

JKX Series



Key features

- Sealed IP 68 (mated connectors)
- Mechanically keyed : ensures correct polarization and alignment.
- Contact arrangements : from 2 to 10 contacts.
- Wire gauge range from 28 AWG to 14 AWG.
- High contact density in a small space.
- Contact termination in either crimp, solder or PCB contacts.



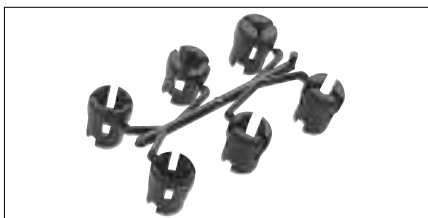
User advantages

Temporary immersion IP 68



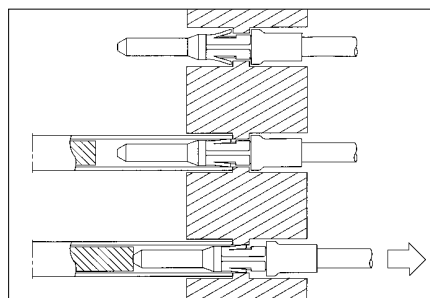
6-collet cluster

Allows a wide range of cable diameter applications for a single connector.
Reduces inventory variations.



Removable contacts

Crimp versions allow easier wiring and maintenance.



Part number system

Basic series	JKX	FD	1	G	05	M	C	S	D	S	M
Shell configuration	FD - ER - EP - PC										
Size	0 - 1										
Keying	G										
Contact layouts	02 ----- 10 (see page 33)										
Contact type	M : pin F : socket (in relation with keying)										
Contact termination	C : crimp ; S : solder ; P* : straight PCB tails ; Q* : 90° PCB tails ; W : 0.7 mm clipped solder										
Material & surface plating	S : Outer shell in brass alloy with glossy chrome over nickel N : Outer shell in brass alloy with black plating (consult us) D : Obligatory suffix S : Insulator in PPS P : Insulator in Peek (for Ø 0.5 mm contacts only) Obligatory suffix for layouts including contacts of Ø 0.5 mm										
Options	M : Connector with backnut for protective boot (protective boot to order separately page 34) G : Connector adapted to accommodate larger cables (Ø 4.5 to 6 in size 0 and Ø 6 to 8 in size 1) R : Red dot (possible for FD, PC, ER only)										

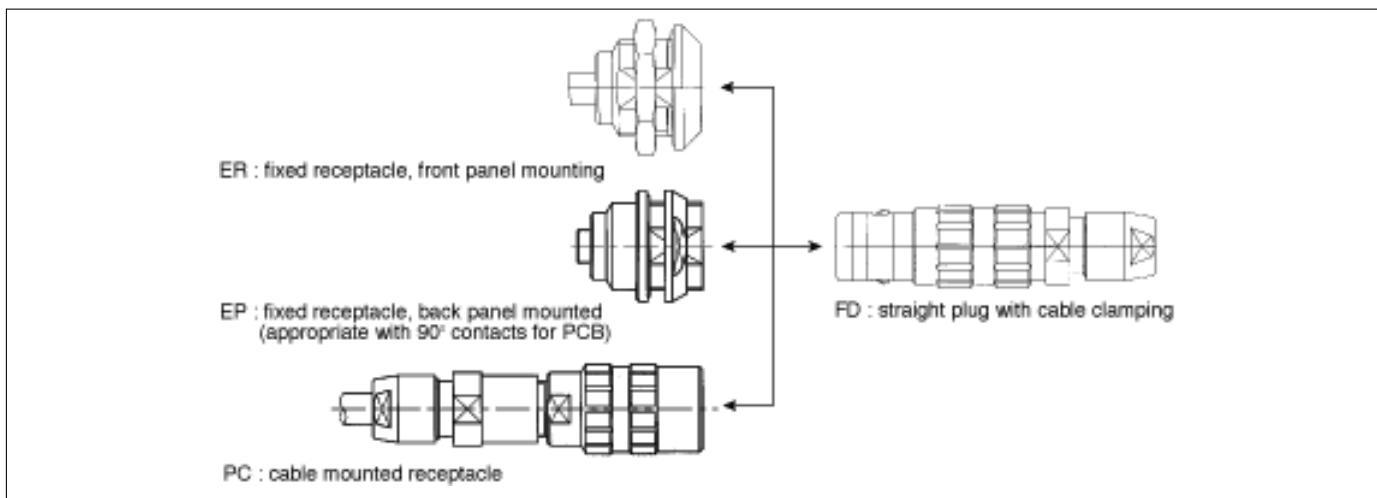
* For receptacles with female contacts only.

JKX Series



Shell type

- Available JKX shells



• Dimensions

ER : Fixed receptacle, front panel mounting

Size	A	B	C	Ø D
0	19.5	4.5	4	18
1	24.5	8.5	4.5	20

FD : Straight plug with cable clamping

Size	A	Ø B	Ø M
0	47	12	1.5 to 4.5
1	57	15	2 to 6

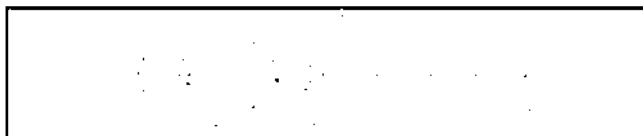
EP : Fixed receptacle, back panel mounting

Size	A	B	C	Ø D
0	19.5	4.5	3.2	18
1	24.5	6	4	20

PC : Cable mounted receptacle

Size	A	Ø B	Ø C
0	—	—	—
1	60	16	2 to 6

- Option G : to accomodate bigger cables



Size	A	Ø B	Ø M
0	51	12	4.6 to 6
1	60	15	6 to 8

JKX Series



Keying

G keying is available in standard version (0° keying angle, plugs with pin contacts, receptacles with female contacts) for the 4 shell types. Reverse gender available in all layouts.

Shell size	Key	ER	EP	PC	FD
0	G	●	●	–	●
1	G	●	●	●	●

● Concerning the availability of other alternatives, please consult our commercial office.

Contacts

• Multi contacts inserts

Shell size	Male insulator viewed from wiring side	Contact layout	Available Contact types				∅ Contact	AWG		Max. current rating (A)	Testing voltage (Vrms)	Working voltage (Vdc / Vrms)
			S solder	C crimp	P* straight PCB tails	Q* 90° PCB tails		Solder wire Max.	Crimp wire Max.			
0		02	S	C	P	Q	0.9	24	20	10	1400	660/460
		03	S	C	P	Q	0.9	24	20	8	1300	600/420
		04	S	C	P	Q	0.7	26	22	7	1400	660/460
		05	S	C	P	Q	0.7	26	22	6.5	800	400/260
		06	S		P		0.5	28	-	2.5	680	320/220
		07	S		P		0.5	28	-	2.5	680	320/220
1		02	S	C	P		1.3	20	18	15	1600	760/530
		03	S	C	P	Q	1.3	20	18	12	1300	600/420
		04	S	C	P	Q	0.9	24	20	10	1900	900/630
		05	S	C	P	Q	0.9	24	20	9	1400	660/460
		06	S	C	P	Q	0.7	26	22	7	1400	660/460
		07	S	C	P	Q	0.7	26	22	7	1400	660/460
		08	S	C	P	Q	0.7	26	22	5	1200	600/420
		10	S		P		0.5	28	-	2.5	600	300/200

Inserts with fixed contacts (non removable contacts)

* For receptacles with female contacts only

JKX Series



Options

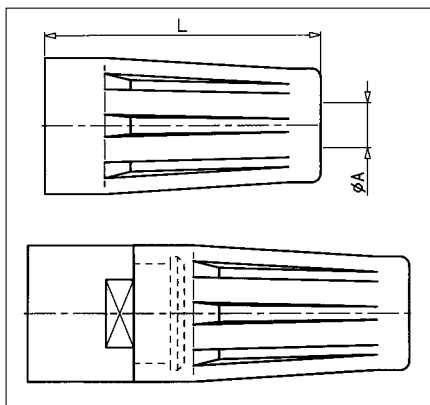
• Protective boot

Protective boot can accept multiple cable diameters



Part number	Shell size	Shell size Option G	Dimensions			
			Ø A	L	Ø Câble	
					min	Max.
JBX 0 MP*	0	-	2.2	20	1.5	5.5
JBX 1 MP*	1	0	2.6	25	2	7.5
JBX 2 MP*	-	1	4	30	3.5	9.7

* Color code



Color code	Colors
A	blue
B	white
G	grey
J	yellow
M	brown
N	black
R	red
V	green
O	orange

Material :

ELASTOLLAN (PUR)

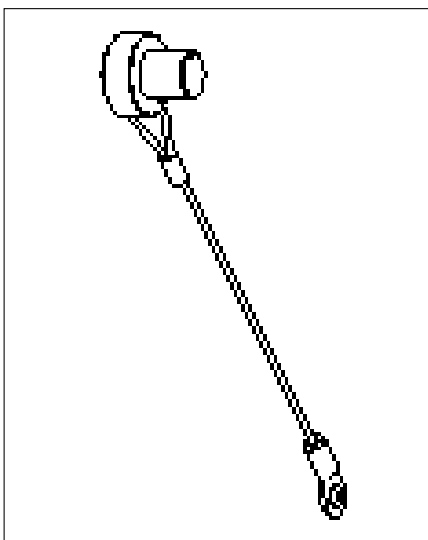
Working temperature :

- 40°C ; + 80°C

- 40°F ; + 176°F

With each JKX connector, one protective boot can accept diverse cable diameters thus the end-user can manage various cable diameters without bothering with multiple part numbers.

• Caps : an efficient protection until 2 bars



Part number	Ø
JKX BR0	15
JKX BR1	17

JKX Series



Technical characteristics

• Material and treatment

Component	Material	Standard		Surface treatment (µm)		
		ISO	ASTM	Cr	Ni	Au
Outer shell and collet nut	Brass	CuZn40Pb3	C38500/C360	0.1 - 0.6	5 - 8	-
Latching sleeve & metal collet	Brass	CuZn40Pb3	C38500/C360	-	5 - 8	-
Shielding ring	Brass	CuZn40Pb3	C38500/C360	-	3 - 7	-
Nut	Brass	CuZn40Pb3	C38500/C360	-	5 - 8	-
Tapered washer and half bushes	Brass	CuZn40Pb3	C38500/C360	-	5 - 8	-
Socket contact (1)	Copper-nickel	CuNi1Pb1P	CDA C 19150	-	3 - 5	0.5
Pin contact (1)	Brass	CuZn35Pb2	C35300/C360	-	3 - 5	0.5
Clip	Beryllium copper	CuBe1,9	C17200/C360	-	-	-

(1) Gold thickness as per MIL-G-45204C type 1, class 00.

Component	Material	Color	Temperature withstanding	
Insert	PPS + 40% GF or PEEK + 15% GF	black brown	- 65°C + 200°C - 50°C + 250°C	- 85°F + 392°F - 58°F + 482°F
Plastic collet	PA 6/6 + MoS2	black	- 55°C + 125°C	- 67°F + 257°F
Cable seal	Silicon rubber	red	- 50°C + 250°C	- 58°F + 482°F

• Mechanical and climatics

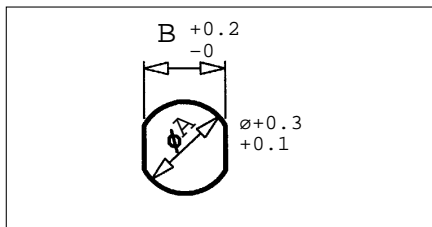
Characteristics	Values	Standard	Method
Endurance	> 1000 cycles (except for 0.7 mm crimp contacts for which endurance is limited to 500 cycles)	MIL-STD 1344A	2016.1
Shock	50 g, duration 6 ms ; contact Ø 0.7 mm and 0.9 mm 100 g, duration 6 ms ; contact Ø 1.3 mm - 1.6 mm and 2 mm	MIL-STD 1344A	2004.1
Vibrations	10 to 2000 Hz $\gamma = 15$ g, contact Ø 0.7 mm and 0.9 mm $\gamma = 20$ g, contact Ø 1.3 mm - 1.6 mm and 2 mm	MIL-STD 1344A	2005.1
Protection index	IP 68 (watertight - 48 hours under 1 m of water)	CEI 529	
Operating temperature	with plastic collets } - 55°C + 125°C - 67°F + 257°F	-	-
	with optional metal collets } - 55°C + 200°C - 67°F + 392°F	-	-

JKX Series



Wiring and assembly instructions

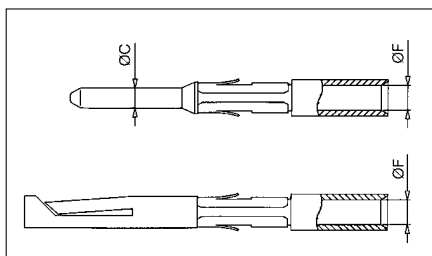
• Panel cutout



Size	0	1
$\varnothing A$	14.1	16.1
B	12.6	14.6

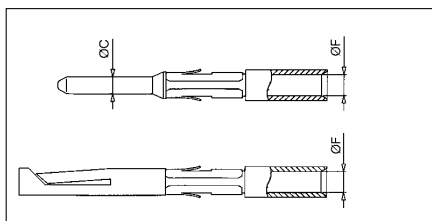
• Removable contacts

Crimp contacts



Contact		Usable cables			Max. current rating (A)	Contact resistance (m Ω)	Endurance (number of cycles)
$\varnothing C$	$\varnothing F$	Core section (mm ²)		AWG			
		min	Max.				
0.7	0.85	0.129	0.326	22 - 24 - 26	7	5	500 Max.
0.9	1.1	0.205	0.518	20 - 22 - 24	10	3.5	> 1000
1.3	1.4	0.326	0.823	18 - 20 - 22	15	3	> 1000

Solder contacts

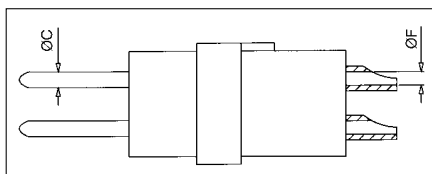


Contact		Usable cables			Max. current rating (A)	Contact resistance (m Ω)	Endurance (number of cycles)
$\varnothing C$	$\varnothing F$	Core section (mm ²)		AWG			
		min	Max.				
0.7	1.0	-	0.3	22	7	5	500 Max.
0.9	0.8	-	0.21	24	10	3.5	> 1000
1.3	1.1	-	0.60	20	15	3	> 1000

The conductor bucket on the solder contacts is designed with an angle to form a cup into which the solder can flow easily.

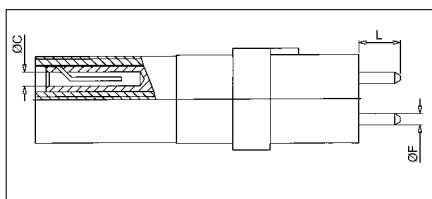
• Fixed contacts

Solder contacts



Contact		Shell size	Usable cables		Max. current rating (A)	Contact resistance (m Ω)	Endurance (number of cycles)
$\varnothing C$	$\varnothing F$		Core section (mm ²) Max.	AWG			
0.5	0.5	0 - 1	0.096	28	5	10	> 1000
0.7	0.63	0 - 1	0.15	26	7	5	> 1000

Contacts for PCB



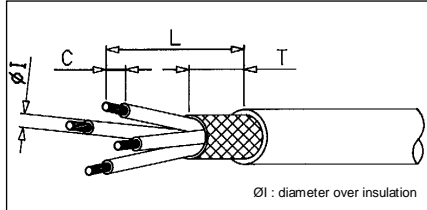
Contacts for PCB	Contact length dimensions "L"
PCB tail length size 0	dimension "L" 5.5 mm
0.7 mm female PCB tail length size 0	dimension "L" 3.5 mm
0.7 mm female PCB tail length size 1	dimension "L" 4.0 mm
0.9 mm female PCB tail length size 0	dimension "L" 3.5 mm
0.9 mm female PCB tail length size 1	dimension "L" 4.0 mm
1.3 mm female PCB tail length size 1	dimension "L" 4.0 mm, dimension "F" 0.7 mm

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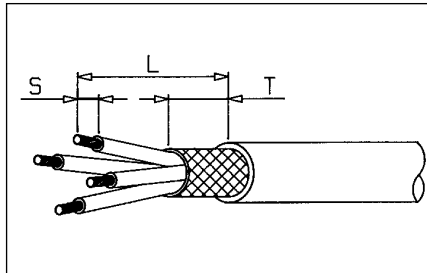
Wiring and assembly instructions

• Cable stripping for connectors with crimp contacts



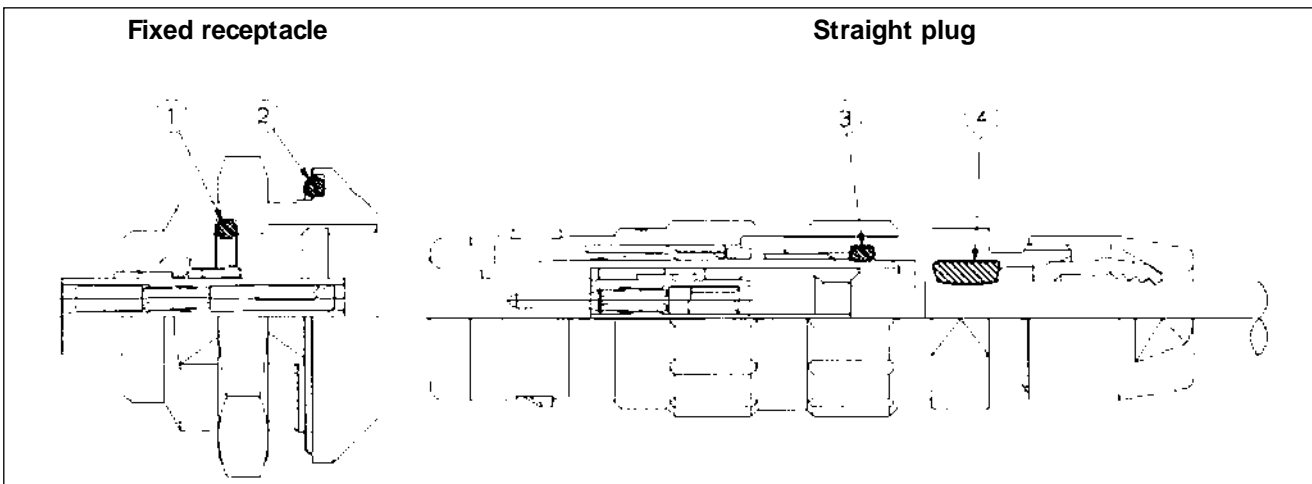
Shell size	Ø Contacts	Ø I	Stripping for FD / PC		
			L	C	T
0	0.7	≤ 1.35	15	4	7
		> 1.35		5.5	
	0.9	≤ 1.6	15	4	7
		> 1.6		5.5	
1	0.7	≤ 1.35	17	4	8
		> 1.35		5.5	
	0.9	≤ 1.6	17	4	8
	> 1.6	5.5			
	1.3	≤ 2.1	17	4	8
		> 2.1		5.5	

• Cable stripping for connectors with solder contacts



Shell size	Ø Contacts	Stripping for FD / PC		
		L	S	T
0	0.5	11	2	7
	0.7	12	3	7
	0.9	12	3	7
1	0.5	13	2	8
	0.7	14	3	8
	0.9	14	3	8
	1.3	14	3.5	8

• Watertightness design (mated connectors)



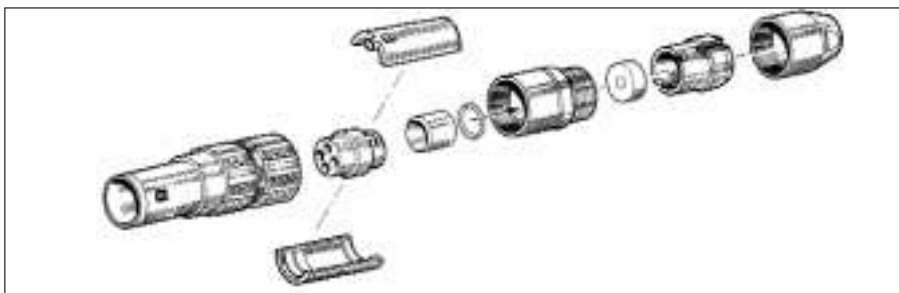
- ① : O'ring for sealing between receptacle and plug shell
- ② : O'ring for sealing between receptacle and panel
- ③ : O'ring for sealing between plug body and backshell
- ④ : seals to accomodate variety of cable diameters

JKX Series

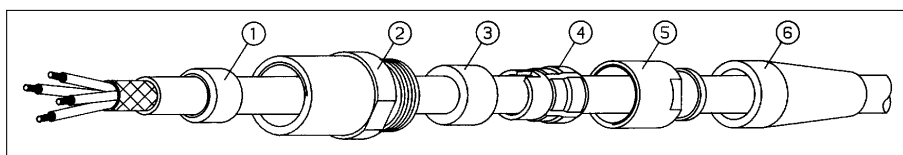


Wiring and assembly instructions : STRAIGHT PLUG

- Cable stripping : see page 37

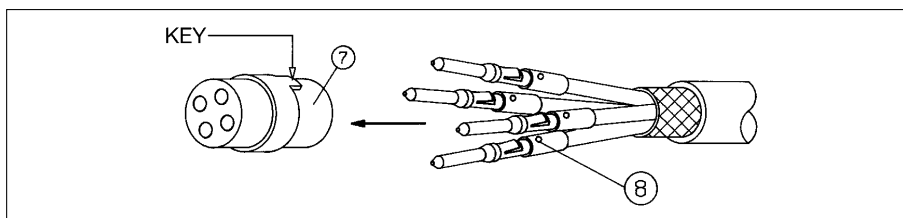


• Connector preparation



- 1 - Select the proper collet ④ and the cable seal ③ (see page 39).
- 2 - Slide protective boot ⑥, the backnut ⑤, the collet ④, the cable seal ③, the outershell ② and the taper seat ① onto the cable. Strip end of cable (see pg. 16)

• Contacts wiring : crimp contacts

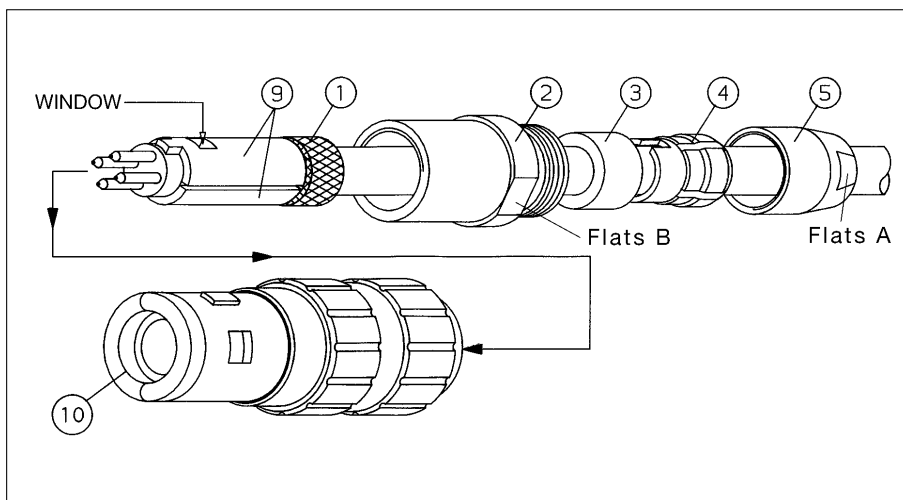


- 1 - Select the proper crimping tool (see page 48)
- 2 - Adjust the crimping tool based on the wire size "AWG". (See wire size and crimp tool settings on the back of this locator.)
- 3 - Crimp the contacts ④ then insert the contact into the insulator until the clip is fully seated and cannot be removed.

• Contacts wiring : solder contacts

Fixed solder contacts 0.5 mm and 0.7 mm	Removable solder contacts from 0.9 mm to 1.3 mm
1 - Insert wire into solder cup and solder	1 - Insert wire into solder cup and solder 2 - Insert the contact into the insulator until the clip is fully seated and cannot be removed.

• Connector assembly



- 1 - In case of shielded cable, comb out the shield and fold back over the taper seat ①.
- 2 - Position 2 half bushes ⑨, making sure that the insert key appears through the windows of one bush.
- 3 - Position the taper seat ① on the half bushes ⑨.
- 4 - Position all the sub-assembly in connector housing ⑩, making sure to keep the sub-assembly well aligned.
- 5 - Screw the outershell ② following the torque values on page 39. Install the cable seal ③ and the collet ④ into the outershell ② then screw the backnut ⑤ till bottoming. Use 2 wrenches well positioned on the flats A and B. Place a wrench to grip flats B, use the other wrench to tighten the backnut at the flats A following the torque values on page 39.
- 6 - Install the protective boot ⑥ if applicable.

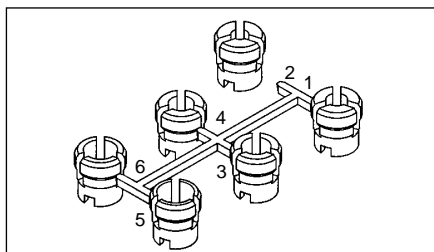
JKX Series



Wiring and assembly instructions

• Collets selection according to cable diameters

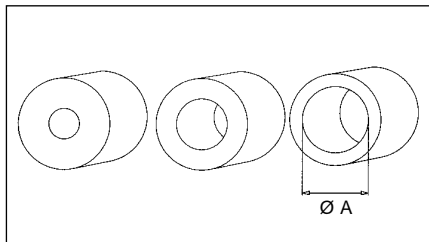
3 or 5 collets per shell size allow a wide range of cable diameters for a single connector. Cable out diameters are for information only, since values will change with each cable construction.



Collet number	Cable diameter			
	Shell size 0	Size 0, option G	Shell size 1	Size 1, option G
1	1.5 - 2.5	-	2 - 2.5	-
2	2.6 - 3.5	-	2.6 - 3.5	-
3	3.6 - 4.5	-	3.6 - 4.5	6.1 - 6.7
4	-	4.6 - 5.5	4.6 - 5.5	6.8 - 7.7
5	-	5.6 - 6	5.6 - 6	7.8 - 8

Collet number 4 in shell size 0 and collet number 6 in shell size 1 are not used.

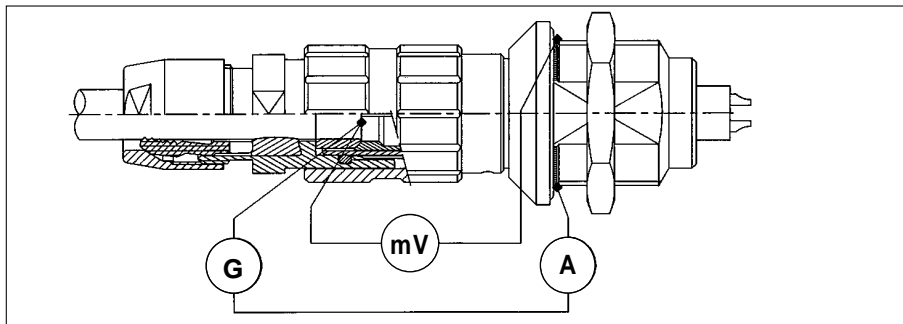
• Cable seal selections according to cable size Discreet application based on cable diameter



Cable gland Ø A	Cable diameter			
	Shell size 0	Size 0, option G	Shell size 1	Size 1, option G
2	1.5 - 2.9			
3.5	3 - 4.5			
2.5			2 - 3.4	-
4		4.6 - 4.9	3.5 - 4.9	-
5.5		5 - 6	5 - 6	6.1 - 6.4
7				6.5 - 8

• Shielding

Tested according to MIL-STD 1344 A, method 3007



Shell size	Electrical continuity (mΩ)
0	4
1	3

• Coupling torques

Size mm	Advised torque* in Nm			
	0	0 (option G)	1	1 (option G)
	1.6	/	1.8	/
	1.5	2	2	2.5
	0.8	0.8	1	1

Torque values are the maximum allowable for each connector size. Torque values will vary due to the type and size of the cable used

* Apply thread lock to back nut prior to assembly.

Tool dimensions

Tools (jaw dimensions)	14 x 1		16 x 1	
	0	0 (option G)	1	1 (option G)
	17		19	
	8	10	13	
	10	11	12	14

Tool numbers can be found on page 32

JBX Series sealed version size 2



Key features

- Sealed IP 67 (mated connectors)(FE, EC, SE, & PC)
- Watertight receptacles IP68 (HC & HH)
- Mechanically keyed : ensure correct polarisation and alignment.
- Contact arrangements : from 2 to 19 contacts.
- Wire gauge range from 26 AWG to 12 AWG.
- High contact density in a small space.
- Contact termination in either crimp, solder or PCB contacts.



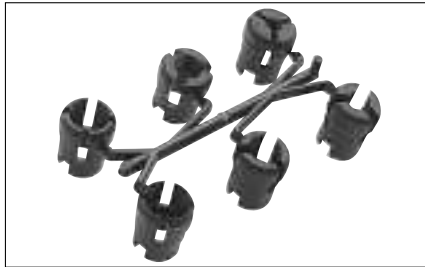
User advantages

Wet environment IP67



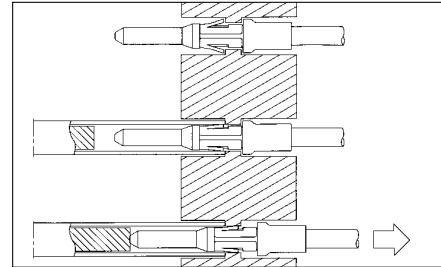
6-collet cluster

Allows a wide range of cable diameter applications for a single connector.
Reduces inventory variations.



Removable contacts (EC, FE, SE & PE)

Crimp versions allow easier wiring and maintenance.



Part number system

Basic series	JBX FE 2 G 12 M C S D S R
Shell type	FE-HH-HC-EC-PE-SE
Shell size	2
Keying	G
Contact layouts	02 ----- 19
Contact type	M : pin F : socket (in relation with keying)
Contact termination	C : crimp ; S : solder ; P* : straight PCB tails ; Q* : 90° PCB tails
Material & surface plating	S : Outer shell in brass alloy with chrome over nickel N : Outer shell in brass alloy with black plating (consult us) D : Obligatory suffix S : Obligatory suffix
Option	R : FE, PE, HH, & HC N/A for EC & SE

* For receptacles with female contacts only.