



- ⬢ IP68 when mated, tested in accordance with EN60529:1992+A2:2013
- ⬢ IP69K when mated, tested in accordance with DIN 40050/Part 9 IP6k9k
- ⬢ EN60068-2-52 Test Kb Salt Mist (Cyclic) Marine Severity Level 1
- ⬢ USB version 2.0 and 3.0 performance
- ⬢ Shielded system
- ⬢ Single and double ended cables
- ⬢ Screw coupling
- ⬢ PCB mounted panel connector
- ⬢ High-speed bus connection, USB 2.0: up to 480Mbps  
USB 3.0: up to 5Gbps
- ⬢ Hot pluggable, USB 2.0 with 4 contact interface, USB 3.0 with 9 contact interface
- ⬢ Alignment indicator reduces risk of damage during mating
- ⬢ High noise immunity and EMI protection
- ⬢ Suitable for PC and peripheral configuration
- ⬢ Secure, proven locking system
- ⬢ Direct mounting or via adaptor leads
- ⬢ Plug and play capability

Sealed USB Cables - Single Ended



PX0840/A

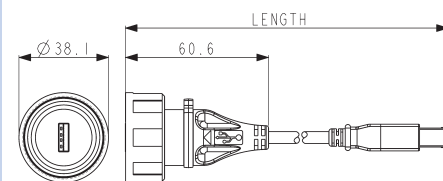


PX0840/B

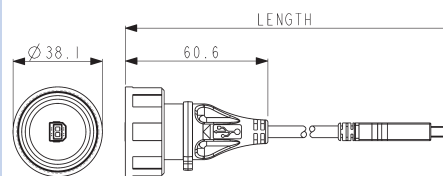


PX0840/AA

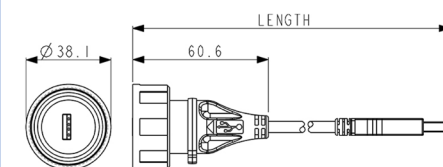
- Single ended sealed cable assembly
- IP68 'A' type USB 2.0 connector to standard 'A' or 'B' type USB 2.0 connector
- IP68 'B' type USB 2.0 connector to standard 'A' type USB 2.0 connector
- IP68 'A' type USB 3.0 connector to standard USB 3.0 'A' type connector
- Mates with all panel mount connectors
- USB 2.0 variants available in 2m, 3m & 5m lengths
- USB 3.0 variants available in 1m, 2m & 3m lengths



PX0840/A/xMxx



PX0840/B/xMxx



PX0840/AA/xMxx

| Part no.       | Length | Description                                    |
|----------------|--------|------------------------------------------------|
| PX0840/A/2M00  | 2m     | IP68 A type USB 2.0 to standard B type USB 2.0 |
| PX0840/A/3M00  | 3m     | IP68 A type USB 2.0 to standard B type USB 2.0 |
| PX0840/A/5M00  | 5m     | IP68 A type USB 2.0 to standard B type USB 2.0 |
| PX0840/B/2M00  | 2m     | IP68 B type USB 2.0 to standard A type USB 2.0 |
| PX0840/B/3M00  | 3m     | IP68 B type USB 2.0 to standard A type USB 2.0 |
| PX0840/B/5M00  | 5m     | IP68 B type USB 2.0 to standard A type USB 2.0 |
| PX0840/AA/2M00 | 2m     | IP68 A type USB 2.0 to standard A type USB 2.0 |
| PX0840/AA/3M00 | 3m     | IP68 A type USB 2.0 to standard A type USB 2.0 |
| PX0840/AA/5M00 | 5m     | IP68 A type USB 2.0 to standard A type USB 2.0 |
| PX0840/A3/1M00 | 1m     | IP68 A type USB 3.0 to standard A type USB 3.0 |
| PX0840/A3/2M00 | 2m     | IP68 A type USB 3.0 to standard A type USB 3.0 |
| PX0840/A3/3M00 | 3m     | IP68 A type USB 3.0 to standard A type USB 3.0 |

#### Sealed USB Cables Double Ended

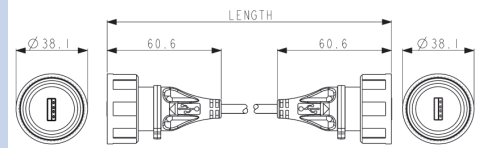


PX0841/AA

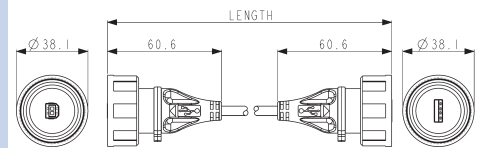


PX0841/AB

- Double ended sealed cable assembly
- IP68 'A' type USB 2.0 connector to IP68 'A' or 'B' type USB 2.0 connector
- IP68 'A' type USB 3.0 connector to IP68 'A' type USB 3.0 connector
- Mates with all panel mount connectors
- USB 2.0 variants available in 2m, 3m & 5m lengths
- USB 3.0 variants available in 1m, 2m & 5m lengths



PX0841/AA/xMxx



PX0841/AB/xMxx

| Part no.       | Length | Description                                |
|----------------|--------|--------------------------------------------|
| PX0841/AB/2M00 | 2m     | IP68 A type USB 2.0 to IP68 B type USB 2.0 |
| PX0841/AB/3M00 | 3m     | IP68 A type USB 2.0 to IP68 B type USB 2.0 |
| PX0841/AB/5M00 | 5m     | IP68 A type USB 2.0 to IP68 B type USB 2.0 |
| PX0841/AA/2M00 | 2m     | IP68 A type USB 2.0 to IP68 A type USB 2.0 |
| PX0841/AA/3M00 | 3m     | IP68 A type USB 2.0 to IP68 A type USB 2.0 |
| PX0841/AA/5M00 | 5m     | IP68 A type USB 2.0 to IP68 A type USB 2.0 |
| PX0841/A3/1M00 | 1m     | IP68 A type USB 3.0 to IP68 A type USB 3.0 |
| PX0841/A3/2M00 | 2m     | IP68 A type USB 3.0 to IP68 A type USB 3.0 |
| PX0841/A3/3M00 | 3m     | IP68 A type USB 3.0 to IP68 A type USB 3.0 |

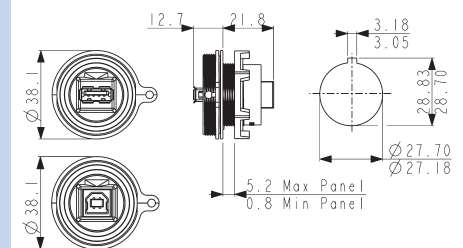
#### Front Panel Mounting Connector



PX0842/A

PX0842/B

- PX0842/A – USB 2.0 'A' type IP68 to USB 2.0 'B' type connector
- PX0842/AA – USB 2.0 'A' type IP68 to USB 2.0 'A' type connector
- PX0842/A3 – USB 3.0 'A' type IP68 to USB 3.0 'A' type connector
- PX0842/B – USB 2.0 'B' type IP68 to USB 2.0 'A' type connector
- Mates with PX0840 and PX0841 cable connectors



| Part no.  | Description                                                                                        |
|-----------|----------------------------------------------------------------------------------------------------|
| PX0842/A  | IP68 A type USB 2.0, front panel mounted. Sealed A type at front of panel, standard B type at rear |
| PX0842/B  | IP68 B type USB 2.0, front panel mounted. Sealed B type at front of panel, standard A type at rear |
| PX0842/AA | IP68 A type USB 2.0, front panel mounted. Sealed A type at front of panel, standard A type at rear |
| PX0842/A3 | IP68 A type USB 3.0, front panel mounted. Sealed A type at front of panel, standard A type at rear |

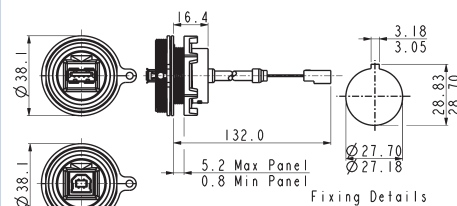
Front Panel Mounting Connector



PX0843/B

PX0843/A

- PX0843/A – USB 2.0 'A' type IP68 connector with 5-way crimp connector
- PX0843/B – USB 2.0 'B' type IP68 connector with 5-way crimp connector
- PX0843/A3 – USB 3.0 'A' type IP68 connector with 10-way crimp connector
- Mates with PX0840 and PX0841 cable connectors



Part no.

Description

|           |                                                                                                            |
|-----------|------------------------------------------------------------------------------------------------------------|
| PX0843/A  | IP68 A type USB 2.0, front panel mounted. Sealed A type at front of panel, 5 way crimp connector at rear.  |
| PX0843/B  | IP68 B type USB 2.0, front panel mounted. Sealed B type at front of panel, 5 way crimp connector at rear.  |
| PX0843/A3 | IP68 A type USB 3.0, front panel mounted. Sealed A type at front of panel, 10-way crimp connector at rear. |
| PX0460/A  | As PX0843/A with exposed braid for use with PX0465 screening can                                           |
| PX0460/B  | As PX0843/B with exposed braid for use with PX0465 screening can                                           |
| PX0460/A3 | As PX0843/A3 with exposed braid for use with PX0465 screening can                                          |

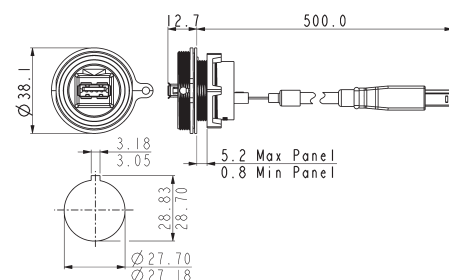
Front Panel Mounting Connector



PX0844/B

PX0844/A

- IP68 Sealed through panel
- PX0844/A – USB 2.0 'A' type IP68 connector
- PX0844/B – USB 2.0 'B' type IP68 connector
- PX0844/A3 – USB 3.0 'A' type IP68 connector
- Standard USB interface plug options to rear of panel
- 0.5m standard cable length, other lengths available
- Mates with PX0840 and PX0841 cable connectors



Part no.

Length

Description

|                   |      |                                                                                                         |
|-------------------|------|---------------------------------------------------------------------------------------------------------|
| PX0844/A/0M50/A   | 0.5m | IP68 A type USB 2.0, sealed through panel, Sealed 'A' type at front of panel, standard 'A' type at rear |
| PX0844/A/0M50/B   | 0.5m | IP68 A type USB 2.0, sealed through panel, Sealed 'A' type at front of panel, standard 'B' type at rear |
| PX0844/B/0M50/A   | 0.5m | IP68 B type USB 2.0, sealed through panel, Sealed 'B' type at front of panel, standard 'A' type at rear |
| PX0844/B/0M50/B   | 0.5m | IP68 B type USB 2.0, sealed through panel, Sealed 'B' type at front of panel, standard 'B' type at rear |
| PX0844/A3/0M50/A3 | 0.5m | IP68 B type USB 3.0, sealed through panel, Sealed 'A' type at front of panel, standard 'A' type at rear |

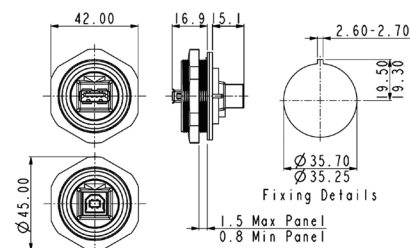
Rear Panel Mounting Connector



PX0848/B

PX0848/A

- PX0848/A – USB 2.0 'A' type IP68 to USB 2.0 'B' type connector
- PX0848/B – USB 2.0 'B' type IP68 to USB 2.0 'A' type connector
- PX0848/A3 – USB 3.0 'A' type IP68 to USB 3.0 'A' type connector
- Mates with PX0840 and PX0841 cable connectors



**Part no.** **Description**

|           |                                                                                                   |
|-----------|---------------------------------------------------------------------------------------------------|
| PX0848/A  | IP68 A type USB 2.0, rear panel mounted. Sealed A type at front of panel, standard B type at rear |
| PX0848/B  | IP68 B type USB 2.0, rear panel mounted. Sealed B type at front of panel, standard A type at rear |
| PX0848/AA | IP68 A type USB 2.0, rear panel mounted. Sealed A type at front of panel, standard A type at rear |
| PX0848/A3 | IP68 A type USB 3.0, rear panel mounted. Sealed A type at front of panel, standard A type at rear |

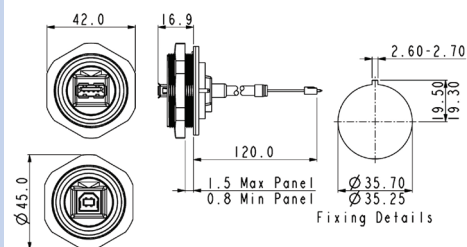
Rear Panel Mounting Connector



PX0849/B

PX0849/A

- PX0849/A - USB 2.0 'A' type IP68 connector with 5-way crimp connector
- PX0849/B - USB 2.0 'B' type IP68 connector with 5-way crimp connector
- PX0849/A3 - USB 3.0 'B' type IP68 connector with 10-way crimp connector
- Mates with PX0840 and PX0841 cable connectors



**Part no.** **Description**

|           |                                                                                                 |
|-----------|-------------------------------------------------------------------------------------------------|
| PX0849/A  | IP68 A type USB 2.0, rear panel mounted. Sealed A type at front of panel, 5-way header at rear  |
| PX0849/B  | IP68 B type USB 2.0, rear panel mounted. Sealed B type at front of panel, 5-way header at rear  |
| PX0849/A3 | IP68 A type USB 3.0, rear panel mounted. Sealed A type at front of panel, 10-way header at rear |

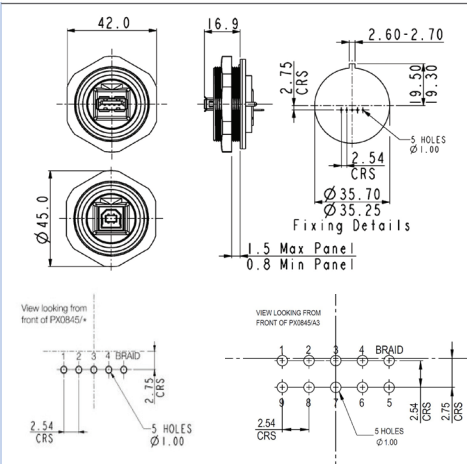
PCB Panel Mounting Connector- PCB Direct Mount



PX0845/B

PX0845/A

- PX0845/A – USB 2.0 'A' type IP68 connector
- PX0845/B – USB 2.0 'B' type IP68 connector
- PX0845/A3 – USB 3.0 'A' type IP68 connector
- PCB contacts at rear
- Direct PCB mount
- Mates with PX0840 and PX0841 cable connectors



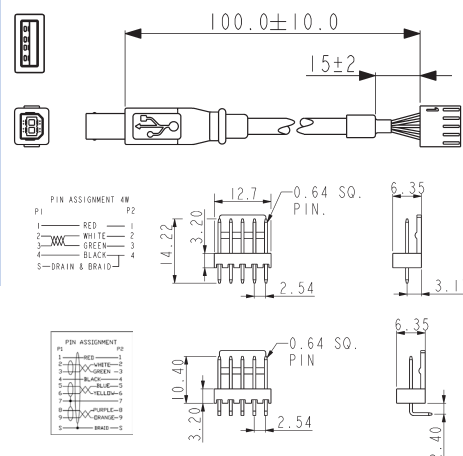
**Part no.** **Description**

|           |                                                                                                             |
|-----------|-------------------------------------------------------------------------------------------------------------|
| PX0845/A  | IP68 A type USB 2.0, rear panel mounted. Sealed A type at front of panel, direct mount PCB contacts at rear |
| PX0845/B  | IP68 A type USB 2.0, rear panel mounted. Sealed A type at front of panel, direct mount PCB contacts at rear |
| PX0845/A3 | IP68 A type USB 3.0, rear panel mounted. Sealed A type at front of panel, direct mount PCB contacts at rear |

#### PCB Adaptor Leads



- Standard A and B type USB 2.0 connectors to 5-way crimp adaptor leads
- 5 way-headers, 2.54mm pitch, horizontal or vertical mounting
- Standard A type USB 3.0 to 10-way crimp adaptor leads



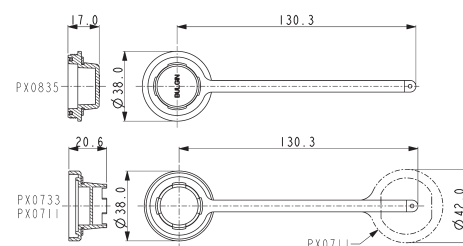
#### Part no. Description

|        |                                            |
|--------|--------------------------------------------|
| 14193  | USB 2.0 'A' type to 5-way crimp connector  |
| 14194  | USB 2.0 'B' type to 5-way crimp connector  |
| 100286 | USB 3.0 'A' type to 10-way crimp connector |
| 14191  | 5-way PCB header straight                  |
| 14192  | 5-way PCB header right angle               |
| 100287 | 10-way PCB header straight                 |
| 100288 | 10-way PCB header right angle              |

#### Accessories



- Sealing caps to maintain IP68 rating when connectors are not in use
- PX0835 for cable connectors PX0840 & PX0841
- PX0733 for front panel mount connectors PX0842, PX0843 & PX0844
- PX0711 for rear panel mount connectors PX0848, PX0849 & PX0845



#### Part no. Description

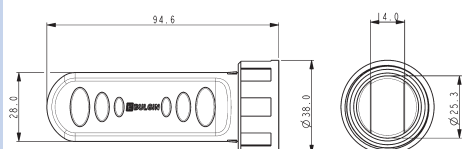
|        |                                                                          |
|--------|--------------------------------------------------------------------------|
| PX0835 | Sealing Cap for cable connectors (PX0840, PX0841)                        |
| PX0733 | Sealing Cap for front panel mounting connector (PX0842, PX0843 & PX0844) |
| PX0711 | Sealing Cap for rear panel mounting connector (PX0848, PX0849, PX0845)   |

#### USB Flash Drive Cover



PX0852

- For use with USB Flash Drives
- Maintains IP68 rating when mated with panel connector
- For use with 'A' type connectors: PX0842, PX0843, PX0845, PX0848 & PX0849
- Internal accommodation 17.5 x 14.0 x 83mm approx.

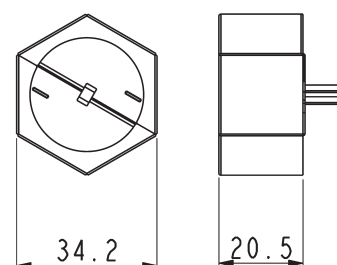


#### Screening Can



PX0465

- Maintains cable screening directly to panel
- Screening can clips around the panel fixing nut
- For use on PX0460/A, PX0460/B and PX0360/A3





Cables & connectors

|                                                                                                               |                                                                    |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <b>Mechanical</b><br>Sealing                                                                                  | IP68, EN60529:1992+A2:2013<br>(10m depth for 2 weeks)              |
|                                                                                                               | IP69K, Tested in accordance with DIN<br>40050/Part 9 IP6k9k        |
| Operating temperature                                                                                         | 0°C to +70°C                                                       |
| Salt Mist                                                                                                     | EN60068-2-52 Test Kb Salt Mist (Cyclic)<br>Marine Severity Level 1 |
| <b>Electrical</b><br>No. of Contacts<br>Current rating<br>Voltage rating<br>Contact resistance<br>Performance | 4<br>1A<br>30V AC (RMS)<br>30m Ω max.<br>USB version 2.0           |

Materials - Overmoulded

|                     |             |
|---------------------|-------------|
| Overmould material  | PVC (black) |
| Flammability rating | UL94V-0     |

Materials - Re-wireable and Panel Connectors

|                               |                        |
|-------------------------------|------------------------|
| Shell material                | Steel                  |
| Shell plating                 | Nickel                 |
| Contact material              | Copper Alloy           |
| Contact plating               | 30 micro inch Gold     |
| Connector body & locking ring | Glass Loaded Polyester |
| Panel connector               | Acetal                 |
| Flammability rating           | UL94 HB                |
| 'O' rings                     | Silicone               |
| Panel Gasket - round          | Silicone               |
| Panel Gasket - square         | Neoprene               |
| Mating cycles                 | 1,000                  |
| RoHS                          | Compliant              |

Materials - cable

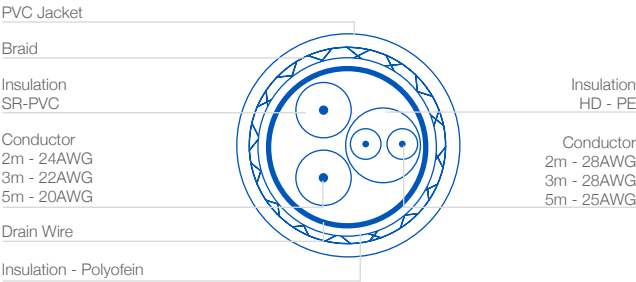
|              |                     |
|--------------|---------------------|
| Cable Jacket | PVC (black)         |
| Screen       | Tinned copper braid |
| Flammability | UL94V-0             |
| RoHS         | Compliant           |

|         |       |                 |            |
|---------|-------|-----------------|------------|
| Length: | Dia   | Conductors      | Conductors |
|         |       | Signal          | 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

|                                                                                                                                                                        |                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Electrical</b><br>No. of conductors<br>Current rating<br>Voltage rating<br>Contact resistance<br>PCB pitch                                                          | 4<br>1A<br>30V AC (RMS)<br><10m Ω max.<br>2.54mm                                                                                 |
| <b>Materials</b><br>Moulding<br>Flammability<br>Contact material<br>Contact plating<br>Wire insulation<br>Conductors<br>Operating temperature<br>Mating cycles<br>RoHS | Polycarbonate<br>UL94V-0<br>Copper Alloy<br>30 micro inch Gold<br>PVC (black)<br>4 x 28AWG<br>0°C to +70°C<br>1,000<br>Compliant |

USB 2.0 Cable construction - PX0840, PX0841



USB 2.0 Contact Diagram - PX0843 & PX0849

| P1               | PAIR | WIRE COLOUR   | P2               |
|------------------|------|---------------|------------------|
| +5V 1            | —    | RED           | 1 +5V            |
| USB- 2<br>USB+ 3 | ⌘    | WHITE / BLUE  | 2 USB-<br>3 USB+ |
| GND 4            | —    | BLACK         | 4 GND            |
| 5                | —    | DRAIN & BRAID | 5                |

## Cables & connectors

### Mechanical

|                       |                                                                    |
|-----------------------|--------------------------------------------------------------------|
| Sealing               | IP68, EN60529:1992+A2:2013<br>(10m depth for 2 weeks)              |
|                       | IP69K, Tested in accordance with DIN<br>40050/Part 9 IP6k9k        |
| Operating temperature | 0°C to +70°C                                                       |
| Salt Mist             | EN60068-2-52 Test Kb Salt Mist (Cyclic)<br>Marine Severity Level 1 |

### Electrical

|                    |                 |
|--------------------|-----------------|
| No. of Contacts    | 9               |
| Current rating     | 1A              |
| Voltage rating     | 30V AC (RMS)    |
| Contact resistance | 30m Ω max.      |
| Performance        | USB version 3.0 |

### Materials - Overmoulded

|                     |             |
|---------------------|-------------|
| Overmould material  | PVC (black) |
| Flammability rating | UL94V-0     |

### Materials - Re-wireable and Panel Connectors

|                               |                        |
|-------------------------------|------------------------|
| Shell material                | Steel                  |
| Shell plating                 | Nickel                 |
| Contact material              | Copper Alloy           |
| Contact plating               | Gold                   |
| Connector body & locking ring | Glass Loaded Polyester |
| Panel connector               | Acetal                 |
| Flammability rating           | UL94 HB                |
| 'O' rings                     | Silicone               |
| Panel Gasket - round          | Silicone               |
| Panel Gasket - square         | Neoprene               |
| Mating cycles                 | 1,000                  |
| <b>RoHS</b>                   | Compliant              |

### Materials - cable

|              |                     |
|--------------|---------------------|
| Cable Jacket | PVC (black)         |
| Screen       | Tinned copper braid |
| Flammability | UL94V-0             |
| <b>RoHS</b>  | Compliant           |

| Length: | Dia   | Conductors<br>Signal | Conductors<br>Power |
|---------|-------|----------------------|---------------------|
| 1m      | 5.5mm | 7 x 28AWG            | 2 x 24AWG           |
| 2m      | 5.5mm | 7 x 28AWG            | 2 x 24AWG           |
| 3m      | 5.5mm | 7 x 28AWG            | 2 x 24AWG           |

## PCB adaptor leads

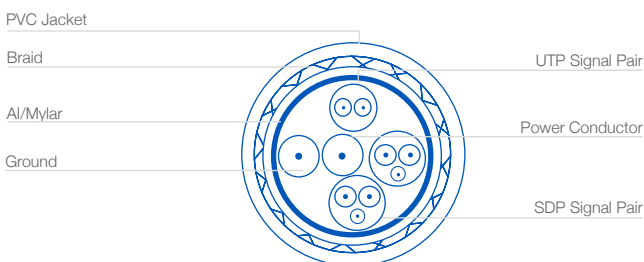
### Electrical

|                    |              |
|--------------------|--------------|
| No. of conductors  | 9            |
| Current rating     | 1A           |
| Voltage rating     | 30V AC (RMS) |
| Contact resistance | 30m Ω max.   |
| PCB pitch          | 2.54mm       |

### Materials

|                       |               |
|-----------------------|---------------|
| Moulding              | Polycarbonate |
| Flammability          | UL94V-0       |
| Contact material      | Copper Alloy  |
| Contact plating       | Gold          |
| Wire insulation       | PVC (black)   |
| Flammability          | UL94-V0       |
| Conductors            | 9 x 28AWG     |
| Operating temperature | 0°C to +70°C  |
| Mating cycles         | 1,000         |
| <b>RoHS</b>           | Compliant     |

## USB 3.0 Cable construction - PX0840/A3, PX0841/A3



## USB 3.0 Contact Diagram - PX0843/A3 & PX0849/A3

| P1      | PAIR | WIRE COLOUR     | P2      |
|---------|------|-----------------|---------|
| +5V 1   | —    | RED             | 1 +5V   |
| USB- 2  | ⌘    | WHITE / GREEN   | 2 USB-  |
| USB+ 3  | ⌘    |                 | 3 USB+  |
| GND 4   | —    | BLACK           | 4 GND   |
| SSTX- 5 | ⌘    | BLUE / YELLOW   | 5 SSTX- |
| SSTX+6  | ⌘    |                 | 6 SSTX+ |
| GND 7   | —    | N/A             | 7 GND   |
| SSRX-8  | ⌘    | PURPLE / ORANGE | 8 SSRX- |
| SSRX+9  | ⌘    |                 | 9 SSRX+ |
| S       | —    | BRAID           | S       |