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SOURIAU

JBX SERIES



Push-Pull Coupling Mechanism



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JBX SERIES

Overview

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Typical Applications



Medical



Robotics - Machine tools



Building Automation & Control



Instrumentation / Measurement



Off road - Mining - Railway



Telecom - Data infrastructure

Features & Benefits

WATER PROOF

IP68 in Mated and Unmated Conditions

Ideal for outdoor applications with temporary or continuous water immersion and dust protection.

SIGNAL INTEGRITY

360° EMI Shielded

Less than 5mΩ: Qualified and Compatible to be used in electromagnetic radiation areas and ensures proper signal integrity and transmission.

SPACE SAVING

High Density Layouts

Ideal for compact devices due to small footprint. The use of 0.5mm contacts along with miniature housing makes it suitable for tight applications.

RELIABLE MATING

Push Pull Locking Mechanism

Only requires two fingers to mate/unmate securely with an audible, tactile and visual indicator, capable of mating over 5,000 times.

COST SAVINGS

Mixed Power & Signal Layouts

Power supply and transmission can be combined in a unique interconnection solution to reduce system complexity and minimize component/installation costs.

JBX IP40

Protective Boot



Choice of Contact termination

- Crimp
- Solder

Plug



FC: Right Angle Plug



FD: Straight Plug



FG: Breakaway Plug



FF: Straight Plug no Latch with Black Boot



FN: Straight Plug with Lanyard



FM: Right Angle Plug with Lanyard

Receptacle



EA: Double Nut Receptacle*



ED: Protuding Front Mount



EP: Rear Mount Receptacle*



ER: Front Mount Receptacle



EZ: Rear Mount Receptacle with Mounting Pins



PC: In Line Cable Receptacle



SA: Rear Mount Cable Receptacle



SR: Front Mount Cable Receptacle

Choice of Contact termination

- Crimp
- Straight PCB Tails
- Solder
- 90° PCB Tails

Protective Boot



* available with 90° PCB tails

Overview

JBX IP68

Protective Boot



Choice of Contact termination

- Crimp
- Solder

Plug

(Available in size 0 and 2)



FH: Straight Plug

Receptacle

(Available in size 0 and 2)

HC: Rear Mount Receptacle*
Available size 0



HD: Protuding Front Mount Receptacle
Available size 0



HH: Front Mount Extended Receptacle
Available size 0 & 2



EC: Double Nut, Front or Rear Mount Receptacle *
Available size 2



Choice of Contact termination

- Crimp
- Straight PCB Tails
- Solder
- 90° PCB Tails

Available for JBX IP40 and JBX IP68



Boot Version

Example: JBXFG0G02MCSDSMR

+





















Boot

Example: JBX0MPR

=

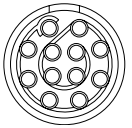
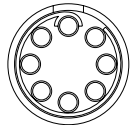
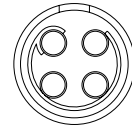
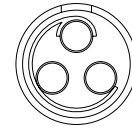
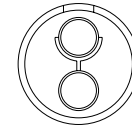
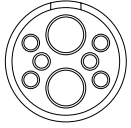
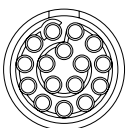
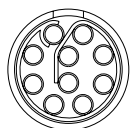
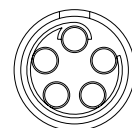
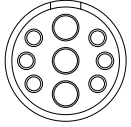
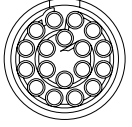
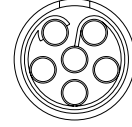
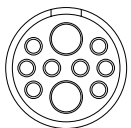
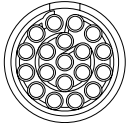
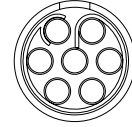
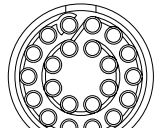
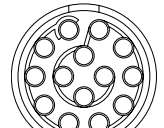
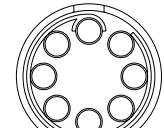
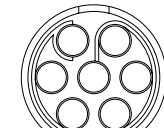
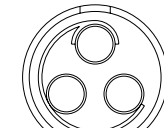
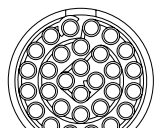

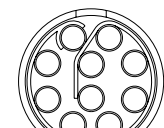
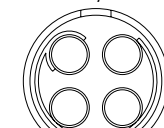


Layouts (Electrical parameter according to UL1977)

Shell size	Contact Ø 0.5	Contact Ø 0.7	Contact Ø 0.9	Contact Ø 01.3	Contact Ø 1.6	Contact Ø 2.0
00	<p>2 contacts 2A 500V</p>  <p>Page 16</p>					
	<p>4 contacts 2A 500V</p>  <p>Page 56</p>					
0	<p>6 contacts 2.5A 320V</p>  <p>Page 96</p>	<p>4 contacts 7A 660V</p>  <p>Page 60</p>	<p>2 contacts 10A 660V</p>  <p>Page 20</p>			
	<p>7 contacts 2.5A 320V</p>  <p>Page 112</p>	<p>5 contacts 6.5A 400V</p>  <p>Page 80</p>	<p>3 contacts 8A 600V</p>  <p>Page 36</p>			
	<p>8 contacts 2A 190V</p>  <p>Page 132</p>					
1	<p>10 contacts 2.5A 300V</p>  <p>Page 164</p>	<p>6 contacts 7A 660V</p>  <p>Page 102</p>	<p>4 contacts 10A 900V</p>  <p>Page 66</p>	<p>2 contacts 15A 760V</p>  <p>Page 26</p>		
	<p>12 contacts 2.5A 170V</p>  <p>Page 184</p>	<p>7 contacts 7A 660V</p>  <p>Page 118</p>	<p>5 contacts 9A 660V</p>  <p>Page 86</p>	<p>3 contacts 12A 600V</p>  <p>Page 42</p>		
			<p>8 contacts 5A 600V</p>  <p>Page 138</p>			

Note: Contacts are numbered Counterclockwise in the plug and clock wise in the receptacle.

Contact	Ø 0.5 mm	Ø 0.7 mm	Ø 0.9 mm	Ø 1.3 mm	Ø 1.6 mm	Ø 2.0 mm
Solder (AWG)	28 and smaller	22 and smaller	22 and smaller	20 and smaller	18 and smaller	16 and smaller
Crimp (AWG)	Not available	22 - 24 - 26	20 - 22 - 24	18 - 20 - 22	14 - 16 - 18	12 - 14 - 16

Shell size	Contact Ø 0.7	Contact Ø 0.9	Contact Ø 1.3	Contact Ø 1.6	Contact Ø 2.0	Mixed Contact		
2	<p>12 contacts 7A 830V</p>  <p>Page 188</p>	<p>8 contacts 10A 830V</p>  <p>Page 142</p>	<p>4 contacts 15A 1,000V</p>  <p>Page 70</p>	<p>3 contacts 17A 830V</p>  <p>Page 46</p>	<p>2 contacts 30A 1,000V</p>  <p>Page 30</p>	<p>8 contacts 26A 700V 6 x Ø 0.7 2 x Ø 2.0</p>  <p>Page 148</p>		
	<p>16 contacts 6A 730V</p>  <p>Page 198</p>	<p>10 contacts 8A 830V</p>  <p>Page 168</p>	<p>5 contacts 14A 900V</p>  <p>Page 90</p>				<p>9 contacts 26A 700V 6 x Ø 0.7 3 x Ø 1.3</p>  <p>Page 158</p>	
	<p>18 contacts 5.5A 660V</p>  <p>Page 204</p>			<p>6 contacts 12A 900V</p>  <p>Page 106</p>				<p>10 contacts 17A 700V 8 x Ø 0.7 2 x Ø 1.6</p>  <p>Page 174</p>
	<p>19 contacts 5A 660V</p>  <p>Page 214</p>			<p>7 contacts 11A 730V</p>  <p>Page 122</p>				
3	<p>22 contacts 5.5A 560V</p>  <p>Page 220</p>	<p>14 contacts 9A 830V</p>  <p>Page 194</p>	<p>8 contacts 12A 830V</p>  <p>Page 154</p>	<p>7 contacts 15A 1,000V</p>  <p>Page 128</p>	<p>3 contacts 25A 1,600V</p>  <p>Page 52</p>			
	<p>30 contacts 3.5A 400V</p>  <p>Page 224</p>	<p>18 contacts 7A 660V</p>  <p>Page 210</p>	<p>10 contacts 12A 600V</p>  <p>Page 180</p>			<p>4 contacts 25A 1,100V</p>  <p>Page 76</p>		

JBX Sealed in Unmated Condition

All dimensions are in mm

General technical characteristics



Materials

- **Outer shell and collet nut:** Brass
- **Latching sleeve:** Brass
- **Shielding ring:** Brass
- **Nut:** Brass
- **Half bushes:** Brass
- **Clip:** Beryllium copper
- **Insert:** PEEK
- **Collet:** PA 6/6 + MoS2
- **Cable seal:** Silicon rubber
- **Contacts:** See every layout pages
- **Halogen free**

Environmental

- **Operating temperature:**
from -40°C to +125°C
- **Flammability rating:**
UL94 V-0
- **Salt spray:**
per MIL-STD-202 method 101
- 48 h (nickel chrome)
- 96 h (black anodized coupling ring)
Higher salt spray resistance (200/500 h)
upon request
- **Sealing:**
- Dynamic IP40 / IP68 in mated condition
- Sealed IP68 connectors in unmated condition
are marked with the symbol "▲".
Please refer to the connector section.
- **Fluid resistance:**
- Gas and oil
- Mineral oil
- Acid bath
- Basic bath
- **Shielding effectiveness:**
55 dB up to 100 MHz

Electrical



- **In accordance with:**
- UL 1977: Certificate ECBT2
File number: E169916
- CSA C22.2: Certificate ECBT8
File number E169916
- Also see pages 10 & 11

Mechanical

- **Durability:**
> 5,000 cycles per IEC 61984 group B
- **Vibration resistance:**
10 - 2,000 Hz, acceleration 15 g,
contact Ø 0.7 mm and 0.9 mm
10 - 2,000 Hz, acceleration 20 g,
contact Ø 1.3 mm - 1.6 mm and 2 mm
Per MIL-STD-1344A method 2005.1
- **Thermal shock:**
5 cycles 30 min. from -40°C to 105°C
Per MIL-STD-202 method 207
- **Mechanical shock:**
50 g, duration 6 ms ; contact Ø 0.7 mm and
0.9 mm
100 g, duration 6 ms ; contact Ø 1.3 mm -
1.6 mm and 2 mm
Per MIL-STD-1344A method 20004.1
- **Discrimination/Keying:**
To eliminate mismatching, JBX connectors
are offered with discrimination keys to avoid
interconnection system errors.
Please consult us for more information.

JBX SERIES

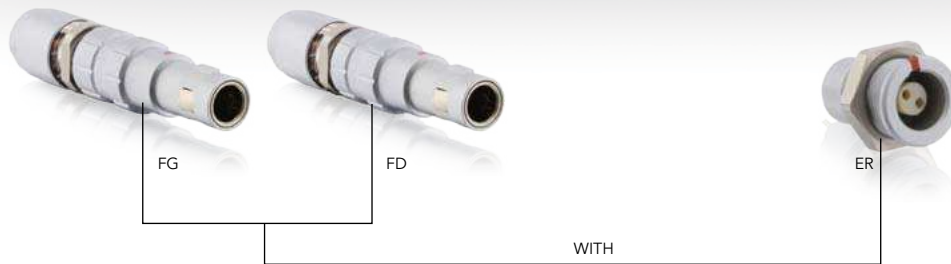
JBX Series

Connector

2 contacts	JBX00-02:	2A	500V	16
	JBX0-02:	10A	660V	20
	JBX1-02:	15A	760V	26
	JBX2-02:	30A	1,000V	30
3 contacts	JBX0-03:	8A	600V	36
	JBX1-03:	12A	600V	42
	JBX2-03:	17A	830V	46
	JBX3-03:	25A	1,600V	52
4 contacts	JBX00-04:	2A	500V	56
	JBX0-04:	7A	660V	60
	JBX1-04:	10A	900V	66
	JBX2-04:	15A	1,000V	70
	JBX3-04:	25A	1,100V	76
5 contacts	JBX0-05:	6.5A	400V	80
	JBX1-05:	9A	660V	86
	JBX2-05:	14A	900V	90
6 contacts	JBX0-06:	2.5A	320V	96
	JBX1-06:	7A	660V	102
	JBX2-06:	12A	900V	106
7 contacts	JBX0-07:	2.5A	320V	112
	JBX1-07:	7A	660V	118
	JBX2-07:	11A	730V	122
	JBX3-07:	15A	1,000V	128
8 contacts	JBX0-08:	2A	190V	132
	JBX1-08:	5A	600V	138
	JBX2-08:	10A	830V	142
	JBX2-001:	26A	700V	148
	JBX3-08:	12A	830V	154
9 contacts	JBX2-002:	26A	700V	158
10 contacts	JBX1-10:	2.5A	300V	164
	JBX2-10:	8A	830V	168
	JBX2-003:	17A	700V	174
	JBX3-10:	12A	600V	180
12 contacts	JBX1-12:	2.5A	170V	184
	JBX2-12:	7A	830V	188
14 contacts	JBX3-14:	9A	830V	194
16 contacts	JBX2-16:	6A	730V	198
18 contacts	JBX2-18:	5.5A	660V	204
	JBX3-18:	7A	660V	210
19 contacts	JBX2-19:	5A	660V	214
22 contacts	JBX3-22:	5.5A	560V	220
30 contacts	JBX3-30:	3.5A	400V	224

Electrical parameters according to UL1977

JBX00-02 - IP40 (2 x Ø 0.5mm)



Layout



Connector IP40 Part Number

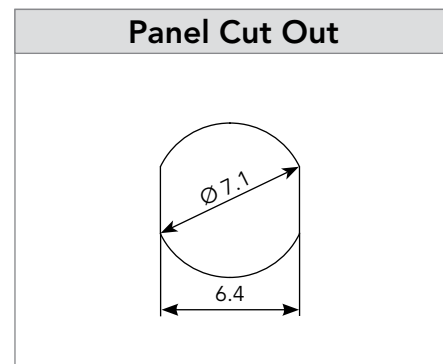
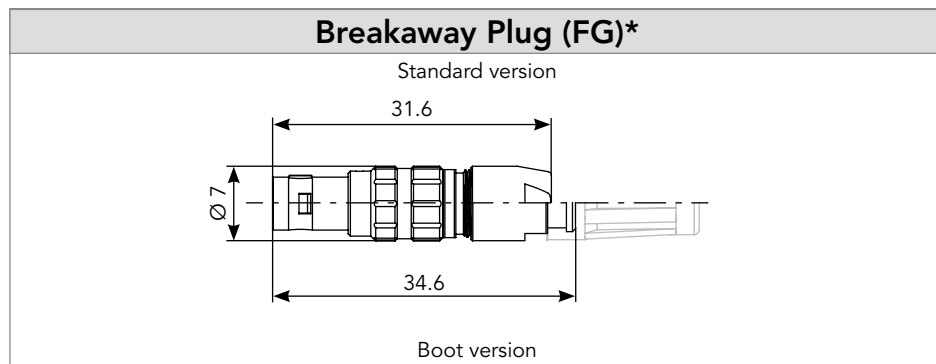
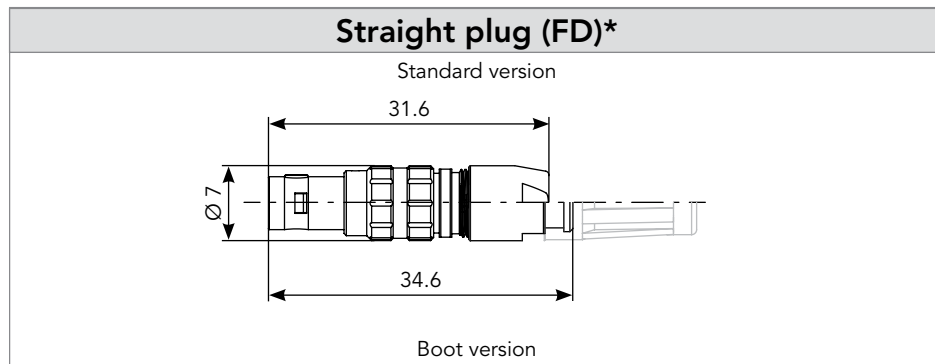
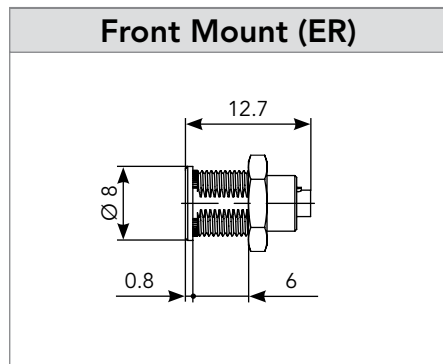
Contact type	Connector type	Description	Part number ⁽¹⁾	
			Male insert	Female insert
Solder contacts see page 19	Receptacle	Front mount (ER)	JBXER00G02MSSDSR	JBXER00G02FSSDSR
	Plug	Straight plug (FD) *	JBXFD00G02MSSDSR	JBXFD00G02FSSDSR
		Breakaway plug (FG) *	JBXFG00G02MSSDSR	JBXFG00G02FSSDSR

* In order to get the back nut for protective boot please add «M» after the last «S». Example: JBX Straight Plug, size 00, 2 solder contacts, male insert = JBXFD00G02MSSDSMR. The protective boot need to be ordered separately, see page accessories.

(1): In order to get a black Chrome over Nickel please replace «S» before the «D» by one «N». Example: JBX Straight Plug, size 00, 2 solder contacts, male insert = JBXFD00G02MSNDSR.

JBX00-02 - IP40 (2 x Ø 0.5mm)

Dimensions (For mated connector lengths see page 19)



Note: all dimensions are in mm

JBX00-02 - IP40 (2 x Ø 0.5mm)

Accessories

Receptacle Dust Cap




Part number
JBXBR00

Plug Dust Cap




Part number
JBXBF00

Grounding Washer



Part number
JAXRA00251


Insulating Washer




Part number	Color
JBX00RIA	Blue
JBX00RIB	White
JBX00RIG	Grey
JBX00RIJ	Yellow
JBX00RIM	Brown
JBX00RIN	Black
JBX00RIR	Red
JBX00RIV	Green
JBX00RIO	Orange

Note : Insulating washers are not compatible with the IP68 versions

Protective Boot

Available only for FD & FG, with back nut protective boot 



Part number	Color
JBX00MPA	Blue
JBX00MPB	White
JBX00MPG	Grey
JBX00MPJ	Yellow
JBX00MPM	Brown
JBX00MPN	Black
JBX00MPR	Red
JBX00MPV	Green
JBX00MPO	Orange

The overall length is 12 mm longer with the protective boot.

Note: The protective boot is not a sealing element.

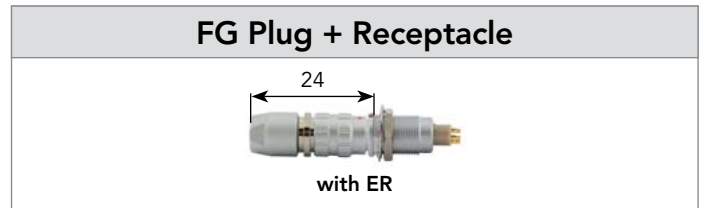
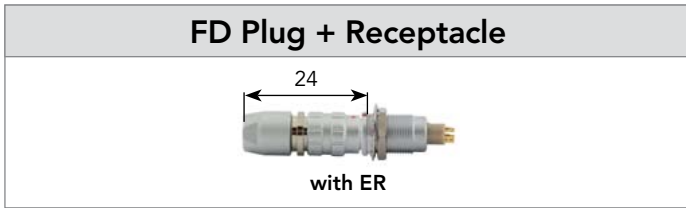
JBX00-02 - IP40 (2 x Ø 0.5mm)

Contacts

Ø 0.5 mm	Contact type	Plating	Contact locking type	AWG - Wire max.
Solder	Machined	0.5 µm gold over 3 to 5 µm Ni	Fixed	30

For more information see page 231

Mated Connector Length

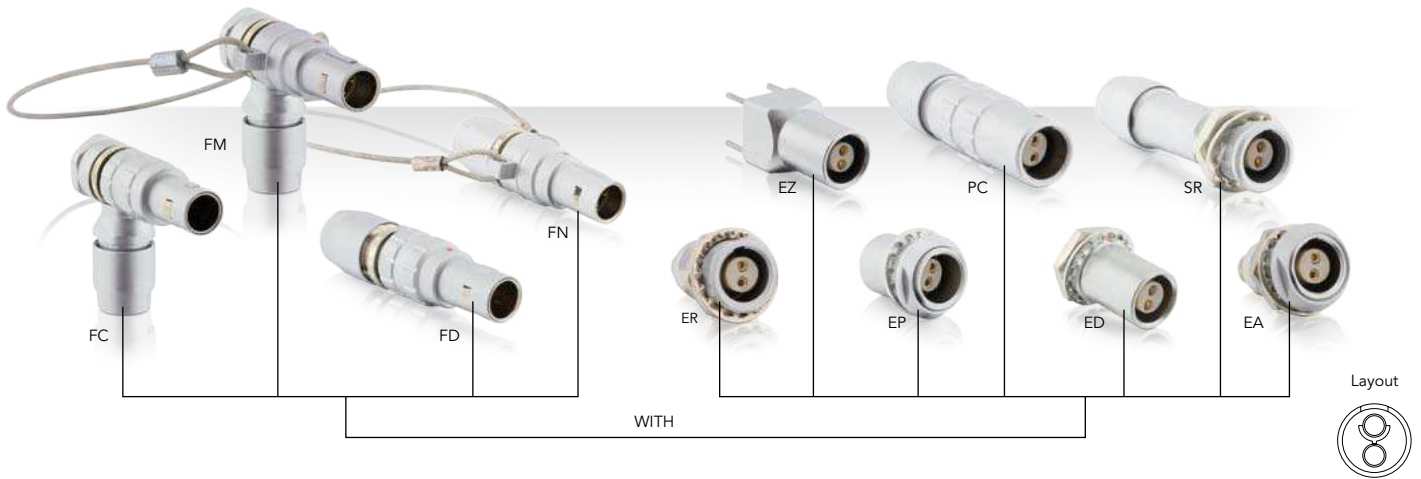


Electrical Characteristics

UL
2A 500V UL94 V-0

Note: all dimensions are in mm

JBX0-02 - IP40 (2 x Ø 0.9 mm) - See waterproof IP68 version page 22



Connector Part Number

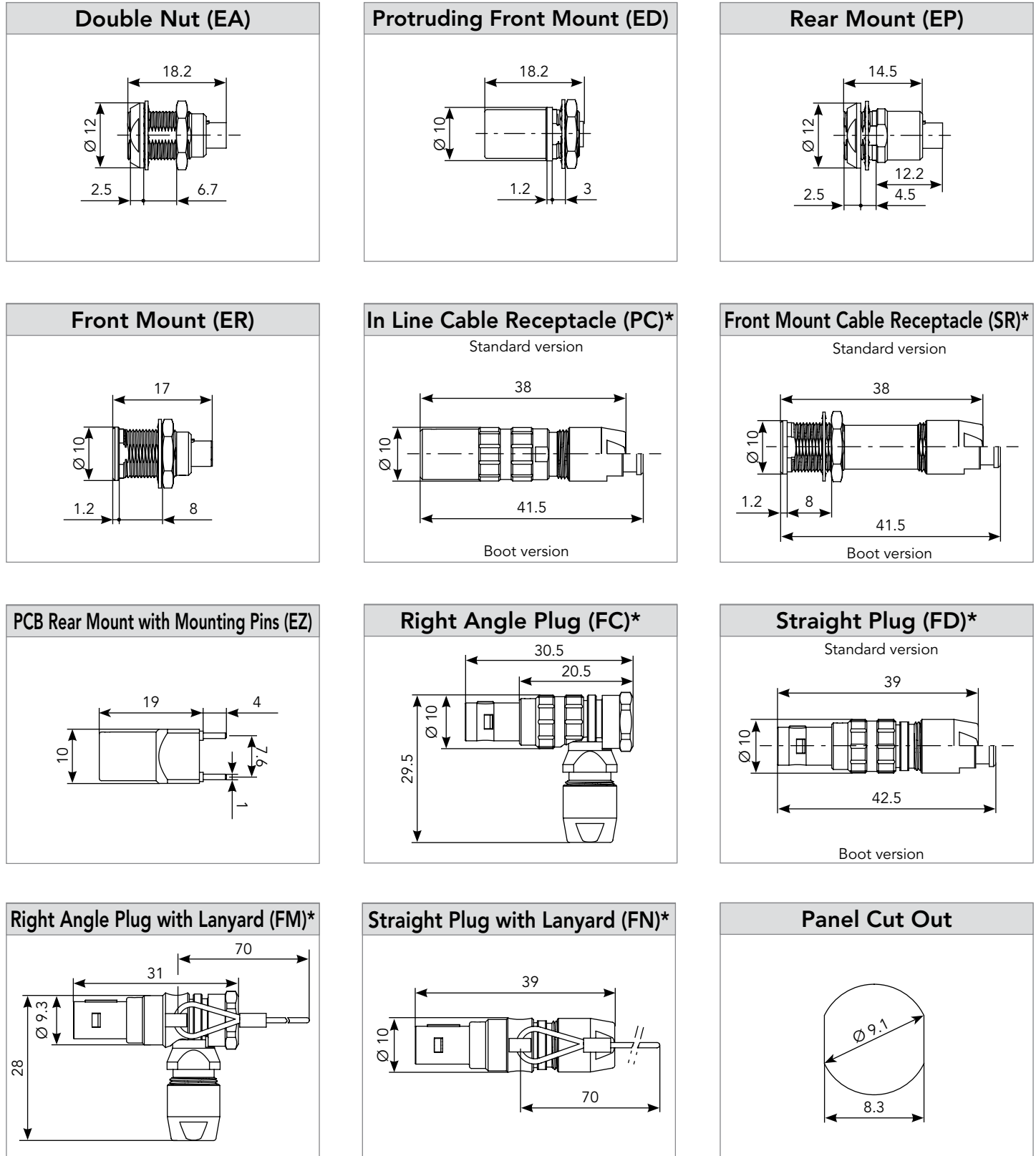
Contact type	Connector type	Description	Part number ⁽¹⁾	
			Male insert	Female insert
Solder contacts see page 25	Receptacle	Double nut (EA)	JBXEA0G02MSSDS	JBXEA0G02FSSDS
		Protruding front mount (ED)	JBXED0G02MSSDSR	JBXED0G02FSSDSR
		Rear mount (EP)	JBXEP0G02MSSDS	JBXEP0G02FSSDS
		Front mount (ER)	JBXER0G02MSSDSR	JBXER0G02FSSDSR
		In line cable (PC) *	JBXPC0G02MSSDSR	JBXPC0G02FSSDSR
	Plug	Right angle plug (FC) *	JBXFC0G02MSSDSR	JBXFC0G02FSSDSR
		Straight plug (FD) *	JBXFD0G02MSSDSR	JBXFD0G02FSSDSR
		Right Angle plug with lanyard (FM) *	JBXFM0G02MSSDSR	JBXFM0G02FSSDSR
Crimp contacts see page 25	Receptacle	Double nut (EA)	JBXEA0G02MCSDS	JBXEA0G02FCSDS
		Protruding front mount (ED)	JBXED0G02MCSDSR	JBXED0G02FCSDSR
		Rear mount (EP)	JBXEP0G02MCSDS	JBXEP0G02FCSDS
		Front mount (ER)	JBXER0G02MCSDSR	JBXER0G02FCSDSR
		In line cable (PC) *	JBXPC0G02MCSDSR	JBXPC0G02FCSDSR
	Plug	Front mount cable (SR) *	JBXSR0G02MCSDSR	JBXSR0G02FCSDSR
		Right angle plug (FC) *	JBXFC0G02MCSDSR	JBXFC0G02FCSDSR
		Straight plug (FD) *	JBXFD0G02MCSDSR	JBXFD0G02FCSDSR
Straight PCB contacts see page 25	Receptacle	Double nut (EA)	-	JBXEA0G02FPSDS
		Rear mount (EP)	-	JBXEP0G02FPSDS
		PCB rear mount with mounting pins (EZ)	-	JBXEZ0G02FPSDSR
90° PCB contacts see page 25	Receptacle	Double nut (EA)	-	JBXEA0G02FQSDS
		Protruding front mount (ED)	-	JBXED0G02FQSDSR
		Rear mount (EP)	-	JBXEP0G02FQSDS

* In order to get the back nut for protective boot please add «M» after the last «S». Example: JBX Straight Plug, size 0, 2 solder contacts, male insert = JBXFD0G02MSSDSMR. : First choice
The protective boot need to be ordered separately, see page accessories.

(1): In order to get a black Chrome over Nickel please replace «S» before the «D» by one «N». Example: JBX Straight Plug, size 0, 2 solder contacts, male insert = JBXFD0G02MSNDSR.

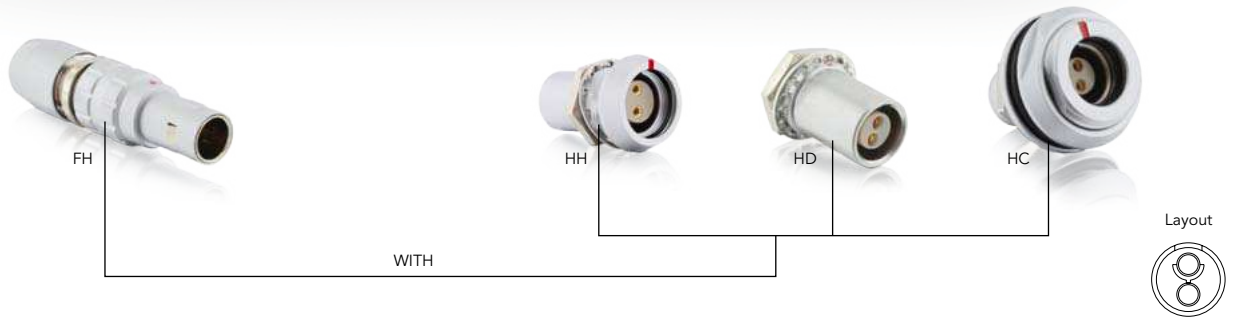
JBX0-02 - IP40 (2 x Ø 0.9 mm) - See waterproof IP68 version page 22

Dimensions (For mated connector lengths see page 25)



Note: all dimensions are in mm

JBX0-02 - IP68 (2 x Ø 0.9 mm) - See non sealed IP40 version page 20



Connector Part Number

Contact type	Connector type	Description	Part number ⁽¹⁾	
			Male insert	Female insert
Solder contacts see page 25	Receptacle	Rear mount (HC) ☁	JBXHC0G02MSSDSR	JBXHC0G02FSSDSR
		Protruding front mount (HD) ☁	JBXHD0G02MSSDSR	JBXHD0G02FSSDSR
		Front mount extended (HH) ☁	JBXHH0G02MSSDSR	JBXHH0G02FSSDSR
	Plug	Straight plug (FH) *	JBXFH0G02MSSDSR	JBXFH0G02FSSDSR
Crimp contacts see page 25	Receptacle	Protruding front mount (HD)	JBXHD0G02MCSDSR	JBXHD0G02FCSDSR
		Front mount extended (HH)	JBXHH0G02MCSDSR	JBXHH0G02FCSDSR
	Plug	Straight plug (FH) * ☁	JBXFH0G02MCSDSR	JBXFH0G02FCSDSR
Straight PCB contacts see page 25	Receptacle	Rear mount (HC) ☁	-	JBXHC0G02FPSDSR

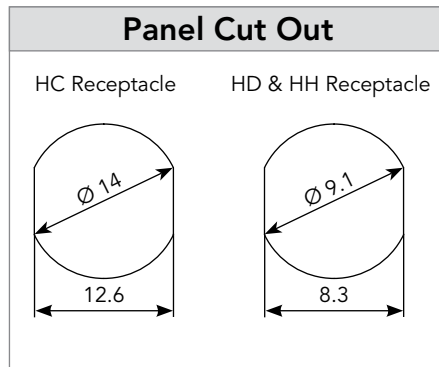
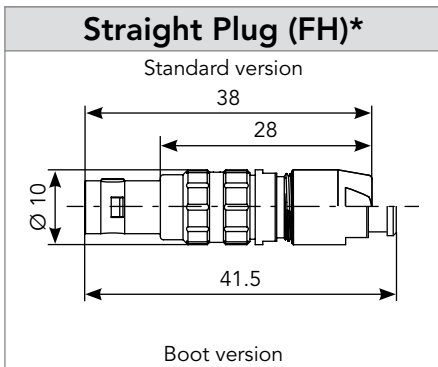
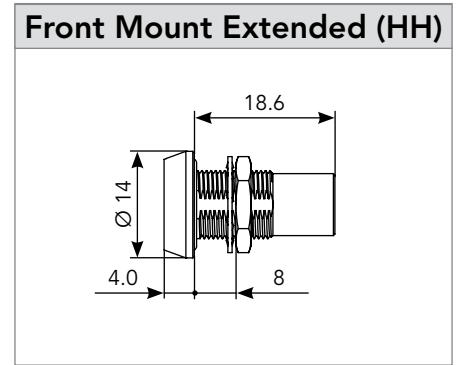
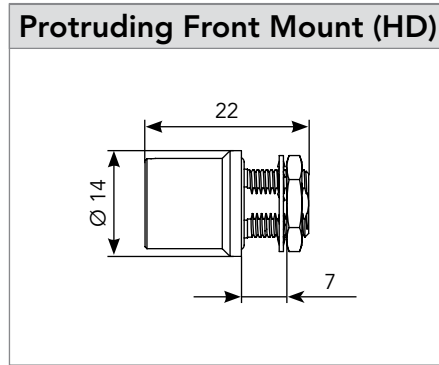
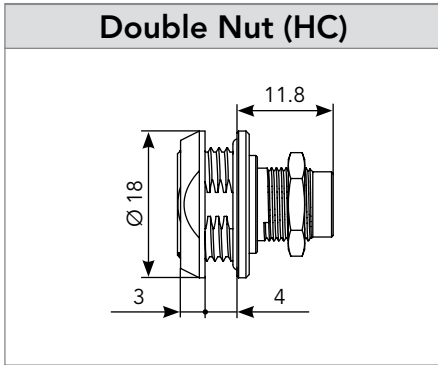
* In order to get the back nut for protective boot please add «M» after the last «S». Example: JBX Straight Plug, size 0, 2 solder contacts, male insert = JBXFH0G02MSSDSMR. ☐ : First choice
 The protective boot need to be ordered separately, see page accessories.

1: In order to get a black Chrome over Nickel please replace «S» before the «D» by one «N». Example: JBX Straight Plug, size 0, 2 solder contacts, male insert = JBXFH0G02MSNDSR.

☁ : Sealed in Unmated Condition

JBX0-02 - IP68 (2 x Ø 0.9 mm) - See non sealed IP40 version page 20

Dimensions (For mated connector lengths see page 25)



Note: all dimensions are in mm

JBX0-02 - IP40 & IP68 (2 x Ø 0.9 mm)

Accessories

Receptacle Dust Cap




Part number
JBXBRØ

Plug Dust Cap




Part number
JBXBFØ

Grounding Washer



Part number
JAXRAØ251

Insulating Washer



Part number	Color
JBXØRIA	Blue
JBXØRIB	White
JBXØRIG	Grey
JBXØRIJ	Yellow
JBXØRIM	Brown
JBXØRIN	Black
JBXØRIR	Red
JBXØRIV	Green
JBXØRIO	Orange

Note : Insulating washers are not compatible with the IP68 versions

Protective Boot

Available only for PC - FC - FD - FM - FN - SR - FH, with back nut protective boot 



Part number	Color
JBXØMPA	Blue
JBXØMPB	White
JBXØMPG	Grey
JBXØMPJ	Yellow
JBXØMPM	Brown
JBXØMPN	Black
JBXØMPR	Red
JBXØMPV	Green
JBXØMPO	Orange

The overall length is 17 mm longer with the protective boot.
Note: The protective boot is not a sealing element.


Tooling

Crimp Tooling



Part number
MIL-22520/7-01

Locator



Part number	
Male	Female
JBXØOUTLPØ9	JBXØOUTLSØ9

Extraction Tool



Part number
JBXOUTDCØ9

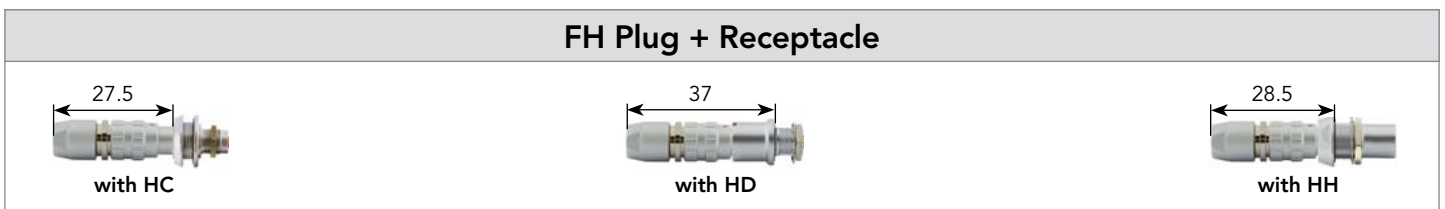
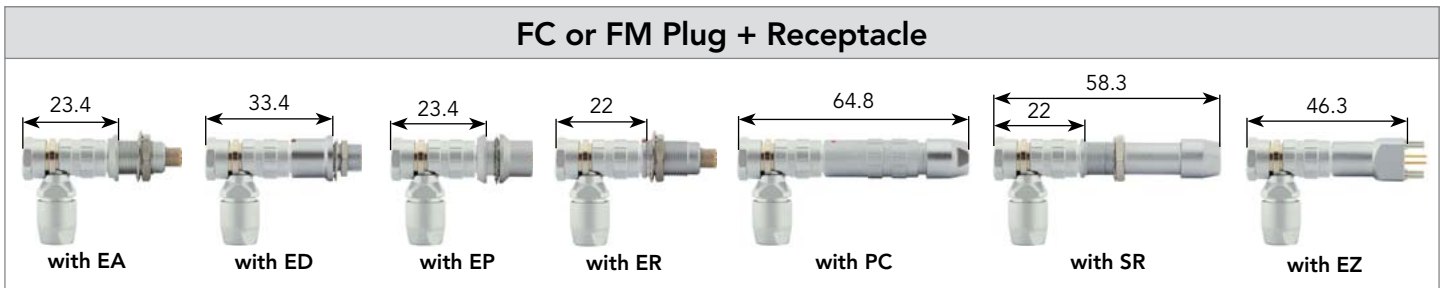
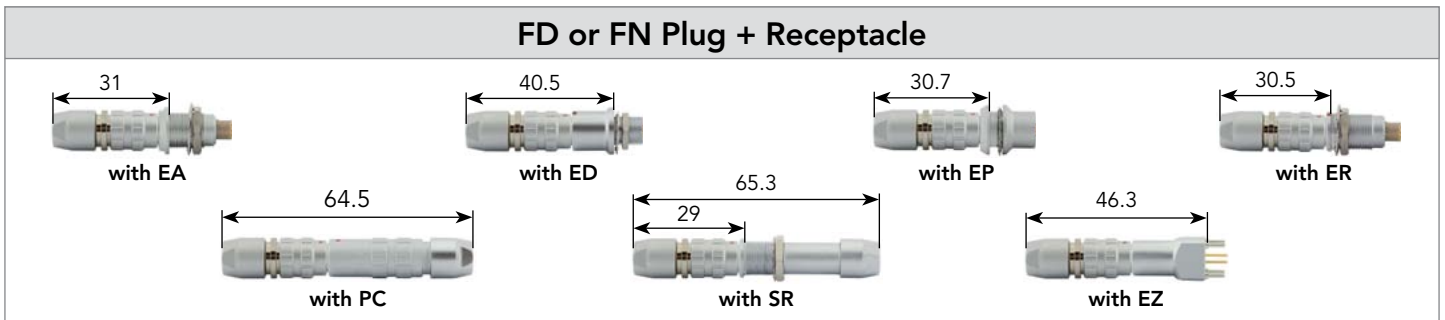
JBX0-02 - IP40 & IP68 (2 x Ø 0.9 mm)

Contacts

Ø 0.9 mm	Contact type	Plating	Contact locking type	AWG
Solder	Machined	0.5 µm gold over 3 to 5 µm Ni	Removable	24
Crimp	Machined	0.5 µm gold over 3 to 5 µm Ni	Removable	20 - 22 - 24
Straight PCB	Machined	0.5 µm gold over 3 to 5 µm Ni	Fixed	-
90° PCB	Machined	0.5 µm gold over 3 to 5 µm Ni	Removable	-

For more information see pages 231 to 234

Mated Connector Length



Electrical Characteristics
<p>UL 10A 660V UL94 V-0</p>

Note: all dimensions are in mm