buccaneer to RJ Buccaneer
PX0832/5M00	Double ended	5m	RJ Buccaneer to RJ Buccaneer

Patch cord flex connectors - PUR jacket cable

PX0836/2M00	Wire end	2m	RJ Buccaneer to bare end
PX0836/3M00	Wire end	3m	RJ Buccaneer to bare end
PX0836/5M00	Wire end	5m	RJ Buccaneer to bare end
PX0837/2M00	Single ended	2m	RJ Buccaneer to Shielded RJ45
PX0837/3M00	Single ended	3m	RJ Buccaneer to Shielded RJ45
PX0837/5M00	Single ended	5m	RJ Buccaneer to Shielded RJ45
PX0838/2M00	Double ended	2m	RJ Buccaneer to RJ Buccaneer
PX0838/3M00	Double ended	3m	RJ Buccaneer to RJ Buccaneer
PX0838/5M00	Double ended	5m	RJ Buccaneer to RJ Buccaneer

Panel mounting connectors

PX0833	Cat 5e Coupler
PX0833/E	Cat 5e Coupler + earth wire

Accessories

PX0835	Sealing Cap for flex connectors
PX0733	Sealing Cap for panel mounting connector
I4151	Hand crimp tooling + die set
I4152	PE Jacket Cable - 50m reel
I41xx	PUR Jacket Cable - 50m reel
I4150	Replacement shielded RJ45

Ethernet Buccaneer®

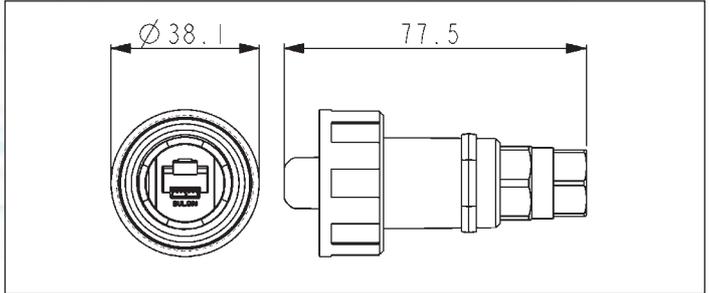


RE-WIREABLE FLEX CONNECTOR



PX0834

- Re-wireable flex cable connector
- Supplied with shielded RJ45 plug
- Three versions:
 - for PE Jacket cable (Cat 5e)
 - for PUR Jacket cables (Cat5e)
 - for other cable sizes from 3.5 to 8mm dia.
- Mates with panel mounting connector PX0833

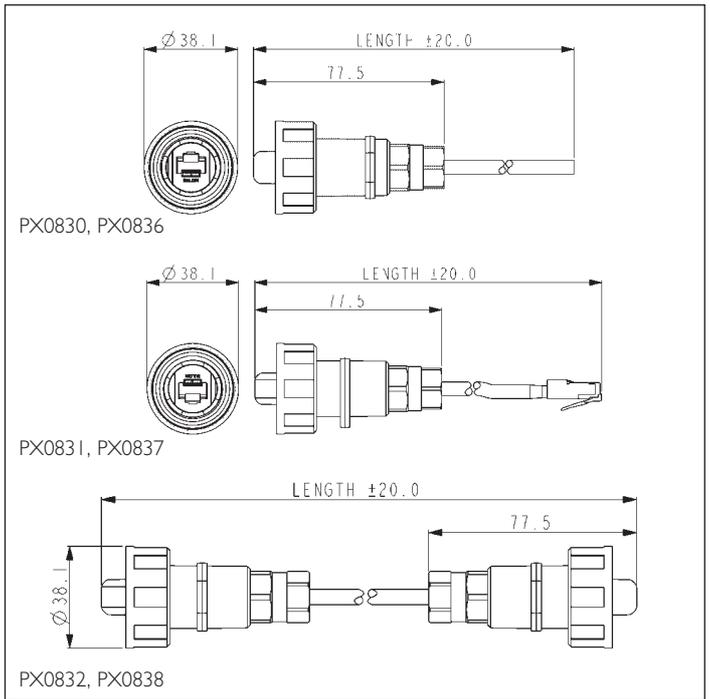


PATCH CORD FLEX CONNECTOR



PX0830

- Patchcords with IP68 connector
- Supplied with shielded RJ45 plug
- Single or double end terminated
- Standard lengths; 2m, 3m & 5m
- Mates with panel mounting connector PX0833
- S-FTP cable construction
- PE or PUR Jacket cable
- Wiring configuration to 568-B
- Exceeds EIA/TIA Cat 5e

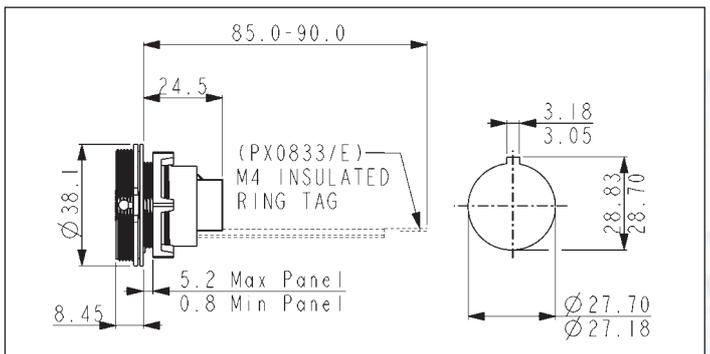


PANEL MOUNTING CONNECTOR



PX0833

- Cat 5e shielded coupler
- For use with IP68 flex connectors
- Standard patchcord can be plugged into rear
- Version with earth wire available
- Single hole fixing
- Complete with panel sealing gasket

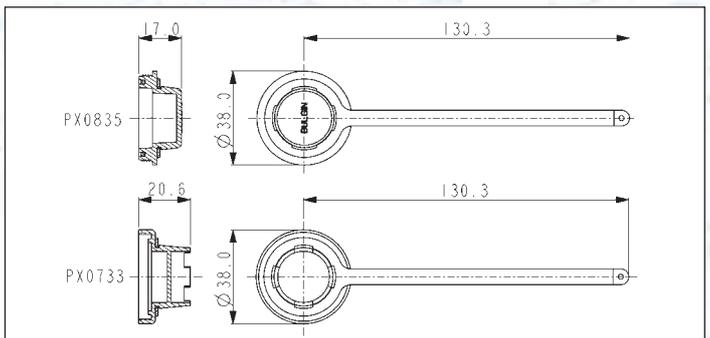


ACCESSORIES



Sealing Caps

- Sealing caps to maintain IP68 rating when connectors are not in use
- Replacement shielded RJ45's
- Hand crimp tool for shielded RJ45
- Patch cord cable available in 50m reels



Ethernet Buccaneer[®] Connector

TECHNICAL SPECIFICATION

Stranded S-FTP Patch cord cable - PE and PUR Jacket

A choice of two cables with internal construction exceeding Cat 5e performance levels. The PE jacket is designed to cope with the rigours that applications in external environments demand. The outer sheath provides good levels of resistance to water, oils and chemicals, will not crack with prolonged exposure to water or UV, and provides good abrasion resistance. The PUR jacket has excellent abrasion, chemical and ozone resistance, low smoke, low halogen flame retardant construction suitable for internal and external industrial environments.

Construction	PE Jacket	PUR Jacket
Conductors	26AWG 7/0.16mm bare copper	24AWG 7/0.2mm bare copper
Insulation	Polyolefin (0.94mm nominal)	HD-PE
Pair	2 of the above cores twisted	2 of the above cores twisted
Core	4 of the above cores	4 of the above cores
Tape	1 lap PEPT tape	1 lap mylar tape
Screen	1 layer PEPT and aluminium tape, 0.1mm tinned copper braid	1 layer mylar and aluminium tape, 0.12mm tinned copper braid
Sheath	PE Jacket Black	PUR Jacket Black
Op Temperature	-25°C to +60°C	-25°C to +85°C
Min. bend radius	8 x o/d (installation)	10 x o/d (installation)
Min. bend radius	4 x o/d (installed)	6 x o/d (installed)
Diameter	5.6mm nominal	6.1mm nominal
Flammability Rating:	-	IEC603

Electrical @ 20°C

Characteristic	PE Jacket	PUR Jacket
Impedance	100Ω ± 15Ω @ 100MHz	100Ω ± 15Ω @ 100MHz
Capacitance	1600pF/km	330pF/km
Conductor Loop resistance	29Ω/100m maximum	29Ω/100m maximum
Skew	40 nsec/100m @ 100MHz	45 nsec/100m @ 100MHz
Smoke index	IEC 61034	IEC 61034
Acid Gas Emissions	IEC 60754	IEC 60754
TIA/EIA Rating	Cat 5e	Cat 5e



Flex & Panel mounted connectors

Mechanical

Sealing IP68, EN60529

Materials

Connector Body Glass filled Polyamide
 Flammability rating UL94V-0
 'O' rings Neoprene
 Panel Gasket Silicon
 Operating Temperature -20°C to +70°C

RJ45 Plug

Materials

Moulding Polycarbonate
 Flammability UL94V-0
 Contact material Phosphor Bronze
 Contact plating 50 micron gold
 Operating Temperature -40°C to +70°C
 Mating cycles 1,000 cycles

Electrical

No. Conductors 8
 Current rating 1.5A
 Voltage rating 30V ac, 42V dc
 Contact resistance 10mΩ max.
 Performance Cat 5e

RJ45 Coupler

Materials

Coupler Shell Copper Alloy
 Coupler Plating Nickel
 Moulding ABS
 Flammability UL94V-0
 Contact material Phosphor Bronze
 Contact plating 50 micron gold
 Operating Temperature -40°C to +70°C
 Mating cycles 1,000 cycles

Electrical

No. Conductors 8
 Current rating 1.5A
 Voltage rating 30V ac, 42V dc
 Contact resistance 10mΩ max.
 Performance Cat 5e

Ethernet Buccaneer Environmentally Sealed Connectors

IMPORTANT - PLEASE READ INSTRUCTIONS PRIOR TO ASSEMBLY

Before using the connector, it is important that these instructions are carefully read and understood to ensure the connector system is completely water tight and performs to specification.

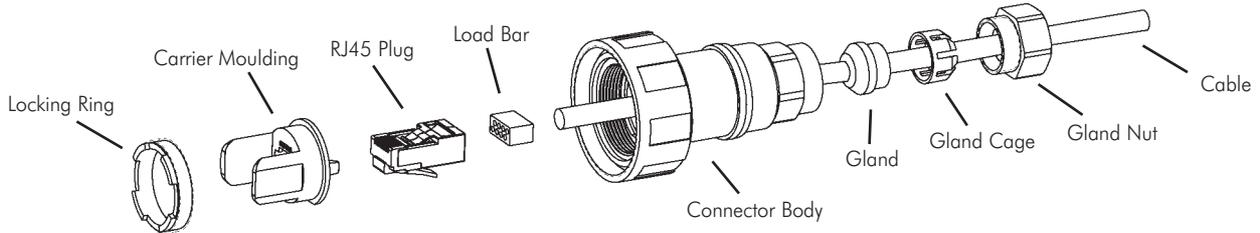
Cable Glands

To ensure the correct cable sealing, cable glands are supplied to accurately fit cable diameters from 3.5 to 8.0mm. It is important to choose the closest gland size to the cable being used.

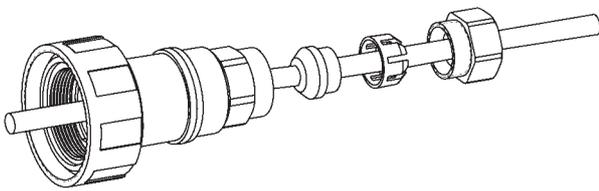
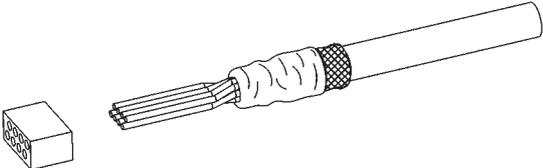
Cable diameter	Gland Colour
3.5 - 5mm	Blue
5 - 7mm	Green
6 - 8mm	Red

The standard shielded RJ45, as supplied, is suitable for cables up to 6.0mm diameter, larger cables may require different assembly techniques.

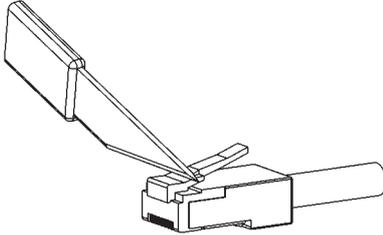
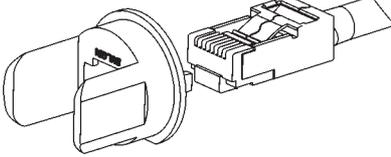
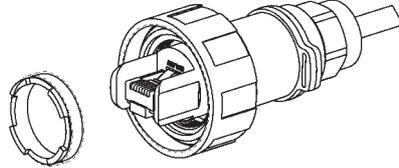
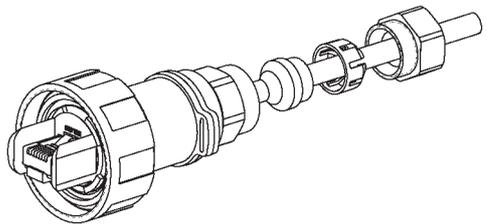
CONNECTOR COMPONENTS



ASSEMBLY/WIRING INSTRUCTIONS

- Thread the gland nut, gland cage, gland and connector body on to the cable.
 
- Remove the cable jacket carefully taking care not to damage the braid and foil. Fold back the braid and foil over the cable jacket.
 
- Un-twist the conductors and feed through the appropriate hole in the load bar, according to the wiring standard required. Push the loading bar fully home on to cable. Trim conductors flush to front of the loading bar.
 

Wiring Configuration		
568-A	Position	568-B
White/Green	1	White/Orange
Green	2	Orange
White/Orange	3	White/Green
Blue	4	Blue
White/Blue	5	White/Blue
Orange	6	Green
White/Brown	7	White/Brown
Brown	8	Brown


- Push load bar and cable fully home into RJ45, ensuring the braid and foil are in contact with the metal shell. Crimp RJ45 with appropriate crimp tool and die set. Trim back braid and foil flush with rear of RJ45 body.
 
- Crop the latching clip on the RJ45 ensuring this is completely removed.
 
- Push the RJ45 into the carrier moulding until it latches.
 
- Pull up the connector body and locate the carrier. The carrier sits into a 'D' shape aperture in the connector body, ensure it is seated correctly. Locate locking ring and tighten ring to retain insert, using the assembly tool provided.
 
- Slide gland, gland cage and gland nut up to body moulding then tighten to torque of 1.5-2.0lb/ins, 13-18Nm. For the PX0854/A version fully tighten nut until end of travel. Note: Over tightening of gland nut may constrict cable and could cause signal distortion.
 

Ethernet Buccaneer Environmentally Sealed Connectors

TECHNICAL SPECIFICATION FOR ETHERNET BUCCANEER CONNECTOR SYSTEM

Stranded S-FTP Patch cord cable - PE Jacket

A cable with internal construction exceeding Cat 5e performance levels. Designed to cope with the rigours that applications in external environments demand. Its outer sheath provides good levels of resistance to water, oils and chemicals, will not crack with prolonged exposure to water or UV, and provides good abrasion resistance.

Construction

Conductors	26AWG 7/0.16mm bare copper
Insulation	Polyolefin (0.94mm nominal)
Pair	2 of the above cores twisted
Core	4 of the above cores
Tape	1 lap of PEPT Tape
Screen	1 layer of PEPT and aluminium tape, 0.1mm Tinned copper braid
Sheath	PE Jacket Black
Operating Temperature	-25°C +60°C
Min. bend radius	8 x o/d (installation)
Min. bend radius	4 x o/d (installed)
Diameter	5.6mm nominal

Electrical @ 20°C

Characteristic Impedance	100Ω ± 15Ω @ 4MHz - 100MHz
Capacitance	1600pF/km
Conductor Loop resistance	29Ω/100m maximum
Skew	40 nsec/100m @ 100MHz
Smoke index	IEC 61034
Acid Gas Emissions	IEC 60754
TIA/EIA Rating	Cat 5e

Ethernet Buccaneer

IP68 Sealed Ethernet Connectors

**Wiring and Assembly Instructions for
PX0834/A and PX0834/B**

Flex & Panel mounted connectors

Mechanical

Sealing	IP68, EN60529
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Materials

Connector Body	Glass filled Polyamide
Flammability rating	UL94-V0
'O' rings	Neoprene
Panel Gasket	Silicon
Operating Temperature	-20°C to +70°C

RJ45 Plug

Materials

Moulding	Polycarbonate
Flammability	UL94V-0
Contact material	Phosphor Bronze
Contact plating	50 micron gold
Operating Temperature	-40°C to +70°C
Mating cycles	1,000 cycles

Electrical

No. Conductors	8
Current rating	30V ac, 42V dc
Voltage rating	1.5A
Contact resistance	10mΩ max.
Performance	Cat 5 EIA/TIA 2840, annex B specification

RJ45 Coupler

Materials

Coupler Shell	Copper Alloy
Coupler Plating	Nickel
Moulding	ABS
Flammability	UL94V-0
Contact material	Phosphor Bronze
Contact plating	50 micron gold
Operating Temperature	-40°C to +70°C
Mating cycles	1,000 cycles

Electrical

No. Conductors	8
Current rating	30V ac, 42V dc
Voltage rating	1.5A
Contact resistance	10mΩ max.
Performance	Cat 5 EIA/TIA 2840, annex B specification



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