

Push-pull circular connectors
Souriau JBX, JDX, JKX and JMX series





Quick, reliable connections

Push-pull connectors are designed for applications where a fast and simple method to connect and disconnect is desired. Push-pull connectors can withstand a high number of mating cycles and exposure to harsh environments, including sterilization. Quick and easy to use, these connectors can be mated and unmated in the hands of any user with keying, color coding and a breakaway mechanism to help to prevent accidental mismatching or system failure. The Souriau push-pull series is also well suited for easy operation in tight spaces, making it possible to have a higher density of connectors on a panel.



JBX series

The JBX series is a metal push-pull connector available in IP50 and IP68 sealing, suited for indoor and outdoor applications. The 360° EMI shielding ensures proper transmission and signal integrity, which is a requirement for high resolution imaging applications. Mixed contact layouts combine power and signal in one connector, simplifying system complexity and minimizing component and installation costs.



JKX series

The mechanically reinforced JKX series metal connectors have two seals and an inner sleeve that prevents water penetration in the connector when mated with a JKX receptacle. They are designed for durability and frequent mating cycles, with high resistance to vibration and thermal shock.



JDX series

The breakaway system of the JDX series allows for disengagement at specified pull force levels, eliminating the need for manual unlocking. This ensures a safe and quick disconnect if a connected cable becomes tangled. Safe operation is also aided by the keying and color-coding options that help to avoid incorrect mating. JDX is rated IP68 in mated and unmated conditions and can withstand vibrations, shock and high temperatures. Hybrid layouts that include signal and power contacts are available.



JMX series

The visually appealing design of the plastic JMX series complements medical equipment. JMX is durable, waterproof and resistant to high temperatures, engineered to withstand autoclave steam sterilization. The curves of the coupling ring provide an easy-to-handle grip that fingers will fit in instinctively for easy operation. The JMX series has six keys and nine identifying color codes to avoid incorrect mating.

Push-pull series

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The Souriau push-pull product line includes four series of metal and plastic circular connectors, all designed for applications that demand high quality and reliability with a simple method to connect and disconnect.

Series

JBX



JBX - metal push-pull connector

Shell material	Sealing	Shielding	Mating cycles	Contact layout	Temperature range	Sterilization	Current rating
Brass	IP50/IP68	Shielded (55dB up to 100 Mhz)	5,000	from 2 to 30 contacts	-40°C to +125°C	–	up to 30 A

JDX



JDX - breakaway connector for a quick release

Shell material	Sealing	Shielding	Mating cycles	Contact layout	Temperature range	Sterilization	Current rating
Brass and aluminum	IP68	Shielded (55dB up to 100 Mhz)	2,500	from 2 to 19 contacts	-40°C to +125°C	–	up to 30 A

JKX



JKX - mechanical reinforced push-pull connector for harsh environment

Shell material	Sealing	Shielding	Mating cycles	Contact layout	Temperature range	Sterilization	Current rating
Brass	IP68	Shielded (55dB up to 100 Mhz)	5,000	from 2 to 12 contacts	-50°C to +125°C	–	up to 30 A

JMX



JMX - plastic push-pull connector

Shell material	Sealing	Shielding	Mating cycles	Contact layout	Temperature range	Sterilization	Current rating
Plastic PEI	IP68	–	2,000	from 2 to 19 contacts	-40°C to +125°C	YES	up to 26 A

Overmolding

Overmolding is a process that enhances the sealing properties of the push-pull series. Overmolding allows for the cable exit to change from straight to 90 degrees, avoiding stress on the cable terminated to the connector. The wires are enclosed in the molding, creating a barrier that prevents liquid from entering the equipment through the connector if the cable jacket is breached.

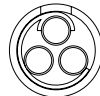


Layouts

Layout size 00

Connector series	Contacts	Description	
JBX series	#24 Ø 0.019" Ø 0.5 mm		
		2A/210V 2 contacts	3.5A/500V 4 contacts

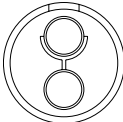
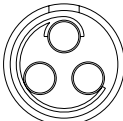
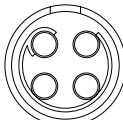
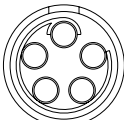
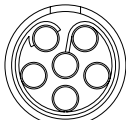
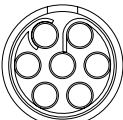
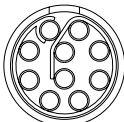
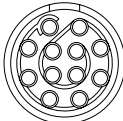
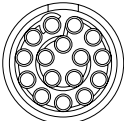
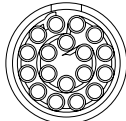
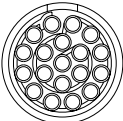
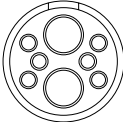
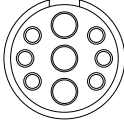
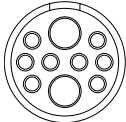
Layout size 0

Connector series	Contacts	Description		
JBX series JDX series JKX series	#20 Ø 0.035" Ø 0.9 mm			
		10A/330V 2 contacts	8A/400V 3 contacts	
	#22 Ø 0.027" Ø 0.7 mm			
		7A/280V 4 contacts	6.5A/260V 5 contacts	
	#24 Ø 0.019" Ø 0.5 mm			
		2.5A/220V 6 contacts	2.5A/220V 7 contacts	2A/200V 8 contacts

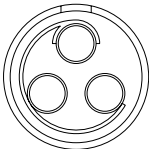
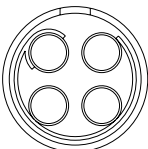
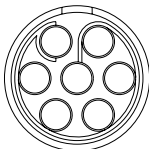
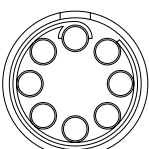
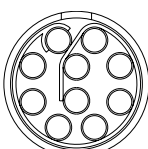
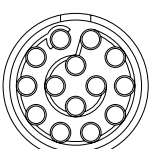
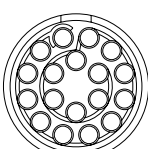
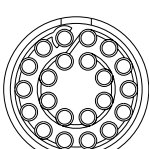
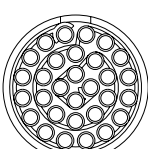
Layout size 1

Connector series	Contacts	Description			
JBX series JDX series JKX series JMX series	#18 Ø 0.051" Ø 1.3 mm				
		10A/400V 2 contacts	9A/360V 3 contacts		
	#20 Ø 0.035" Ø 0.9 mm				
		8A/360V 4 contacts	7A/360V 5 contacts		
	#22 Ø 0.027" Ø 0.7 mm				
		6A/330V 6 contacts	5A/330V 7 contacts	5A/300V 8 contacts	
	#24 Ø 0.019" Ø 0.5 mm				
		2.5A/300V 10 contacts	2.5A/300V 12 contacts		

Layout size 2

Connector series	Contacts	Description			
JBX series JDX series JMX series	#14 Ø 0.078" Ø 2.0 mm	 25A/580V 2 contacts			
	#16 Ø 0.062" Ø 1.6 mm	 17A/610V 3 contacts			
	#18 Ø 0.051" Ø 1.3 mm	 15A/610V 4 contacts	 14A/530V 5 contacts	 12A/450V 6 contacts	 11A/530V 7 contacts
	#20 Ø 0.035" Ø 0.9 mm	 10A/410V 8 contacts	 5A/430V 10 contacts		
	#22 Ø 0.027" Ø 0.7 mm	 7A/410V 12 contacts	 6A/310V 16 contacts	 5.5A/280V 18 contacts	 3A/310V 19 contacts
Mixed contact	 26A/500V 8 contacts 6 x Ø 0.7 / 2 x Ø 2.0	 26A/500V 9 contacts 6 x Ø 0.7 / 3 x Ø 1.3	 17A/500V 10 contacts 8 x Ø 0.7 / 2 x Ø 1.6		

Layout size 3 - JBX series

Connector series	Contacts	Description	
JBX series	#14 Ø 0.078" Ø 2.0 mm		
		25A/500V 3 contacts	19A/410V 4 contacts
	#16 Ø 0.062" Ø 1.6 mm		
		15A/410V 7 contacts	
	#18 Ø 0.051" Ø 1.3 mm		
		13A/380V 8 contacts	12A/300V 10 contacts
	#20 Ø 0.035" Ø 0.9 mm		
		9A/400V 14 contacts	7A/350V 18 contacts
	#22 Ø 0.027" Ø 0.7 mm		
		5.5A/300V 22 contacts	3.5A/230V 30 contacts



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 layouts on pages 6- 8
- 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
- RoHS compliant
- Fluid resistance:
 - Gas and oil
 - Mineral oil
 - Acid bath
 - Basic bath
- Shielding effectiveness: 55 dB up to 100 MHz

Electrical

- UL 1977: certificate ECBT2, file number E169916
- CSA C22.2: certificate ECBT8, file number E169916

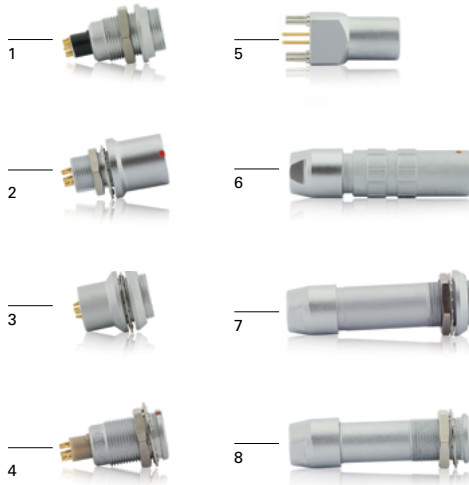
Mechanical

- Durability: 5,000 cycles per IEC 61984 group B
- Vibration resistance: 10- 2,000 Hz, acceleration 15 g, contact Ø 0.027" (0.7 mm) and 0.035" (0.9 mm), per MIL - STD-1344A method 2005.1
 - 10- 2,000 Hz, acceleration 20 g, contact Ø 0.051" - 0.062" (1.3 mm- 1.6 mm) and 0.078" (2 mm)
- Thermal shock: 5 cycles 30 min. from -40°C to 105°C, per MIL- STD-202 method 207
- Mechanical shock: per MIL - STD-1344A method 20004.1
 - 50 g, duration 6 ms contact Ø 0.027" (0.7 mm) and 0.035" (0.9 mm)
 - 100 g, duration 6 ms contact Ø 0.051" - 0.062" (1.3 mm- 1.6 mm) and 0.078" (2 mm)
- Discrimination/keying: JBX connectors have discrimination keys to avoid connection errors.

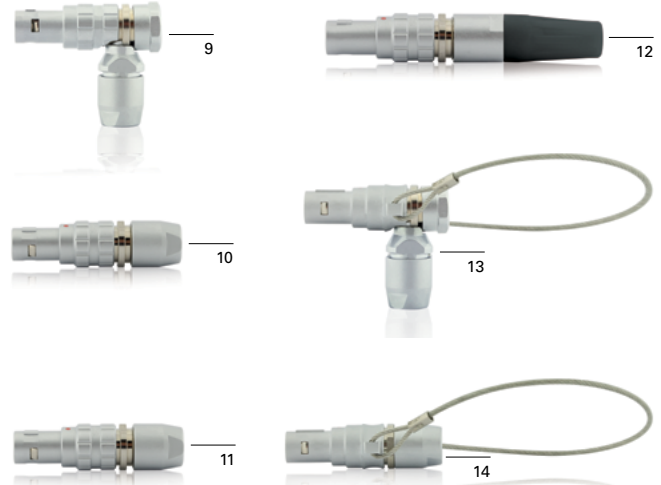
Shell type IP40

2

Receptacle



Plug



Choice of contact termination

- Crimp
- Solder
- Straight PC tail
- 90° PC tail



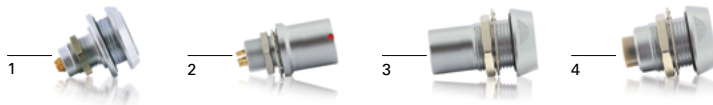
1. EA: double nut* receptacle
2. ED: protruding front mount receptacle
3. EP: rear mount* receptacle
4. ER: front mount receptacle
5. EZ: rear mount receptacle with mounting pins
6. PC: in line cable receptacle
7. SA: rear mount cable receptacle
8. SR: front mount cable receptacle
9. FC: right angle plug

10. FD: straight plug
11. FG: breakaway plug
12. FF: straight plug no latch with black boot
13. FM: right angle plug with lanyard
14. FN: straight plug with lanyard
15. Protective boot

Note: *available with 90° PCB tails

Shell type IP68 available size 0 and 2

Receptacle



Plug



Choice of contact termination

- Crimp
- Solder
- Straight PC tail
- 90° PC tail

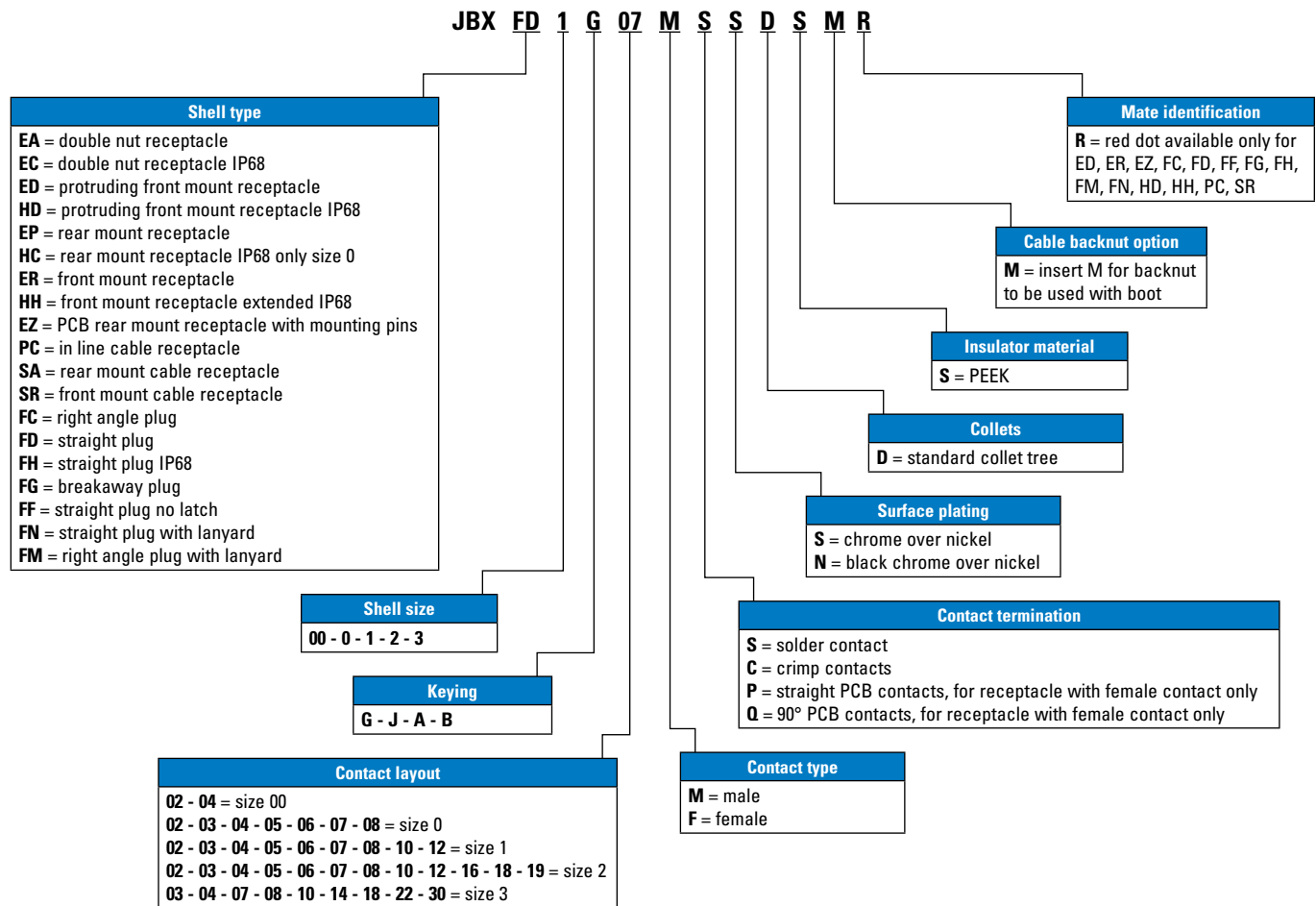


1. HC: rear mount receptacle* available size 0
2. HD: protruding front mount receptacle available size 0
3. HH: front mount extended receptacle available size 0 and 2
4. EC: double nut, front or rear mount receptacle* available size 2

5. FH: straight plug
6. Protective boot

Note: * available with 90° PCB tails

Catalog number selection



Discrimination/keying methods

JBX series are mechanically keyed to ensure correct alignment of the inserts before the contacts mate.

- G: standard keying
- J: standard reverse gender keying, plugs with socket contacts, receptacles with pin contacts

G and J are standard keying, but all keying configuration can use standard or reverse gender.

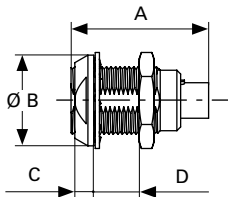
	Key G	J Sizes 0 and 1	Sizes 2 and 3	A	B Sizes 0 and 1
Keying angle	0	45°	37.5°	30°	60°

G is the standard keying, other keyings can be ordered by replacing the G character with the required keying character.

JBXFC0G02MSSDSR (G keying) => JBXFC0B02MSSDSR (B keying)

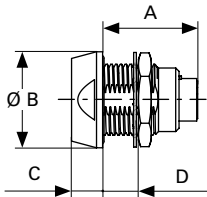
Receptacle

2



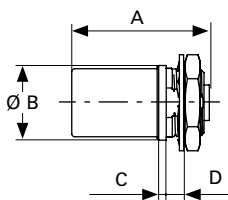
EA - receptacle double nut

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm
0	0.716	18.2	0.472	12	0.098	2.5	0.263	6.7
1	0.795	20.2	0.629	16	0.125	3.2	0.326	8.3
2	0.874	22.2	0.787	20	0.149	3.8	0.314	8
3	1.070	27.2	0.944	24	0.177	4.5	0.374	9.5



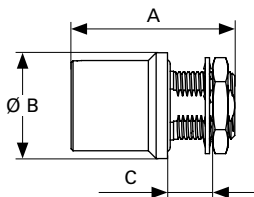
EC - receptacle double nut IP68

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm
2	0.787	20	0.787	20	0.255	6.5	0.393	10



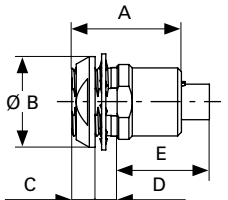
ED - receptacle protruding front mount

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm
0	0.716	18.2	0.393	10	0.047	1.2	0.118	3



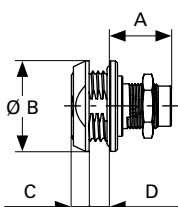
HD - receptacle protruding front mount

Connector size	A inch	mm	Ø B inch	mm	C inch	mm
0	0.866	22	0.551	14	0.2745	7



EP - receptacle rear mount

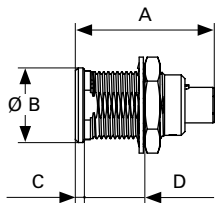
Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm	E inch	mm
0	0.570	14.5	0.472	12	0.098	2.5	0.177	4.5	0.480	12.2
1	0.649	16.5	0.629	16	0.125	3.2	0.236	6	0.362	9.2
2	0.728	18.5	0.787	20	0.149	3.8	0.255	6.5	0.460	11.7



HC - receptacle rear mount IP68

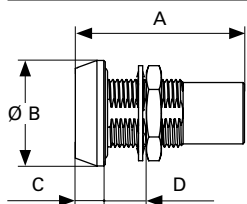
Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm	E inch	mm
0	0.464	11.8	0.708	18	0.118	3	0.157	4	0.480	12.2

Receptacle



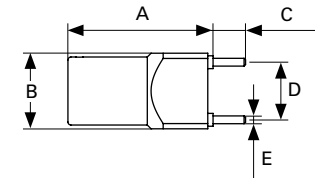
ER - receptacle front mount

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm
00	0.500	12.7	0.314	8	0.031	0.8	0.236	6
0	0.669	17	0.393	10	0.047	1.2	0.314	8
1	0.677	17.2	0.551	14	0.059	1.5	0.393	10
2	0.803	20.4	0.708	18	0.070	1.8	0.393	10
3	0.885	22.5	0.866	22	0.078	2	0.472	12



HH - receptacle front mount extended

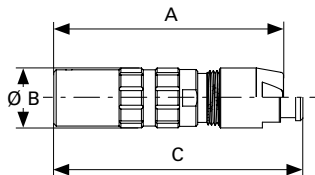
Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm
0	0.732	18.6	0.551	14	0.157	4	0.314	8
2	0.964	24.5	0.787	20	0.196	5	0.393	10



EZ - receptacle PCB rear mount with mounting pins

Connector size	A inch	mm	B inch	mm	C inch	mm	D inch	mm	E inch	mm
0	0.748	19	0.393	10	0.157	4	0.299	7.6	0.039	1
1	0.826	21	0.472	12	0.157	4	0.299	7.6	0.040	1.03

standard version

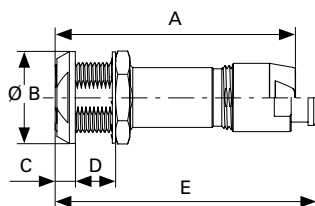


boot version

PC - receptacle in line cable

Connector size	A inch	mm	Ø B inch	mm	C inch	mm
0	1.496	38	0.393	10	1.633	41.5
1	1.653	42	0.511	13	1.795	45.6
2	1.968	50	0.629	16	2.157	54.8

standard version

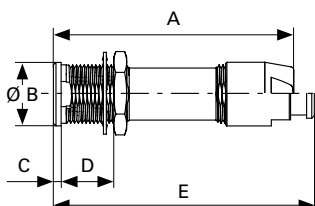


boot version

SA - receptacle rear mount cable

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm	E inch	mm
2	1.968	50	0.787	20	0.149	3.8	0.255	6.5	2.157	54.8

standard version



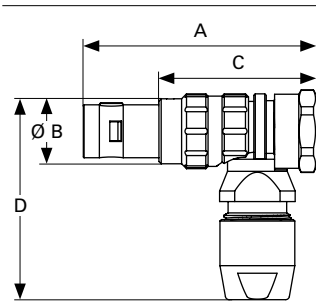
boot version

SR - receptacle front mount cable

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm	E inch	mm
0	1.496	38	0.393	10	0.047	1.2	0.314	8	1.633	41.5
1	1.653	42	0.551	14	0.059	1.5	0.393	10	1.795	45.6
3	2.322	59	0.866	22	0.078	2	0.472	12	2.519	64

Plugs

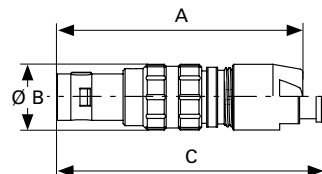
2



FC - plug right angle

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm
0	1.200	30.5	0.393	10	0.807	20.5	1.161	29.5
1	1.437	36.5	0.472	12	1.003	25.5	1.318	33.5
2	1.673	42.5	0.590	15	1.200	30.5	1.437	36.5
3	1.988	50.5	0.708	18	1.397	35.5	1.771	45

standard version

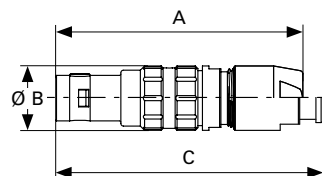


boot version

FD - plug straight

Connector size	A inch	mm	Ø B inch	mm	C inch	mm
00	1.244	31.6	0.275	7	1.362	34.6
0	1.535	39	0.393	10	1.673	42.5
1	1.732	44	0.472	12	1.874	47.6
2	2.047	52	0.590	15	2.236	56.8
3	2.401	61	0.629	16	2.637	67

standard version

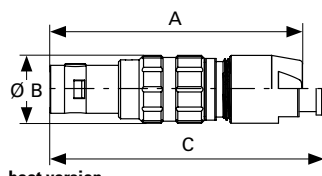


boot version

FH - plug straight IP68

Connector size	A inch	mm	Ø B inch	mm	C inch	mm
0	1.496	38	0.393	10	1.633	41.5
2	2.047	52	0.629	16	2.236	56.8

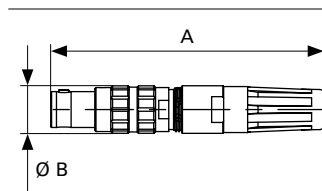
standard version



boot version

FG - plug breakaway

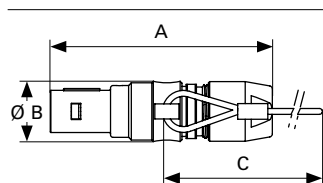
Connector size	A inch	mm	Ø B inch	mm	C inch	mm
00	1.244	31.6	0.275	7	1.362	34.6



FF - plug straight no latch with black protective boot

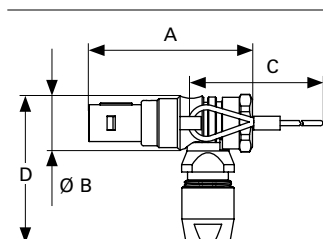
Connector size	A inch	mm	Ø B inch	mm
1	2.677	68	0.472	12

Plugs



FN - plug straight with lanyard

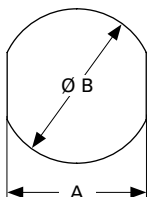
Connector size	A inch	mm	Ø B inch	mm	C inch	mm
0	1.535	39	0.393	10	2.755	70



FM - plug right angle plug with lanyard

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm
0	2.755	70	0.366	9.3	1.220	31	1.102	28

Panel cut-out



EA - receptacle double nut / EC - receptacle double nut IP68

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.326	8.3	0.358	9.1	0.263	6.7
1	0.417	10.6	0.476	12.1	0.326	8.3
2	0.535	13.6	0.594	15.1	0.314	8.0
3	0.653	16.6	0.712	18.1	0.374	9.5

ED - receptacle protruding front mount

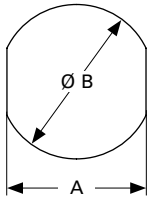
Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.326	8.3	0.358	9.1	0.118	3.0
1	0.417	10.6	0.476	12.1	0.177	4.5
2	0.535	13.6	0.594	15.1	0.48	6.3

ER - receptacle front mount

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
00	0.251	6.4	0.279	7.1	0.236	6.0
0	0.326	8.3	0.358	9.1	0.314	8.0
1	0.417	10.6	0.476	12.1	0.393	10.0
2	0.535	13.6	0.594	15.1	0.393	10.0
3	0.653	16.6	0.712	18.1	0.472	12.0

Panel cut-out

2



EP - receptacle rear mount

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.326	8.3	0.358	9.1	0.177	4.5
1	0.417	10.6	0.476	12.1	0.236	6.0
2	0.535	13.6	0.594	15.1	0.255	6.5

HC - receptacle rear mount IP68

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.496	12.6	0.551	14.0	0.157	4.0

HD - receptacle protruding front mount

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.326	8.3	0.358	9.1	0.275	7.0

HH - receptacle front mount extended

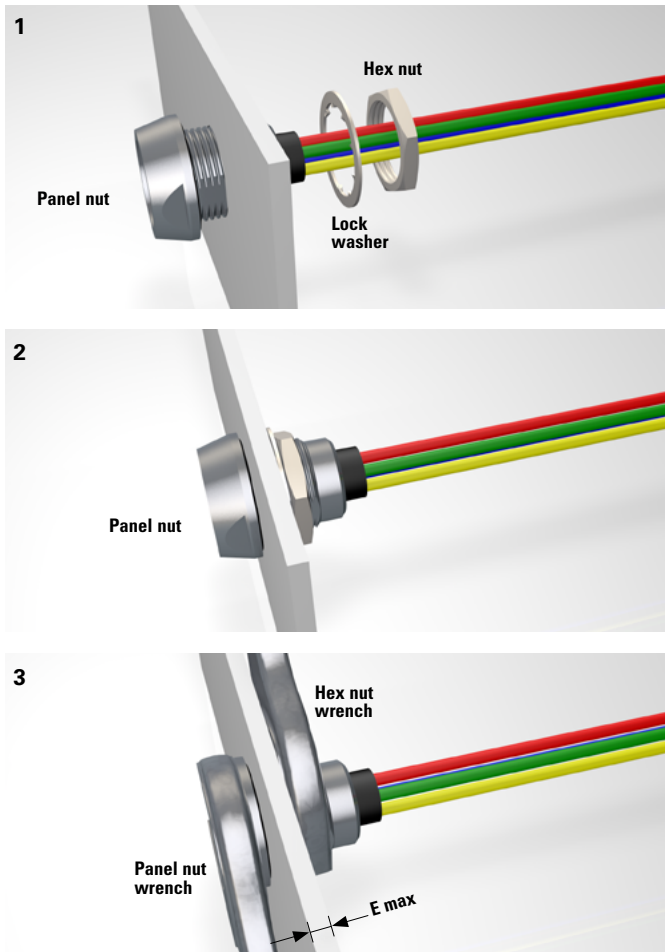
Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.326	8.3	0.358	9.1	0.314	8.0
2	0.535	13.6	0.594	15.1	0.393	10.0

SA - receptacle rear mount cable

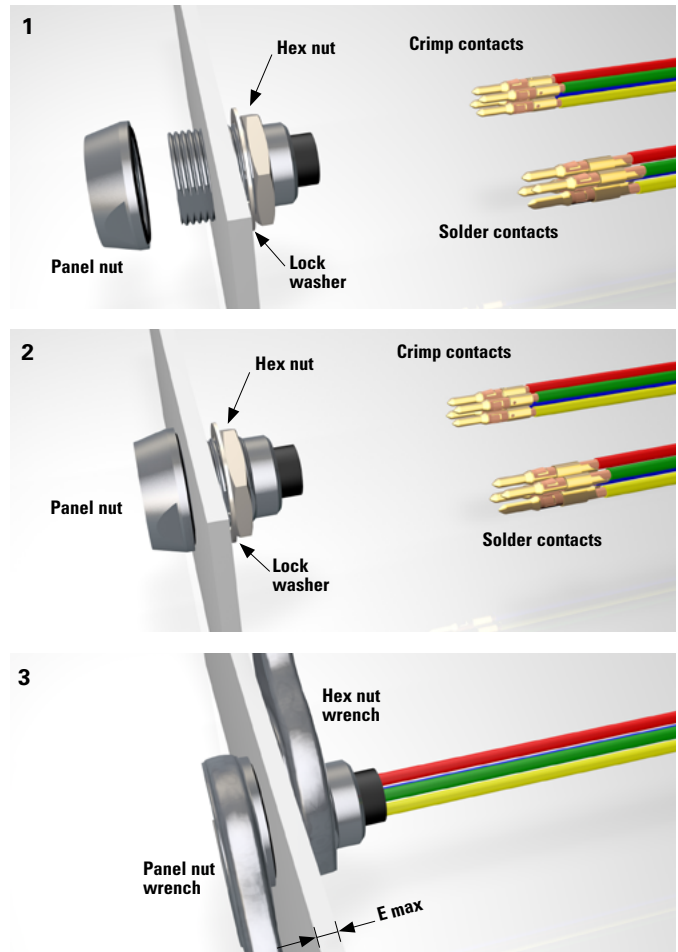
Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
2	0.535	13.6	0.594	15.1	0.255	6.5

SR - receptacle front mount cable

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.326	8.3	0.358	9.1	0.314	8.0
1	0.417	10.6	0.476	12.1	0.393	10.0
2	0.535	13.6	0.594	15.1	0.393	10.0
3	0.653	16.6	0.712	18.1	0.472	12.0

JBXEA or JBXEC assembly**Front mounting with fitted contacts**

- Solder or crimp contacts (see pages 53-55)
- Slide the lock washer and the hex nut on to the cable
- Apply thread lock to panel nut prior to assembly
- Place the receptacle in the panel cut-out
- Insert contacts manually in the cavities for removable contacts versions
- Insert the lock washer and tighten the panel nut hand tight

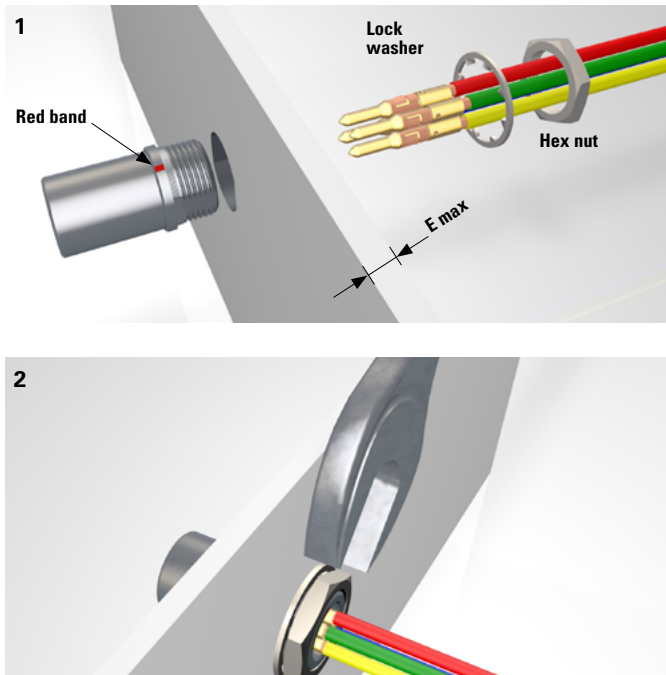
Rear mounting with separate contacts

- Screw the hex nut to the bulkhead
- Use two wrenches to tighten:
 - maintain the panel nut wrench fixed
 - screw the hex nut
- Recommended tightening torques are listed in the table below:

Shell size	Wrench size	Tightening torque (Nm)	E - Panel max thickness	
			inch	mm
0	11	0.7	0.263	6.7
1	14	1.3	0.326	8.3
2	17	1.7	0.314	8
3	21	2	0.374	9.5

JBXED assembly

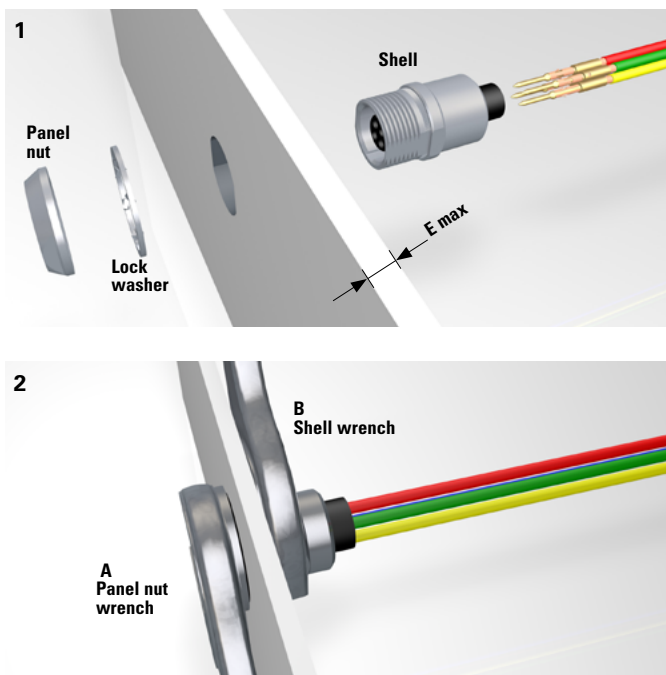
2



- Solder or crimp contacts (see pages 53-55)
- Slide the lock washer and the hex nut on to the cable
- Apply thread lock to the receptacle prior to assembly
- Place the receptacle in the panel cut-out
- Insert contacts manually in the cavities for removable contacts versions
- Insert the lock washer and tighten the panel nut hand tight
- Screw the hex nut to the bulkhead with a wrench
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max	Wrench size	E Panel max thickness inch	mm
0	0.7	11	0.118	3.0
1	1.3	14	0.177	4.5
2	1.7	17	0.248	6.3

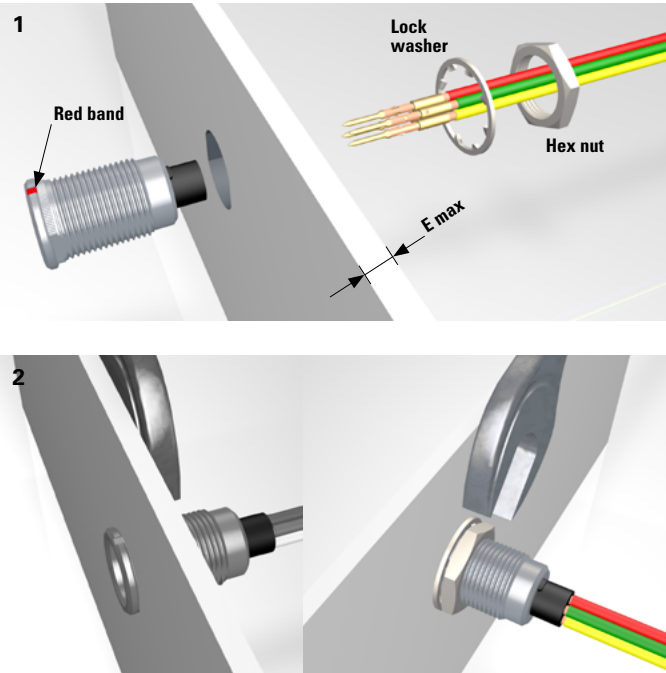
JBXEP Assembly



- Solder or crimp contacts (see pages 53-55)
- Place the receptacle in the panel cut-out
- Insert the washer and tighten the panel nut hand tight
- Insert contacts manually in the cavities for removable contacts versions
- Use two wrenches to tighten:
 - maintain the receptacle with nut wrench fixed
 - screw the panel nut
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max	Wrench size A	Wrench size B	E Panel max thickness inch	mm
0	0.7	10	11	0.177	4.5
1	1.3	13	14	0.236	6.0
2	1.7	17	17	0.255	6.5

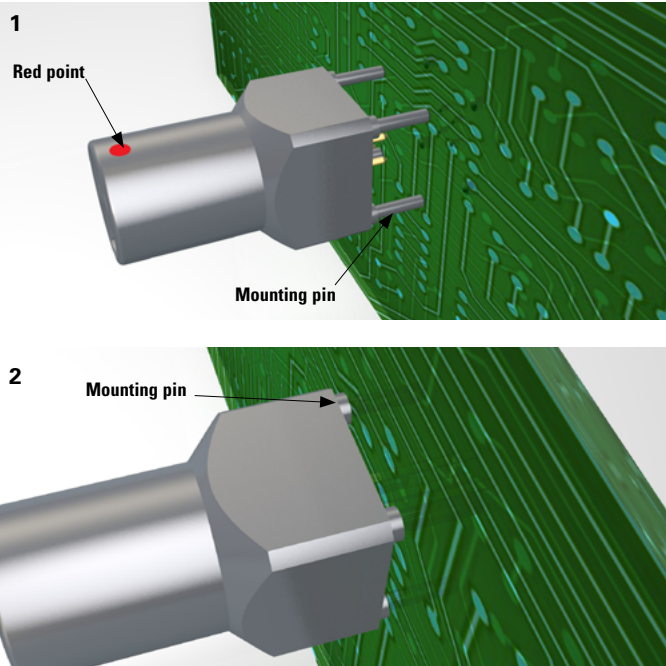
JBXER assembly



- Solder or crimp contacts (see pages 53-55)
- Slide the lock washer and the hex nut on to the cable
- Place the receptacle in the panel cut-out
- Insert contacts manually in the cavities for removable contacts versions
- Screw the hex nut to the bulkhead with a wrench
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max	Wrench size	E Panel max thickness inch	mm
00	0.7	7	0.236	6.0
0	0.7	11	0.118	3.0
1	1.3	14	0.177	4.5
2	1.7	17	0.248	6.3
3	2	21	0.472	12.0

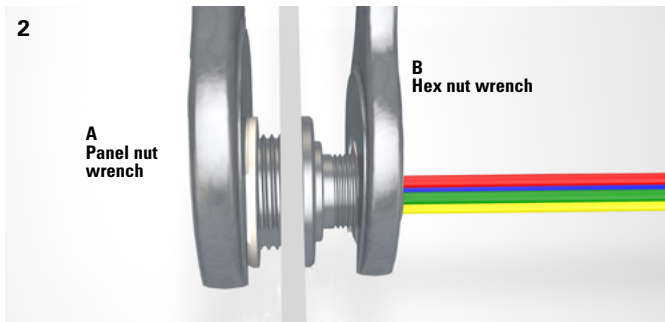
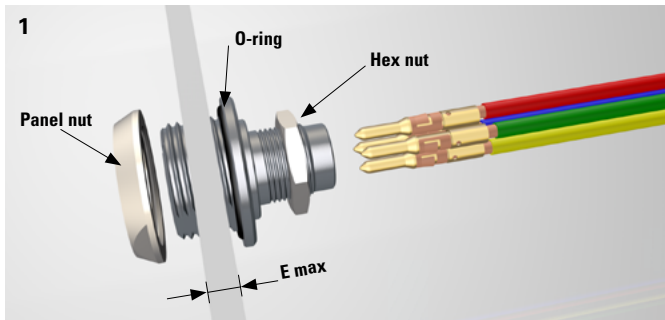
JBXEZ assembly



Note: See pages 62-69 for drilling pattern

JBXHC assembly

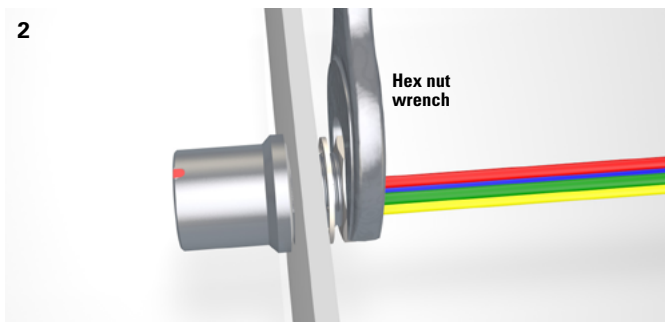
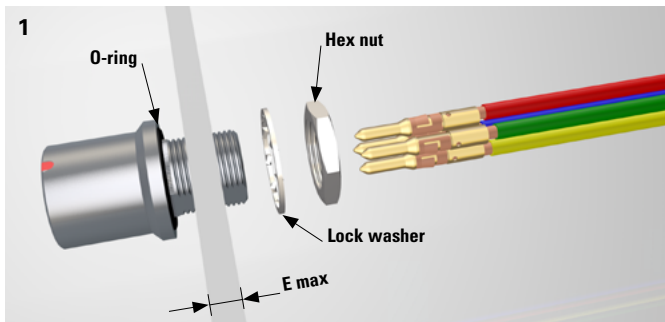
2



- Solder or crimp contacts (see pages 53-55)
- Place the receptacle in the panel cut-out
- Apply thread lock to panel nut prior to assembly
- Tighten the panel nut hand tight
- Insert contacts manually in the cavities for removable contacts versions
- Screw the hex nut if needed
- Screw the panel nut with a wrench
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max		Wrench size		E Panel max thickness	
	A	B	A	B	inch	mm
0	1.7	0.7	16	11	0.157	4.0

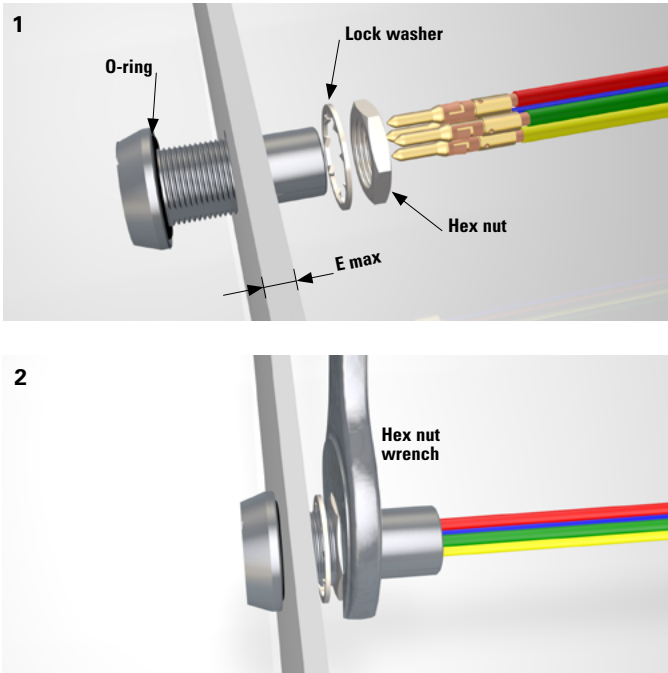
JBXHHD assembly



- Solder or crimp contacts (see pages 53-55)
- Slide the lock washer and the hex nut on to the cable
- Place the receptacle in the panel cut-out
- Insert contacts manually in the cavities for removable contacts versions
- Screw the hex nut to the bulkhead with a wrench
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max		Wrench size		E Panel max thickness	
					inch	mm
0	1.3		11		0.275	7.0

JBXHH assembly

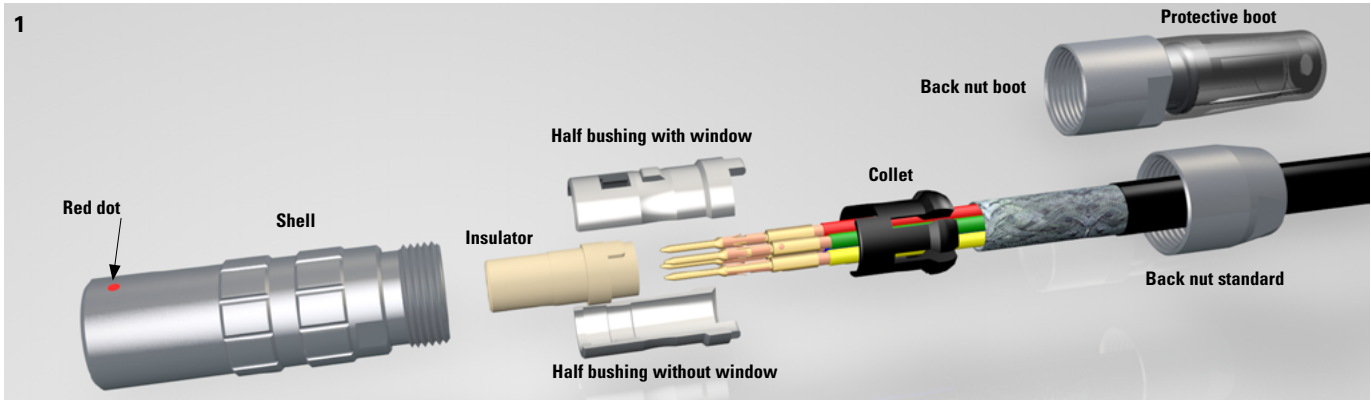


- Solder or crimp contacts (see pages 53-55)
- Slide the lock washer and the hex nut on to the cable
- Place the receptacle in the panel cut-out
- Insert contacts manually in the cavities for removable contacts versions
- Screw the hex nut to the bulkhead with a wrench
- Recommended tightening torques are listed in the table below:

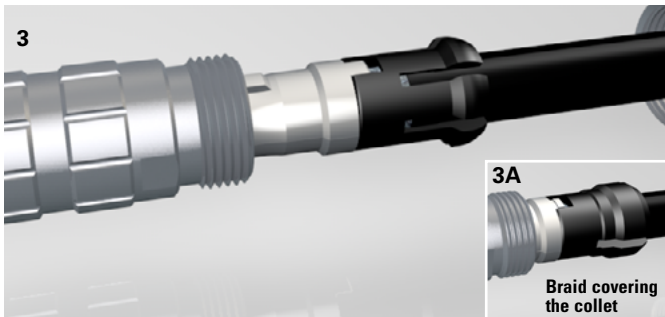
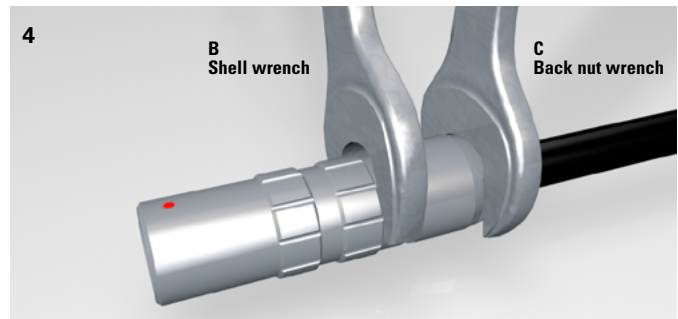
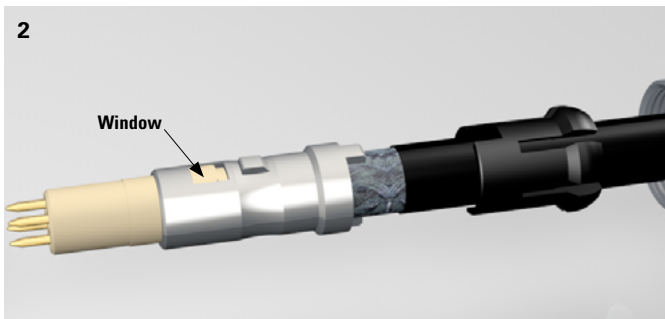
Shell size	Tightening torque (Nm) max	Wrench size	E Panel max thickness	
			inch	mm
0	0.7	11	0.314	8.0
1	1.7	17	0.393	10.0

JBXPC assembly

2

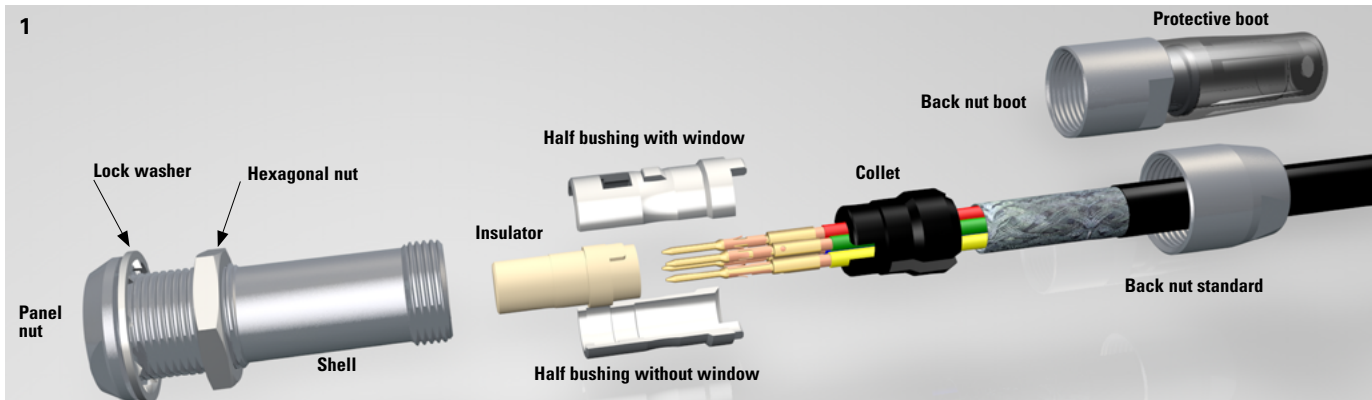


- Slide the protective boot/back nut boot or the back nut standard on to the cable
- Select the proper collet according to the cable diameter specification (see page 28) and slide it on to the cable
- Strip external cable jacket and wire (see page 56)
- Solder or crimp contacts (see pages 53-55)
- Place the two half bushes on the insert, making sure that the insert keyway appears through the window of the half bushing (fig. 2)
- Place the collet and the half bushes while maintaining the screen, half bush keys must be seated in the collet keyway (fig. 3)
- If the cable has shielding, fold back the braid so that it is covering the outside diameter of the collet, braid must be between the collet and half bushes (fig. 3A)
- Place subassembly in the connector housing making sure to keep it aligned (fig. 3), respect the red dot and window alignment
- Install the back nut or the back nut boot and screw it on to the threads
- Use two wrenches to tighten
- Recommended tightening torques are listed in the table below:

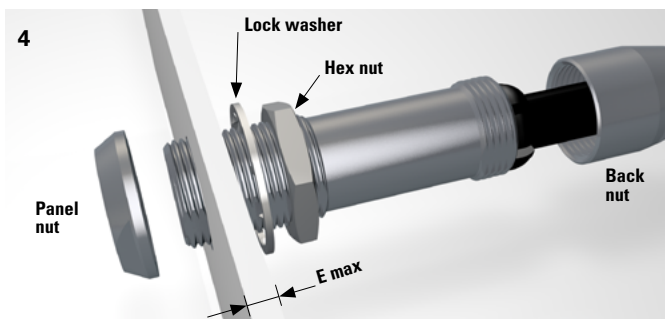
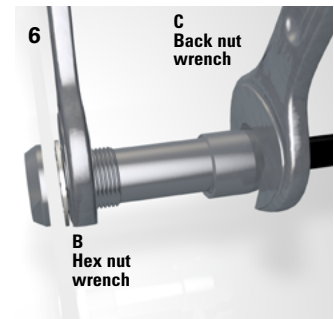
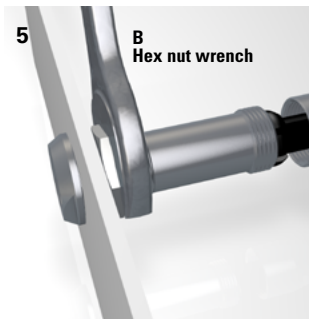
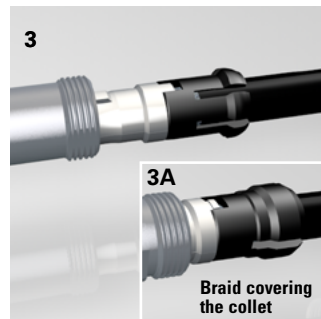
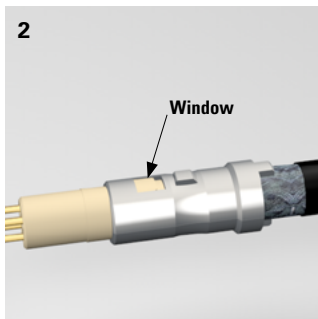


Shell size	Tightening torque (Nm) max		Wrench size	
	B	C	B	C
0	0.8	0.8	9	8
1	1.0	1.0	11	10
2	1.5	1.5	14	13

JBXSA assembly



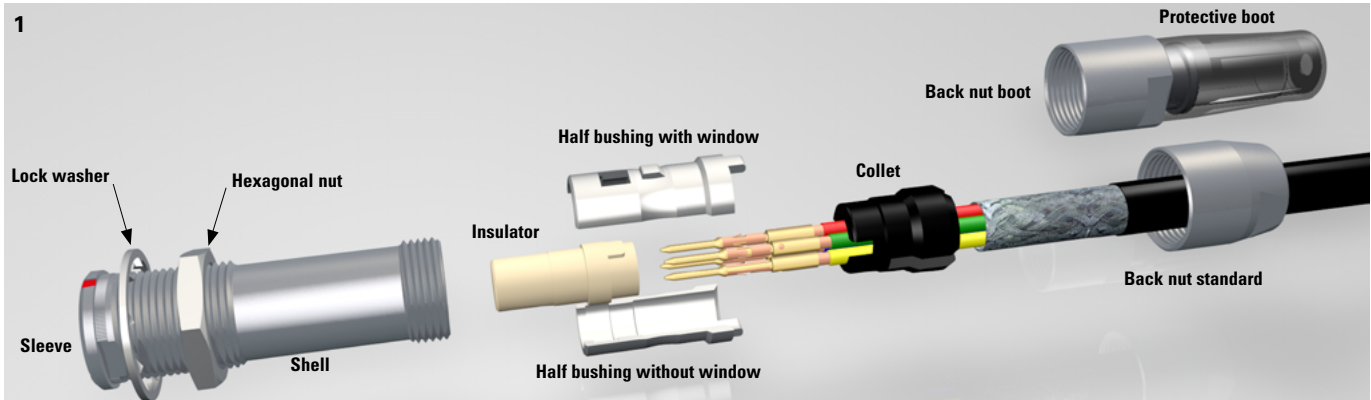
- Slide the protective boot/back nut boot or the back nut standard on to the cable
- Select the proper collet according to the cable diameter specification (see page 28) and slide it on to the cable
- Strip external cable jacket and wire (see page 56)
- Solder or crimp contacts (see pages 53-55)
- Place the two half bushes on the insert, making sure that the insert keyway appears through the window of the half bushing (fig. 2)
- Place the collet and the half bushes while maintaining the screen, half bush keys must be seated in the collet keyway (fig. 3)
- If the cable has shielding, fold back the braid so that it is covering the outside diameter of the collet, braid must be between the collet and half bushes (fig. 3A)
- Place subassembly in the connector housing making sure to keep it aligned (fig. 3)
- Install the back nut or the back nut boot and screw it on to the threads
- Tighten the panel nut hand tight (fig. 4)
- Use two wrenches to tighten (fig. 5 & 6)
- Recommended tightening torques are listed in the table below:



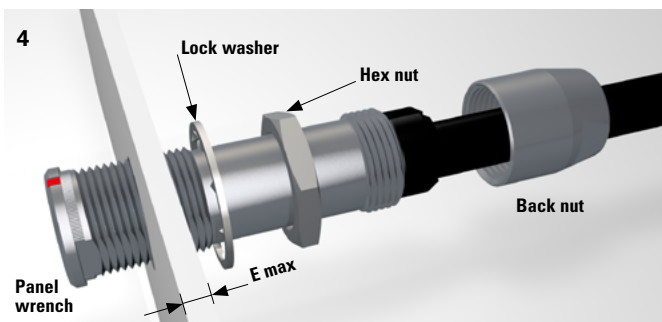
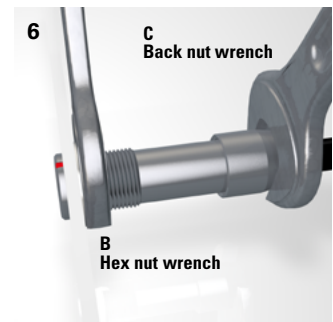
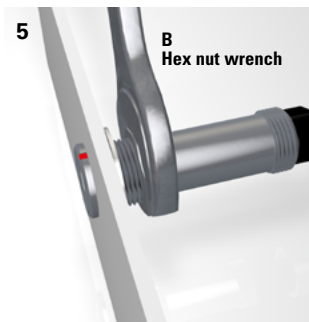
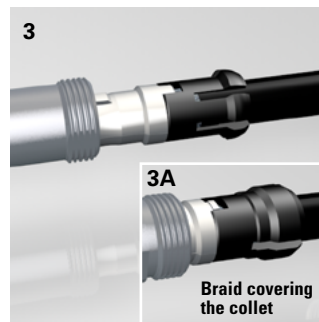
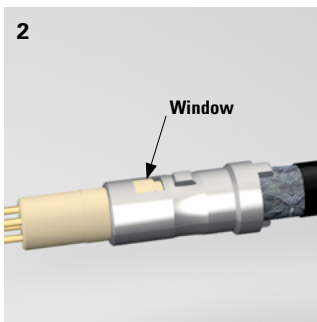
Shell size	Tightening torque (Nm) max		Wrench size		E Panel max thickness	
	B	C	B	C	inch	mm
2	1.7	1.5	17	11	0.143	3.65

JBXSR assembly

2

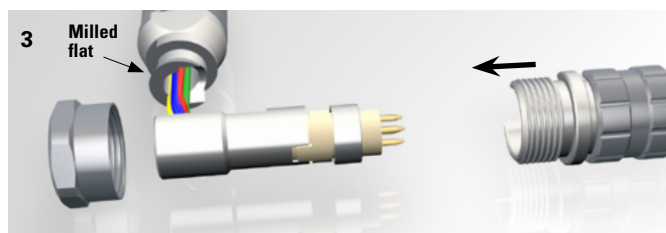
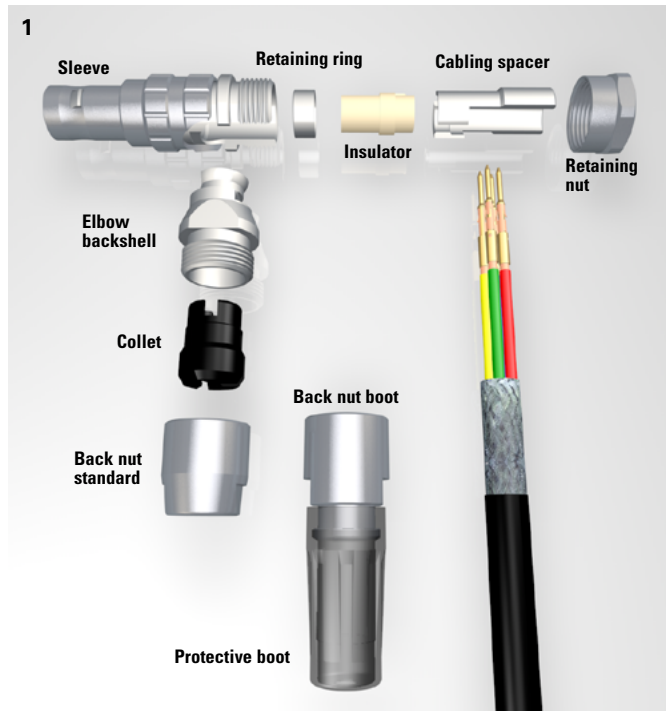


- Slide the protective boot/back nut boot or the back nut standard on to the cable
- Select the proper collet according to the cable diameter specification (see page 28) and slide it on to the cable
- Strip external cable jacket and wire (see page 56)
- Solder or crimp contacts (see pages 53-55)
- Place the two half bushes on the insert, making sure that the insert keyway appears through the window of the half bushing (fig. 2)
- Place the collet and the half bushes while maintaining the screen, half bush keys must be seated in the collet keyway (fig. 3)
- If the cable has shielding, fold back the braid so that it is covering the outside diameter of the collet, braid must be between the collet and half bushes (fig. 3)
- Insert the receptacle in the panel cut-out, respect the orientation (fig. 4)
- Place subassembly in the connector housing making sure to keep it aligned (fig. 4), respect the red dot and window alignment
- Install the back nut or the back nut boot and screw it on to the threads
- Screw the hex nut with a wrench (fig. 5)
- Use two wrenches to tighten (fig. 6)
- Recommended tightening torques are listed in the table below:

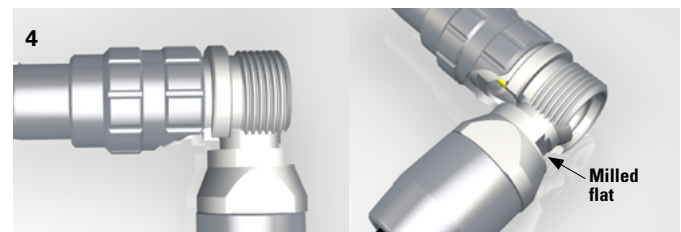


Shell size	Tightening torque (Nm) max		Wrench size		E Panel max thickness	
	B	C	B	C	inch	mm
0	0.7	0.8	11	8	0.314	8.0
1	1.3	1.0	14	10	0.393	10.0
2	1.7	1.5	17	13	0.393	10.0
3	2.0	2.0	21	15	0.472	12.0

JBXFC & JBXFM assembly



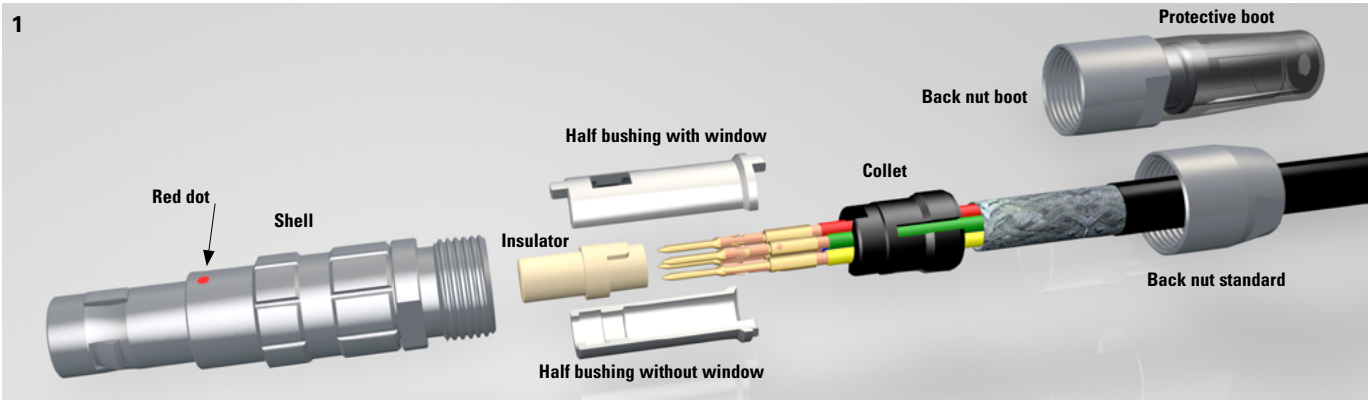
- Slide the protective boot/back nut boot or the back nut standard on to the cable
- Select the proper collet according to the cable diameter specification (see page 28) and slide it on to the cable (fig. 2)
- Slide the elbow backshell on to the cable (fig. 2)
- If the cable has shielding, fold back the braid so that it is covering the outside diameter of the collet, braid must be between the collet and half bushes (fig 2A)
- Strip external cable jacket and wire (see page 56)
- Solder or crimp contacts (see pages 53-55)
- Place the cabling spacer on to the cables
- Insert the contacts into the insulator
- Slide the cabling spacer on the Insulator (fig. 3)
- Slide the retaining ring on the Insulator (fig. 3)
- Position the wires at 90° then place the assembly (elbow backshell + cabling spacer + insulator) inside the sleeve (fig. 3)
- Ensure that the milled flat of the elbow outlet is facing to the rear of the plug housing (fig. 4)
- Tighten the retaining nut with a wrench (fig. 5)
- Install the back nut or the back nut boot and screw it on to the thread
- Use two wrenches to tighten (fig. 6)
- Recommended tightening torques are listed in the table below:



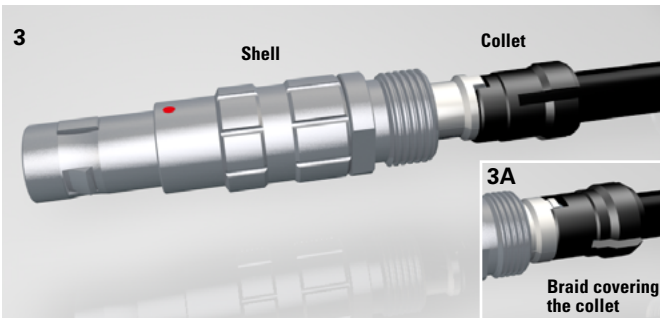
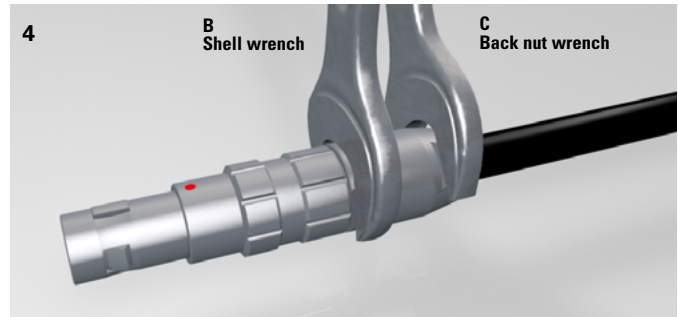
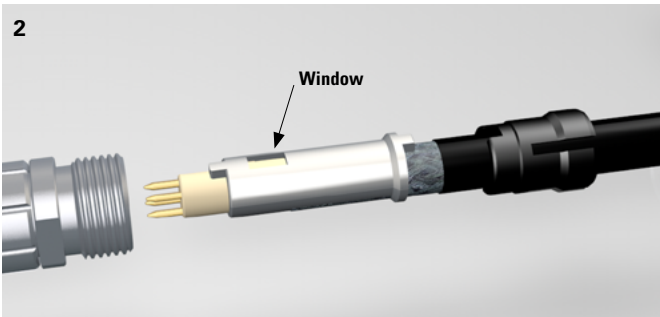
Shell size	Tightening torque (Nm) max			Wrench size		
	A	B	C	A	B	C
0	0.4	—	0.8	10	8	8
1	0.4	—	1.0	12	10	10
2	0.5	—	1.5	15	13	13
3	0.5	—	2.0	17	15	15

JBXFD, JBXFG, JBXFH & JBXFN assembly

2

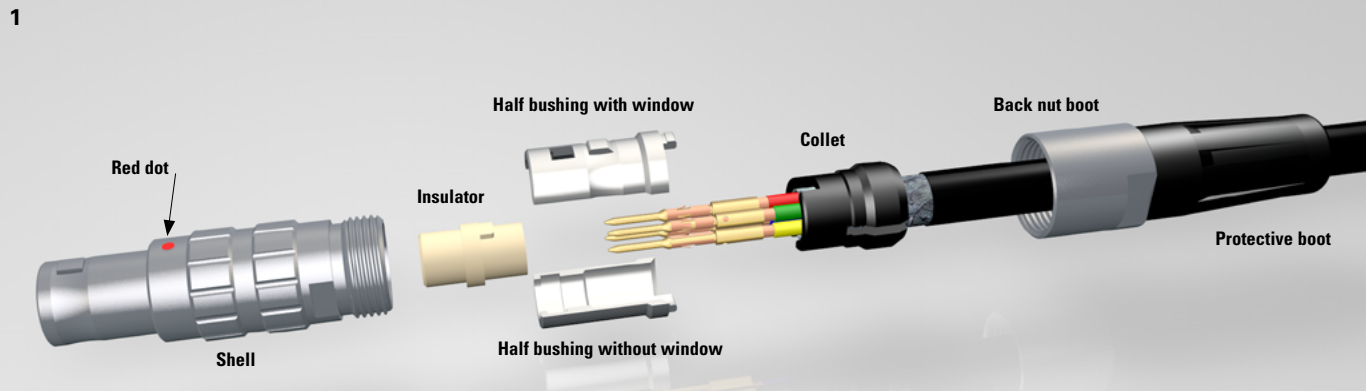


- Slide the protective boot/back nut boot or the back nut standard on to the cable
- Select the proper collet according to the cable diameter specification (see page 28) and slide it on to the cable
- Strip external cable jacket and wire (see page 56)
- Solder or crimp contacts (see pages 53-55)
- Place the two half bushes on the insert, making sure that the insert keyway appears through the window of the half bushing (fig. 2)
- Place the collet and the half bushes while maintaining the screen, half bush keys must be seated in the collet keyway (fig. 3)
- If the cable has shielding, fold back the braid so that it is covering the outside diameter of the collet. Braid must be between the collet and half bushes (fig. 3A)
- Place subassembly in the connector housing making sure to keep it aligned (fig. 3), respect the red dot and window alignment
- Install the back nut or the back nut boot and screw it on to the thread
- Use two wrenches to tighten
- Recommended tightening torques are listed in the table below:

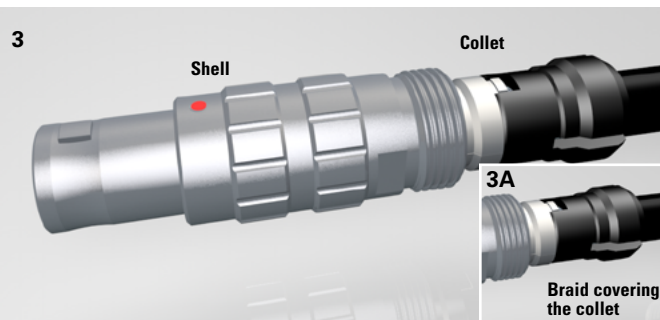
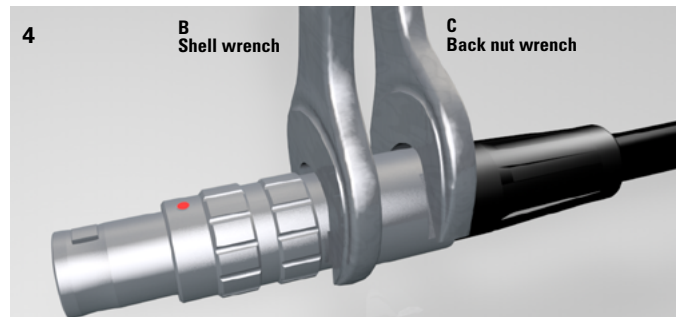
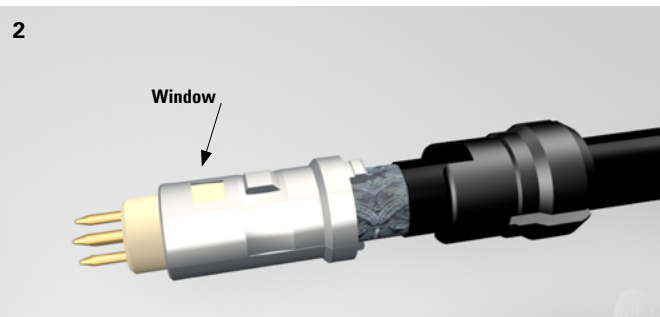


Shell size	Tightening torque (Nm) max		Wrench size	
	B	C	B	C
00	—	0.7	6	6
0	—	0.8	9	8
1	—	1.0	00	10
2	—	1.5	14	13
3	—	2.0	16	15

JBXFF assembly



- Slide the protective boot/back nut boot or the back nut standard on to the cable
- Select the proper collet according to the cable diameter specification (see page 28) and slide it on to the cable
- Strip external cable jacket and wire (see page 56)
- Solder or crimp contacts (see pages 53-55)
- Place the two half bushes on the insert, making sure that the insert keyway appears through the window of the half bushing (fig. 2)
- Place the collet and the half bushes while maintaining the screen, half bush keys must be seated in the collet keyway (fig. 3)
- If the cable has shielding, fold back the braid so that it is covering the outside diameter of the collet, braid must be between the collet and half bushes (fig. 3A)
- Place subassembly in the connector housing making sure to keep it aligned (fig. 3), respect the red dot and window alignment
- Install the back nut or the back nut boot and screw it on to the thread
- Use two wrenches to tighten
- Recommended tightening torques are listed in the table below:



Shell size	Shell wrench Size	Torque (Nm)	Back nut wrench Size	Torque (Nm)
1	10	—	10	10

Collet selections according to cable diameters

2



Collet number	Cable diameter Shell size 00 inch	mm	Shell size 0 inch	mm	Shell size 1 inch	mm	Shell size 2 inch	mm	Shell size 3 inch	mm
1	0.043 to 0.074	1.1 to 1.9	0.059 to 0.098	1.5 to 2.5	0.078 to 0.098	2.0 to 2.5	0.137 to 0.185	3.5 to 4.7	0.192 to 0.236	4.9 to 6.0
2	0.078 to 0.110	2.0 to 2.8	0.090 to 0.137	2.3 to 3.5	0.102 to 0.137	2.6 to 3.5	0.188 to 0.224	4.8 to 5.7	0.240 to 0.283	6.1 to 7.2
3	0.114 to 0.137	2.9 to 3.5	0.141 to 0.177	3.6 to 4.5	0.248 to 0.177	6.3 to 4.5	0.228 to 0.263	5.8 to 6.7	0.287 to 0.330	7.3 to 8.4
4	–	–	0.181 to 0.216	4.6 to 5.5	0.181 to 0.216	4.6 to 5.5	0.267 to 0.303	6.8 to 7.7	0.334 to 0.377	8.5 to 9.6
5	–	–	–	–	0.220 to 0.259	5.6 to 6.6	0.307 to 0.342	7.8 to 8.7	0.381 to 0.425	9.7 to 10.8
6	–	–	–	–	0.263 to 0.295	6.7 to 7.5	0.346 to 0.381	8.8 to 9.7	0.429 to 0.472	10.9 to 12.0

**Materials**

- Shell: brass or aluminum
- Shell plating: black chrome over nickel
- Shielding ring: copper alloy (proprietary)
- Nut: brass
- Insert: PEEK
- Contacts: brass
- Contacts plating: gold over nickel
- Potting seal: epoxy potting compound

Environmental

- Operating temperature: -40°C to +125°C
- Salt spray resistance: 96 hours
- Sealing: IP68 (mated & unmated)
- RoHS compliant
- Fluid resistance:
 - Gas and oil
 - Mineral oil
 - Acid bath
 - Basic bath
- Shielding effectiveness: 55 dB up to 100 MHz

Electrical

- UL 1977: certificate ECBT2, file number E169916
- CSA C22.2: certificate ECBT8, file number E169916

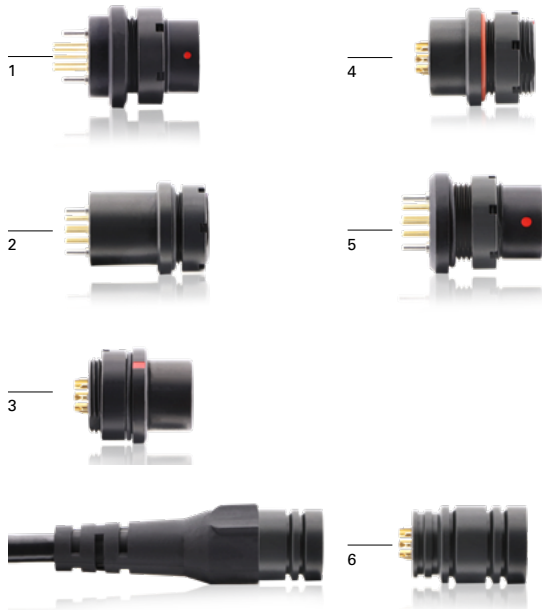
Mechanical

- Durability: 2,500 cycles
- Vibration resistance: 10- 2000 HZ, acceleration 15 g, per EIA 364 method 2005,1
- Mechanical shock: 300 g, duration 3 ms, per EIA-364-D method 27
- Autoclavable

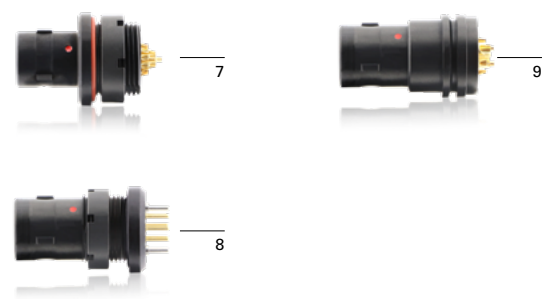
Shell type

3

Receptacle



Plug



Choice of contact termination

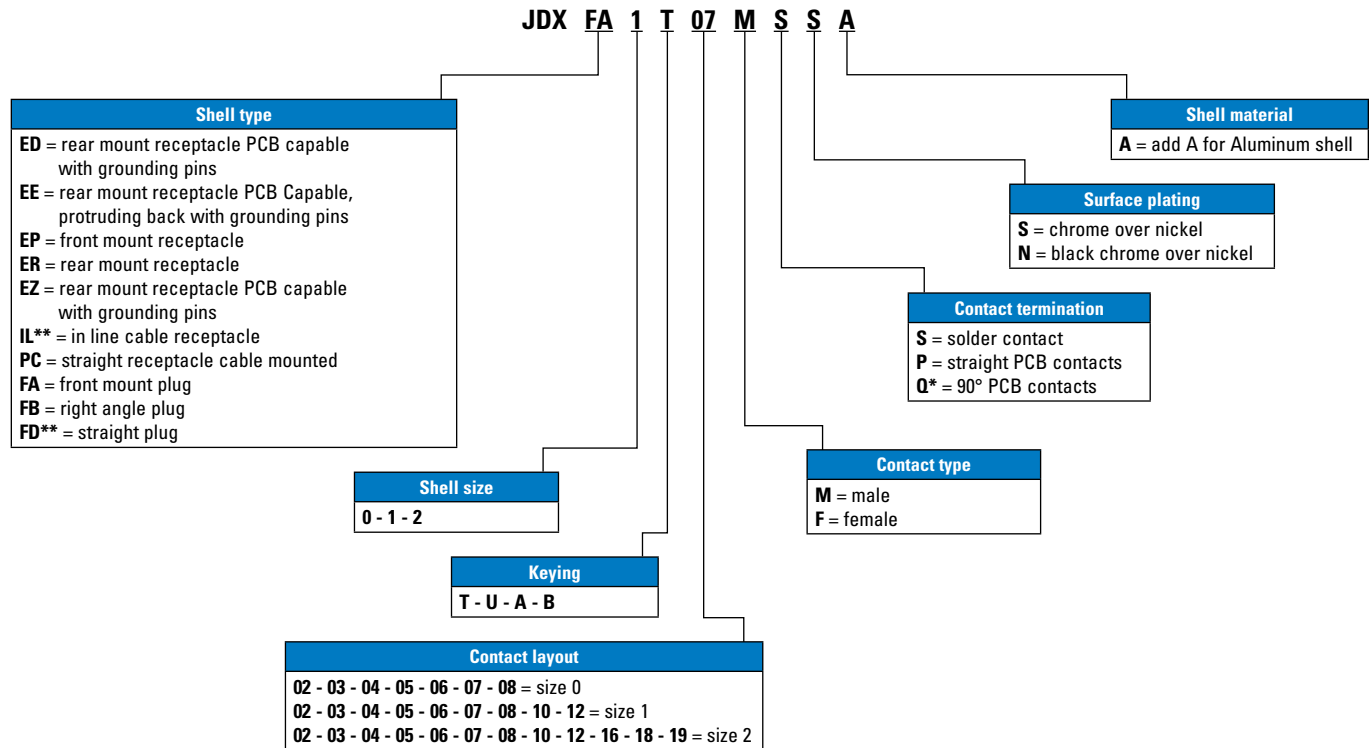
- Solder
- Straight PC tail

1. ED: rear mount receptacle PCB capable with grounding pins
2. EE: rear mount receptacle PCB extended with grounding pins
3. EP: front mount receptacle
4. ER: rear mount receptacle
5. EZ: PCB rear mount receptacle with mounting pins
6. IL: in line cable receptacle*

7. FA: front mount plug
8. FB: right angle plug
9. FD: straight plug

Note: * IL: in line cable receptacle is supplied as overmolded cable assembly or as stand-alone connector (strain relief boot not available for this product)

Catalog number selection



Notes: * Receptacles shell style EE only.

** IL and FD shell styles are supplied as overmolded cable assemblies or as stand-alone connectors (strain relief boot not available for this product).

Custom cable assemblies available for any cable product for any series.

Custom grommets and overmolds can be designed for any application.

Keying color codes

3



In applications where similar connectors are used next to each other, mismatching can cause disturbances, system failures or even danger to operating personnel. To eliminate mismatching, JDX connectors have discrimination keys to avoid interconnection system errors.

In addition to the keyings, we offer four color codes on the receptacle and plug to help the user to identify the correct connector. Each color is linked to a polarization key. JDX color identification remains visible in mated condition.

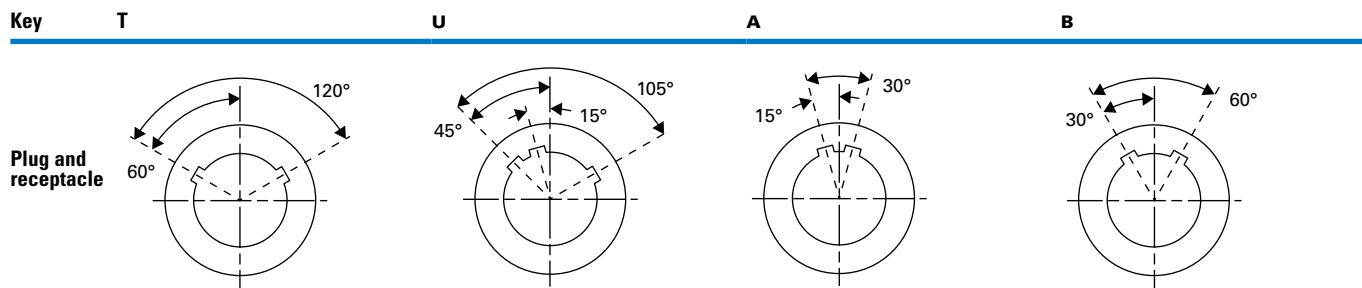
	White	Azur	Red	Green	Purple	Yellow	Orange	Light brown
	○	●	●	●	●	●	●	●
Contacts standard gender	U	B	T	A	–	–	–	–
Contacts reverse gender	–	–	–	–	T	U	A	B

Keying angles

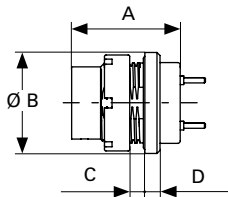
	T		U		A		B	
Keying angle	0		45°		37.5°		30°	
Keying color codes	Contact standard gender	Red	Contact reverse gender	White	Contact standard gender	Green	Contact standard gender	Blue
	Contact reverse gender	Purple	Contact reverse gender	Yellow	Contact reverse gender	Orange	Contact reverse gender	Brown

T is the standard keying, other keyings can be ordered by replacing the T character with the required keying character.

JDXER2**T**02MSS (G keying) => JDXER2**B**02MSS (B keying)



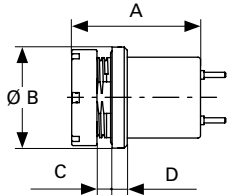
Receptacle



ED: receptacle rear mount PCB capable with grounding pins

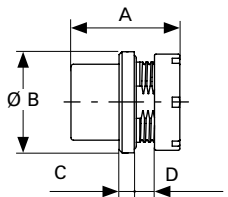
Connector size	A inch	mm	Ø B inch	mm	C max inch	mm	D inch	mm
2	0.846	21.5	0.787	20	0.122	3.1	0.118	3

3



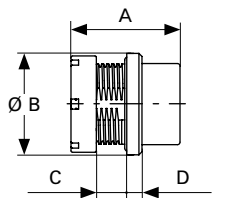
EE: receptacle rear mount PCB extended with grounding pins

Connector size	A inch	mm	Ø B inch	mm	C max inch	mm	D inch	mm
2	1.003	25.5	0.787	20	0.102	2.6	0.118	3



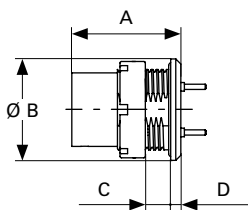
EP: receptacle front mount

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D max inch	mm
0	0.736	18.7	0.629	16	0.118	3	0.106	2.7
1	0.822	20.9	0.629	16	0.118	3	0.165	4.2
2	0.846	21.5	0.787	20	0.118	3	0.157	4



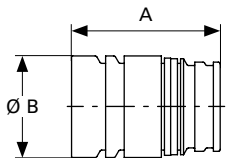
ER: receptacle rear mount

Connector size	A inch	mm	Ø B inch	mm	C max inch	mm	D inch	mm
0	0.736	18.7	0.629	16	0.106	2.7	0.118	3
1	0.822	20.9	0.629	16	0.145	3.7	0.118	3
2	0.846	21.5	0.787	20	0.236	6	0.118	3



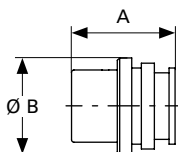
EZ: receptacle PCB rear mount with mounting pins

Connector size	A inch	mm	Ø B inch	mm	C max inch	mm	D inch	mm
0	0.736	18.7	0.629	16	0.216	5.5	0.118	3
2	0.846	21.5	0.787	20	0.216	5.5	0.078	2



IL: receptacle in line cable

Connector size	A inch	mm	Ø B inch	mm
0	0.787	20.0	0.440	11.2
1	0.921	23.4	0.547	13.9
2	0.944	24	0.645	16.4

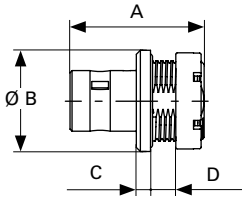


PC: receptacle straight cable mounted

Connector size	A inch	mm	Ø B inch	mm
0	0.736	18.7	0.708	18
1	0.822	20.9	0.708	18
2	0.846	21.5	0.787	20

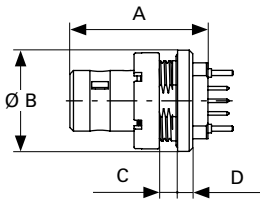
Plug

3



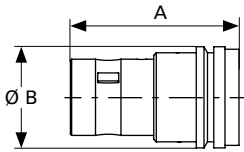
FA: plug front mount

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D max inch	mm
0	0.838	21.3	0.629	16	0.118	3	0.088	2.2
1	1.023	26	0.629	16	0.118	3	0.228	5.8
2	1.043	26.5	0.787	20	0.110	2.8	0.220	5.6



FB: plug rear mount with grounding pins

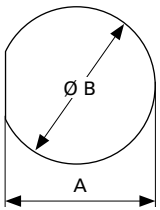
Connector size	A inch	mm	Ø B inch	mm	C max inch	mm	D inch	mm
2	1.073	27.27	0.787	20	0.118	3	0.118	3



FD: plug straight cable

Connector size	A inch	mm	Ø B inch	mm
0	0.838	21.3	0.3851	9.7
1	1.023	26	0.511	13
2	1.043	26.5	0.625	15.9

Panel cut-out



ED: receptacle rear mount PCB capable with grounding pins

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
2	0.574	14.6	0.633	16.1	0.122	3

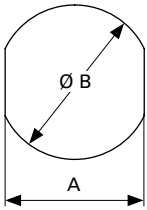
EE: receptacle rear mount PCB extended with grounding pins

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
2	0.574	14.6	0.633	16.1	0.102	2.6

FB: plug rear mount with grounding pins

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
2	0.575	14.6	0.630	16.1	0.118	3

Panel cut-out (continued)



EP: receptacle front mount

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.477	10.6	0.476	12.1	0.106	2.7
1	0.477	10.6	0.476	12.1	0.165	4.2
2	0.575	14.6	0.630	16.1	0.157	4

3

ER: receptacle rear mount

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.477	10.6	0.476	12.1	0.118	3
1	0.477	10.6	0.476	12.1	0.118	3
2	0.575	14.6	0.630	16.1	0.118	3

EZ: receptacle PCB rear mount with mounting pins

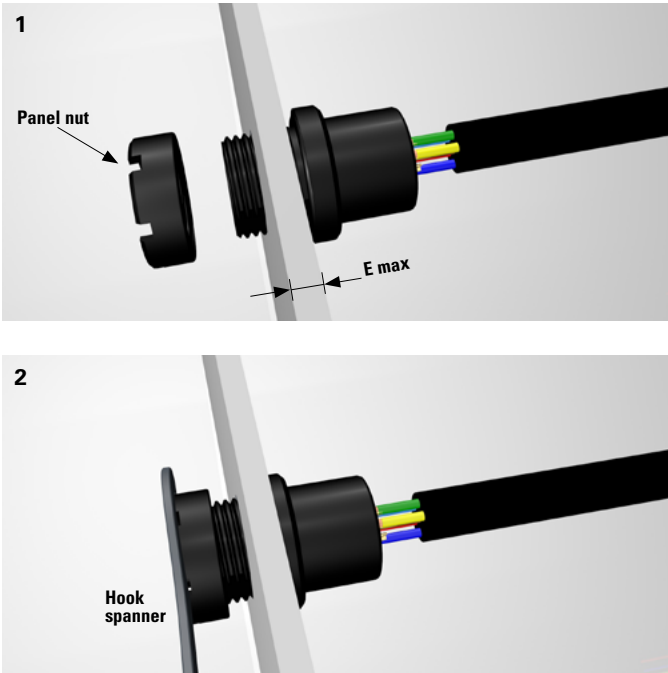
Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.477	10.6	0.476	12.1	0.216	5.5
2	0.575	14.6	0.630	16.1	0.216	5.5

FA: plug front mount

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.477	10.6	0.476	12.1	0.088	2.2
1	0.477	10.6	0.476	12.1	0.228	5.8
2	0.575	14.6	0.630	16.1	0.220	5.6

JDXED - JDXER assembly

3

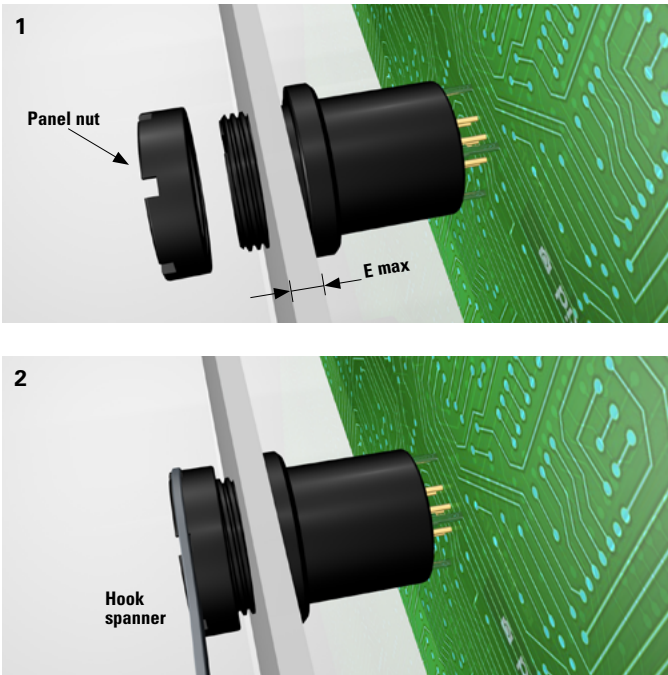


- Solder or crimp contacts (see pages 53-55)
- Place the receptacle in the panel cut-out
- Apply thread lock to panel nut prior to assembly
- Tighten the panel nut hand tight
- Screw the panel nut with with the hook spanner
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max	Hook spanner	E Panel max thickness inch	mm
0	0.7	SKF - HN 0	0.118	3
1	1.3			
2	1.7			

Note: For PCB contacts see pages 62-67 for drilling pattern

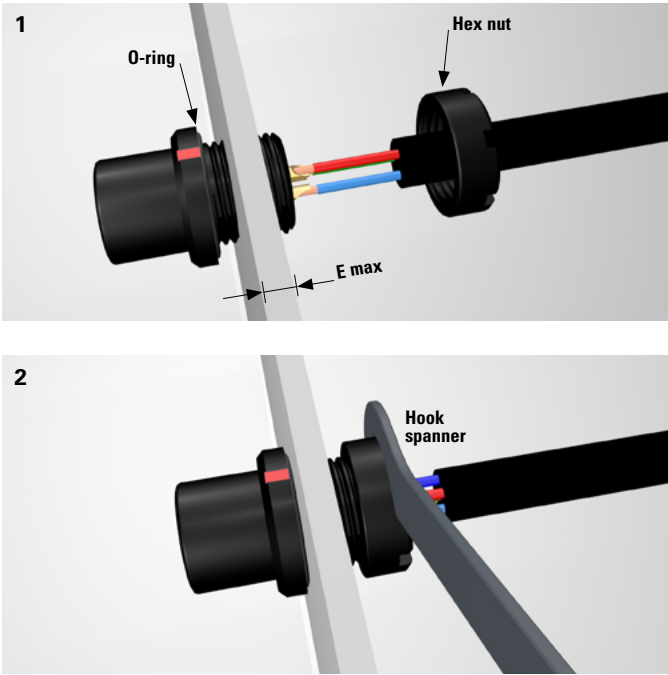
JDXEE assembly



Shell size	Tightening torque (Nm) max	Hook spanner	E Panel max thickness inch	mm
2	1.7	SKF - HN 0	0.102	2.6

Note: For drilling pattern see pages 62-67

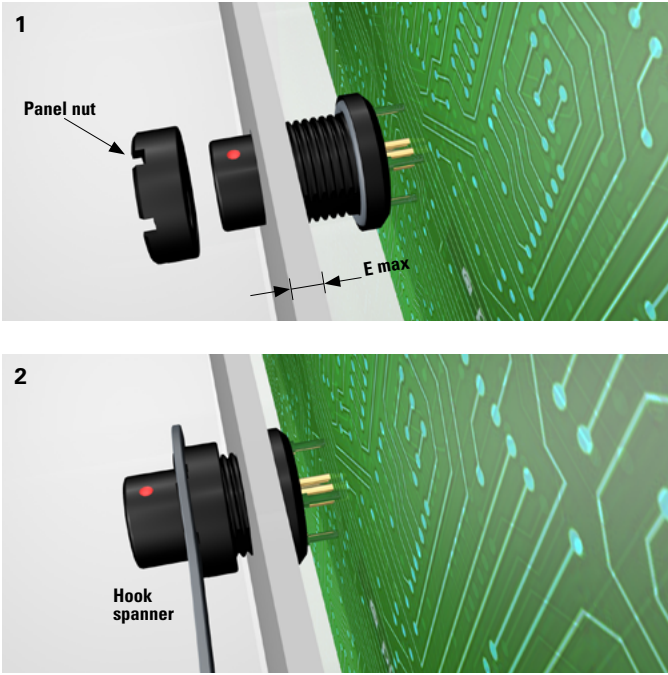
JDXEP assembly



- Solder or crimp contacts (see pages 53-55)
- Place the cable in the panel cut-out
- Slide the hex nut on to the cable
- Place the receptacle in the panel cut-out
- Screw the hex nut to the bulkhead with the hook spanner
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max	Hook spanner	E Panel max thickness	
			inch	mm
0	0.7	SKF - HN 0	0.106	2.7
1	1.3		0.165	4.2
2	1.7		0.157	4

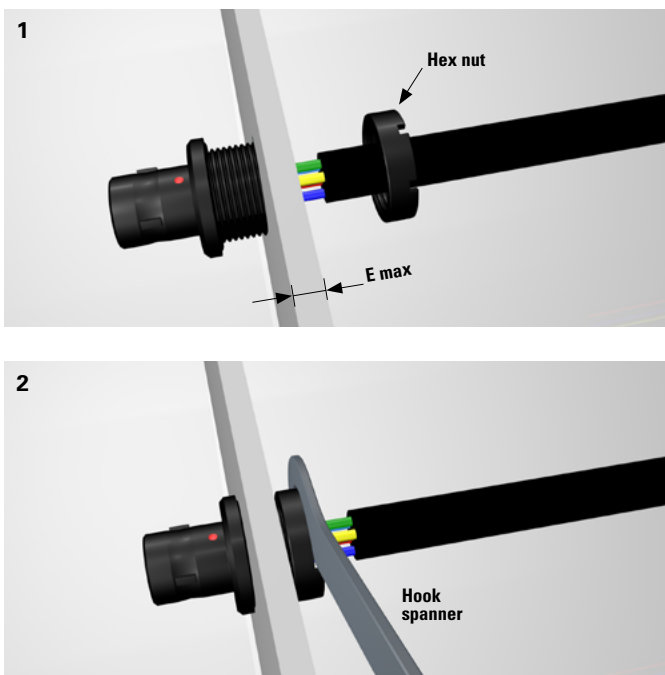
JDXEZ assembly



Shell size	Tightening torque (Nm) max	Hook spanner	E Panel max thickness	
			inch	mm
0	0.7	SKF - HN 0	0.216	5.5
2	1.7			

Notes: For drilling pattern see pages 62-67

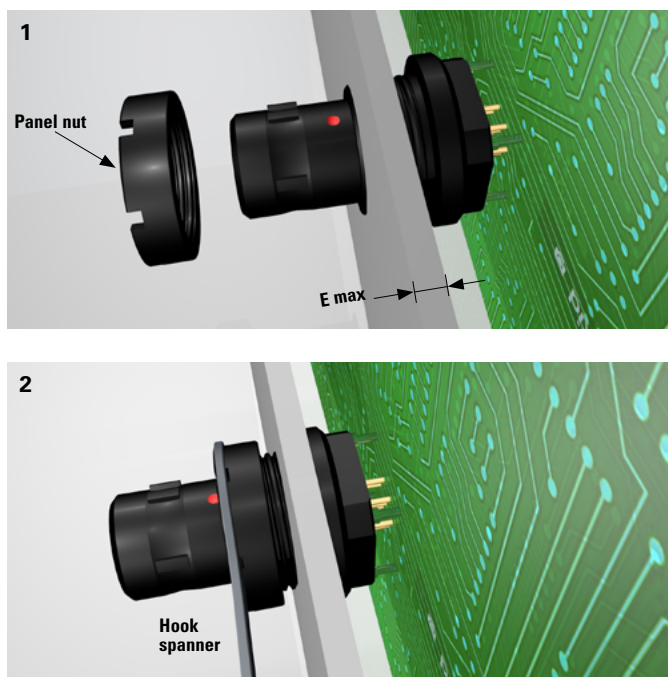
JDXFA assembly



- Solder or crimp contacts (see pages 53-55)
- Place the cable in the panel cut-out
- Slide the hex nut on to the cable
- Place the receptacle in the panel cut-out
- Screw the hex nut to the bulkhead with the hook spanner
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max	Hook spanner	E Panel max thickness	
			inch	mm
0	0.7	SKF - HN 0	0.088	2.2
1	1.3		0.228	5.8
2	1.7		0.220	5.6

JDXFB assembly



Shell size	Tightening torque (Nm) max	Hook spanner	E Panel max thickness	
			inch	mm
2	1.7	SKF - HN 0	0.118	3

Note: For drilling pattern see pages 62-67



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 layouts on page 6
- 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 (standard version)
 - 96 h (black anodized coupling ring)
- Higher salt spray resistance (200/500 h) upon request
- Sealing: dynamic IP68 in mated condition
- RoHS compliant
- Fluid resistance:
 - Gas and oil
 - Mineral oil
 - Acid bath
 - Basic bath
- Shielding effectiveness: 55 dB up to 100 MHz

Electrical

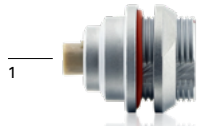
- UL 1977: certificate ECBT2, file number E169916
- CSA C22.2: certificate ECBT8, file number E169916

Mechanical

- Durability: 5,000 cycles, except for 0.027" (0.7 mm) crimp contacts for which endurance is limited to 500 cycles
- Vibration resistance:
 - 10- 2,000 Hz, acceleration 15 g, contact Ø 0.027" (0.7 mm) and 0.035" (0.9 mm)
 - 10- 2,000 Hz, acceleration 20 g, contact Ø 0.051"- 0.062" (1.3 mm- 1.6 mm) and 0.078" (2 mm)
- 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 0.027" (0.7 mm) and 0.035" (0.9 mm)
 - 100 g, duration 6 ms contact Ø 0.051"- 0.062" (1.3 mm- 1.6 mm) and 0.078" (2 mm)

Shell type

Receptacle



Plug



Choice of contact termination

- Crimp
- Solder
- Straight PC tail
- 90° PC tail

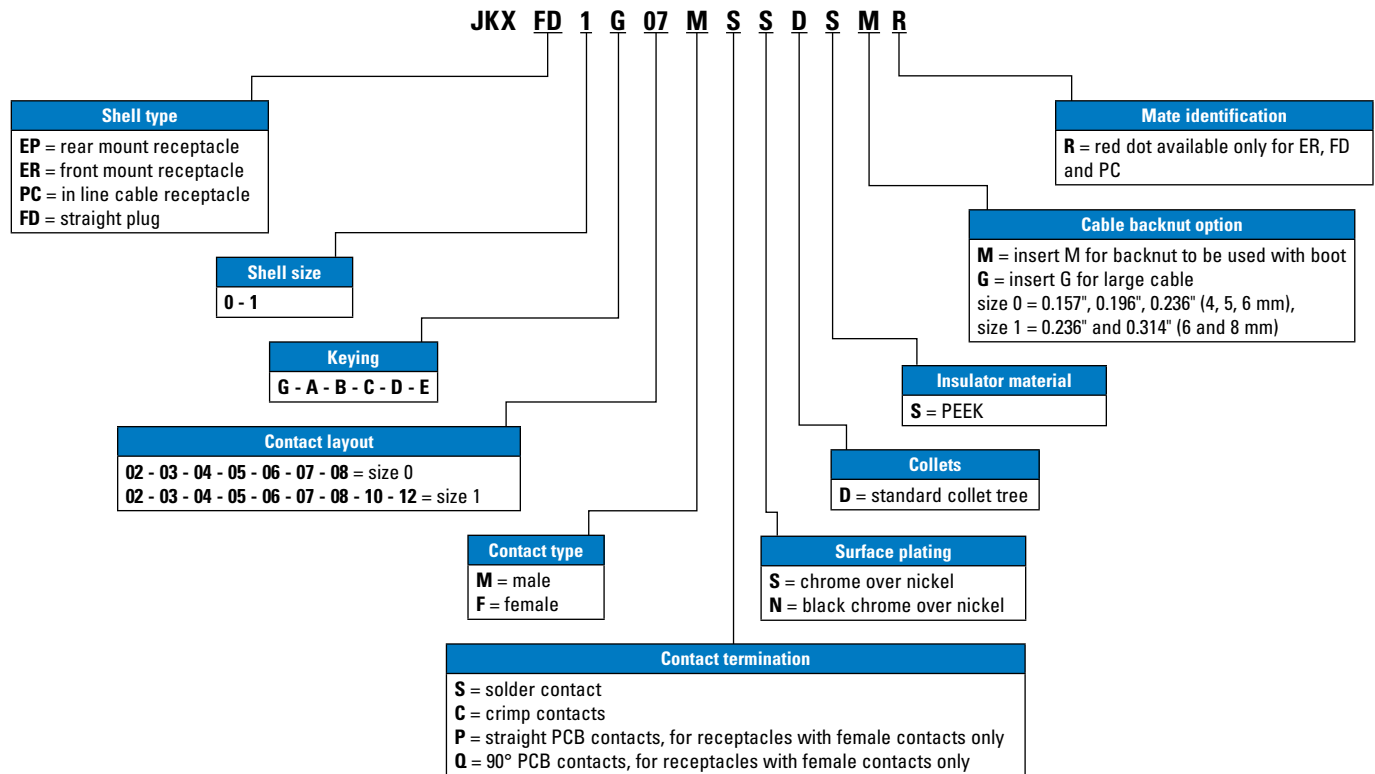
Choice of contact termination

- Crimp
- Solder

1. EP: rear mount receptacle
2. ER: front mount receptacle
3. PC: in line cable receptacle

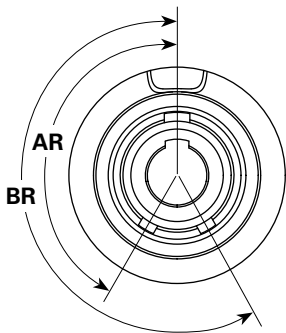
4. FD: straight plug with cable clamping chrome over nickel version
5. FD...M: straight plug backnut for protective boot black chrome over nickel version
6. Protective boot

Catalog number selection



4

Discrimination



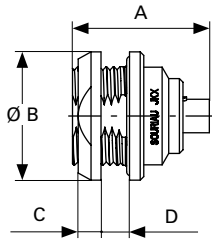
Viewed from front face
receptacle

Keying	AR	BR
G	165°	195°
A	45°	180°
B	135°	225°
C	45°	225°
D	135°	315°
E	180°	315°

G is the standard keying, other keyings can be ordered by replacing the G character with the required keying character.

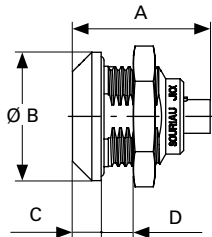
JKXFD1G05MCSDSM (G keying) => JKXFD1B05MCSDSM (B keying)

Receptacle



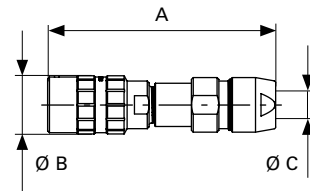
EP - receptacle rear mount

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm
0	0.767	19.5	0.708	18	0.125	3.2	0.177	4.5
1	0.964	24.5	0.787	20	0.157	4	0.236	6



ER - receptacle front mount

Connector size	A inch	mm	Ø B inch	mm	C inch	mm	D inch	mm
0	0.767	19.5	0.708	18	0.157	4	0.177	4.5
1	0.964	24.5	0.787	20	0.177	4.5	0.314	8

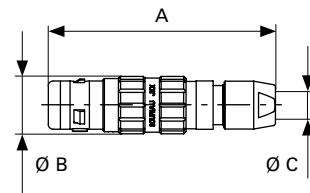


PC - receptacle in line cable

Connector size	A inch	mm	Ø B inch	mm	Ø C inch	mm
1	2.362	60	0.629	16	0.078 to 0.236	2 to 6
1 option G*	2.440	62	0.629	16	0.236 to 0.314	6.0 to 8.0

Notes: * select option G to accommodate bigger cables

Plug

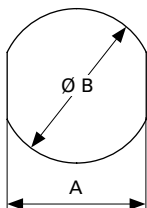


FD - plug straight

Connector size	A inch	mm	Ø B inch	mm	Ø C inch	mm
0	1.850	47	0.472	12	0.059 to 0.177	1.5 to 4.5
0 option G*	2.007	51	0.472	12	0.181 to 0.236	4.6 to 6.0
1	2.244	57	0.590	15	0.078 to 0.236	2.0 to 6.0
1 option G*	2.362	60	0.590	15	0.236 to 0.314	6.0 to 8.0

Notes: * select option G to accommodate bigger cables

Panel cut-out



EP - receptacle rear mount

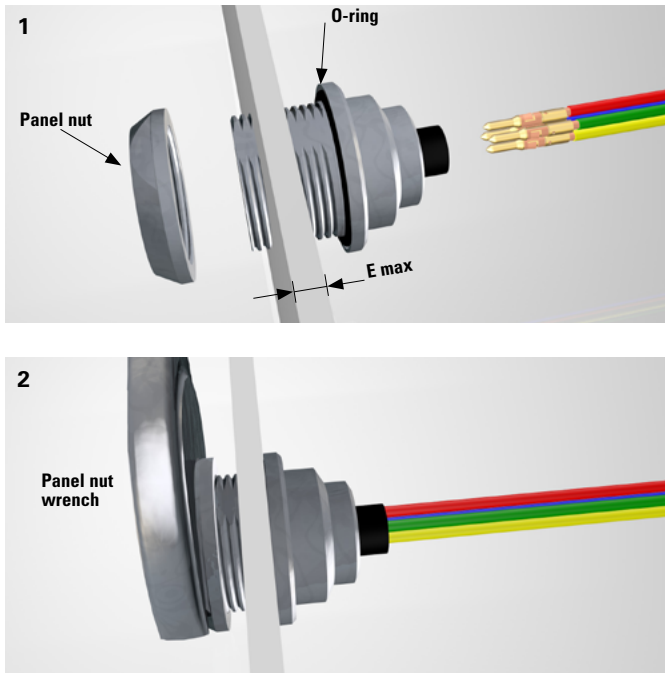
Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.496	12.6	0.555	14.1	0.177	4.5
1	0.574	14.6	0.633	16.1	0.236	6

ER - receptacle front mount

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
0	0.496	12.6	0.555	14.1	0.177	4.5
1	0.574	14.6	0.633	16.1	0.335	8.5

Receptacle assembly instructions

JKXEP assembly

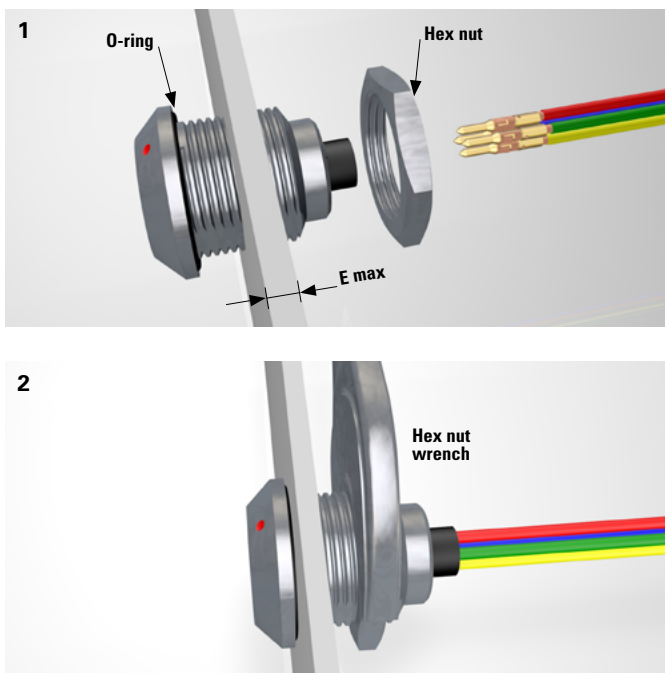


- Solder or crimp contacts (see pages 53-55)
- Place the receptacle in the panel cut-out
- Apply thread lock to panel nut prior to assembly
- Tighten the panel nut hand tight
- Insert contacts manually in the cavities for removable contacts versions
- Screw the hex nut if needed
- Screw the panel nut with a wrench
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max	Wrench size	E Panel max thickness	
			inch	mm
0	1.5	16	0.177	4.5
1	2	17	0.236	6

Note: For PCB contacts see pages 62-64 for drilling pattern

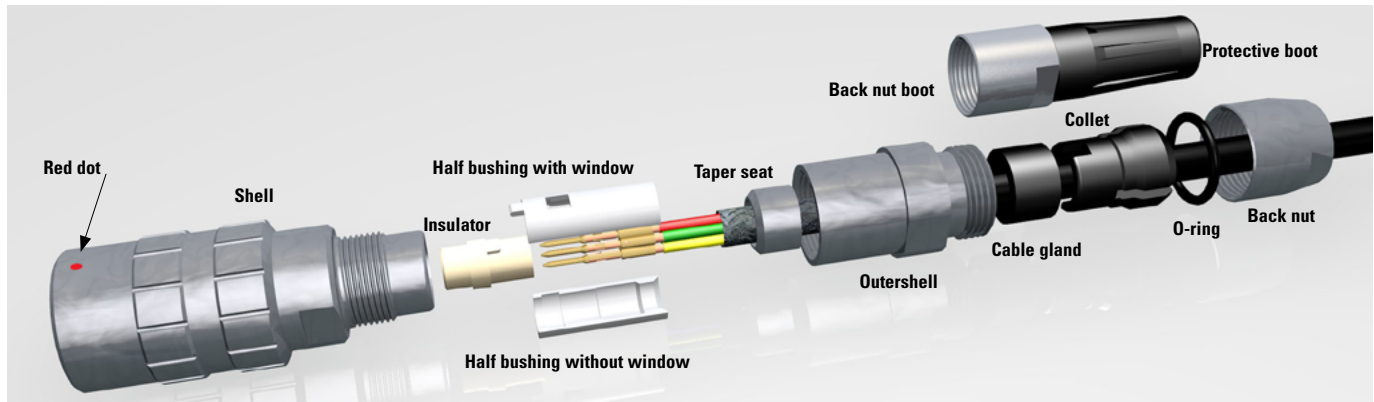
JKXER assembly



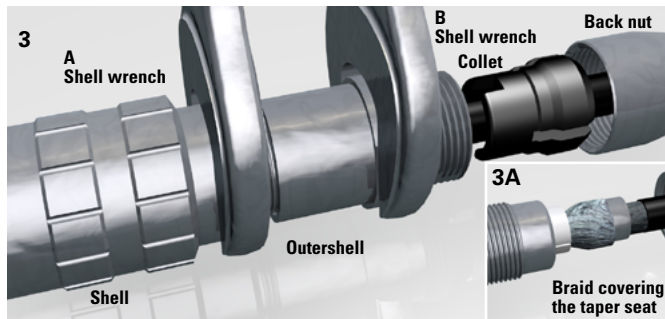
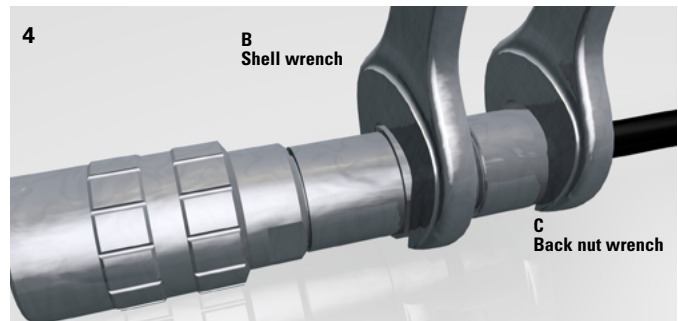
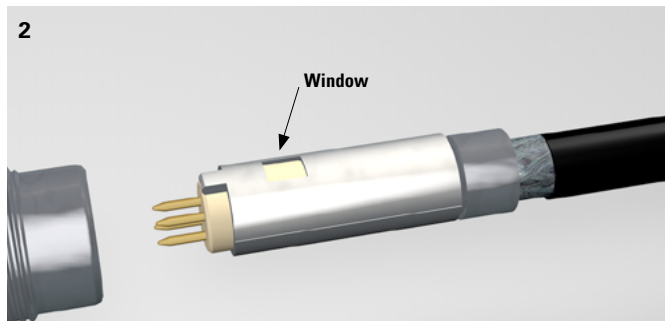
- Solder or crimp contacts (see pages 53-55)
- Slide the lock washer and the hex nut on to the cable
- Place the receptacle in the panel cut-out
- Insert contacts manually in the cavities for removable contacts versions
- Screw the hex nut to the bulkhead with a wrench
- Recommended tightening torques are listed in the table below:

Shell size	Tightening torque (Nm) max	Wrench size	E Panel max thickness	
			inch	mm
0	1.6	17	0.177	4.5
1	1.8	19	0.335	8.5

JKXPC assembly

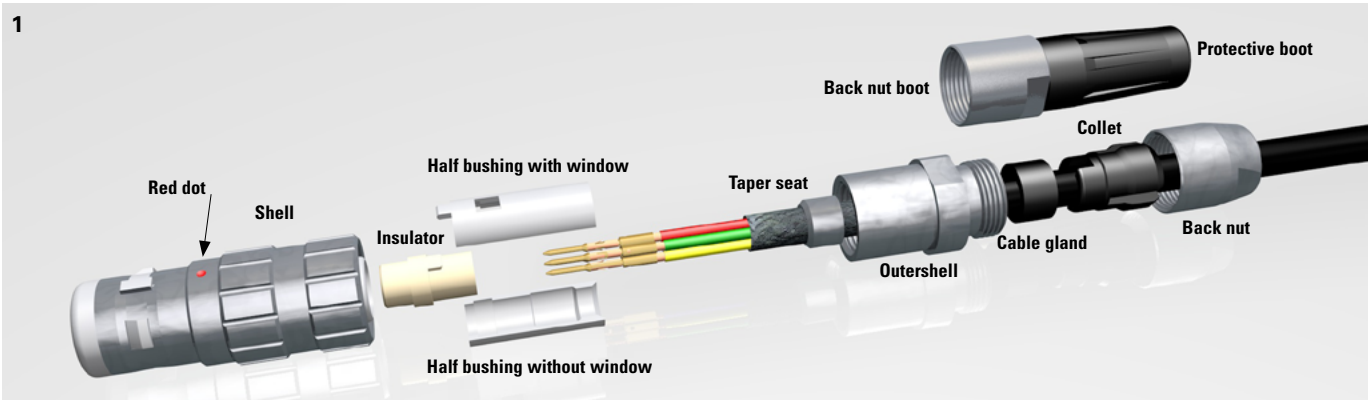


- Slide the protective boot/back nut boot or the back nut standard on to the cable
- Select the proper collet according to the cable diameter specification (see page 28) and slide it on to the cable
- Strip external cable jacket and wire (see page 56)
- Solder or crimp contacts (see pages 53-55)
- Place the two half bushes on the insert, making sure that the insert keyway appears through the window of the half bushing (fig. 2)
- Place the collet and the half bushes while maintaining the screen, half bush keys must be seated in the collet keyway (fig. 3)
- If the cable has shielding, fold back the braid so that it is covering the outside diameter of the collet, braid must be between the collet and half bushes (fig. 3A)
- Place subassembly in the connector housing making sure to keep it aligned (fig. 3), respect the red dot and window alignment
- Install the back nut or the back nut boot and screw it on to the thread
- Use two wrenches to tighten
- Recommended tightening torques are listed in the table below:

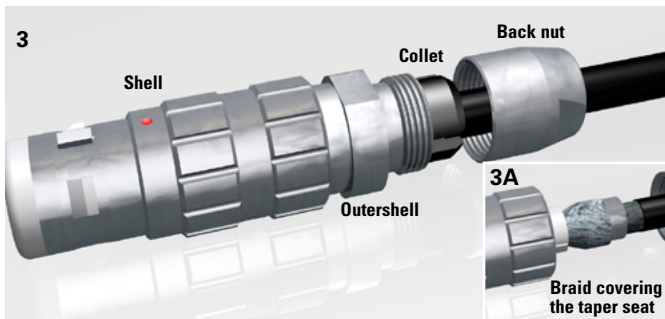
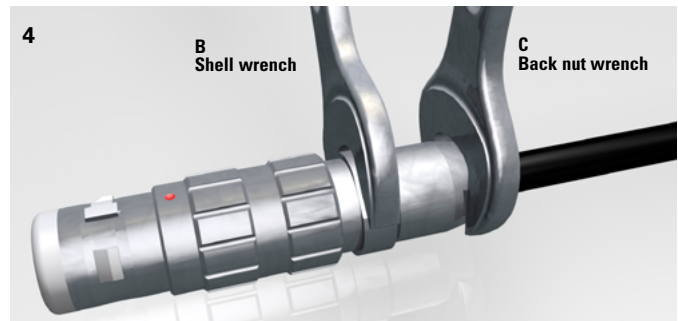
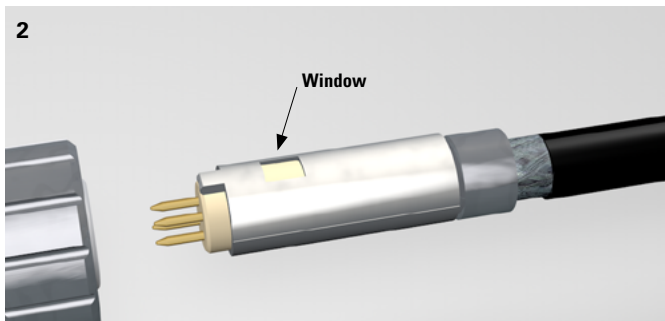


Shell size	Tightening torque (Nm) max			Wrench size		
	A	B	C	A	B	C
1	—	1	2	12	12	10
1 option G	—	1	2.5	12	14	13

JKXFD assembly



- Slide the protective boot/back nut boot or the back nut standard on to the cable
- Select the proper collet according to the cable diameter specification (see page 28) and slide it on to the cable
- Strip external cable jacket and wire (see page 56)
- Solder or crimp contacts (see pages 53-55)
- Place the two half bushes on the insert, making sure that the insert keyway appears through the window of the half bushing (fig. 2)
- Place the collet and the half bushes while maintaining the screen, half bush keys must be seated in the collet keyway (fig. 3)
- If the cable has shielding, fold back the braid so that it is covering the outside diameter of the collet, braid must be between the collet and half bushes (fig. 3A)
- Place subassembly in the connector housing making sure to keep it aligned (fig. 3), respect the red dot and window alignment
- Install the back nut or the back nut boot and screw it on to the thread
- Use two wrenches to tighten
- Recommended tightening torques are listed in the table below:



Shell size	Tightening torque (Nm) max		Wrench size	
	B	C	B	C
0	0.8	1.5	10	8
0 option G	0.8	2	11	10
1	1	2	12	10
1 option G	1	2.5	14	13

Collet selections according to cable diameters



4

Collet number	Cable diameter Shell size 0 inch	mm	Shell size 0 option G inch	mm	Shell size 1 inch	mm	Shell size 1 option G inch	mm
1	0.059 to 0.098	1.5 to 2.5	—	—	0.078 to 0.098	2.0 to 2.5	—	—
2	0.102 to 0.137	2.6 to 3.5	—	—	0.102 to 0.137	2.6 to 3.5	—	—
3	0.141 to 0.177	3.6 to 4.5	—	—	0.141 to 0.177	3.6 to 4.5	0.251 to 0.263	6.1 to 6.7
4	—	—	0.181 to 0.216	4.6 to 5.5	0.181 to 0.216	4.6 to 5.5	0.267 to 0.303	6.8 to 7.7
5	—	—	0.220 to 0.236	5.6 to 6.0	0.220 to 0.236	5.6 to 6.0	0.307 to 0.314	7.8 to 8.0

Cable gland selections according to cable size



Cable gland Ø A	Cable diameter Shell size 0 inch	mm	Shell size 0 option G inch	mm	Shell size 1 inch	mm	Shell size 1 option G inch	mm
2	0.059 to 0.114	1.5 to 2.9	—	—	—	—	—	—
3.5	0.118 to 0.177	3.0 to 4.5	—	—	—	—	—	—
2.5	—	—	—	—	0.078 to 0.133	2.0 to 3.4	—	—
4	—	—	0.181 to 0.216	4.6 to 4.9	0.137 to 0.192	3.5 to 4.9	—	—
5.5	—	—	0.196 to 0.236	5.0 to 6.0	0.196 to 0.236	5.0 to 6.0	0.240 to 0.251	6.1 to 6.4
7	—	—	—	—	—	—	0.255 to 0.314	6.5 to 8.0



Materials

- Shell: PEI
- Insert: PEEK
- Collet: PEI
- Cable seal: silicon rubber
- Clip: beryllium copper
- Contacts: cupro-nickel
- Contacts plating: gold
- Biocompatibility: shell material biocompatible to USP Class VI / ISO 10993

Environmental

- Operating temperature:
 - Receptacle: -20°C to +100°C
 - Plug: -40°C to +125°C
 - Short term (autoclaving): resistance up to +134°C
- Flammability rating:
 - UL94 V-0 for the shell
 - UL94 HB for the insert
- Steam sterilization*: plug withstands autoclave steam sterilization pre-vacuum & gravity displacement process: 200 cycles per EN13060
- RoHS compliant
- IP68 1 bar during 1 week per IEC60529 in mated conditions

Note: *Connectors are not sterilized when shipped to the customer. The medical device manufacturer is responsible for cleaning the connectors to ensure appropriate use in the final application.

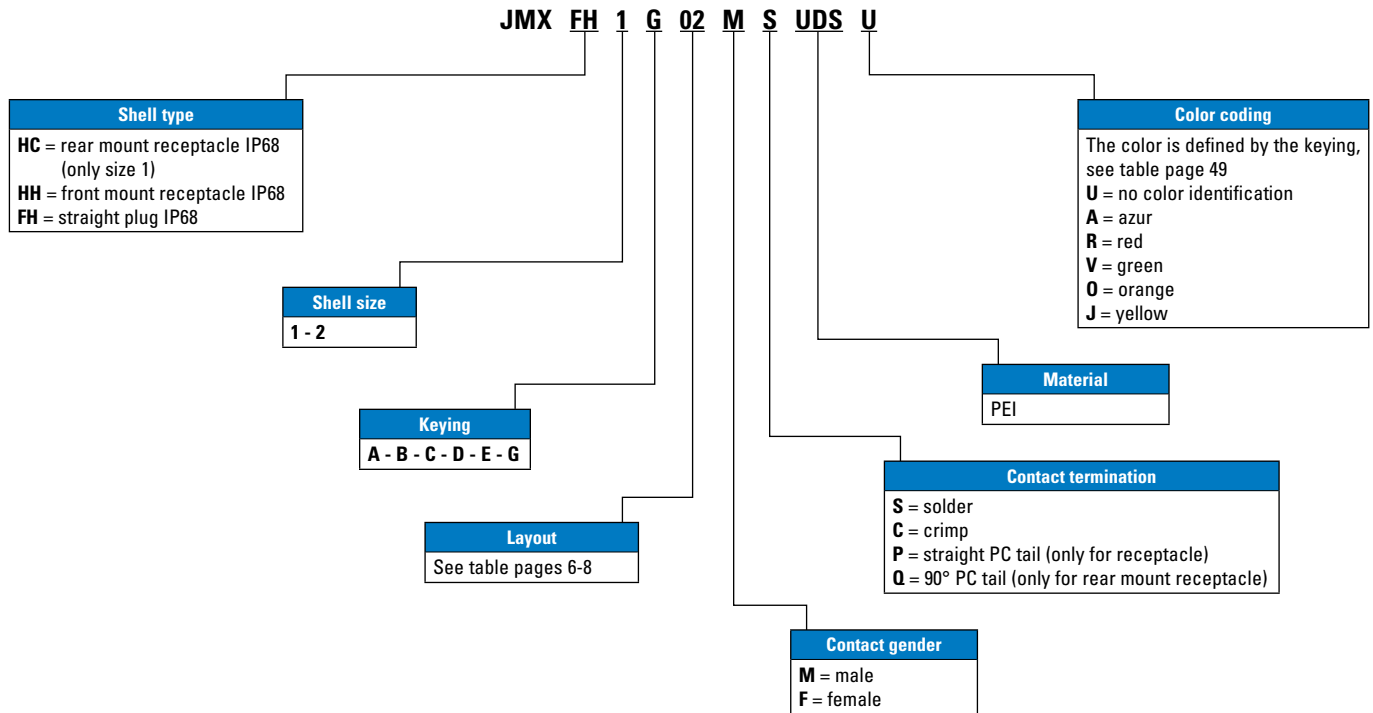
Electrical

- UL 1977 and IEC 61984

Mechanical

- Durability: 2,000 cycles per IEC 60512-5 test 9a
- Mechanical strength impact: dropping height 29.527" (750 mm), per IEC 60512-7-2 test 7b
- Color coding: five color codings, see pages 48-49
- Keying: see pages 48-49
- Acceptable cable diameter: 0.137" to 0.295" (3.5 to 7.5 mm)

Catalog number selection



Keying color codes



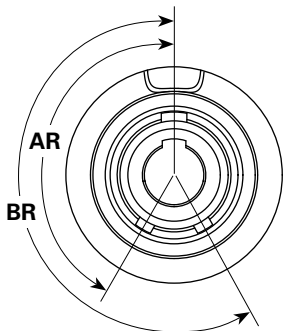
5

In applications where similar connectors are used next to each other, mismatching can cause disturbances, system failures or even danger to operating personnel. To eliminate mismatching, JMX connectors have discrimination keys to avoid interconnection system errors.

In addition to the keyings, we offer five color codes on the receptacle and plug to help the user to identify the correct connector. Each color is linked to a polarization key. JMX color identification remains visible in mated condition.

	No color identification	Azur	Red	Green	Orange	Yellow
	○	●	●	●	●	●
Keying	G	A	B	C	D	E
Color identification	U	A	R	V	O	J
Part number	JMX***G***UDSU	JMX***A***UDSA	JMX***B***UDSR	JMX***C***UDSV	JMX***D***UDSO	JMX***E***UDSJ

Keying angles

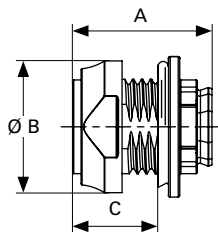


Viewed from front face
receptacle

Keying	AR	BR
G	165°	195°
A	45°	180°
B	135°	225°
C	45°	225°
D	135°	315°
E	180°	315°

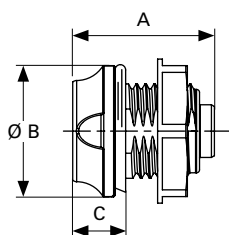
G is the standard keying, other keyings can be ordered by replacing the G character with the required keying character.
JMXHH1**G**03MSUDS**U** (G keying) => JMXHH1**B**03MSUDS**R** (B keying Red color)

Receptacle



HC: rear mount receptacle IP68

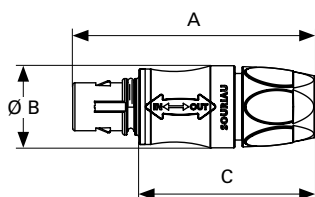
Connector size	A inch	mm	Ø B inch	mm	C inch	mm
1	0.937	23.8	0.885	22.5	0.586	14.9



HH: front mount receptacle IP68

Connector size	A inch	mm	Ø B inch	mm	C inch	mm
1	0.944	24	0.866	22	0.334	8.5
2	1.015	25.8	1.102	28	0.350	8.9

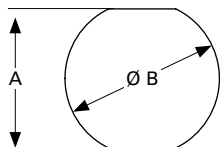
Plug



FH: straight plug IP68

Connector size	A inch	mm	Ø B inch	mm	C inch	mm
1	0.944	24	0.866	22	0.334	8.5
2	1.015	25.8	1.102	28	0.350	8.9

Panel cut-out



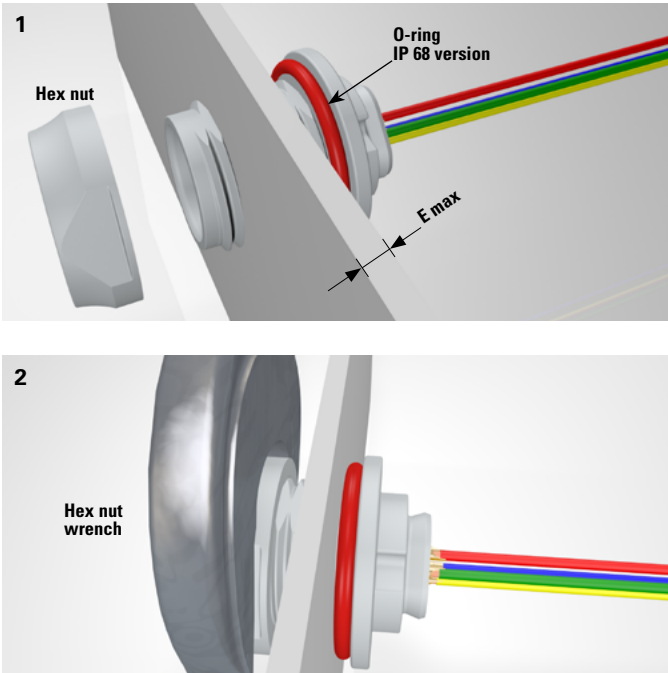
HH: front mount receptacle IP68

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
1	0.561	14.2	0.639	16.2	0.314	8
2	0.797	20.2	0.875	22.2	0.314	8

HC: rear mount receptacle IP68

Connector size	A inch	mm	Ø B inch	mm	Max panel thickness inch	mm
1	0.639	16.2	0.718	18.2	0.236	6

JMXHC assembly



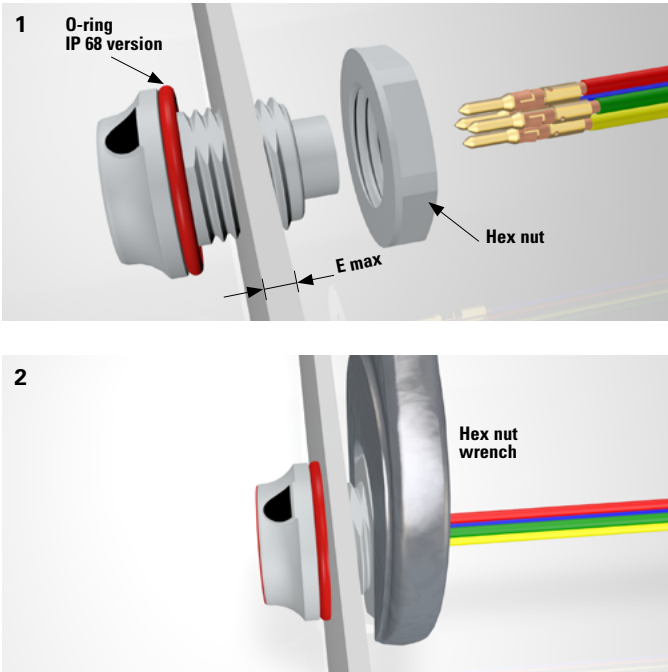
Solder and crimp versions:

- Solder, crimp the wires to the contacts (see pages 53-55), straight PC tail and 90° PC tail
- Insert contacts manually in the cavities for removable contacts versions
- Solder the PC tail contacts on to the PCB board
- Check carefully the presence of the o-ring on the receptacle for the JMXHC version
- Place the receptacle in the panel cut-out, make sure the panel thickness is less than E max
- Screw the hex nut to the bulkhead with a wrench according to the recommended tightening torque

Tightening torque (Nm) max	Wrench size	E Panel max thickness inch	mm
2.5	25	0.236	6

Note: For PCB contacts see pages 63-67 for drilling pattern

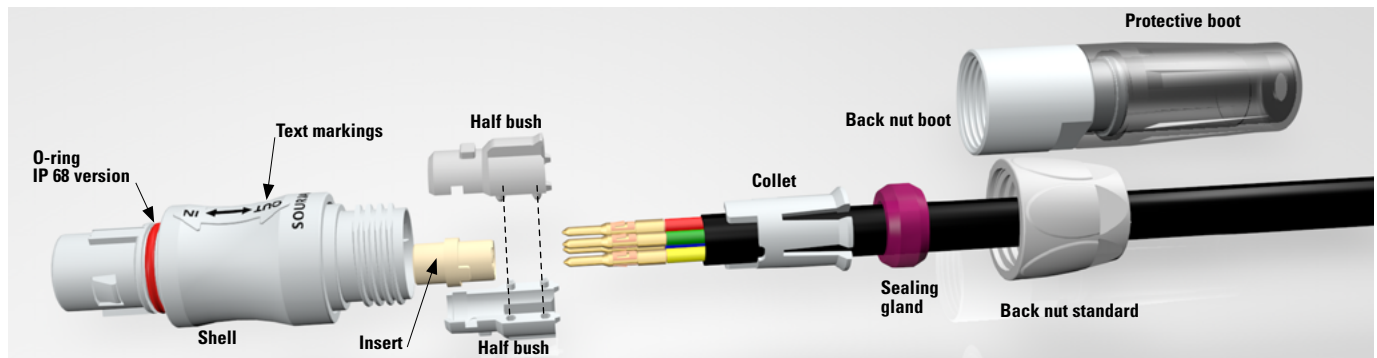
JMXHH assembly



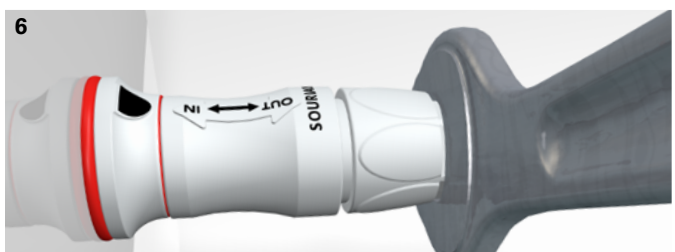
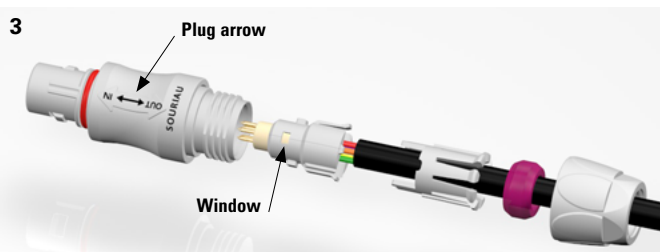
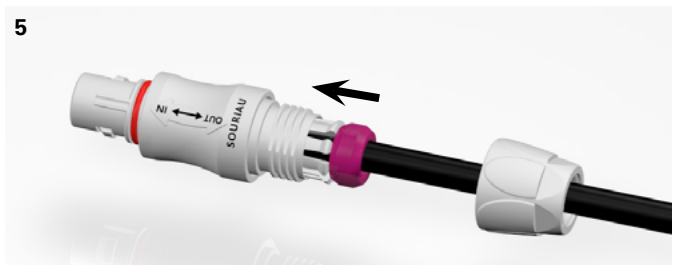
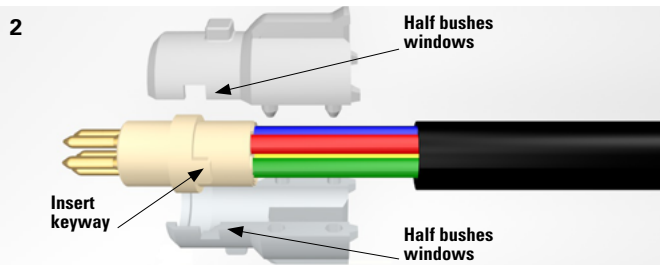
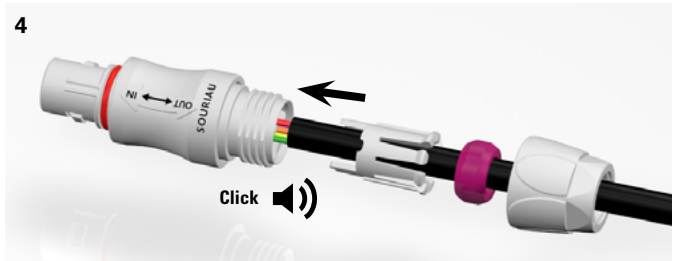
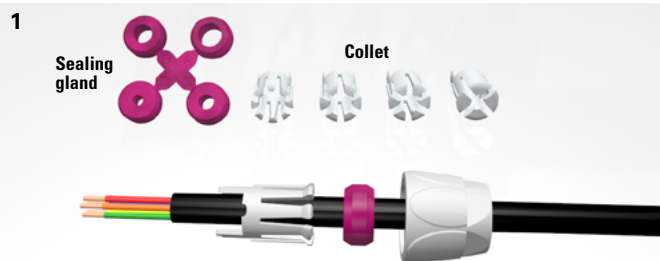
- Solder or crimp the wires to the contacts (see pages 53-55)
- Insert contacts manually in the cavities for removable contacts versions
- Check carefully the presence of the o-ring on the receptacle for the JMXHH version
- Place the receptacle in the panel cut-out, make sure the panel thickness less than to E max
- Screw the hex nut to the bulkhead with a wrench according to the recommended tightening torque

Tightening torque (Nm) max	Wrench size	E Panel max thickness inch	mm
2.5	22	0.314	8

JMXFH assembly



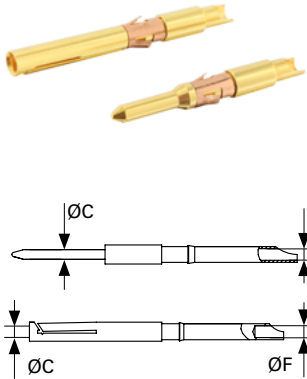
- Slide the back nut, the sealing gland and the collet on to the cable (see collet & sealing gland selection table below)
- Strip external cable jacket and wire (see page 56)
- Solder or crimp the wires to the contacts (see pages 53-55)
- For removable contacts, insert them manually in the insert
- Place the insert keyway into the half bushes windows (fig. 2)
- Align the half bushes window with the plug arrow (fig. 3)
- Slide the subassembly until hearing an audible click (fig. 4)
- Slide the collet, the sealing gland and the backnut (fig. 5)
- Apply a torque of 1.5 Nm on the backnut with a wrench size 14 mm (fig. 6)



**Collet & sealing gland
selection
Indice**

	Ø cable max inch	mm
A	0.295	7.5
B	0.242"	6.2
C	0.189	4.8
D	0.138	3.5

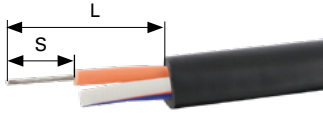
Solder contacts



Contact size ØC	Shell size	ØF inch	mm	Wire size max (stranded) AWG	mm ²	Part number* Male	Female	Max current rating (A)	Contact resistance (mΩ)
#24 Ø 0.019" Ø 0.5 mm	00	0.015	0.40	30	0.05	—	—	5	10
	0	0.019"	0.50	28	0.09	—	—	5	10
	1	0.019"	0.50	28	0.09	—	—	5	10
#22 Ø 0.027" Ø 0.7 mm	0	0.031"	0.80	22	0.34	—	—	7	5
	1	0.031"	0.80	22	0.34	—	—	7	5
	2	0.031"	0.80	22	0.34	—	—	7	5
	3	0.031"	0.80	22	0.34	—	—	7	5
#20 Ø 0.035" Ø 0.9 mm	0	0.031"	0.80	22	0.34	JBX0CTMS09	JBX0CTFS09	10	3.5
	1	0.031"	0.80	22	0.34	JBX1CTMS09	JBX1CTFS09	10	3.5
	2	0.031"	0.80	22	0.34	JBX2CTMS09	JBX2CTFS09	10	3.5
	2	0.031"	0.80	22	0.34	JBX3CTMS09	JBX3CTFS09	10	3.5
#18 Ø 0.051" Ø 1.3 mm	1	0.043"	1.10	20	0.50	JBX1CTMS13	JBX1CTFS13	15	3
	2	0.043"	1.10	20	0.50	JBX2CTMS13	JBX2CTFS13	15	3
	3	0.043"	1.10	20	0.50	JBX3CTMS13	JBX3CTFS13	15	3
#16 Ø 0.062" Ø 1.6 mm	2	0.059"	1.50	18	1.00	JBX2CTMS16	JBX2CTFS16	17	2.5
	3	0.059"	1.50	18	1.00	JBX3CTMS16	JBX3CTFS16	17	2.5
#14 Ø 0.078" Ø 2.0 mm	2	0.074"	1.90	16	1.50	JBX2CTMS20	JBX2CTFS20	30	2.5
	3	0.074"	1.90	16	1.50	JBX3CTMS20	JBX3CTFS20	30	2.5

Note: * Part numbers for removal contacts only

Solder contacts



Wire stripping instructions with solder contacts

Shell size	Contact size inch	Contact size mm	Stripping for FD, SR, PC connectors				Stripping for FC connectors			
			L inch	mm	S inch	mm	L inch	mm	S inch	mm
00	0.019	0.5	0.354	9	0.078	2	—	—	—	—
0	0.019	0.5	0.433	11	0.078	2	0.629	16	0.078	2
	0.027	0.7	0.472	12	0.118	3	0.629	16	0.118	3
	0.035	0.9	0.472	12	0.118	3	0.629	16	0.118	3
1	0.019	0.5	0.472	12	0.078	2	0.748	19	0.078	2
	0.027	0.7	0.511	13	0.118	3	0.748	19	0.118	3
	0.035	0.9	0.511	13	0.118	3	0.748	19	0.118	3
	0.051	1.3	0.511	13	0.137	3.5	0.748	19	0.137	3.5
2	0.027	0.7	0.629	16	0.118	3	0.984	25	0.118	3
	0.035	0.9	0.629	16	0.118	3	0.984	25	0.118	3
	0.051	1.3	0.629	16	0.137	3.5	0.984	25	0.118	3
	0.062	1.6	0.708	18	0.157	4	0.984	25	0.157	4
	0.078	2.0	0.708	18	0.157	4	0.984	25	0.157	4
3	0.027	0.7	0.787	20	0.118	3	1.181	30	0.118	3
	0.035	0.9	0.787	20	0.118	3	1.181	30	0.118	3
	0.051	1.3	0.787	20	0.137	3.5	1.181	30	0.137	3.5
	0.062	1.6	0.866	22	0.157	4	1.181	30	0.157	4
	0.078	2.0	0.866	22	0.157	4	1.181	30	0.157	4

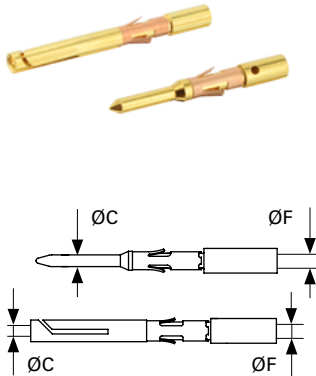
Packaging for contacts #22 to #14



100 piece package

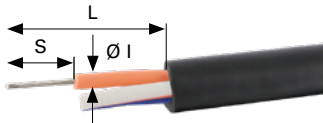
Due to the wide variety of applications, contacts are offered in bulk packaging.

Crimp contacts



Contact size ØC	Shell size	ØF inch	mm	Wire size max (stranded) AWG	mm ²	Part number* Male	Female	Max current rating (A)	Contact resistance (mΩ)
#22 Ø 0.027 Ø 0.7 mm	1	0.033	0.85	26-22	0.14-0.34	JBX1CTMC07	JBX1CTFC07	7	5
	2	0.033	0.85	26-22	0.14-0.34	JBX2CTMC07	JBX2CTFC07	7	5
	3	0.033	0.85	26-22	0.14-0.34	JBX3CTMC07	JBX3CTFC07	7	5
#20 Ø 0.035 Ø 0.9 mm	1	0.043	1.10	24-20	0.25-0.50	JBX1CTMC09	JBX1CTFC09	10	3.5
	2	0.043	1.10	24-20	0.25-0.50	JBX2CTMC09	JBX2CTFC09	10	3.5
	3	0.043	1.10	24-20	0.25-0.50	JBX3CTMC09	JBX3CTFC09	10	3.5
#18 Ø 0.051 Ø 1.3 mm	1	0.055	1.40	20-18	0.50-1.00	JBX1CTMC13	JBX1CTFC13	15	3
	2	0.055	1.40	20-18	0.50-1.00	JBX2CTMC13	JBX2CTFC13	15	3
	3	0.055	1.40	20-18	0.50-1.00	JBX3CTMC13	JBX3CTFC13	15	3
#16 Ø 0.062 Ø 1.6 mm	2	0.074	1.90	18-14	1.00-1.50	JBX2CTMC16	JBX2CTFC16	17	2.5
	3	0.074	1.90	18-14	1.00-1.50	JBX3CTMC16	JBX3CTFC16	17	2.5
#14 Ø 0.078 Ø 2.0 mm	2	0.094	2.40	16-12	1.50-2.50	JBX2CTMS20	JBX2CTFS20	30	2.5
	3	0.094	2.40	16-12	1.50-2.50	JBX3CTMS20	JBX3CTFS20	30	2.5

Note: * Part numbers for removal contacts only



Wire stripping instructions for crimp contacts

Shell size	Contact size inch	mm	Ø I (diameter over insulation) inch	mm	L inch	mm	S inch	mm
1	0.027	0.7	≤ 0.053	≤ 1.35	0.790	20	0.157	4
			> 0.053	> 1.35			0.216	5.5
	Ø 0.035	0.9	≤ 0.062	≤ 1.60	0.790	20	0.157	4
			> 0.062	> 1.60			0.216	5.5
	Ø 0.051	1.3	≤ 0.082	≤ 2.10	0.790	20	0.157	4
			> 0.082	> 2.10			0.216	5.5
2	Ø 0.027	0.7	≤ 0.053	≤ 1.35	1.102	28	0.157	4
			> 0.053	> 1.35			0.216	5.5
	Ø 0.035	0.9	≤ 0.062	≤ 1.60	1.102	28	0.157	4
			> 0.062	> 1.60			0.216	5.5
	Ø 0.051	1.3	≤ 0.082	≤ 2.10	1.102	28	0.157	4
			> 0.082	> 2.10			0.216	5.5
	Ø 0.062	1.6	≤ 0.102	≤ 2.60	1.102	28	0.216	5.5
			> 0.102	> 2.60			0.275	7
	Ø 0.078	2.0	≤ 0.125	≤ 3.20	1.102	28	0.216	5.5
			> 0.125	> 3.20			0.275	7

Contacts

Wire stripping instructions for JBX series

Shell size	Contact size ØC		Ø I (diameter over insulation)		Stripping for FD, SR, PC connectors				Stripping for FC connectors			
	inch	mm	inch	mm	L inch	mm	S inch	mm	L inch	mm	S inch	mm
0	0.027	0.7	≤ 0.053	≤ 1.35	0.590	15	0.157	4	0.748	19	0.157	4
			> 0.053	> 1.35			0.216	5.5			0.216	5.5
	0.035	0.9	≤ 0.062	≤ 1.60	0.590	15	0.157	4	0.748	19	0.157	4
			> 0.062	> 1.60			0.216	5.5			0.216	5.5
1	0.027	0.7	≤ 0.053	≤ 1.35	0.629	16	0.157	4	0.866	22	0.157	4
			> 0.053	> 1.35			0.216	5.5			0.216	5.5
	0.035	0.9	≤ 0.062	≤ 1.60	0.629	16	0.157	4	0.866	22	0.157	4
			> 0.062	> 1.60			0.216	5.5			0.216	5.5
	0.051	1.3	≤ 0.082	≤ 2.10	0.629	16	0.157	4	0.866	22	0.157	4
			> 0.082	> 2.10			0.216	5.5			0.216	5.5
2	0.027	0.7	≤ 0.053	≤ 1.35	0.748	19	0.157	4	1.102	28	0.157	4
			> 0.053	> 1.35			0.216	5.5			0.216	5.5
	0.035	0.9	≤ 0.062	≤ 1.60	0.748	19	0.157	4	1.102	28	0.157	4
			> 0.062	> 1.60			0.216	5.5			0.216	5.5
	0.051	1.3	≤ 0.082	≤ 2.10	0.748	19	0.157	4	1.102	28	0.157	4
			> 0.082	> 2.10			0.216	5.5			0.216	5.5
	0.062	1.6	≤ 0.102	≤ 2.60	0.826	21	0.216	5.5	1.102	28	0.216	5.5
			> 0.102	> 2.60			0.275	7			0.275	7
3	0.027	0.7	≤ 0.053	≤ 1.35	0.984	25	0.157	4	1.377	35	0.157	4
			> 0.053	> 1.35			0.275	7			0.275	7
	0.035	0.9	≤ 0.062	≤ 1.60	0.984	25	0.157	4	1.377	35	0.157	4
			> 0.062	> 1.60			0.275	7			0.275	7
	0.051	1.3	≤ 0.082	≤ 2.10	0.984	25	0.157	4	1.377	35	0.157	4
			> 0.082	> 2.10			0.275	7			0.275	7
	0.062	1.6	≤ 0.102	≤ 2.60	1.062	27	0.216	5.5	1.377	35	0.216	5.5
			> 0.102	> 2.60			0.334	8.5			0.334	8.5
3	0.078	2.0	≤ 0.125	≤ 3.20	1.062	27	0.216	5.5	1.377	35	0.216	5.5
			> 0.125	> 3.20			0.334	8.5			0.334	8.5

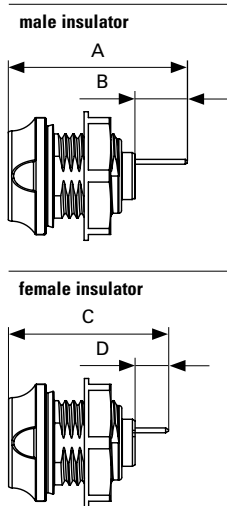
Packaging for contacts #22 to #14



100 piece package

Due to the wide variety of applications, contacts are offered in bulk packaging.

Straight PC tail contacts



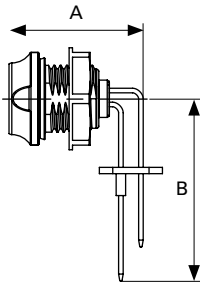
Shell size	Contact size	Layout	Contact range	Male	Female	Max current rating (A)	Contact resistance (mΩ)	A inch	mm	B inch	mm	C inch	mm	D inch	mm
0	#24 Ø 0.019 Ø 0.5 mm	06	yes	yes	2	10	0.829	21.6	0.212	5.4	0.829	21.6	0.212	5.4	
		07	yes	yes	2.5	10	0.829	21.6	0.212	5.4	0.829	21.6	0.212	5.4	
		08	yes	yes	2.5	10	0.829	21.6	0.212	5.4	0.829	21.6	0.212	5.4	
	#22 Ø 0.027 Ø 0.7 mm	05	yes	yes	6.5	5	0.956	24.3	0.232	5.9	0.858	21.8	0.133	3.4	
		04	yes	yes	7	5	0.956	24.3	0.232	5.9	0.858	21.8	0.133	3.4	
	#20 Ø 0.035 Ø 0.9 mm	03	no	yes	10	3.5	—	—	—	—	0.858	21.8	0.133	3.4	
		02	no	yes	10	3.5	—	—	—	—	0.858	21.8	0.133	3.4	
	1	#24 Ø 0.019 Ø 0.5 mm	12	no	yes	5	10	—	—	—	—	0.944	24.0	0.200	5.1
10			no	yes	5	10	—	—	—	—	0.944	24.0	0.200	5.1	
#22 Ø 0.027 Ø 0.7 mm		08	yes	yes	7	5	1.035	26.3	0.232	5.9	0.956	24.3	0.153	3.9	
		07	yes	yes	7	5	1.035	26.3	0.232	5.9	0.956	24.3	0.153	3.9	
		06	yes	yes	7	5	1.035	26.3	0.232	5.9	0.956	24.3	0.153	3.9	
#20 Ø 0.035 Ø 0.9 mm		05	no	yes	10	3.5	—	—	—	—	0.956	24.3	0.153	3.9	
		04	no	yes	10	3.5	—	—	—	—	0.956	24.3	0.153	3.9	
#18 Ø 0.051 Ø 1.3 mm		03	no	yes	15	3	—	—	—	—	0.956	24.3	0.153	3.9	
		02	no	yes	15	3	—	—	—	—	0.956	24.3	0.153	3.9	
2		#22 Ø 0.027 Ø 0.7 mm	19	yes	yes	7	5	1.011	25.7	0.130	3.3	1.114	28.3	0.232	5.9
	18		yes	yes	7	5	1.011	25.7	0.130	3.3	1.114	28.3	0.232	5.9	
	16		yes	yes	7	5	1.011	25.7	0.130	3.3	1.114	28.3	0.232	5.9	
	12		yes	yes	7	5	1.011	25.7	0.130	3.3	1.114	28.3	0.232	5.9	
	#20 Ø 0.035 Ø 0.9 mm	10	no	yes	10	3.5	—	—	—	—	1.114	28.3	0.232	5.9	
		08	no	yes	10	3.5	—	—	—	—	1.114	28.3	0.232	5.9	
	#18 Ø 0.051 Ø 1.3 mm	07	yes	yes	15	3	1.200	30.5	0.318	8.1	1.114	28.3	0.232	5.9	
		06	yes	yes	15	3	1.200	30.5	0.318	8.1	1.114	28.3	0.232	5.9	
		05	yes	yes	15	3	1.200	30.5	0.318	8.1	1.114	28.3	0.232	5.9	
		04	yes	yes	15	3	1.200	30.5	0.318	8.1	1.114	28.3	0.232	5.9	
3	#22 Ø 0.027 Ø 0.7 mm	30	no	yes	7	5	—	—	—	—	1.307	33.2	0.228	5.8	
	#20 Ø 0.035 Ø 0.9 mm	22	no	yes	7	5	—	—	—	—	1.307	33.2	0.228	5.8	
		18	no	yes	10	3.5	—	—	—	—	1.307	33.2	0.228	5.8	
		14	no	yes	10	3.5	—	—	—	—	1.307	33.2	0.228	5.8	
#18 Ø 0.051 Ø 1.3 mm	10	no	yes	15	3.5	—	—	—	—	1.307	33.2	0.228	5.8		

90° PC tail contacts



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female insulator



Shell size	Contact size	Layout	Contact range female contact	Max current rating (A)	Contact resistance (mΩ)	A inch	mm	B inch	mm
0	#22 Ø 0.027 Ø 0.7 mm	05	yes	7	5	0.992	25.2	1.255	31.9
		04	yes	7	5	0.893	22.7	1.248	31.7
	#20 Ø 0.035 Ø 0.9 mm	03	yes	10	3.5	0.893	22.7	1.236	31.4
		02	yes	10	3.5	0.893	22.7	1.255	31.9
1	#22 Ø 0.027 Ø 0.7 mm	08	yes	7	5	1.086	27.6	1.279	32.5
		07	yes	7	5	1.086	27.6	1.275	32.4
		06	yes	7	5	1.086	27.6	1.275	32.4
	#20 Ø 0.035 Ø 0.9 mm	05	yes	10	3.5	1.086	27.6	1.263	32.1
		04	yes	10	3.5	0.984	25.0	1.251	31.8
	#18 Ø 0.051 Ø 1.3 mm	03	yes	15	3	0.984	25.0	1.240	31.5
2	#22 Ø 0.027 Ø 0.7 mm	16	yes	7	5	1.366	34.7	1.338	34.0
		12	yes	7	5	1.263	32.1	1.326	33.7
	#20 Ø 0.035 Ø 0.9 mm	10	yes	10	3.5	1.263	32.1	1.322	33.6
		08	yes	10	3.5	1.165	29.6	1.330	33.8

Tooling for crimp contacts

Contact size ØC	Shell size	Part number* Male	Female	Crimp tool	Locator Male	Female	Extraction tools
#22 Ø 0.027 Ø 0.7 mm	0	JBX0CTMC07	JBX0CTFC07	MIL-22520/7-01	JBX0OUTLP07	JBX0OUTLS07	JBXOUTDC07
	1	JBX1CTMC07	JBX1CTFC07		JBX1OUTLP07	JBX1OUTLS07	
	2	JBX2CTMC07	JBX2CTFC07		JBX2OUTLP07	JBX2OUTLS07	
	3	JBX3CTMC07	JBX3CTFC07		JBX3OUTLP07	JBX3OUTLS07	
#20 Ø 0.9 mm Ø 0.035	0	JBX0CTMC09	JBX0CTFC09	MIL-22520/7-01	JBX0OUTLP09	JBX0OUTLS09	JBXOUTDC09
	1	JBX1CTMC09	JBX1CTFC09		JBX1OUTLP09	JBX1OUTLS09	
	2	JBX2CTMC09	JBX2CTFC09		JBX2OUTLP09	JBX2OUTLS09	
	3	JBX3CTMC09	JBX3CTFC09		JBX3OUTLP09	JBX3OUTLS09	
#18 Ø 0.051 Ø 1.3 mm	1	JBX1CTMC13	JBX1CTFC13	MIL-22520/7-01	JBX1OUTLP13	JBX1OUTLS13	JBXOUTDC13
	2	JBX2CTMC13	JBX2CTFC13		JBX2OUTLP13	JBX2OUTLS13	
	3	JBX3CTMC13	JBX3CTFC13		JBX3OUTLP13	JBX3OUTLS13	
#16 Ø 0.062 Ø 1.6 mm	2	JBX2CTMC16	JBX2CTFC16	MIL-22520/1-01	JBX2OUTLT16	JBX2OUTLT16	JBXOUTDC16
	3	JBX3CTMC16	JBX3CTFC16		JBX3OUTLT16	JBX3OUTLT16	
#14 Ø 0.078 Ø 2.0 mm	2	JBX2CTMC20	JBX2CTFC20	MIL-22520/1-01	JBX2OUTLT20	JBX2OUTLT20	JBXOUTDC20
	3	JBX3CTMC20	JBX3CTFC20		JBX3OUTLT20	JBX3OUTLT20	

Note: * Part numbers for removal contacts only

Crimp tool



Locator



Extraction tool



JBX series**Receptacle dust cap**

Connector size	Part number
00	JBXBR00
0	JBXBR0
1	JBXBR1
2	JBXBR2

**Plug dust cap**

Connector size	Part number
00	JBXBF00
0	JBXBF0
1	JBXBF1
2	JBXBF2

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JDX series**Receptacle lanyard w/terminal**

Connector size	Part number
0	JDXBRE0-1
1	JDXBRE1-1
2	JDXBRE2-1

**Receptacle lanyard w/crimp ring**

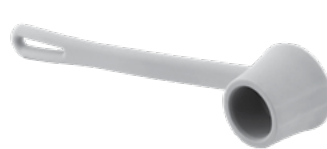
Connector size	Part number
0	JDXBRE0-2
1	JDXBRE1-2
2	JDXBRE2-2

JKX series**Receptacle dust cap**

Connector size	Part number
0	JKXBR0
1	JKXBR1

JMX series**Receptacle dust cap**

Connector size	Part number
1	JMXBR1
2	JMXBR2

**Plug dust cap**

Connector size	Part number
1	JMXBF1
2	JMXBF2

JBX series accessories



Grounding washer

Part number

JAXRA3252



Protective boot

Part number Color

JBX3MPA	Blue
JBX3MPB	White
JBX3MPG	Grey
JBX3MPJ	Yellow
JBX3MPM	Brown
JBX3MPN	Black
JBX3MPR	Red
JBX3MPV	Green
JBX3MPO	Orange

Note: Available only for FC- FD- SR, with back nut protective boot.
Total length is 1.122 (28.5 mm) longer with the protective boot.
The protective boot is not a sealing element.

JBX and JKX series accessories



Insulating washer

Part number Color

JBX3RIA	Blue
JBX3RIB	White
JBX3RIG	Grey
JBX3RIJ	Yellow
JBX3RIM	Brown
JBX3RIN	Black
JBX3RIR	Red
JBX3RIV	Green
JBX3RIO	Orange

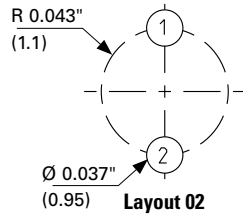
Note: Insulating washers are not compatible with the IP68 versions

Layout size 0 - JBX, JDX and JKX series

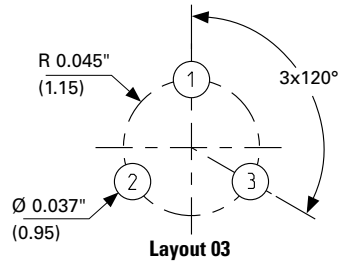
Contacts type

Dimensions in inches (millimeters)

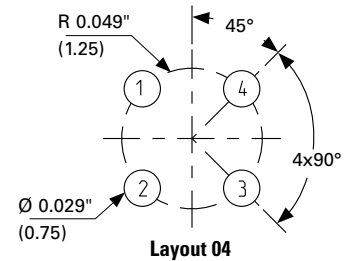
Straight PCB



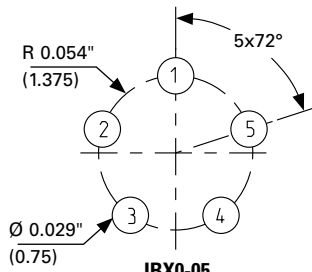
Layout 02



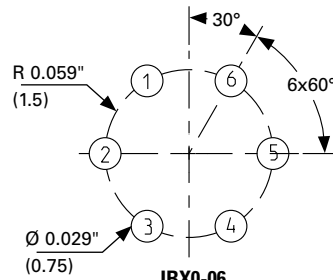
Layout 03



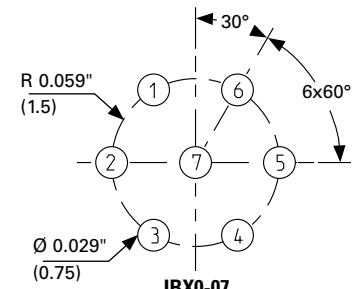
Layout 04



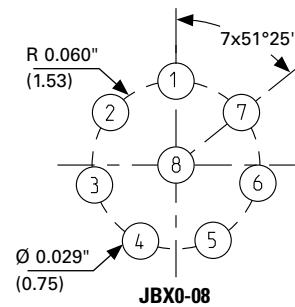
JBX0-05



JBX0-06

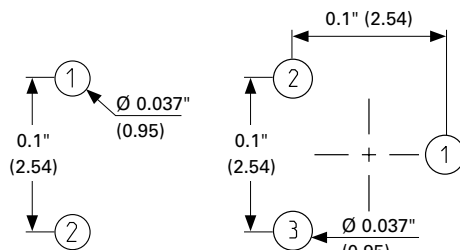


JBX0-07



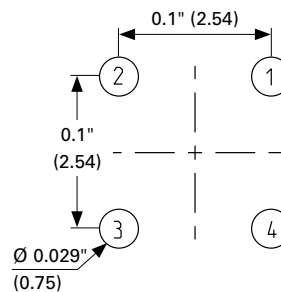
JBX0-08

90° PCB

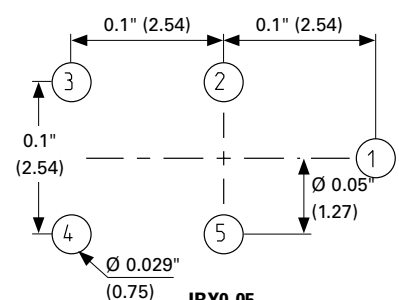


JBX0-02

JBX0-03

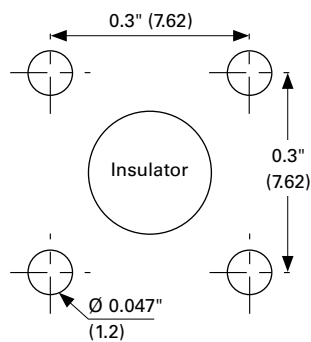


JBX0-04



JBX0-05

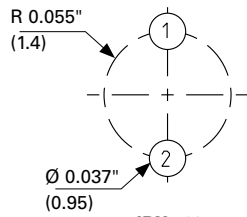
Mounting pins



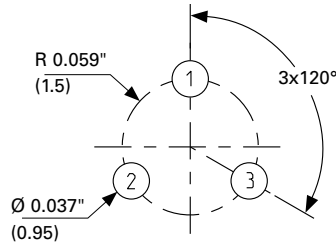
Layout size 1 - JBX, JDX, JKX and JMX series

Contacts type Dimensions in inches (millimeters)

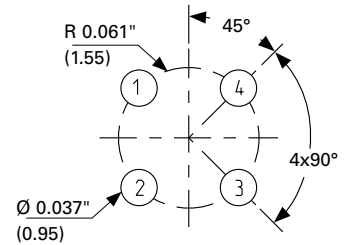
Straight PCB



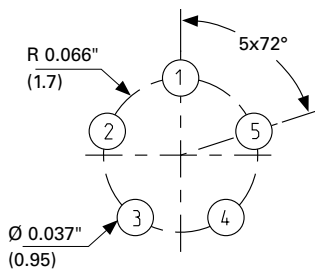
JBX1-02



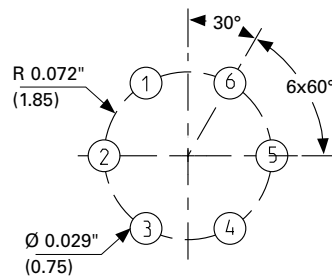
JBX1-03



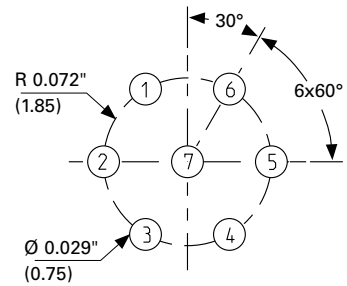
JBX1-04



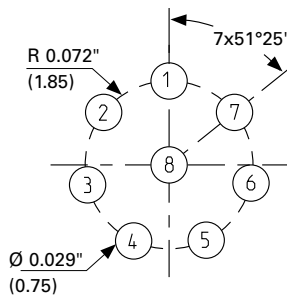
JBX1-05



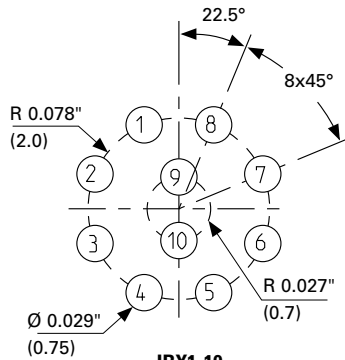
JBX1-06



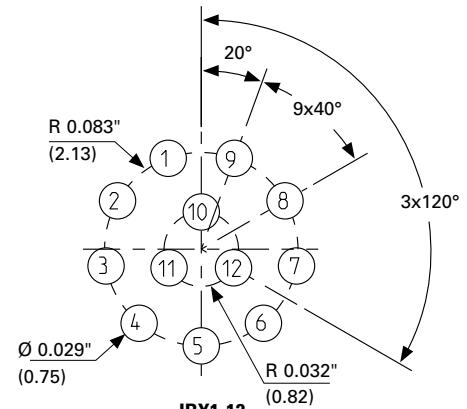
JBX1-07



JBX1-08



JBX1-10

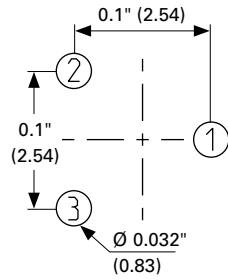


JBX1-12

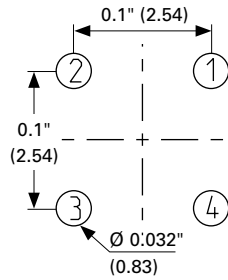
Layout size 1 - JBX, JDX, JKX and JMX series

Contacts type Dimensions in inches (millimeters)

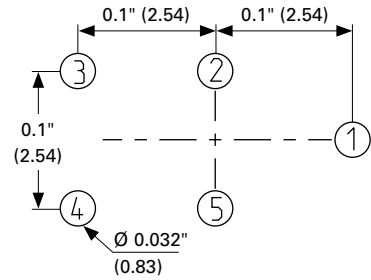
90° PCB



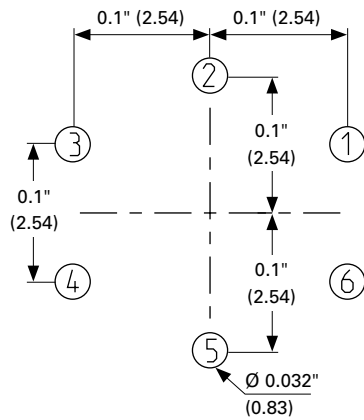
JBX1-03



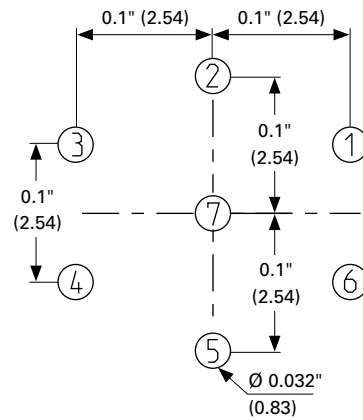
JBX1-04



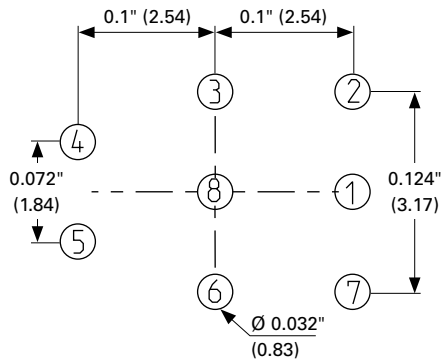
JBX1-05



JBX1-06

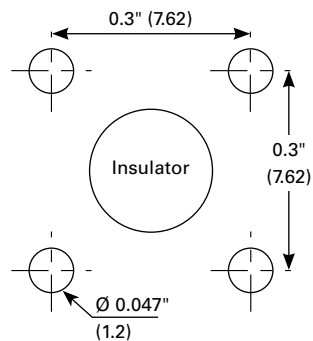


JBX1-07



JBX1-08

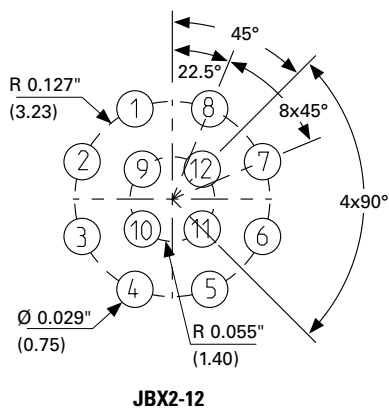
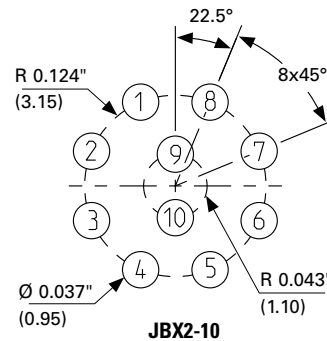
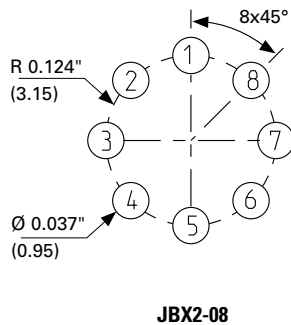
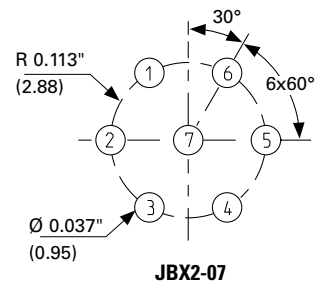
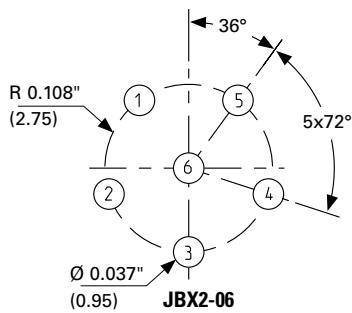
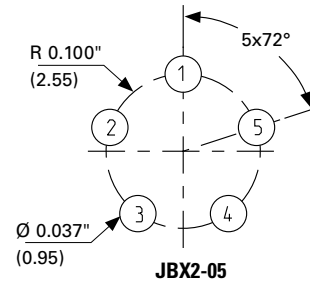
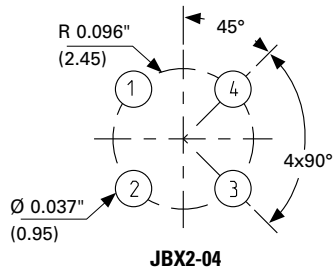
Mounting pins



Layout size 2 - JBX, JDX and JMX series

Contacts type Dimensions in inches (millimeters)

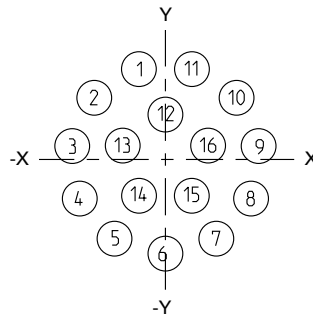
Straight PCB



Layout size 2 - JBX, JDX and JMX series

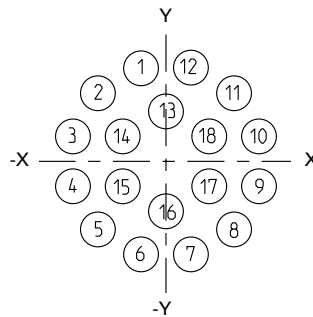
Contacts type Dimensions in inches (millimeters)

Straight PCB



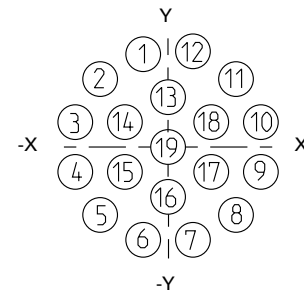
JBX2-16

Rep.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
X	-0.036" (-0.92)	-0.097" (-2.48)	-0.127" (-3.24)	-0.127" (-2.98)	-0.069" (-1.77)	0	0.069" (1.77)	0.117" (2.98)	0.127" (3.24)	0.097" (2.48)	0.036" (0.92)	0	-0.057" (-1.47)	-0.035" (-0.91)	0.035" (0.91)	0.057" (1.47)
Y	0.123" (3.14)	0.084" (2.15)	0.018" (0.48)	-0.053" (-1.36)	-0.108" (-2.76)	-0.129" (-3.28)	-0.108" (-2.76)	-0.053" (-1.36)	0.018" (0.47)	0.084" (2.15)	0.123" (3.14)	0.061" (1.55)	0.018" (0.48)	-0.049" (-1.25)	0.049" (1.25)	0.018" (0.48)



JBX2-18

Rep.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
X	-0.033" (-0.86)	-0.092" (-2.35)	-0.126" (-3.21)	-0.126" (-3.21)	-0.092" (-2.35)	-0.033" (-0.86)	0.033" (0.86)	0.092" (2.35)	0.126" (3.21)	0.126" (3.21)	0.092" (2.35)	0.033" (0.86)	0	-0.058" (-1.49)	-0.058" (-1.49)	0	0.058" (1.49)	0.058" (1.49)
Y	0.126" (3.21)	0.092" (2.35)	0.033" (0.86)	-0.033" (-0.86)	-0.092" (-2.35)	-0.126" (-3.21)	-0.126" (-3.21)	-0.092" (-2.35)	-0.033" (-0.86)	0.033" (0.86)	0.092" (2.35)	0.126" (3.21)	0.068" (1.73)	0.033" (0.86)	-0.033" (-0.86)	-0.068" (-1.73)	-0.033" (-0.86)	0.033" (0.86)



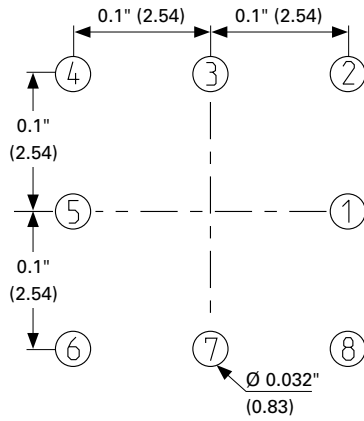
JBX2-19

Rep.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
X	-0.033" (-0.86)	-0.092" (-2.35)	-0.126" (-3.21)	-0.126" (-3.21)	-0.092" (-2.35)	-0.033" (-0.86)	0.033" (0.86)	0.092" (2.35)	0.126" (3.21)	0.126" (3.21)	0.092" (2.35)	0.033" (0.86)	0	-0.058" (-1.49)	-0.058" (-1.49)	0	0.058" (1.49)	0.058" (1.49)	0
Y	0.126" (3.21)	0.092" (2.35)	0.033" (0.86)	-0.033" (-0.86)	-0.092" (-2.35)	-0.126" (-3.21)	-0.126" (-3.21)	-0.092" (-2.35)	-0.033" (-0.86)	0.033" (0.86)	0.092" (2.35)	0.126" (3.21)	0.068" (1.73)	0.033" (0.86)	-0.033" (-0.86)	-0.068" (-1.73)	-0.033" (-0.86)	0.033" (0.86)	0

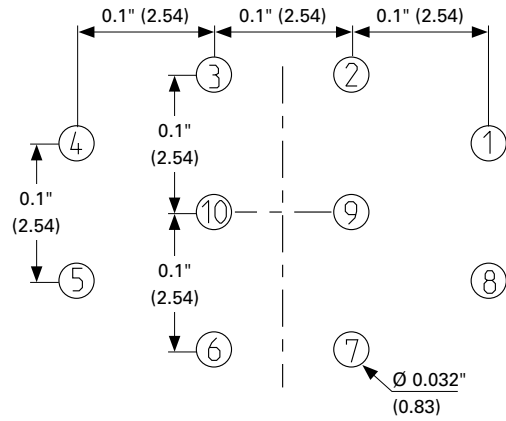
Layout size 2 - JBX, JDX and JMX series

Contacts type Dimensions in inches (millimeters)

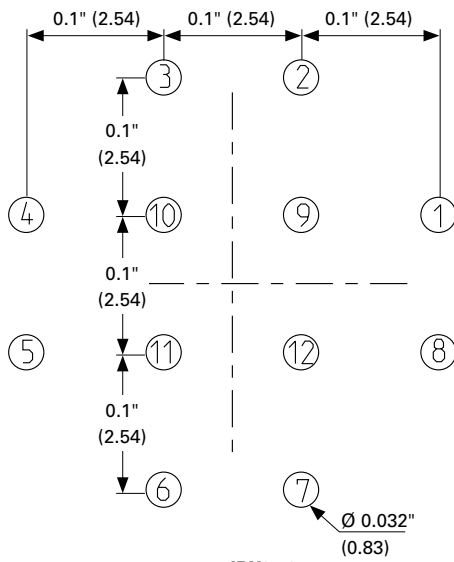
90° PCB



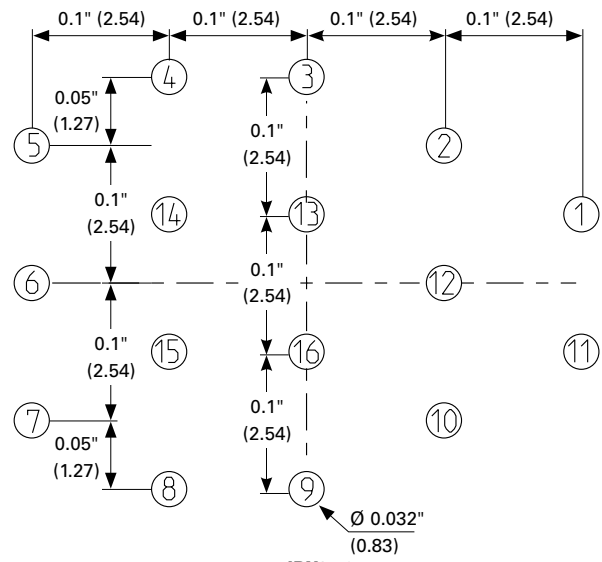
JBX2-08



JBX2-10



JBX2-12

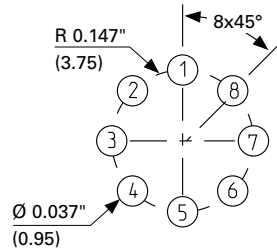


JBX2-16

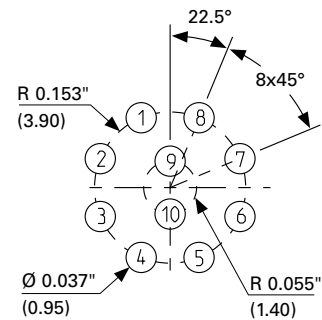
Layout size 3 - JBX series

Contacts type Dimensions in inches (millimeters)

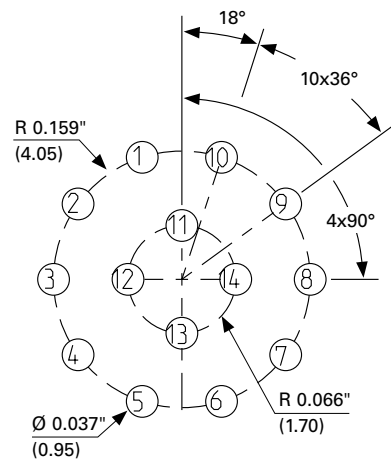
Straight PCB



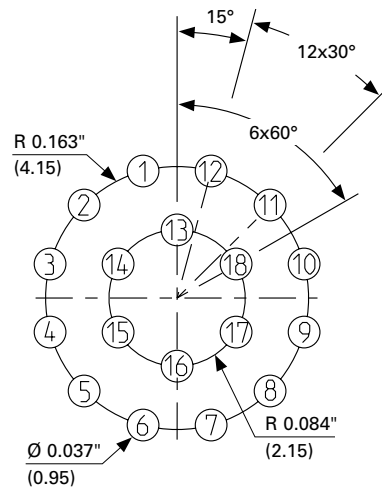
JBX3-08



JBX3-10



JBX3-14

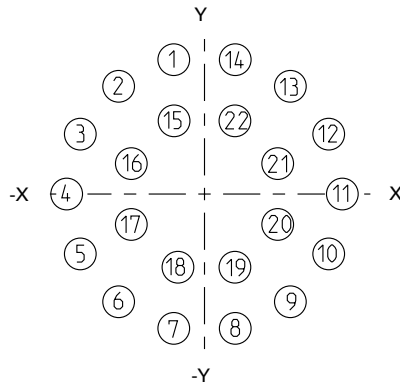


JBX3-18

Layout size 3 - JBX series

Contacts type Dimensions in inches (millimeters)

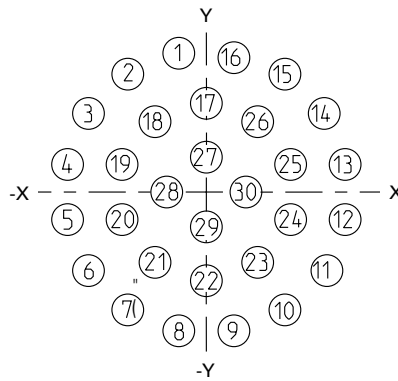
Straight PCB



JBX3-22

Rep.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
X	-0.038" (-0.97)	-0.106" (-2.71)	-0.154" (-3.92)	-0.171" (-4.35)	-0.154" (-3.92)	-0.106" (-2.71)	-0.038" (-0.97)	0.038" (0.97)	0.106" (2.71)	0.154" (3.92)	0.171" (4.35)	0.154" (3.92)	0.106" (2.71)	-0.038" (-0.97)	-0.037" (-0.96)	-0.090" (-2.31)
Y	0.166" (4.24)	0.133" (3.40)	0.074" (1.89)	0 (0)	-0.074" (-1.89)	-0.133" (-3.40)	-0.166" (-4.24)	-0.166" (-4.24)	-0.133" (-3.40)	-0.074" (-1.89)	0 (0)	0.074" (1.89)	0.133" (3.40)	0.166" (4.24)	0.090" (2.31)	0.037" (0.96)

Rep.	17	18	19	20	21	22
X	-0.090" (-2.31)	-0.037" (-0.96)	0.037" (0.96)	0.090" (2.31)	0.090" (2.31)	0.037" (0.96)
Y	-0.037" (-0.96)	-0.090" (-2.31)	-0.090" (-2.31)	-0.037" (-0.96)	0.037" (0.96)	0.090" (2.31)



JBX3-30

Rep.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
X	-0.034" (-0.87)	-0.097" (-2.48)	-0.146" (-3.72)	-0.172" (-4.38)	-0.172" (-4.38)	-0.146" (-3.72)	-0.097" (-2.48)	-0.034" (-0.87)	0.034" (0.87)	0.097" (2.48)	0.146" (3.72)	0.172" (4.38)	0.172" (4.38)	0.146" (3.72)	0.097" (2.48)	0.034" (0.87)
Y	0.172" (4.38)	0.146" (3.72)	0.097" (2.48)	0.034" (0.87)	-0.034" (-0.87)	-0.097" (-2.48)	-0.146" (-3.72)	-0.172" (-4.38)	0.172" (4.38)	-0.146" (-3.72)	-0.097" (-2.48)	-0.034" (-0.87)	0.034" (0.87)	0.097" (2.48)	0.146" (3.72)	0.172" (4.38)

Rep.	17	18	19	20	21	22	23	24	25	26	27	28	29	30
X	0 (0)	-0.063" (-1.62)	-0.104" (-2.66)	-0.104" (-2.66)	-0.063" (-1.62)	0 (0)	0.063" (1.62)	0.104" (2.66)	0.104" (2.66)	0.063" (1.62)	0 (0)	" (-1.25)	0 (0)	0.049" (1.25)
Y	0.110" (2.80)	0.087" (2.22)	0.034" (0.87)	-0.034" (-0.87)	-0.087" (-2.22)	-0.110" (-2.80)	-0.087" (-2.22)	-0.034" (-0.87)	0.034" (0.87)	0.087" (2.22)	0.043" (1.10)	0 (0)	-0.043" (-1.10)	0 (0)

