## 6000 Series Buccaneer®

### **Robust, instant connections for harsh environments**

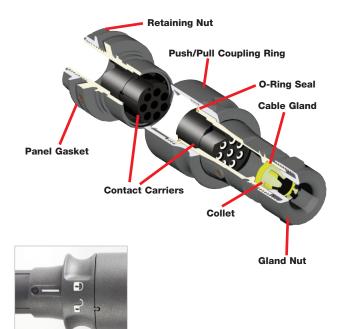
The all plastic construction 6000 Series Buccaneer - circular connectors that combine the ease of use of a push/pull coupling mechanism with proven environmental sealing for signal and mains power.

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 latching mechanism*	Secure, instant latching. 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
<ul> <li>All plastic body version; UL94-V0 rated, UV stable, halogen free</li> </ul>	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

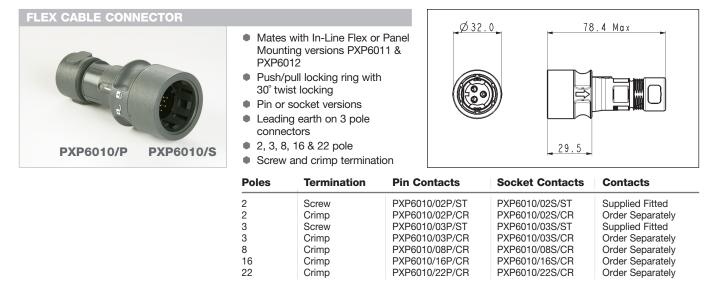








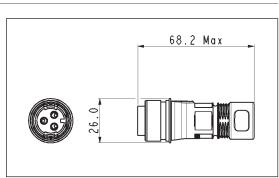




### IN-LINE FLEX CABLE CONNECTOR



- 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



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

PXP6012/22P/CR

PXP6012/22S/CR

#### FRONT PANEL MOUNTING CONNECTOR Ø32.0 41.4 Max Mates with Flex Cable 3.5 B13.5 connectors PXP6010 Front panel mounting ٠ Single hole fixing ٠ Pin or socket versions ٠ Leading earth on 3 pole • Ø22.5 27.4 connectors Max 2, 3, 8, 16 and 22 pole 5.2 Max Pane 0.8 Min Pane PXP6012/P PXP6012/S • Screw and crimp termination Poles Termination **Pin Contacts Socket Contacts** Contacts PXP6012/02P/ST 2 Screw 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 PXP6012/08P/CR PXP6012/08S/CR Order separately Crimp Crimp 16 PXP6012/16P/CR PXP6012/16S/CR Order separately

Crimp

22

Order separately



CRIMP CONTACTS			Contacts - Crimp for 2,	3, 8, 16
	<ul> <li>Crimp Contac</li> <li>Gold Plated</li> <li>Current rating:</li> </ul>		Contacts (for 2 & 3 pole) (Supplied in packs of 10)	Crimp
	2 & 3 pole: 8 pole:	16A 10A	Pins Sockets	SA3545/F SA3545/S
	16 pole: 22 pole:	3A 2A	Contacts (for 8 pole) (Supplied in packs of 10)	Crimp
2, 3, 8, 16 & 22 pole contacts			Pins Sockets	SA3544/F SA3544/S

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

### **Crimp Tooling**



 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. 14940/SP Insertion/Extraction Tool (16 & 22 pole) PNo. 14944/SP

CONTACT CARRIER REMOVAL TOOL	
PNo 14917	

For removal of all contact carriers

### Tools

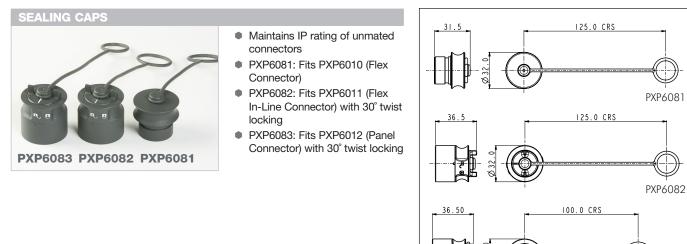
Contact carrier removal tool all poles)	PNo. 14917/SP

## 6000 Series Buccaneer®



PXP6083

### Thermo-plastic Version





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

## 6000 Series Buccaneer®



### Thermo-plastic Version

PART NO SYSTEM
<b>PXP</b> / <b>xxxx</b> / <b>xx</b> / <b>x</b> / <b>x</b> / <b>xx</b> / <b>xxx</b>
Plastic Connector Designation
Series6 = 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
$\mathbf{P} = Pin$ $\mathbf{S} = Socket$
Contacts Termination CR = Crimp ST = Screw (2 and 3 pole only)
Cable Entry Size (for Flex and Flex In-Line connectors only) 0405 = 4-5mm (Dark Grey) 0507 = 5-7mm (White) 0709 = 7-9mm (Yellow) 0910 = 9-10mm (Light Grey)

### Examples:

 $\label{eq:pxP6010/03/P/CR/0507} \ensuremath{\mathsf{PXP6010/03/P/CR/0507}}\xspace = \ensuremath{\mathsf{Flex}}\xspace$  crimp termination with 5 to 7mm cable glands

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



SPECIFICATION

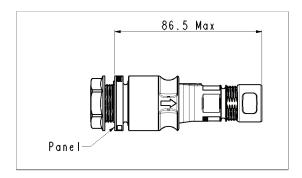
Electrical:		Mechanical:	
No. Poles:	2 3 8 16 22	Locking mechanism	Push/pull with 30° locking
Rated cable	18 18 18 22 26		Patent applied for
Current Rating: See de-rating curves for further information	AWG AWG AWG AWG AWG	Sealing:	IP66 to EN60529:1992 IP68 to EN60529:1992 (10m depth for 2 weeks) IP69k to DIN 40050-9
CCC, UL and VDE (pending)	16A 16A 10A 3A 2A	Contact Accommodation:	
cUL (pending)	13A 12A 8A 3A 2A	2 & 3 pole crimp	14 to 18AWG
Voltage Rating (ac/dc):	277V 277V 277V 60V 60V	2 & 3 pole screw terminals	1.5mm <sup>2</sup> max
Contact Resistance:	<10mΩ	8 pole crimp 16 pole crimp	18 to 20AWG 22 to 26AWG
Insulation Resistance:	>10ºMΩ @500V dc	22 pole crimp	22 to 26AWG
AC Breakdown voltage:	. 1013/	Cable Acceptance:	4-10mm dia.
2 pole 3 pole	>10kV >8kV	Cable retention force	
8 to 22 pole	>5kV	(to BS EN61984):	
		4 - 9mm dia cable	80N
Operating Temp. Range:	-40°C to +120°C	9 - 10mm dia cable	100N
Approvals (pending):		Terminations:	
UL	UL1977	2 Pole:	Screw Terminals & Crimp Contacts
CSA	C22.2 No.182.3-M1987 (R2009)	3 Pole:	Screw Terminals & Crimp Contacts
VDE CCC	IEC 61984:2009 GB/T11918 and GB/T11919	8 Pole:	Crimp Contacts
		16 Pole: 22 Pole:	Crimp Contacts Crimp Contacts
		Tightening Torques:	
Material:		Gland Nut:	1.13Nm (10lb.in)
Body:	PC/ PBT	Panel Nut:	1.7Nm (15lbf.in.)
Colour:		Panel Nut Thread:	M22 x 1.5-6g
	Grey	Dimensions:	
Flammability Rating:	UL94 V-0	Diameter: (over coupling ring)	32mm
Halogen free	Yes	Diameter: (panel hole cut-out)	22.5mm
UV Resistance:	ISO 4892 part 3 cycle 1 (QUV)		
Contacts:	Brass, Nickel plated		

### Mated dimensions - Flex to panel connector

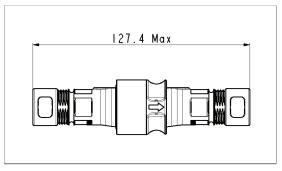
(2A – Gold plated)

Silicon

Compliant



### Mated dimensions - Flex connector to in-line connector



O Rings & Gaskets:

RoHS



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.

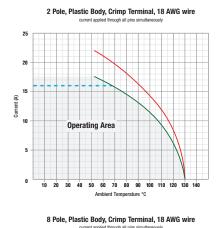
De-rating curves are plotted for each contact carrier combination with the current being carried simultaneously by all contacts. These graphs show the heat rise generated as the current is increased.

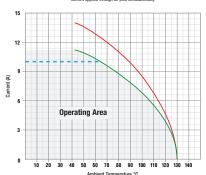
The red line indicates the direct correlation between current applied and the measured temperature rise within the connector. The dotted blue line shows rated current and the green line is derived by applying a factor of 0.8 to the original plot data to give a de-rating curve. The dashed blue line shows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

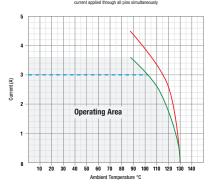
### = tested operating limits

- = de-rated operating limits
- = rated current

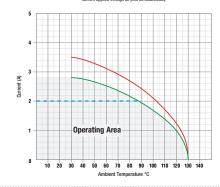




16 Pole, Plastic Body, Crimp Terminal, 22 AWG wire







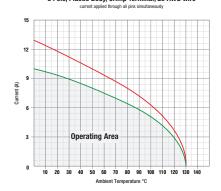
25 15 Current **Operating Area** 

> 30 40 50 60 70

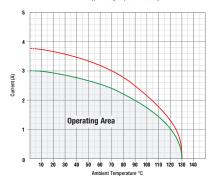
3 Pole, Plastic Body, Screw Terminal, 18 AWG wire



90 100



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



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# Issue no: V1.2

### 6000 Series Current vs. Temperature Characteristics

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