

# 7000 Series Buccaneer®



## Robust, rapid connections for harsh environments

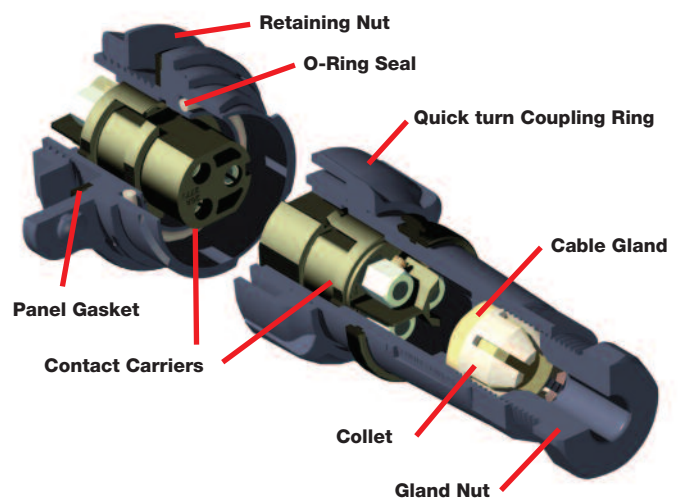
The all plastic construction 7000 Series Buccaneer - circular connectors that combine the ease of use of a quick coupling mechanism with proven environmental sealing for signal and mains power.

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



|                                                                              |                                                                              |
|------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| ● <b>Less than 1/4 Turn locking mechanism</b>                                | Secure, quick connector mating and release                                   |
| ● <b>Positive feedback on locking mechanism</b>                              | Confidence that connector is correctly mated and sealed                      |
| ● <b>IP66, IP68 and IP69K when mated</b>                                     | Suitable for a wide range of dust and water borne environments               |
| ● <b>All plastic body version; UL94-V0 rated, UV stable, halogen free</b>    | Light-weight, self-extinguishing material suitable for long-term outdoor use |
| ● <b>Flex, flex in-line &amp; panel mount body styles, with sealing caps</b> | Complete family of products maintain sealing integrity in all styles         |
| ● <b>Polarisation and visual alignment features</b>                          | Aids the correct mating of connectors                                        |
| ● <b>2 to 32 poles – up to 25A, 600V rated</b>                               | Suitable for mains power to signal applications                              |
| ● <b>'Scoop proof' contacts</b>                                              | Prevents damage through mis-mating – ideal for 'blind mating' applications   |
| ● <b>cULs, UL, VDE, CCC approvals (pending)</b>                              | Internationally recognised certification                                     |

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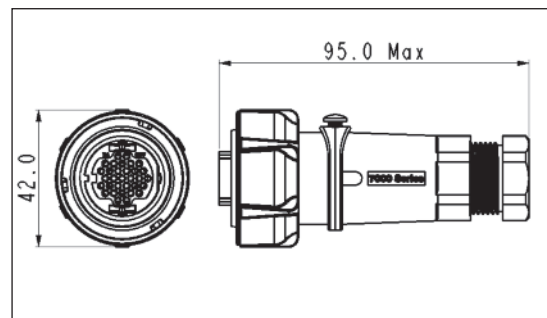
## Thermo-plastic Version

### FLEX CABLE CONNECTOR



**PXP7010**

- Mates with In-Line Flex or Panel Mounting versions PXP7011 & PXP7012
- Quick turn locking ring
- Pin or socket versions
- Leading earth on 3 pole connectors
- 2, 3, 6, 10 & 32 pole
- Screw and crimp termination



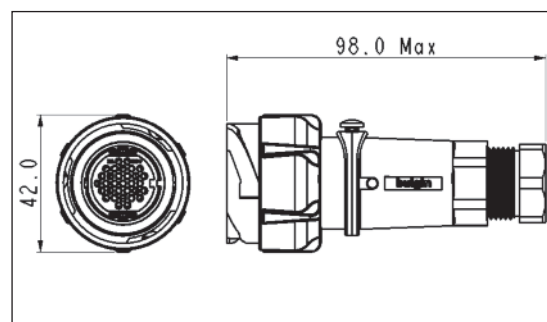
| Poles | Termination | Pin Contacts   | Socket Contacts | Contacts         |
|-------|-------------|----------------|-----------------|------------------|
| 2     | Screw       | PXP7010/02P/ST | PXP7010/02S/ST  | Supplied Fitted  |
| 3     | Screw       | PXP7010/03P/ST | PXP7010/03S/ST  | Supplied Fitted  |
| 6     | Screw       | PXP7010/06P/ST | PXP7010/06S/ST  | Supplied Fitted  |
| 10    | Crimp       | PXP7010/10P/CR | PXP7010/10S/CR  | Order Separately |
| 32    | Crimp       | PXP7010/32P/CR | PXP7010/32S/CR  | Order Separately |

### IN-LINE FLEX CABLE CONNECTOR



**PXP7011**

- Mates with Flex Cable connector PXP7010
- For in-line cable connection
- Pin or socket versions
- Leading earth on 3 pole connectors
- 2, 3, 6, 10 and 32 pole
- Screw and crimp termination



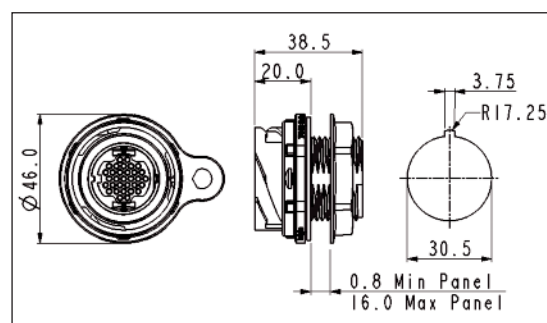
| Poles | Termination | Pin Contacts   | Socket Contacts | Contacts         |
|-------|-------------|----------------|-----------------|------------------|
| 2     | Screw       | PXP7011/02P/ST | PXP7011/02S/ST  | Supplied Fitted  |
| 3     | Screw       | PXP7011/03P/ST | PXP7011/03S/ST  | Supplied Fitted  |
| 6     | Screw       | PXP7011/06P/ST | PXP7011/06S/ST  | Supplied Fitted  |
| 10    | Crimp       | PXP7011/10P/CR | PXP7011/10S/CR  | Order separately |
| 32    | Crimp       | PXP7011/32P/CR | PXP7011/32S/CR  | Order separately |

### FRONT PANEL MOUNTING CONNECTOR



**PXP7012**

- Mates with Flex Cable connectors PXP7010
- Front panel mounting
- Single hole fixing
- Pin or socket versions
- Leading earth on 3 pole connectors
- 2, 3, 6, 10 and 32 pole
- Screw and crimp termination



| Poles | Termination | Pin Contacts   | Socket Contacts | Contacts         |
|-------|-------------|----------------|-----------------|------------------|
| 2     | Screw       | PXP7012/02P/ST | PXP7012/02S/ST  | Supplied Fitted  |
| 3     | Screw       | PXP7012/03P/ST | PXP7012/03S/ST  | Supplied Fitted  |
| 6     | Screw       | PXP7012/06P/ST | PXP7012/06S/ST  | Supplied Fitted  |
| 10    | Crimp       | PXP7012/10P/CR | PXP7012/10S/CR  | Order separately |
| 32    | Crimp       | PXP7012/32P/CR | PXP7012/32S/CR  | Order separately |

# 7000 Series Buccaneer®



## Thermo-plastic Version

### CRIMP CONTACTS



10 & 32 pole contacts

- Crimp Contacts
- Gold Plated
- Current ratings:
  - 10 pole: 10A
  - 32 pole: 2A

### Contacts - Crimp for 10 and 32 pole

#### Contacts (for 10 pole) (Supplied in packs of 10)

|         | Crimp    |
|---------|----------|
| Pins    | SA3544/P |
| Sockets | SA3544/S |

#### Contacts (for 32 pole) (Supplied in packs of 10)

|         | Crimp    |
|---------|----------|
| Pins    | SA3542/P |
| Sockets | SA3542/S |

### CRIMP TOOLING



PNo 14025

- Crimp Tools for 10 and 32 pole crimp contacts

### Crimp Tooling

|                           |               |
|---------------------------|---------------|
| Crimp Tool (10 & 32 pole) | PNo. 14025    |
| Positioner (10 pole)      | PNo. 15021/SP |
| Positioner (32 pole)      | PNo. 15019/SP |

### EXTRACTION TOOLS



PNo 14944/SP PNo 14945/SP

- Extraction tool for 10 and 32 pole contacts

### Extraction tools

|                           |               |
|---------------------------|---------------|
| Extraction tool (10 pole) | PNo. 14945/SP |
| Extraction tool (32 pole) | PNo. 14944/SP |

### CONTACT CARRIER REMOVAL TOOL



PNo 15065/SP

- For removal of all contact carriers

### Tools

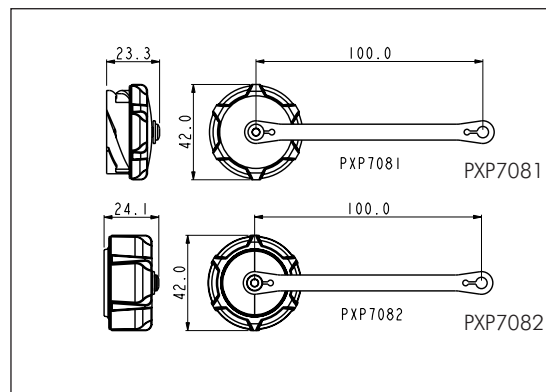
|                                          |               |
|------------------------------------------|---------------|
| Contact carrier removal tool (all poles) | PNo. 15065/SP |
|------------------------------------------|---------------|

## Thermo-plastic Version

### SEALING CAPS



- Maintains IP rating of unmated connectors
- PXP7081: Fits PXP7010 (Flex Connector)
- PXP7082: Fits PXP7011 (Flex In-Line Connector) and PXP7012: (Panel Connector)



### CABLE GLAND PACKS



- Packs of cable glands, cages and gland nuts to suit cables ranges from 5.0 to 15.0mm diameter
- PXP7088/0507: for cable ranges between 5.0 and 7.0mm
- PXP7088/0713: for cable ranges between 7.0 and 13.0mm
- PXP7088/1315: for cable ranges between 13.0 and 15.0mm

# 7000 Series Buccaneer®



## Thermo-plastic Version

### PART NO SYSTEM

**PXP / xxxx / xx x / xx / xxxx**

Plastic Connector Designation

Series

**7** = 7000 Series

Body Styles

**010** = Flex

**011** = Flex In-Line

**012** = Panel

No. of Contacts

**02** = 2 Pole

**03** = 3 Pole

**06** = 6 Pole

**10** = 10 Pole

**32** = 32 Pole

Contacts Type

**P** = Pin

**S** = Socket

Terminations

**ST** = Screw Terminal (2, 3, & 6 pole only)

**CR** = Crimp Contacts (10 & 32 pole only)

Cable Entry Size

(for Flex and Flex In-Line connectors only)

**0507** = 5-7mm (grey)

**0709** = 7-9mm (white)

**0911** = 9-11mm (black)

**1113** = 11 to 13 mm (yellow)

**1315** = 13 to 15 mm (light grey)

### Examples:

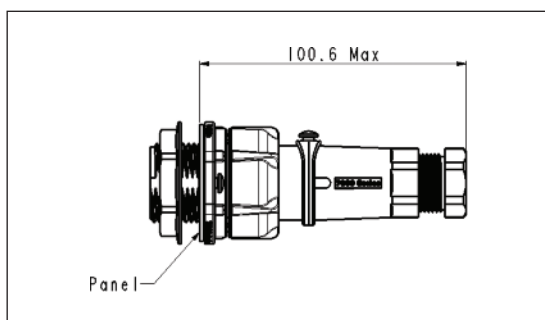
PXP7010/03P/ST/0709 = 3 pole, flex connector, with pin contacts and screw terminals for 7-9mm diameter cable

## Thermo-plastic Version

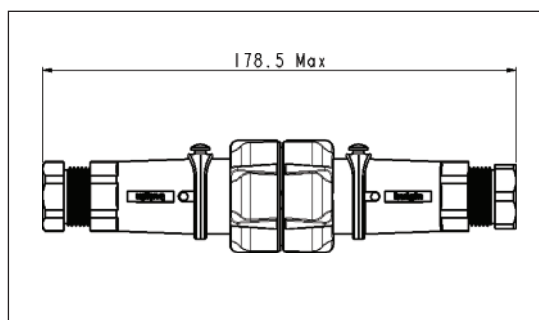
### SPECIFICATION

| Electrical:               |                                            |      |      |      |      | Mechanical:                                                                                            |                                                                                              |
|---------------------------|--------------------------------------------|------|------|------|------|--------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| No. Poles:                | 2                                          | 3    | 6    | 10   | 32   | Locking mechanism                                                                                      | Quarter turn, rapid locking                                                                  |
| Current Rating:           |                                            |      |      |      |      | Sealing:                                                                                               | IP66 to EN60529:1992<br>IP68 to EN60529:1992 (10m depth for 2 weeks)<br>IP69k to DIN 40050-9 |
| CCC, UL and VDE (pending) | 25A                                        | 25A  | 10A  | 10A  | 3A   | Contact Accommodation:<br>2 & 3 pole screw terminals<br>6 pole screw<br>10 pole crimp<br>32 pole crimp | 6.0mm² max<br>1.00mm² max<br>18 to 20AWG<br>22 to 26AWG                                      |
| cUL (pending)             | 25A                                        | 25A  | 8A   | 6A   | 2A   |                                                                                                        |                                                                                              |
| Voltage Rating (ac/dc):   |                                            |      |      |      |      |                                                                                                        |                                                                                              |
| CCC, VDE (pending)        | 600V                                       | 600V | 500V | 277V | 200V |                                                                                                        |                                                                                              |
| UL, cUL (pending)         | 600V                                       | 600V | 600V | 600V | 600V | Cable Acceptance:                                                                                      | 5-15mm dia.                                                                                  |
| Contact Resistance:       | <10mΩ                                      |      |      |      |      | Cable retention force                                                                                  | 80N<br>100N                                                                                  |
| Insulation Resistance:    | >10⁹MΩ @500V dc                            |      |      |      |      | (to BS EN61984):                                                                                       |                                                                                              |
| AC Breakdown voltage:     |                                            |      |      |      |      | 5 - 9mm dia cable                                                                                      |                                                                                              |
| 2 pole                    | >10kV                                      |      |      |      |      | 9 - 15mm dia cable                                                                                     |                                                                                              |
| 3 pole                    | >8kV                                       |      |      |      |      | Terminations:                                                                                          |                                                                                              |
| 6 to 32 pole              | >5kV                                       |      |      |      |      | 2 Pole:                                                                                                | Screw Terminals                                                                              |
| Operating Temp. Range:    | -40°C to +120°C                            |      |      |      |      | 3 Pole:                                                                                                | Screw Terminals                                                                              |
| Approvals (pending):      |                                            |      |      |      |      | 6 Pole:                                                                                                | Screw Terminals                                                                              |
| UL                        | UL1977                                     |      |      |      |      | 10 Pole:                                                                                               | Crimp Contacts                                                                               |
| CSA                       | C22.2 No.182.3-M1987 (R2009)               |      |      |      |      | 32 Pole:                                                                                               | Crimp Contacts                                                                               |
| VDE                       | IEC 61984:2009                             |      |      |      |      | Tightening Torques:                                                                                    |                                                                                              |
| CCC                       | GB/T11918 and GB/T11919                    |      |      |      |      | Gland Nut:                                                                                             | TBA                                                                                          |
|                           |                                            |      |      |      |      | Panel Nut:                                                                                             | 1.7Nm (15lbf.in.)                                                                            |
|                           |                                            |      |      |      |      | Panel Nut Thread:                                                                                      | M30 x 2-6g                                                                                   |
|                           |                                            |      |      |      |      | Dimensions:                                                                                            |                                                                                              |
|                           |                                            |      |      |      |      | Diameter: (over coupling ring)                                                                         | 42mm                                                                                         |
|                           |                                            |      |      |      |      | Diameter: (panel hole cut-out)                                                                         | 30mm                                                                                         |
| 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<br>(2A – Gold plated) |      |      |      |      |                                                                                                        |                                                                                              |
| O Rings & Gaskets:        | Silicon                                    |      |      |      |      |                                                                                                        |                                                                                              |
| RoHS                      | Compliant                                  |      |      |      |      |                                                                                                        |                                                                                              |

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

### 7000 Series Current vs. Temperature Characteristics

