6000 Series Buccaneer®

bulgin
a brand of Elektron Technology

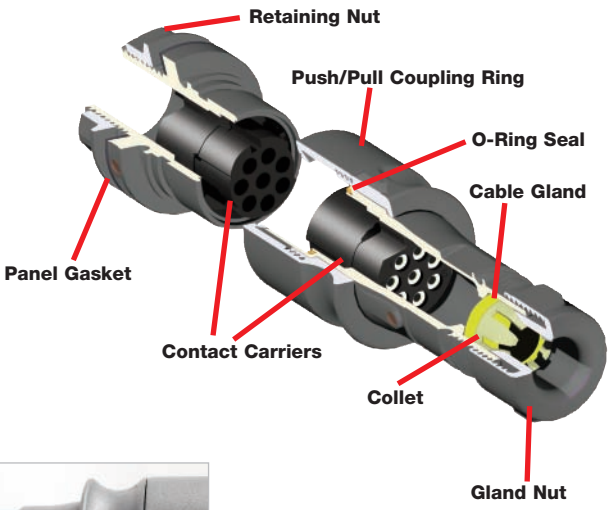
Robust, instant connections for harsh environments

The all plastic construction 6000 Series Buccaneer - circular connectors that combine the ease of use of a push/pull coupling mechanism with proven environmental sealing for signal and mains power.

Designed and independently tested to IP66, IP68 & IP69K standards, they are ideal for applications where ingress of dust and water must be avoided and where ease of connection, space and appearance are important considerations.

For Power

THERMO-PLASTIC VERSION



Push/pull locking mechanism*	Secure, instant locking. Quick connector mating and release
30° twist locking*	Tamperproof lock prevents accidental un-mating
IP66, IP68 and IP69K when mated	Suitable for a wide range of dust and water borne environments
All plastic body version; UL94-V0 rated, UV stable, halogen free	Light-weight, self-extinguishing material suitable for long-term outdoor use
Flex, flex in-line & panel mount body styles, with sealing caps	Complete family of products maintain sealing integrity in all styles
Polarisation and visual alignment features	Aids the correct mating of connectors
2 to 22 poles – up to 16A, 277V rated	Suitable for mains power to signal applications
'Scoop proof' contacts	Prevents damage through mis-mating – ideal for 'blind mating' applications
cULs, UL, VDE, CCC approvals (pending)	Internationally recognised certification

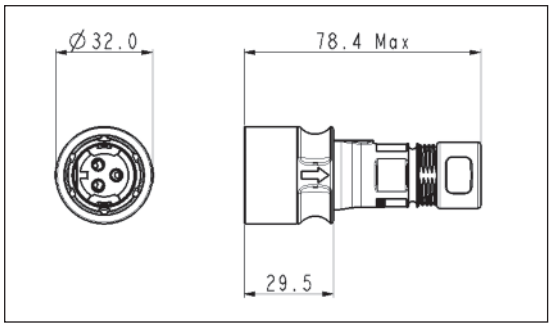
*patent applied for

Thermo-plastic Version

FLEX CABLE CONNECTOR

PXP6010/P PXP6010/S

- Mates with In-Line Flex or Panel Mounting versions PXP6011 & PXP6012
- Push/pull locking ring with 30˚ twist locking
- Pin or socket versions
- Leading earth on 3 pole connectors
- 2, 3, 8, 16 & 22 pole
- Screw and crimp termination

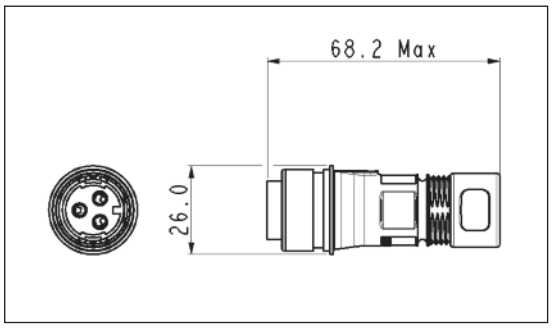


Poles	Termination	Pin Contacts	Socket Contacts	Contacts
2	Screw	PXP6010/02P/ST	PXP6010/02S/ST	Supplied Fitted
2	Crimp	PXP6010/02P/CR	PXP6010/02S/CR	Order Separately
3	Screw	PXP6010/03P/ST	PXP6010/03S/ST	Supplied Fitted
3	Crimp	PXP6010/03P/CR	PXP6010/03S/CR	Order Separately
8	Crimp	PXP6010/08P/CR	PXP6010/08S/CR	Order Separately
16	Crimp	PXP6010/16P/CR	PXP6010/16S/CR	Order Separately
22	Crimp	PXP6010/22P/CR	PXP6010/22S/CR	Order Separately

IN-LINE FLEX CABLE CONNECTOR

PXP6011/P PXP6011/S

- Mates with Flex Cable connector PXP6010
- For in-line cable connection
- Pin or socket versions
- Leading earth on 3 pole connectors
- 2, 3, 8, 16 and 22 pole
- Screw and crimp termination

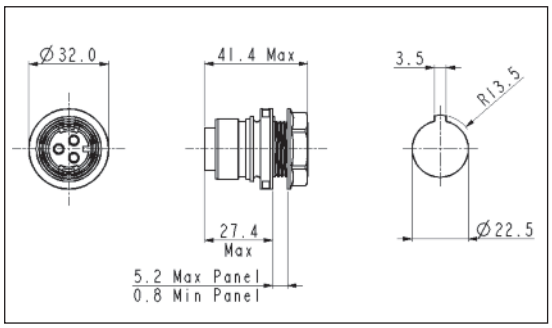


Poles	Termination	Pin Contacts	Socket Contacts	Contacts
2	Screw	PXP6011/02P/ST	PXP6011/02S/ST	Supplied Fitted
2	Crimp	PXP6011/02P/CR	PXP6011/02S/CR	Order separately
3	Screw	PXP6011/03P/ST	PXP6011/03S/ST	Supplied Fitted
3	Crimp	PXP6011/03P/CR	PXP6011/03S/CR	Order separately
8	Crimp	PXP6011/08P/CR	PXP6011/08S/CR	Order separately
16	Crimp	PXP6011/16P/CR	PXP6011/16S/CR	Order separately
22	Crimp	PXP6011/22P/CR	PXP6011/22S/CR	Order separately

FRONT PANEL MOUNTING CONNECTOR

PXP6012/P PXP6012/S

- Mates with Flex Cable connectors PXP6010
- Front panel mounting
- Single hole fixing
- Pin or socket versions
- Leading earth on 3 pole connectors
- 2, 3, 8, 16 and 22 pole
- Screw and crimp termination



Poles	Termination	Pin Contacts	Socket Contacts	Contacts
2	Screw	PXP6012/02P/ST	PXP6012/02S/ST	Supplied Fitted
2	Crimp	PXP6012/02P/CR	PXP6012/02S/CR	Order separately
3	Screw	PXP6012/03P/ST	PXP6012/03S/ST	Supplied Fitted
3	Crimp	PXP6012/03P/CR	PXP6012/03S/CR	Order separately
8	Crimp	PXP6012/08P/CR	PXP6012/08S/CR	Order separately
16	Crimp	PXP6012/16P/CR	PXP6012/16S/CR	Order separately
22	Crimp	PXP6012/22P/CR	PXP6012/22S/CR	Order separately

Thermo-plastic Version

CRIMP CONTACTS

2, 3, 8, 16 & 22 pole contacts

- Crimp Contacts
- Gold Plated
- Current ratings:
  - 2 & 3 pole: 16A
  - 8 pole: 10A
  - 16 pole: 3A
  - 22 pole: 2A

Contacts - Crimp for 2, 3, 8, 16 and 22 pole

Contacts (for 2 & 3 pole) (Supplied in packs of 10)	Crimp
Pins	SA3545/P
Sockets	SA3545/S

Contacts (for 8 pole) (Supplied in packs of 10)	Crimp
Pins	SA3544/P
Sockets	SA3544/S

Contacts (for 16 & 22 pole) (Supplied in packs of 10)	Crimp
Pins	SA3542/P
Sockets	SA3542/S

CRIMP TOOLING

PNo 14232

- Crimp Tools for 2, 3, 8, 16 and 22 pole crimp contacts

Crimp Tooling	
Crimp Tool (2 & 3 pole)	PNo. 14232
Positioner (2 & 3 pole)	PNo. 14232/2/SP
Crimp Tool (8, 16 & 22 pole)	PNo. 14025
Positioner (8 pole)	PNo. 15021/SP
Positioner (16 & 22 pole)	PNo. 15019/SP

INSERTION/EXTRACTION TOOLS

PNo 14946

- Insertion/Extraction Tool for 2, 3, 8, 16 and 22 pole contacts

Insertion/Extraction Tools	
Insertion/Extraction Tool (2 & 3 pole)	PNo. 14946/SP
Insertion/Extraction Tool (8 pole)	PNo. 14945/SP
Insertion/Extraction Tool (16 & 22 pole)	PNo. 14944/SP

CONTACT CARRIER REMOVAL TOOL

PNo 14917

- For removal of all contact carriers

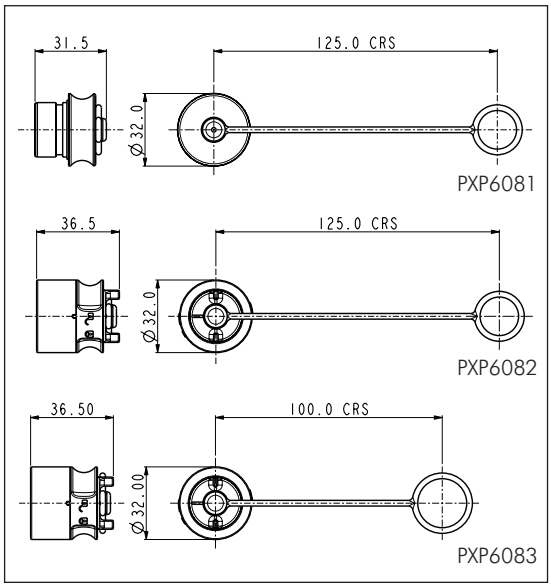
Tools	
Contact carrier removal tool (all poles)	PNo. 14917/SP

Thermo-plastic Version

SEALING CAPS

PXP6081 PXP6082 PXP6083

- Maintains IP rating of unmated connectors
- PXP6081: Fits PXP6010 (Flex Connector)
- PXP6082: Fits PXP6011 (Flex In-Line Connector) with 30˚ twist locking
- PXP6083: Fits PXP6012 (Panel Connector) with 30˚ twist locking



CABLE GLAND PACKS

PXP6088

- Pack of all cable glands to suit cable ranges from 4.0 to 10.0mm diameter

Thermo-plastic Version

PART NO SYSTEM

PXP / xxxx / xx / x / xx / xxxx

Plastic Connector Designation

Series
6 = 6000 Series

Body Styles
010 = Flex
011 = Flex In-Line
012 = Panel

No. of Contacts
02 = 2 Pole
03 = 3 Pole
08 = 8 Pole
16 = 16 Pole
22 = 22 Pole

Contacts Type
P = Pin
S = Socket

Contacts Termination
CT = Crimp
ST = Screw (2 and 3 pole only)

Cable Entry Size
(for Flex and Flex In-Line connectors only)
0405 = 4-5mm (Black)
0507 = 5-7mm (Grey)
0709 = 7-9mm (White)
0910 = 9-10mm (Yellow)

Examples:
PXP6010/03/P/CT/0507= Flex cable connector, 3 pole, pin contacts, crimp termination with 5 to 7mm cable glands

PXP6012/03/S/ST= Front panel mounting connector, 3 pole, socket with screw termination

Thermo-plastic Version

SPECIFICATION

Electrical:

No. Poles:	2	3	8	16	22
Rated cable	18 AWG	18 AWG	18 AWG	22 AWG	26 AWG
Current Rating: See de-rating curves for further information					
CCC, UL and VDE (pending)	16A	12A	10A	3A	2A
cUL (pending)	13A	12A	10A	3A	2A
Voltage Rating (ac/dc):	277V	277V	277V	60V	60V
Contact Resistance:	<10mΩ				
Insulation Resistance:	>10⁸MΩ @500V dc				
AC Breakdown voltage:					
2 pole	>10kV				
3 pole	>8kV				
8 to 22 pole	>5kV				
Operating Temp. Range:	–40°C to +120°C				
Approvals (pending):					
UL	UL1977				
CSA	C22.2 No.182.3-M1987 (R2009)				
VDE	IEC 61984:2009				
CCC	GB/T11918 and GB/T11919				

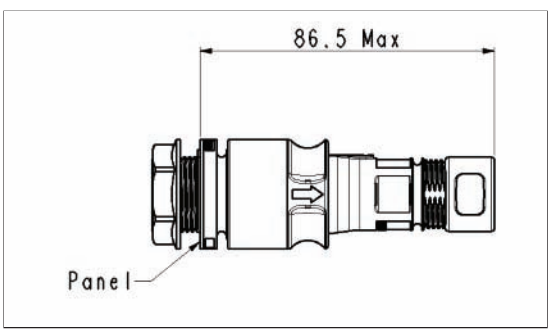
Material:

Body:	PC/ PBT
Colour:	Grey
Flammability Rating:	UL94 V-0
Halogen free	Yes
UV Resistance:	ISO 4892 part 3 cycle 1 (QUV)
Contacts:	Brass, Nickel plated (2A – Gold plated)
O Rings & Gaskets:	Silicon
RoHS	Compliant

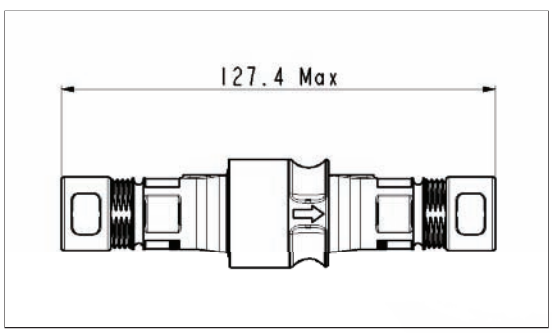
Mechanical:

Locking mechanism	Push/pull with 30° locking Patent applied for
Sealing:	IP66 to EN60529:1992 IP68 to EN60529:1992 (10m depth for 2 weeks) IP69k to DIN 40050-9
Contact Accommodation:	
2 & 3 pole crimp	14 to 18AWG
2 & 3 pole screw terminals	1.5mm² max
8 pole crimp	18 to 20AWG
16 pole crimp	22 to 26AWG
22 pole crimp	22 to 26AWG
Cable Acceptance:	4-10mm dia.
Cable retention force (to BS EN61984):	
4 - 9mm dia cable	80N
9 - 10mm dia cable	100N
Terminations:	
2-7 Pole:	Screw Terminals
3 Pole:	Screw Terminals & Crimp Contacts
9 Pole:	Crimp Contacts
12 Pole:	Crimp & Solder Contacts
25 Pole:	Crimp & Solder Contacts
Tightening Torques:	
Gland Nut:	1.13Nm (10lb.in)
Panel Nut:	1.7Nm (15lbf.in.)
Panel Nut Thread:	M22 x 1.5-6g
Dimensions:	
Diameter: (over coupling ring)	32mm
Diameter: (panel hole cut-out)	22.5mm

Mated dimensions - Flex to panel connector



Mated dimensions - Flex connector to in-line connector



Thermo-plastic Version

CURRENT CARRYING CAPACITY

The thermal properties of the materials used in the construction of a connector limit the current carrying capacity. There are a number of factors that determine the amount of current that can be handled: contact spacing, size of cable, ambient temperature and the heat that is generated by the current passing through the connector.

The maximum current varies with different contact layouts, and because of these factors it is necessary to produce de-rating curves for each pole variant. This de-rating curve is specified in the standard IEC 60512 part 3.

De-rating curves are plotted for each contact carrier combination with the current being carried simultaneously by all contacts. These graphs show the heat rise generated as the current is increased.

The red line indicates the direct correlation between current applied and the measured temperature rise within the connector. The dotted blue line shows rated current and the green line is derived by applying a factor of 0.8 to the original plot data to give a de-rating curve. The dashed blue line shows the rated current.

The shaded area under the 0.8 curve shows the permitted operating area, and allows safe current vs ambient temperature characteristics to be determined.

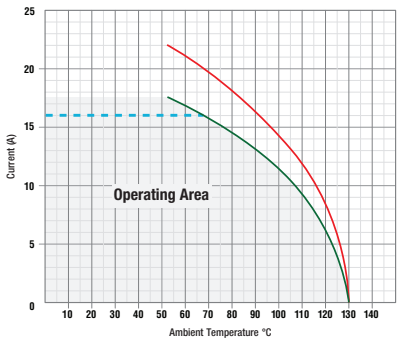
— = tested operating limits

— = de-rated operating limits

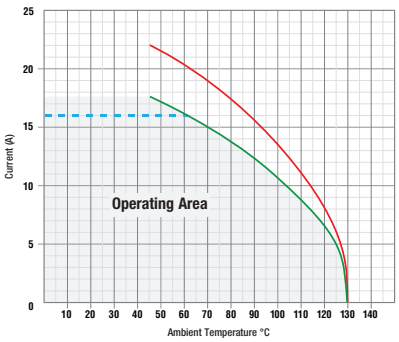
– – = rated current

6000 Series Current vs. Temperature Characteristics

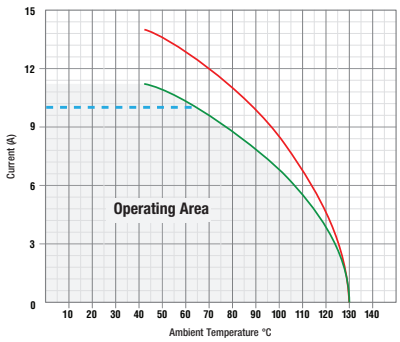
2 Pole, Plastic Body, Crimp Terminal, 18 AWG wire
current applied through all pins simultaneously



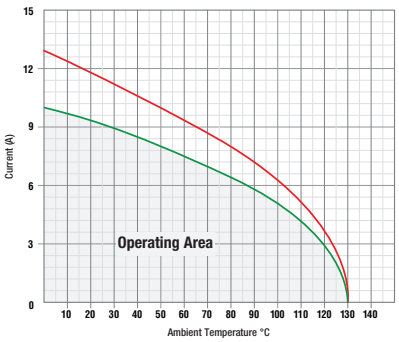
3 Pole, Plastic Body, Screw Terminal, 18 AWG wire
current applied through all pins simultaneously



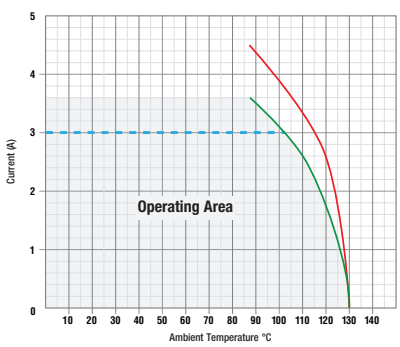
8 Pole, Plastic Body, Crimp Terminal, 18 AWG wire
current applied through all pins simultaneously



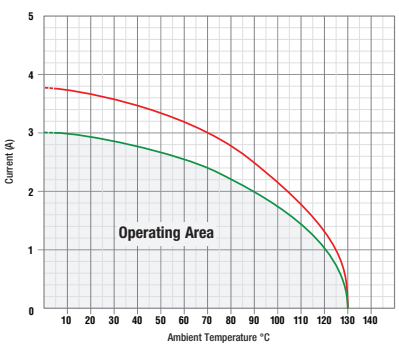
8 Pole, Plastic Body, Crimp Terminal, 20 AWG wire
current applied through all pins simultaneously



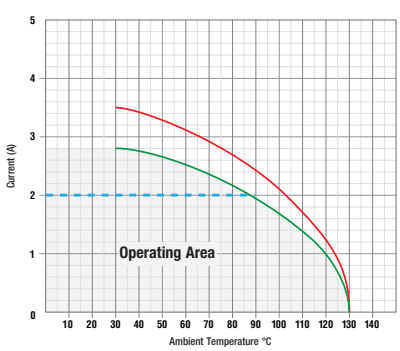
16 Pole, Plastic Body, Crimp Terminal, 22 AWG wire
current applied through all pins simultaneously



16 Pole, Plastic Body, Crimp Terminal, 26 AWG wire
current applied through all pins simultaneously



22 Pole, Plastic Body, Crimp Terminal, 26 AWG wire
current applied through all pins simultaneously



Europe
Elektron Technology, Woodland Road, Torquay, Devon UK TQ2 7AY
t: +44 (0)1803 407752
e: europe@elektron-technology.com

The Americas
Elektron Technology, 31-315 Plantation Drive Thousand Palms CA 92276
t: +1 760-343-3650
e: americas@elektron-technology.com

China and Asia
Elektron Technology, Room 902 No.568 Hengfeng Rd, Henhui Int Building, Shanghai 200070, China
t: +86 21-6040-0060
e: asia@elektron-technology.com

Issue no: V1.0

6000 Series Buccaneer®

bulgin
a brand of Elektron Technology

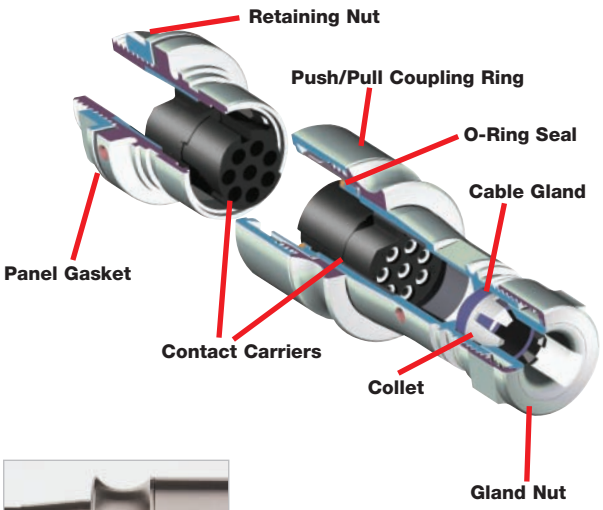
Robust, instant connections for harsh environments

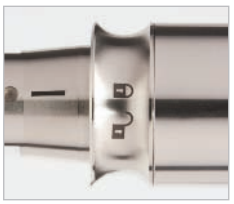
The all metal construction 6000 Series Buccaneer - circular connectors that combine the ease of use of a push/pull coupling mechanism with proven environmental sealing for signal and mains power.

Designed and independently tested to IP66, IP68 & IP69K standards, they are ideal for applications where ingress of dust and water must be avoided and where ease of connection, space and appearance are important considerations

For Power

METAL VERSION





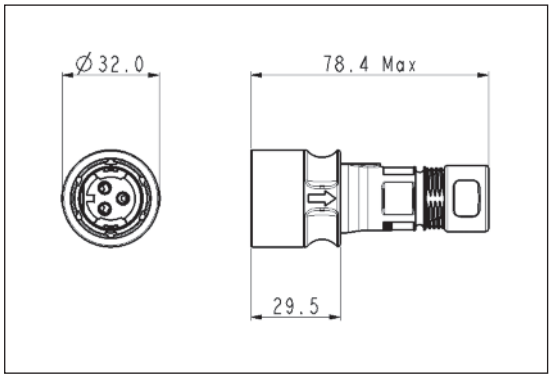
Push/pull locking mechanism*	Secure, instant locking. Quick connector mating and release
30° twist locking*	Tamperproof lock prevents accidental un-mating
IP66, IP68 and IP69K when mated	Suitable for a wide range of dust and water borne environments
All metal body version; brass, nickel plated	Robust construction offering protection against EMI
Flex, flex in-line & panel mount body styles, with sealing caps	Complete family of products maintain sealing integrity in all styles
Polarisation and visual alignment features	Aids the correct mating of connectors
2 to 22 poles – up to 16A, 277V rated	Suitable for mains power to signal applications
'Scoop proof' contacts	Prevents damage through mis-mating – ideal for 'blind mating' applications
Cable braid termination accessory	Maintains continuity between cable screen and connector body
cULus, VDE, CCC approvals (pending)	Internationally recognised certification

*patent applied for

Metal Version

FLEX CABLE CONNECTOR

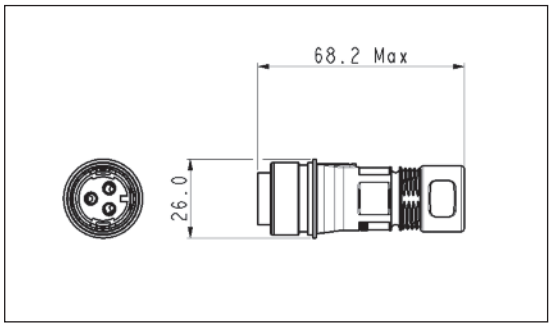
- Mates with In-Line Flex or Panel Mounting versions PXM6011 and PXM6012
- Push/pull locking ring with 30° twist locking
- Pin or socket versions
- Leading earth on 3 pole connectors
- 2, 3, 8, 16 and 22 pole
- Screw and crimp termination
- Cable braid termination accessory option, add /SN suffix



Poles	Termination	Pin Contacts	Socket Contacts	Contacts
2	Screw	PXM6010/02P/ST	PXM6010/02S/ST	Supplied Fitted
2	Crimp	PXM6010/02P/CR	PXM6010/02S/CR	Order Separately
3	Screw	PXM6010/03P/ST	PXM6010/03S/ST	Supplied Fitted
3	Crimp	PXM6010/03P/CR	PXM6010/03S/CR	Order Separately
8	Crimp	PXM6010/08P/CR	PXM6010/08S/CR	Order Separately
16	Crimp	PXM6010/16P/CR	PXM6010/16S/CR	Order Separately
22	Crimp	PXM6010/22P/CR	PXM6010/22S/CR	Order Separately

IN-LINE FLEX CABLE CONNECTOR

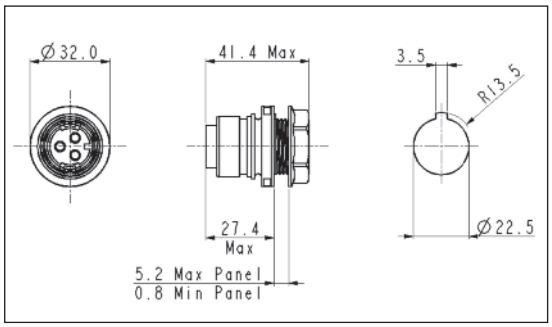
- Mates with Flex Cable connector PXM6010
- For in-line cable connection
- Pin or socket versions
- Leading earth on 3 pole connectors
- 2, 3, 8, 16 and 22 pole
- Screw and crimp termination
- Cable braid termination accessory option, add /SN suffix



Poles	Termination	Pin Contacts	Socket Contacts	Contacts
2	Screw	PXM6011/02P/ST	PXM6011/02S/ST	Supplied Fitted
2	Crimp	PXM6011/02P/CR	PXM6011/02S/CR	Order separately
3	Screw	PXM6011/03P/ST	PXM6011/03S/ST	Supplied Fitted
3	Crimp	PXM6011/03P/CR	PXM6011/03S/CR	Order separately
8	Crimp	PXM6011/08P/CR	PXM6011/08S/CR	Order separately
16	Crimp	PXM6011/16P/CR	PXM6011/16S/CR	Order separately
22	Crimp	PXM6011/22P/CR	PXM6011/22S/CR	Order separately

FRONT PANEL MOUNTING CONNECTOR

- Mates with Flex Cable connectors PXM6010
- Front panel mounting
- Single hole fixing
- Pin or socket versions
- Leading earth on 3 pole connectors
- 2, 3, 8, 16 and 22 pole
- Screw and crimp termination



Poles	Termination	Pin Contacts	Socket Contacts	Contacts
2	Screw	PXM6012/02P/ST	PXM6012/02S/ST	Supplied Fitted
2	Crimp	PXM6012/02P/CR	PXM6012/02S/CR	Order separately
3	Screw	PXM6012/03P/ST	PXM6012/03S/ST	Supplied Fitted
3	Crimp	PXM6012/03P/CR	PXM6012/03S/CR	Order separately
8	Crimp	PXM6012/08P/CR	PXM6012/08S/CR	Order separately
16	Crimp	PXM6012/16P/CR	PXM6012/16S/CR	Order separately
22	Crimp	PXM6012/22P/CR	PXM6012/22S/CR	Order separately

Metal Version

CRIMP CONTACTS

2, 3, 8, 16 & 22 pole contacts

- Crimp Contacts
- Gold Plated
- Current ratings:
  - 2 & 3 pole : 16A
  - 8 pole : 10A
  - 16 pole : 3A
  - 22 pole : 2A

Contacts - Crimp for 2, 3, 8, 16 and 22 pole

Contacts (for 2 & 3 pole) (Supplied in packs of 10)	Crimp
Pins	SA3545/P
Sockets	SA3545/S

Contacts (for 8 pole) (Supplied in packs of 10)	Crimp
Pins	SA3544/P
Sockets	SA3544/S

Contacts (for 16 & 22 pole) (Supplied in packs of 10)	Crimp
Pins	SA3542/P
Sockets	SA3542/S

CRIMP TOOLING

PNo 14232

- Crimp Tools for 2, 3, 8, 16 and 22 pole crimp contacts

Crimp Tooling	
Crimp Tool (2 & 3 pole)	PNo. 14232
Positioner (2 & 3 pole)	PNo. 14232/2/SP
Crimp Tool (8, 16 & 22 pole)	PNo. 14025
Positioner (8 pole)	PNo. 15021/SP
Positioner (16 & 22 pole)	PNo. 15019/SP

INSERTION/EXTRACTION TOOLS

PNo 14946

- Insertion/Extraction Tool for 2, 3, 8, 16 and 22 pole contacts

Insertion/Extraction Tools	
Insertion/Extraction Tool (2 & 3 pole)	PNo. 14946/SP
Insertion/Extraction Tool (8 pole)	PNo. 14945/SP
Insertion/Extraction Tool (16 & 22 pole)	PNo. 14944/SP

CONTACT CARRIER REMOVAL TOOL

PNo 14917

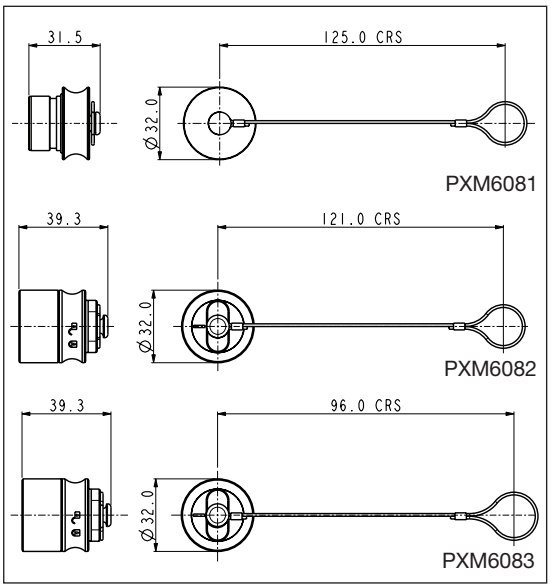
- For removal of all contact carriers

Tools	
Contact carrier removal tool (all poles)	PNo. 14917/SP

Metal Version

SEALING CAPS

- Maintains IP Rating of Unmated Connectors
- PXM6081: Fits PXM6010 (Flex Connector)
- PXM6082: Fits PXM6011 (Flex In-Line Connector)
- PXM6083: Fits PXM6012 (Panel Connector)



CABLE GLAND PACKS


PXP6088

- Pack of all cable glands to suit cable ranges from 4.0 to 10.0mm diameter

CABLE BRAID TERMINATION OPTION


PXM6090

- For cable braid termination
- Supplied with ty-rap

Metal Version

PART NO SYSTEM

PXM / xxxx / xx / x / xx / xxxx / xx

Metal Connector Designation

Series
6 = 6000 Series

Body Styles
010 = Flex
011 = Flex In-Line
012 = Panel

No. of Contacts
02 = 2 Pole
03 = 3 Pole
08 = 8 Pole
16 = 16 Pole
22 = 22 Pole

Contacts Type
P = Pin
S = Socket

Contacts Termination
CT = Crimp
ST = Screw (2 and 3 pole only)

Cable Entry Size
(for Flex and Flex In-Line connectors only)
0405 = 4-5mm (Black)
0507 = 5-7mm (Grey)
0709 = 7-9mm (White)
0910 = 9-10mm (Yellow)

Cable Braid Termination Accessory
(for Flex and Flex In-Line connectors only)
SN if required
Blank if not required

Examples:
PXM6010/03/P/CT/0507= Flex cable connector, 3 pole, pin contacts, crimp termination with 5 to 7mm cable glands

PXM6012/03/S/ST= Front panel mounting connector, 3 pole, socket with screw termination

Metal Version

SPECIFICATION

Electrical:

No. Poles:	2	3	8	16	22
Rated cable	18 AWG	18 AWG	18 AWG	22 AWG	26 AWG
Current Rating: See de-rating curves for further information					
CCC, UL and VDE (pending)	16A	12A	10A	3A	3A
cUL (pending)	13A	12A	10A	3A	3A
VoltaΩge Rating (ac/dc):	277V	277V	277V	60V	60V
Contact Resistance:	<10mΩ				
Insulation Resistance:	>10⁶MΩ @500V dc				
AC Breakdown voltage:					
2 pole	>10kV				
3 pole	>8kV				
8 to 22 pole	>5kV				
Operating Temp. Range:	–40°C to +120°C				
Approvals (pending):					
UL	UL1977				
CSA	C22.2 No.182.3-M1987 (R2009)				
VDE	IEC 61984:2009				
CCC	GB/T11918 and GB/T11919				

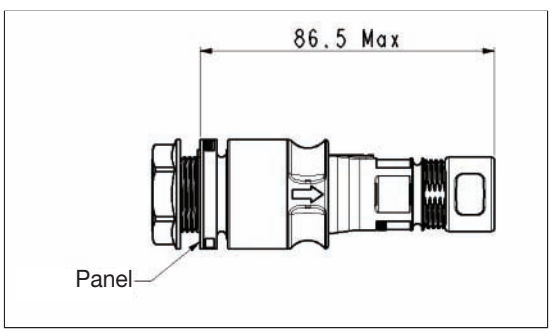
Material:

Body:	Brass, Nickel plated
Colour:	Matt Silver
Contacts:	Brass, Nickel plated (2A – Gold plated)
O Rings & Gaskets:	Silicon
RoHS	Compliant

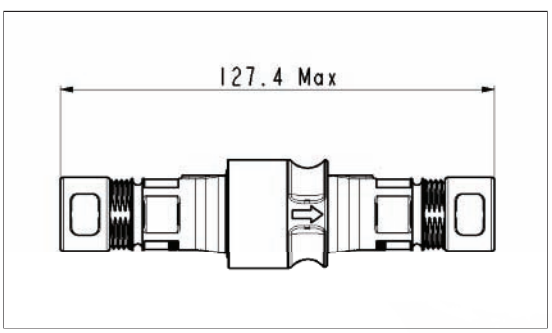
Mechanical:

Locking mechanism	Push/pull with 30˚ locking Patent applied for
Sealing:	IP66 to EN60529:1992 IP68 to EN60529:1992 (10m depth for 2 weeks) IP69k to DIN 40050-9
Contact Accommodation:	
2 & 3 pole crimp	14 to 18AWG
2 & 3 pole screw terminals	1.5mm² max
8 pole crimp	18 to 20AWG
16 pole crimp	22 to 26AWG
22 pole crimp	22 to 26AWG
Cable Acceptance:	4-10mm dia.
Cable retention force (to BS EN61984):	
4 - 9mm dia cable	80N
9 - 10mm dia cable	100N
Terminations:	
2-7 Pole:	Screw Terminals
3 Pole:	Screw Terminals & Crimp Contacts
9 Pole:	Crimp Contacts
12 Pole:	Crimp & Solder Contacts
25 Pole:	Crimp & Solder Contacts
Tightening Torques:	
Gland Nut:	1.13Nm (10lb.in)
Panel Nut:	1.7Nm (15lbf.in.)
Panel Nut Thread:	M22 x 1.5-6g
Dimensions:	
Diameter: (over coupling ring)	32mm
Diameter: (panel hole cut-out)	22.5mm

Mated dimensions - Flex to panel connector



Mated dimensions - Flex connector to in-line connector



6000 Series Buccaneer®

bulgin
a brand of Elektron Technology

Metal Version

CURRENT CARRYING CAPACITY

The thermal properties of the materials used in the construction of a connector limit the current carrying capacity. There are a number of factors that determine the amount of current that can be handled: contact spacing, size of cable, ambient temperature and the heat that is generated by the current passing through the connector.

The maximum current varies with different contact layouts, and because of these factors it is necessary to produce de-rating curves for each pole variant. This de-rating curve is specified in the standard IEC 60512 part 3.

De-rating curves are plotted for each contact carrier combination with the current being carried simultaneously by all contacts. These graphs show the heat rise generated as the current is increased.

The red line indicates the direct correlation between current applied and the measured temperature rise within the connector. The dotted blue line shows rated current and the green line is derived by applying a factor of 0.8 to the original plot data to give a de-rating curve. The dashed blue line shows the rated current.

The shaded area under the 0.8 curve shows the permitted operating area, and allows safe current vs ambient temperature characteristics to be determined.

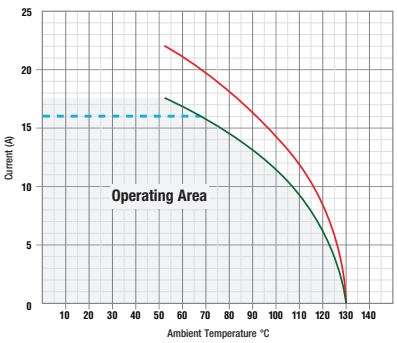
= tested operating limits

= de-rated operating limits

= rated current

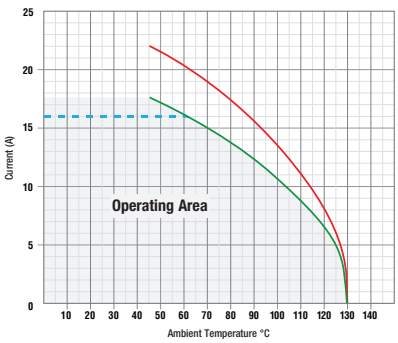
2 Pole, Plastic Body, Crimp Terminal, 18 AWG wire

current applied through all pins simultaneously



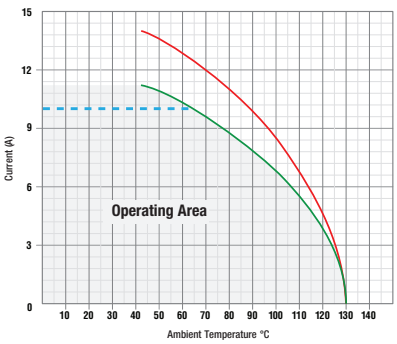
3 Pole, Plastic Body, Screw Terminal, 18 AWG wire

current applied through all pins simultaneously



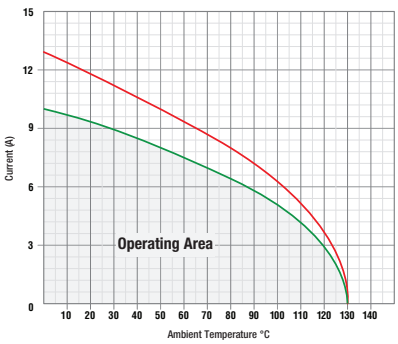
8 Pole, Plastic Body, Crimp Terminal, 18 AWG wire

current applied through all pins simultaneously



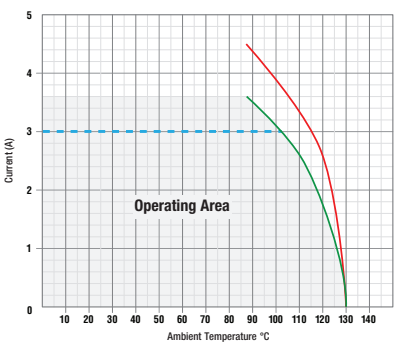
8 Pole, Plastic Body, Crimp Terminal, 20 AWG wire

current applied through all pins simultaneously



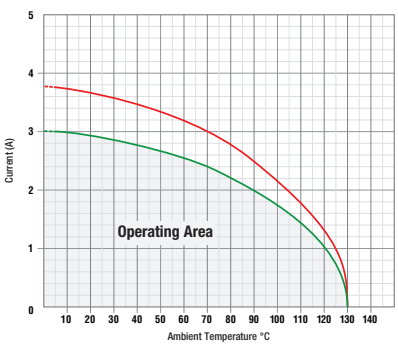
16 Pole, Plastic Body, Crimp Terminal, 22 AWG wire

current applied through all pins simultaneously



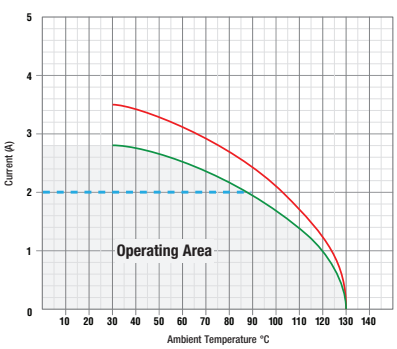
16 Pole, Plastic Body, Crimp Terminal, 26 AWG wire

current applied through all pins simultaneously



22 Pole, Plastic Body, Crimp Terminal, 26 AWG wire

current applied through all pins simultaneously



Europe
Elektron Technology, Woodland Road, Torquay, Devon UK TQ2 7AY
t: +44 (0)1803 407752
e: europe@elektron-technology.com

The Americas
Elektron Technology, 31-315 Plantation Drive Thousand Palms CA 92276
t: +1 760-343-3650
e: americas@elektron-technology.com

China and Asia
Elektron Technology, Room 902 No.568 Hengfeng Rd, Henhui Int Building, Shanghai 200070, China
t: +86 21-6040-0060
e: asia@elektron-technology.com

Issue no: V1.0

6000 Series Buccaneer®

bulgin
a brand of Elektron Technology

Robust, instant connections for harsh environments

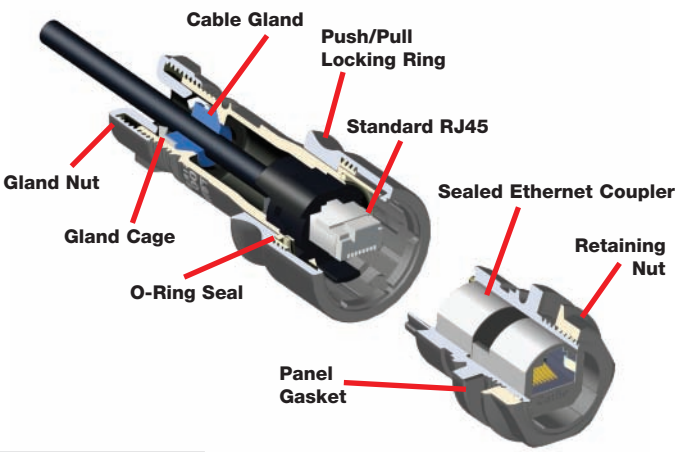
IP66 IP68 IP69K

6000 Series Buccaneer - circular connectors that combine the ease of use of a push/pull coupling mechanism with proven environmental sealing. Available with metal or plastic bodies, the range supports Ethernet and USB data interfaces.

Designed and independently tested to IP66, IP68 & IP69K standards, they are ideal for applications where ingress of dust and water must be avoided and where ease of connection, space and appearance are important considerations.

For Data — Ethernet

THERMO-PLASTIC & METAL VERSIONS



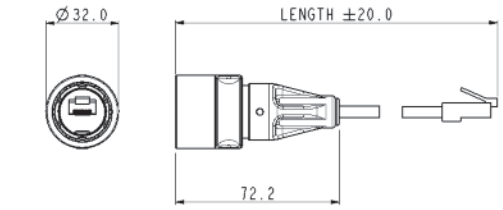
Push-pull locking system*	Secure, instant locking. Quick connector mating and release
30° twist locking*	Prevents accidental un-mating
IP66, IP68 and IP69K when mated	Suitable for a wide range of dust and water borne environments
Independent sealing tests	IP Ratings independently verified
Cat 5e compliant	Data rate up to 100MHz
PUR jacket on cable	Good chemical resistance, flame retardant
Shielded system	High noise immunity and EMI protection
Cat 5e shielded coupler	Maintains shielding
Visual mating indication	Alignment indicator reduces risk of damage during mating
Rewireable flex connector	Ability to 'field' terminate
Earth lead version of panel adaptor on plastic connector	Continuous screening of panel mount connector
Metal connector grounded to cable screen	Continuous screening of panel mount connector
Sealed through panel Ethernet	Prevent water ingress into equipment

*patent applied for

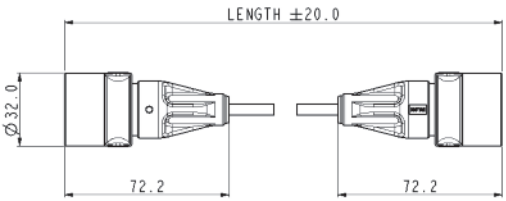
Ethernet – Thermo-plastic version

PATCH CORD FLEX CONNECTOR - PUR JACKET CABLE

- Mates with PXP6033TP type panel mounting connectors
- 30° twist locking
- Overmoulded patchcords with IP rated connector
- Supplied with shielded RJ45 plug
- Single or double end terminated
- Standard lengths: 2m, 3m & 5m
- S-FTP cable construction
- PUR jacket cable
- Wiring configuration to 568-B
- Exceeds EIA/TIA Cat 5e



PXP6037- single ended

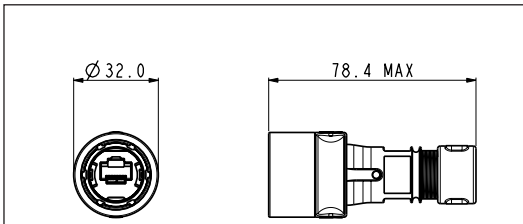


PXP6038 - double ended

Part no.	Type	Length	Description
PXP6037/2M00	Single ended	2m	IP RJ Buccaneer to Shielded RJ45
PXP6037/3M00	Single ended	3m	IP RJ Buccaneer to Shielded RJ45
PXP6037/5M00	Single ended	5m	IP RJ Buccaneer to Shielded RJ45
PXP6038/2M00	Double ended	2m	IP RJ Buccaneer to IP68 RJ Buccaneer
PXP6038/3M00	Double ended	3m	IP RJ Buccaneer to IP68 RJ Buccaneer
PXP6038/5M00	Double ended	5m	IP RJ Buccaneer to IP68 RJ Buccaneer

RE-WIREABLE FLEX CONNECTOR

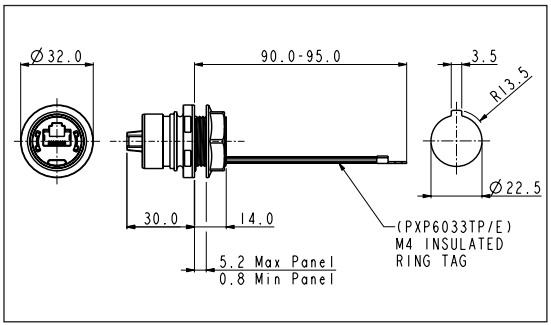
- Mates with PXP6033TP type panel mounting connectors
- 30° twist locking
- Supplied with shielded RJ45 plug
- Two versions:
  for PUR jacket cable (Cat 5e)
  for other cable sizes from 3.5 to 8mm dia.



Part no.	Description
PXP6034/A	Cable glands optimised for PUR jacket cable to maintain Cat 5e performance
PXP6034/B	Suitable for use with cables from 3.5 to 8mm diameter

FRONT PANEL MOUNTING CONNECTOR

- Sealed through panel
- Cat 5e shielded coupler
- Mates with all plastic flex connectors
- Standard RJ45 patchcord can be plugged into rear
- Version with earth wire available
- Single hole fixing
- Complete with panel sealing gasket



Part no.	Description	Fixing
PXP6033TP	Cat 5e coupler	Front panel mounted - sealed through panel
PXP6033TP/E	Cat 5e coupler + earth wire	Front panel mounted - sealed through panel

Ethernet – Thermo-plastic version

PART NO SYSTEM

PXP / xxxx xx / x

Plastic Connector Designation

Series
6 = 6000 Series

Body Styles
033 = Panel
034 = Re-wireable Flex
037 = Patchcord (Single Ended)
038 = Patchcord (Double Ended)

Panel Sealing
TP = through panel sealing (for use with PXP6033 panel body only)
Blank = not applicable

Characteristics
E = Earth lead (for use with PXP6033 plastic panel body only)
A = Glanding for PUR cable (for use with PXP6034 re-wireable flex only)
B = Glanding for 3.5 to 8mm cables (for use with PXP6034 re-wireable flex only)
2M00 = 2 metre cable length (for use with PXP6037 and PXP6038 patchcords only)
3M00 = 3 metre cable length (for use with PXP6037 and PXP6038 patchcords only)
5M00 = 5 metre cable length (for use with PXP6037 and PXP6038 patchcords only)

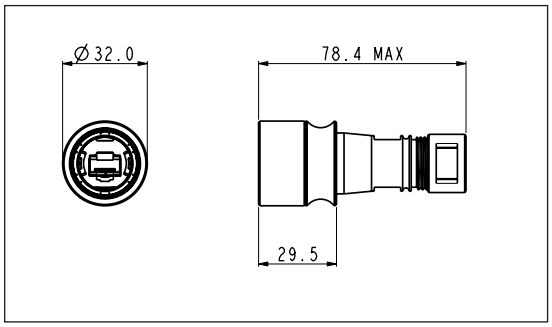
Examples:
PXP6033TP/E= Panel mounted coupler, sealed through panel with earth lead

PXP6037/2M00= Patchcord with one sealed end, 2 metres long

Ethernet – Metal version

RE-WIREABLE FLEX CONNECTOR

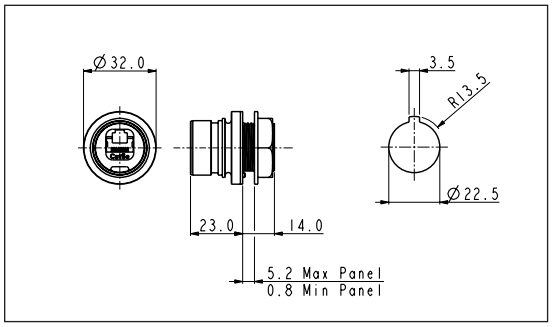
- Mates with PXM6033TP type panel mounting connectors
- 30˚ twist locking
- Supplied with shielded RJ45 plug
- Two versions:
  for PUR jacket cable (Cat 5e)
  for other cable sizes from 3.5 to 8mm dia.



Part no.	Description
PXM6034/A PXM6034/B	Cable glands optimised for PUR jacket cable to maintain Cat 5e performance Suitable for use with cables from 3.5 to 8mm diameter

FRONT PANEL MOUNTING CONNECTOR

- Sealed through panel
- Cat 5e shielded coupler
- Mates with PXM6034 type flex connectors
- Standard RJ45 patchcord can be plugged into rear
- Connector shell ground to cable screen
- Single hole fixing
- Complete with panel sealing gasket



Part no.	Description	Fixing
PXM6033TP	Cat 5e coupler	Front panel mounted - sealed through panel

ACCESSORIES FOR ETHERNET CONNECTORS

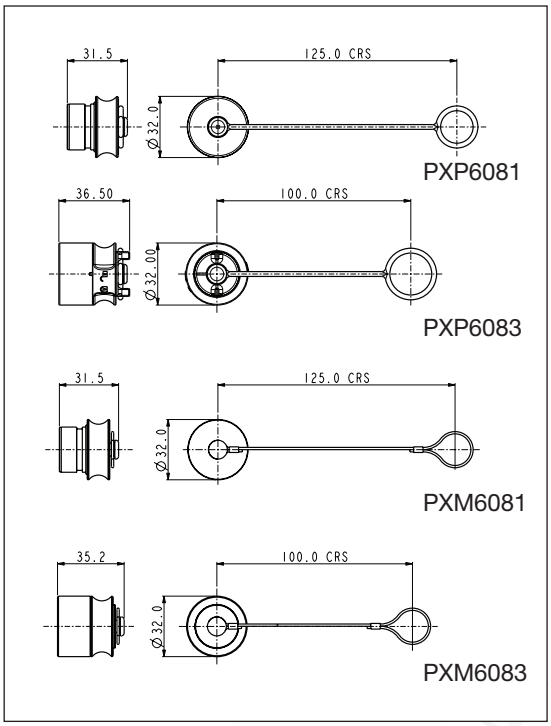
- Sealing caps to maintain IP rating when connectors are not in use

Plastic connectors

- PXP6081 for cable connectors PXP6034, PXP6037 & PXP6038
- PXP6083 for front panel mount connectors PXP6033, with 30˚ twist lock

Metal connectors

- PXM6081 for cable connectors PXM6034
- PXM6083 for front panel mount connectors



Part No.	Description
PXP6081	Sealing Cap for plastic Flex cable connectors
PXP6083	Sealing Cap for plastic front panel mounting connector
PXM6081	Sealing Cap for metal Flex cable connectors
PXM6083	Sealing Cap for metal front panel mounting connector
14151	Hand crimp tooling + die set
14199	PUR Jacket cable - 50m reel
14150	Replacement shielded RJ45

Ethernet – Metal version

PART NO SYSTEM

PXM / xxxx xx / x

Metal Connector Designation

Series
6 = 6000 Series

Body Styles
033 = Panel
034 = Re-wireable Flex

Panel Sealing
TP = through panel sealing (for use with PXM6033 panel body only)
Blank = not applicable

Characteristics
A = Glanding for PUR cable
B = Glanding for 3.5 to 8mm cables (for use with PXM6034 re-wireable flex only)

Examples:
PXM6034/A = Flex re-wireable connector for use with PUR cable

PXM6033TP = Panel mounted coupler, through panel sealed

6000 Series Buccaneer®

bulgin
a brand of Elektron Technology

Ethernet – Metal and Thermo-plastic versions

SPECIFICATION

Connectors

Mechanical	
Sealing	IP69K, DIN40050-9 IP68, EN60529 IP66, EN60529
Operating Temperature	
Re-wireable and Metal	–20˚C to +70˚C
Overmoulded patchcords	0˚C to +70˚C
Materials - Overmoulded	
Overmould material	PVC (black)
Flammability rating	UL94V-0
Materials - Re-wireable and Panel Connectors	
Plastic	PC/PBT
Metal	Machined Brass, Nickel Plated
Flammability rating	UL94V-0
'O' rings	Silicon
Panel Gasket - round	Silicon
Panel Gasket - flange	Silicon
Approvals (pending)	UL
RoHS	Compliant

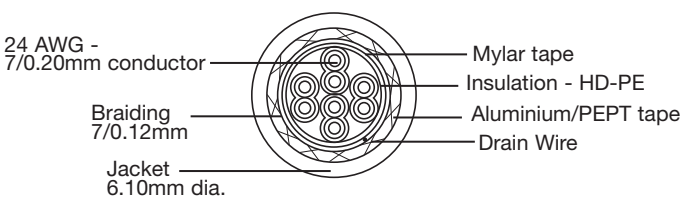
Stranded S-FTP Patch cord cable - PUR Jacket

Polyurethane (PUR) jacket cable with internal construction exceeding Cat 5e performance levels. The PUR jacket has excellent abrasion, chemical and ozone resistance, low smoke, low halogen flame retardant construction suitable for internal and external industrial environments.

Cable

Conductors	24AWG (7/0.2mm) bare copper
Insulation	HD-PE
Pair	2 of the above cores twisted
Core	4 of the above cores
Tape	1 lap mylar tape
Screen	1 layer mylar and aluminium tape, 0.12mm tinned copper braid
Sheath	PUR Jacket Black
Op Temperature	–25°C to +85°C
Min. bend radius	10 x o/d (installation)
Min. bend radius	6 x o/d (installed)
Diameter	6.1mm nominal
Electrical @ 20˚C	
Characteristic Impedance	100Ω ±15Ω @ 100MHz
Capacitance	330pF/km
Conductor Loop resistance	29Ω/100m maximum
Skew	45 nsec/100m @ 100MHz
TIA/EIA Rating	Cat 5e

Cable construction - PXP6037, PXP6038 and 14199



Polyurethane (PUR) Jacket

RJ45 Plug

Materials	
Moulding	Polycarbonate
Flammability	UL94V-0
Contact material	Phosphor Bronze
Contact plating	50 micron gold
Storage Temperature	–40°C to +70°C
Mating cycles	1,000 cycles
RoHS	Compliant
Electrical	
No. Conductors	8
Conductor types	24-28AWG, solid or multi-stranded
Current rating	1.5A
Voltage rating	30V ac, 42V dc
Contact resistance	10mΩ max.
Performance	Cat 5e
RoHS	Compliant

RJ45 Coupler

Materials	
Coupler Shell	Copper Alloy
Coupler Plating	Nickel
Moulding	ABS
Flammability	UL94V-0
Contact material	Phosphor Bronze
Contact plating	50 micron gold
Storage 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

Europe
Elektron Technology, Woodland Road, Torquay, Devon UK TQ2 7AY
t: +44 (0)1803 407752
e: europe@elektron-technology.com

The Americas
Elektron Technology, 31-315 Plantation Drive Thousand Palms CA 92276
t: +1 760-343-3650
e: americas@elektron-technology.com

China and Asia
Elektron Technology, Room 902 No.568 Hengfeng Rd, Henhui Int Building, Shanghai 200070, China
t: +86 21-6040-0060
e: asia@elektron-technology.com

Issue no: V1.0

6000 Series Buccaneer®

bulgin
a brand of Elektron Technology

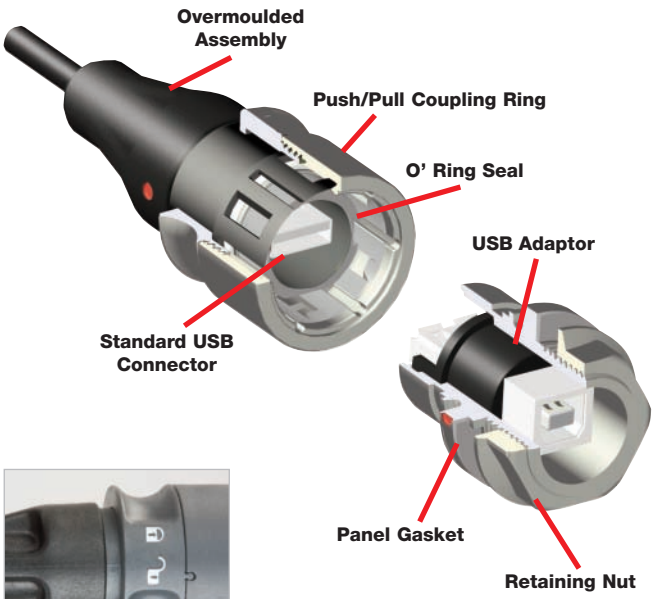
Robust, instant connections for harsh environments

6000 Series Buccaneer - circular connectors that combine the ease of use of a push/pull coupling mechanism with proven environmental sealing. Available with metal or plastic bodies, the range supports Ethernet and USB data interfaces.

Designed and independently tested to IP66, IP68 & IP69K standards, they are ideal for applications where ingress of dust and water must be avoided and where ease of connection, space and appearance are important considerations.

For Data — USB

THERMO-PLASTIC VERSION



Push-pull coupling locking system*	Secure, instant locking. Quick connector mating and release
30° twist locking*	Prevents accidental un-mating
IP66, IP68 and IP69K when mated	Suitable for a wide range of dust and water borne environments
Independent sealing tests	IP Ratings independently verified
USB version 2.0 performance	Low and high speed bus connection, 1.5Mbs to 480Mbs
Plug and play capability	Hot pluggable, standard 4 pole interface
Shielded system	High noise immunity and EMI protection
Visual mating indication	Alignment indicator reduces risk of damage during mating
Single and double ended cables	Suitable for PC and peripheral configuration

*patent applied for

USB – Thermo-plastic version

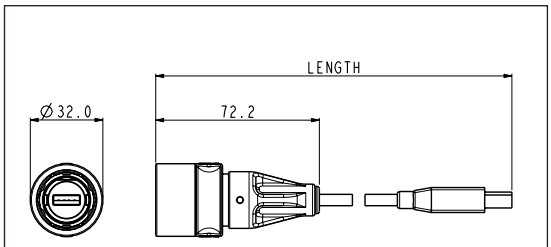
SEALED USB CABLES - SINGLE ENDED

PXP6040/A

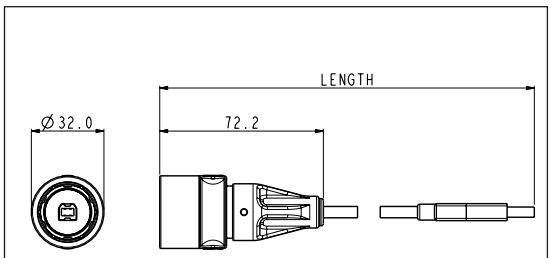
PXP6040/B

Single ended sealed cable assembly

- Mates with all panel mounting connectors
- 30° twist locking
- IP rated 'A' type USB connector to standard 'B' type USB connector, mates with all panel mount connectors
- IP rated 'B' type USB connector to standard 'A' type USB connector, mates with all panel mount connectors
- Available in 2m, 3m and 5m lengths



PXP6040/A/xMxx



PXP6040/B/xMxx

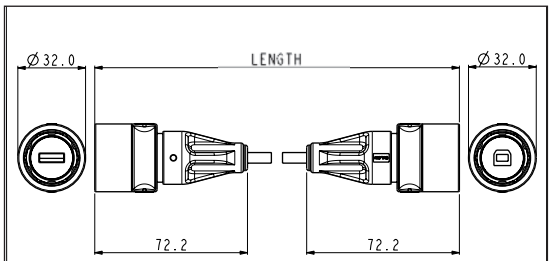
Part No.	Length	Description
PXP6040/A/2M00	2m	IP rated A type USB to standard B type USB
PXP6040/A/3M00	3m	IP rated A type USB to standard B type USB
PXP6040/A/5M00	5m	IP rated A type USB to standard B type USB
PXP6040/B/2M00	2m	IP rated B type USB to standard A type USB
PXP6040/B/3M00	3m	IP rated B type USB to standard A type USB
PXP6040/B/5M00	5m	IP rated B type USB to standard A type USB

SEALED USB CABLES - DOUBLE ENDED

PXP6041/AB

Double ended sealed cable assembly

- Mates with all panel mount connectors
- 30° twist locking
- IP rated 'A' type USB connector to 'B' type USB connector
- Available in 2m, 3m and 5m lengths



PXP6041/AB/xMxx

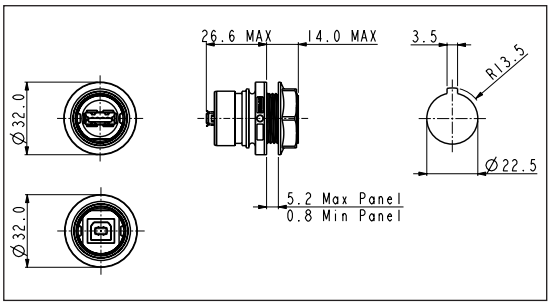
Part No.	Length	Description
PXP6041/AB/2M00	2m	IP rated A type USB to IP68 B type USB
PXP6041/AB/3M00	3m	IP rated A type USB to IP68 B type USB
PXP6041/AB/5M00	5m	IP rated A type USB to IP68 B type USB

bulgin
a brand of Elektron Technology

USB – Thermo-plastic version

FRONT PANEL MOUNTING CONNECTOR

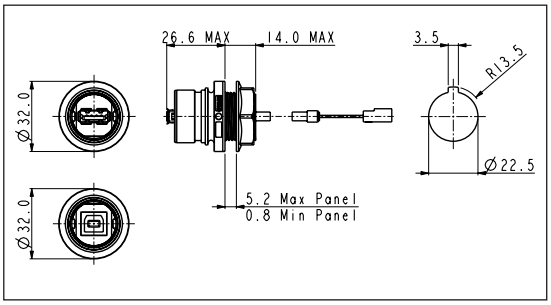
- PXP6042/A - USB 'A' type IP rated connector
- PXP6042/B - USB 'B' type IP rated connector
- Opposite USB type connector to rear of panel
- Mates with PXP6040 and PXP6041 cable connectors



Part No.	Description
PXP6042/A	IP rated A type USB, front panel mounted. Sealed A type at front of panel, standard B type at rear.
PXP6042/B	IP rated B type USB, front panel mounted. Sealed B type at front of panel, standard A type at rear.

FRONT PANEL MOUNTING CONNECTOR

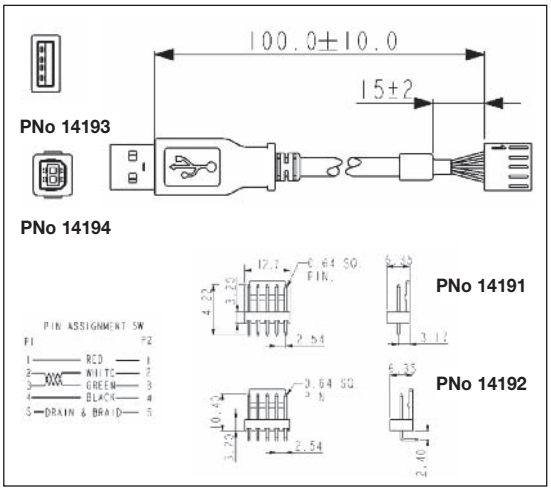
- PXP6043/A - USB 'A' type IP rated connector
- PXP6043/B - USB 'B' type IP rated connector
- Leaded with 5 way crimp connector
- Mates with PXP6040 and PXP6041 cable connectors



Part No.	Description
PXP6043/A	IP rated A type USB, front panel mounted. Sealed A type at front of panel, 5 way crimp connector at rear.
PXP6043/B	IP rated B type USB, front panel mounted. Sealed B type at front of panel, 5 way crimp connector at rear.

PCB ADAPTOR LEADS

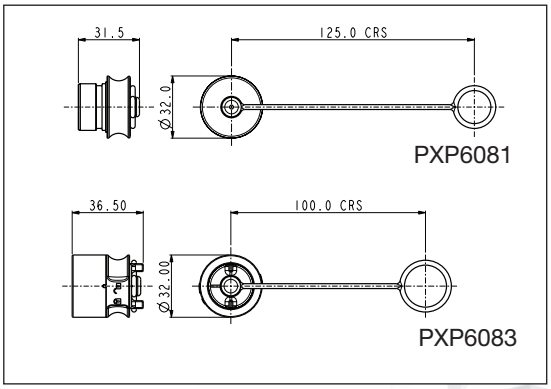
- Standard A and B type USB connectors to 5 way crimp adaptor leads
- 5 way headers, 2.54mm pitch, horizontal or vertical mounting



Part No.	Description
14193	USB 'A' type to 5 way crimp connector
14194	USB 'B' type to 5 way crimp connector
14191	5 way PCB header straight
14192	5 way PCB header right angle

ACCESSORIES

- Sealing caps to maintain IP rating when connectors are not in use
- PXP6081 for cable connectors PXP6040 & PXP6041
- PXP6083 for front panel mount connectors PXP6042 & PXP6043, with 30° twist lock



Part No.	Description
PXP6081	Sealing Cap for Flex cable connectors (PXP6040, PXP6041)
PXP6083	Sealing Cap for front panel mounting connector (PXP6042, PXP6043)

USB – Thermo-plastic version

PART NO SYSTEM

PXP / xxxx / x / xxxx

Plastic Connector Designation

Series
6 = 6000 Series

Body Styles
040 = Single ended cable
041 = Double ended cable
042 = Panel with adaptor
043 = Panel with lead

Characteristics
A = 'A' type sealed interface
B = 'B' type sealed interface
AB = 'A' & 'B ' type sealed interface (for use with 6041 only)

Cable length
2M00 = 2 metre cable length (for use with 6041 and 6042 cables only)
3M00 = 3 metre cable length (for use with 6041 and 6042 cables only)
5M00 = 5 metre cable length (for use with 6041 and 6042 cables only)
Blank for 6042 & 6043 panel bodies

Examples:

PXP6040/A/2M00 = Cable assembly with sealed 'A' type connector to unsealed 'B' type connector, 2 metres long

PXP6042/A = Panel mounted adapter with sealed 'A' type to unsealed 'B' type at rear

6000 Series Buccaneer®

bulgin
a brand of Elektron Technology

USB – Thermo-plastic version

SPECIFICATION

Cables & connectors

Mechanical

Sealing	IP69K, DIN40050-9 IP68, EN60529 IP66, EN60529
Operating temperature	0˚C to +70˚C

Electrical

No. of poles	4
Current rating	1A
Voltage rating	30Vac (RMS)
Contact resistance	30mΩ max.
Performance	USB version 2.0

Materials - Overmoulded

Overmould material	PVC (black)
Flammability rating	UL94V-0

Materials - Re-wireable and Panel Connectors

Plastic	PC/PBT
Metal	Machined Brass, Nickel Plated
Flammability rating	UL94V-0
'O' rings	Silicon
Panel Gasket - round	Silicon
Panel Gasket - flange	Silicon

Materials - cable

Cable Jacket	PVC (black)
Screen	Tinned copper braid
Flammability	UL94V-0
RoHS	Compliant

Length:	Dia	Conductors Signal	Conductors Power
2m	4.8mm	2 x 28AWG	2 x 24AWG
3m	5.0mm	2 x 28AWG	2 x 22AWG
5m	5.2mm	2 x 25AWG	2 x 20AWG

PCB adaptor leads

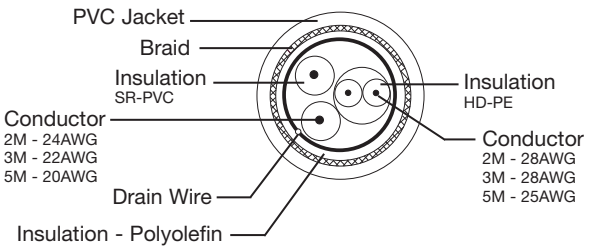
Electrical

No. of conductors	4
Current rating	1A
Voltage rating	30Vac (RMS)
Contact resistance	<10mΩ max.
PCB pitch	2.54mm

Materials

Moulding	Polycarbonate
Flammability	UL94V-0
Contact material	Copper Alloy
Contact plating	30 micro inch Gold
Wire insulation	PVC (black)
Flammability	UL94-V0
Conductors	4 x 28AWG
Operating temperature	0˚C to +70˚C
Mating cycles	1,000
RoHS	Compliant

Cable construction - PXP6040, PXP6041



Europe
Elektron Technology, Woodland Road, Torquay, Devon UK TQ2 7AY
t: +44 (0)1803 407752
e: europe@elektron-technology.com

The Americas
Elektron Technology, 31-315 Plantation Drive Thousand Palms CA 92276
t: +1 760-343-3650
e: americas@elektron-technology.com

China and Asia
Elektron Technology, Room 902 No.568 Hengfeng Rd, Henhui Int Building, Shanghai 200070, China
t: +86 21-6040-0060
e: asia@elektron-technology.com

Issue no: V1.0