



**THE DATASHEET OF  
SA3180/1**





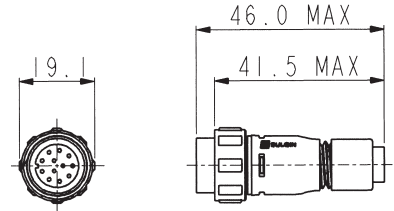
- IP68 rating tested at 1.054kg/sq cm (15lb/sq in) 10m depth for 2 weeks
- IP69K, Tested in accordance with DIN 40050/Part 9 IP6k9k
- 2 and 3 Contact - 8A, 250V rating
- 4, 6 and 8 Contact - 5A, 125V rating
- 10 and 12 Contact - 1A, 50V rating
- 2.5mm contact engagement for electrical integrity 'Scoop proof' contacts
- Contact inserts are part of body moulding
- Cable range from 3 to 7mm
- Overall length (flex + Inline) 80mm
- Gold plated contacts
- Diameter over coupling ring 19.1mm
- Pre-wired, overmoulded cable assemblies
- Flex, Inline, Front Panel, Rear Panel and PCB mounting body styles
- Plug and Socket versions in all body styles
- Flame Retardant moulding material - Polyamide UL94-V0
- Contacts supplied separately (except PCB versions)
- Sealing caps available to maintain IP68 rating
- Secure sealing system
- Crimp and solder contacts
- PCB mounting connector supplied with contacts pre-loaded
- Front and rear panel mounting panel connectors
- VDE and cULus approvals
- EN60068-2-52 Test Kb Salt Mist (Cyclic) Marine Severity Level 1
- Smart options available with EEPROM memory chip

Flex Cable Connector



PX0410

- Mates with Inline or Panel mounting versions PX0401, PX0411, PX0412 & PX0413
- Plug or socket
- 2, 3, 4, 6, 8, 10 or 12 Contact
- Screw locking ring
- Contacts supplied separately

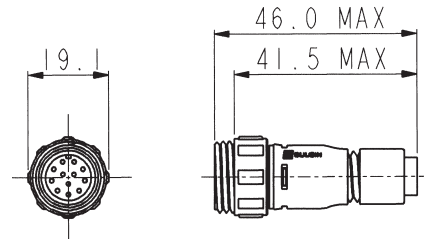


Inline Cable Connector



PX0411

- Mates with Flex Cable connectors PX0400, PX0402 & PX0410
- Plug or socket
- 2, 3, 4, 6, 8, 10 or 12 Contact
- For Inline cable connection
- Contacts supplied separately

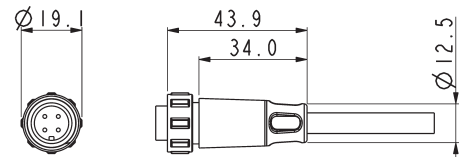


Pre Wired Flex Cable Connector



PX0400

- Overmoulded Flex connector for pre-wired cable assemblies
- Plug or socket
- Cable range 2.5 -9.0mm O/D
- 2, 3, 4, 6, 8, 10 or 12 Contact
- Mates with PX0401 & PX0411 Inline connectors and PX0412 & PX0413 panel mounting connectors

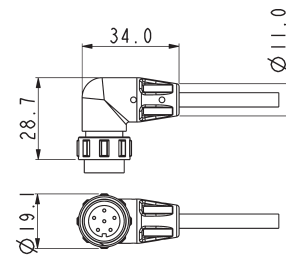


Pre Wired Flex Cable Connector



PX0402

- Right-angled overmoulded Flex connector for pre-wired cable assemblies
- Plug or socket
- Cable range 2.5 -9.0mm O/D
- 2, 3, 4, 6, 8, 10 or 12 Contact
- Mates with PX0401 & PX0411 Inline connectors and PX0412 & PX0413 panel mounting connectors

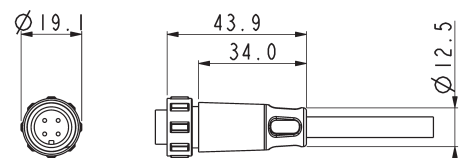


Smart Connector



PXS410

- Overmoulded pre-wired sealed connector
- 4, 6, 8, 10, 12 Contact
- Embedded memory chip through 1 wire EEPROM
- Mates with PX0401 & PX0411 Inline connectors and PX0412 & PX0413 panel mounting connectors

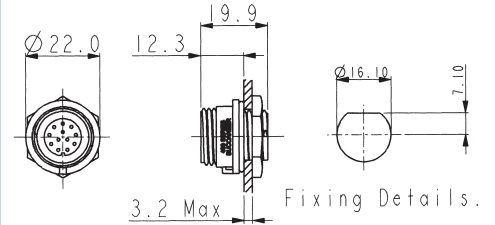


Front Panel Mounting Connector



PX0412

- Mates with Flex Cable connectors PX0410, PX0400 & PX0402
- Single hole fixing
- Contacts supplied separately
- 2, 3, 4, 6, 8, 10 or 12 Contact

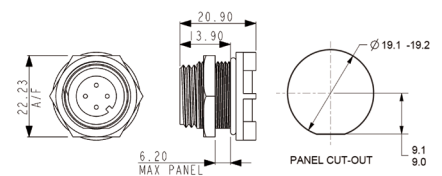


Rear Panel Mounting Connector



PX0413/XXX

- Mates with Flex Cable connector PX0410, PX0400 & PX0402
- Single hole fixing
- Contacts supplied separately
- 2, 3, 4, 6, 8, 10 or 12 Contact

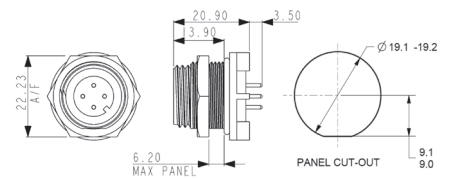


PCB Mounting Connector



PX0413/XXX/PC

- Mates with Flex Cable connector PX0410, PX0400 & PX0402
- PCB Rear Panel mounting
- Straight PC spills
- Supplied with pre-loaded gold plated contacts
- 2, 3, 4, 6, 8, 10 or 12 Contact



Sealing Caps



PX0480 PX0480/1 PX0481 PX0484

- Maintains IP68 Rating of Unmated Connectors
- PX0480: Fits PX0412 (panel mounting)
- PX0480/1: Fits PX0401 & PX0411 (Inline)
- PX0481: Fits PX0400, PX0402 & PX0410 (flex connector)
- PX0484: Fits PX0413 (PCB and rear panel mount)

Gland Packs

Part No	Description
PX0482	Pack of 4 pairs cable glands and collets to suit cables from 3.0 to 5.0mm diameter.
PX0483	Pack of 4 pairs cable glands and collets to suit cables from 5.0 to 7.0mm diameter.

Crimp Contacts

Contact	Current Rating	Plug Part No.	Socket Part No.	Pack Qty	Cable Acceptance (dia)
2, 3	8A	SA3350	SA3349	10	20 - 24 AWG
4, 6, 8	5A	SA3348	SA3347	10	22 - 26 AWG
10, 12	1A	SA3180	SA3179	10	24 - 28 AWG

Solder Contacts

Contact	Current Rating	Plug Part No.	Socket Part No.	Pack Qty	Cable Acceptance (dia)
2, 3	8A	SA3350/1	SA3349/1	10	20 - 24 AWG
4, 6, 8	5A	SA3348/1	SA3347/1	10	22 - 26 AWG
10, 12	1A	SA3180/1	SA3179/1	10	24 - 28 AWG

Insertion / Extraction

	Contacts	Contact Rating	Colour	Part No
Insertion/Extraction Tool	2,3	8A	Blue	13027/2
Insertion/Extraction Tool	4,6,8	5A	Red	13027/1
Insertion/Extraction Tool	10,12	1A	Green	13027

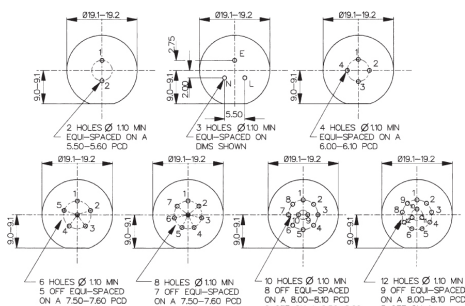
Crimp tools

	Contacts	Contact Rating	Colour	Part No
Positioner	2,3	8A	Blue	14025/8AMP
Positioner	4,6,8	5A	Red	14025/5AMP
Positioner	10,12	1A	Green	14025/1AMP
8 Indent Crimp Tool for use with positioners				14025

PX0413 PCB Contact Layout

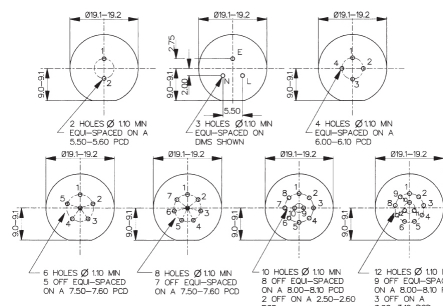
Sockets

Contact numbers viewed from rear of panel



Plugs

Contact numbers viewed from rear of panel



2 Contact  
(8 Amp)



3 Contact  
(8 Amp)



4 Contact  
(5 Amp)



6 Contact  
(5 Amp)



8 Contact  
(5 Amp)



10 Contact  
(1 Amp)





12 Contact  
(1 Amp)

**Electrical:**

No. Contacts:	2, 3	4, 6, 8	10, 12
Current Rating:	8A	5A	1A
Voltage Rating:	250V AC/DC	125V AC/DC	50V AC/DC
Contact Resistance:	<5mΩ		
Insulation Resistance:	>10 <sup>6</sup> MΩ (@ 500V DC)		
AC Breakdown voltage:	2.5kV		
Cycles:	>1000		
Operating Temperature:			
Flex and panel types	-40°C to +80°C		
Overmoulded	-20°C to +60°C		

**Approvals:**

 cULus (Underwriters Laboratory)	E214972
 VDE (Verband der Elektrotechnik)	40002226

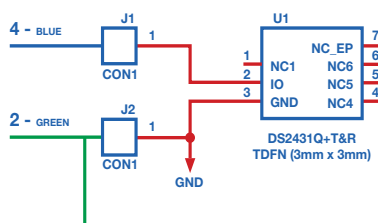
Overmoulded cable assemblies approvals to customer requirements.

**Material:**

Flex and panel types:	
Body Mouldings:	Polyamide
Flammability Rating:	UL94V-0
UV Resistance:	To EN 50021:1999
Overmoulded types:	
Body Mouldings:	Polyurethane
Flammability Rating:	UL94V-HB
Contacts:	Copper alloy, Gold plated
O Rings:	Nitrile
Panel Sealing O Ring:	Nitrile
<b>RoHS</b>	Compliant

**Smart Connector EEPROM:**

1024 - Bit Memory  
1 - Wire  
Can be Write Protected  
Manufacturer - Maxim Intergrated  
Part Number - 0S2431



**Mechanical:**

Sealing:	IP69K, Tested in accordance with DIN 40050/Part 9 IP6k9k
	IP68, EN60529:1992+A2:2013 tested @ 1.054kg/sq cm (15lb/sq in) 10m depth for 2 weeks
Salt Mist:	EN60068-2-52 Test Kb Salt Mist (Cyclic) Marine Severity Level 1
Cable Acceptance:	3.0 - 7.0mm
Contact Accommodation:	2, 3 Contact, 20 - 24 AWG 4, 6, 8 Contact, 22 - 26 AWG 10, 12 Contact, 24 - 28 AWG
Termination:	Crimp, solder and PCB
Insertion/Withdrawal Force:	
No. Contacts:	2 3 4 6 8 10 12
Insertion Force (typ):	19N 25N 27N 27N 28N 55N 62N
Withdrawal Force (typ):	12N 17N 17N 21N 22N 25N 29N
Tightening Torques:	
Panel mount (PX0412)	
Rear fixing nut:	1.0-1.1Nm (9lbf.in.)
Panel mount (PX0413)	
Front fixing nut:	1.0-1.1Nm (9lbf.in.)
Cable Retention force:	
3.0mm dia	60N
4.0 to 7.0mm dia	80N
Rear panel thread PX0412:	M16x1.5
Panel thread PX0413:	18.97x26TPI Whitworth form to BS84 med fit

**Dimensions:**

Overall dimensions of connectors when mated together	
Flex + Inline	80mm
Dia. over coupling ring	19.1mm
	Dia. over coupling ring

Plug	Wire Colour
1	Red
2	Green
3	Yellow
4	Blue
5	White
6	Black
7	Brown
8	Violet
9	Orange
10	Pink
11	Turquoise
12	Grey

Standard:

<b>PX041X</b>	/	<b>XX</b>	/	<b>X</b>	/	<b>XXXX</b>
<b>Body Styles</b>  PX0410 = Flex body PX0411 = Inline body PX0412 = Front panel mounting body PX0413 = Rear panel/PCB mounting body		<b>Number of Contacts</b>  02 03 04 06 08 10 12		<b>Contact Type</b>  P = Plug, S = Socket		<b>For PX0410 and PX0411 cable connectors - Cable Entry Size:</b>  3035 = 3.0 - 3.5mm (Light Grey) 3540 = 3.5 - 4.0mm (Grey) 4045 = 4.0 - 4.5mm (Green) 4550 = 4.5 - 5.0mm (Red)  5055 = 5.0 - 5.5mm (Yellow) 5560 = 5.5 - 6.0mm (Blue) 6065 = 6.0 - 6.5mm (White) 6570 = 6.5 - 7.0mm (Black)
<b>Examples:</b>  PX0410/10S/4045 = Flex cable connector, 10 socket contacts with gland and collet for cables between 4.0 and 4.5mm diameter (supplied less contacts). PX0412/08P = Front panel mounting connector, 8 Plug contacts (supplied less contacts). PX0413/06P = Rear panel mounting connector, for 6 Plug contacts (supplied less contacts). PX0413/04P/PC = Rear panel/PCB connector, 4 Plug contacts, PCB mounting (supplied with contacts loaded).						Cable gland and collet supplied in colour coded pairs.  For PX0413 PCB/Rear Panel Mount: PC = Pre-loaded PC Plugs Blank = no Plugs supplied  For PX0412 Front Panel Mount: Suffix not required - leave blank

Pre Wired Variation:

<b>PX040X</b>	/	<b>XXX</b>	/	<b>XX</b>	/	<b>X</b>
<b>Body Styles</b>  PX0400 = Pre Wired Flex Cable Connector PX0402 = Pre Wired Flex Cable Connector - Right angle		<b>Length</b>  001 = 1m 002 = 2m 003 = 3m ... 015 = 15m		<b>Number of Contacts</b>  02 03 04 06 08 12		<b>Contact Type</b>  P = Plug S = Socket

Smart:



<b>PXS410</b>	/	<b>XX</b>	/	<b>XX</b>	/	<b>X</b>
<b>Body Styles</b>  PXS410 = Flex body		<b>Cable length</b>  02 = 2m 03 = 3m 05 = 5m 10 = 10m		<b>Number of Contacts</b>  04 06 08 10 12		<b>Contact Type</b>  P = Plug S = Socket

Examples:

PXS410/02/04/P = Smart flex cable connector, 2m cable to free end, 4 Plug contact

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