

Sealed Breakaway Connector



Souriau JDX Breakaway Connectors



Key Features

Breakaway design eliminates the need for a manually operated latching system

Mates and un-mates quickly and prevents injury to the user or equipment if the cable becomes entangled.

**Sealed to IP68.
Two shell sizes, 2 to 19 positions.
Contact termination solder & PCB.
Custom cable assemblies.**

Part Numbering System

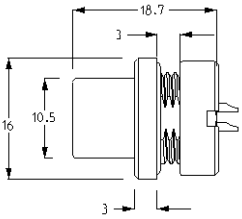
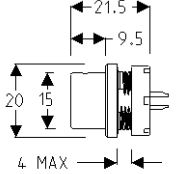
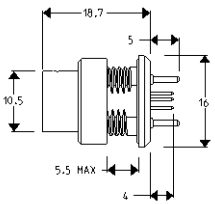
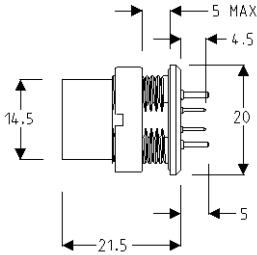
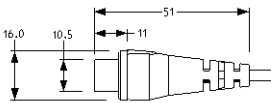
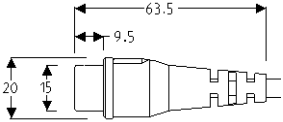
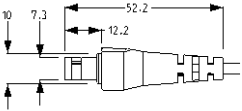
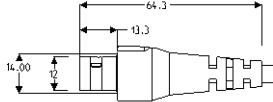
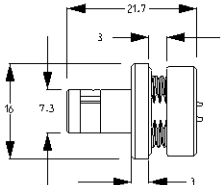
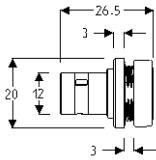
Basic Series	JDX	FD	2	T	05	M	S	N	R
Shell Type	FD-EP-EZ-PC								
Shell Size	0 - 2								
Keying	T & U								
Contact Layout	Size 0; 2, 3, 4, 5, 6, 7, 8 Size 2; 2, 3, 4, 5, 6, 7, 8, 10, 12, 16, 18, 19								
Contact Type	M : pin F : socket								
Contact Termination	S : solder ; P : PCB								
Surface Plating	N : Outer shell, brass alloy with black chrome over nickel S : Outer shell, brass alloy with chrome over nickel								
Orientation	Red dot								

FD & PC are only sold as part of a cable assembly.
Contact Souriau for information on custom cable assemblies.

Sealed Breakaway Connector



JDX Shell Styles

Size 0	Size 2
EP: Fixed receptacle front panel mounted, fixed flange	EP: Fixed receptacle front panel mounted, fixed flange
	
EZ: Straight PCB mounted receptacle	EZ: Straight PCB mounted receptacle
	
PC: Straight cable mounted receptacle	PC: Straight cable mounted receptacle
	
FD: Straight cable mounted plug	FD: Straight cable mounted plug
	
FA: Front panel mounted plug	FA: Front panel mounted plug
	

Sealed Breakaway Connector



Contact Layouts

Shell Size	Male Insulator Viewed From Wire Side	Contact Layout	Solder	PCB	Contact Diameter mm	Solder Wire MAX	MAX Current Rating	Test Voltage (Vrms)	Working Voltage (Vrms)
0		02	S	P	0.9	24	10	1400	660/460
		03	S	P	0.9	24	8	1300	600/420
		04	S	P	0.7	26	7	1400	660/460
		05	S	P	0.7	26	6.5	800	400/260
		06	S	P	0.5	30	2.5	680	320/220
		07	S	P	0.5	30	2.5	680	320/220
		08	S	P	0.5	30	2.5	680	320/220
2		02	S		2	16	30	2100	1000/700
		03	S		1.6	18	17	1700	830/560
		04	S	P	1.3	20	15	2400	1000/800
		05	S	P	1.3	20	14	1900	900/630
		06	S	P	1.3	20	12	1900	900/630
		07	S	P	1.3	20	11	1500	730/500
		08	S	P	0.9	24	10	1700	830/560
		10	S	P	0.9	24	8	1700	830/560
		12	S	P	0.7	26	7	1700	830/561
		16	S	P	0.7	26	6	1500	730/500
		18	S	P	0.7	26	5.5	1400	660/460
		19	S	P	0.7	26	5	1400	660/460

■ Non-removable contacts

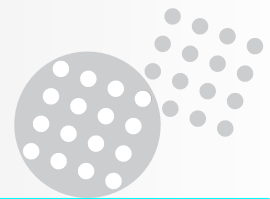
• Voltage Test Procedure

- **The testing voltage** corresponds to the maximum voltage the connector is able to withstand in normal climatic conditions. The value is about 75% of the electrical breakdown voltage. The testing voltage level can be reached several times in connectors life, but never applied for a continuous duration.
- **The working voltage** corresponds to the maximum voltage the connector is able to withstand continuously during its life time, in real environmental conditions, even with high temperature. The value is around 1/3 of the testing voltage.

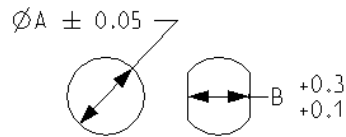
Keying Options	
Size 0	Size 2
T & U	T & U

Key	T	U
Plug & Receptacles		

Sealed Breakaway Connector



Size 2 A dimension is 16
SAT 20 January 2011



Size	0	2
A	12.1	15
B	10.6	14.6

Technical Characteristics

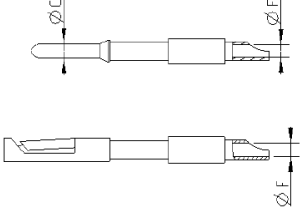
Component	Material	Standard	Surface Treatment (um)		
			Cr	Ni	Au
Shell	Brass	C38500/C3600	0.1 - 0.6	5 - 8	
Shell	Aluminum, Contact Souriau for Availability & Part Number	AISI 7075-T6	0.1 - 0.6	5 - 8	
Nut	Brass	C38500/C3600	0.1 - 0.6	5 - 8	
Nut	Aluminum, Contact Souriau for Availability & Part Number	AISI 7075-T6	0.1 - 0.6	5 - 8	
Pin Contact	Brass	C38500/C3600		3 - 5	0.5
Socket Contact	Copper Nickel	CAD C 19150		3 - 5	0.5
Clip	Beryllium Copper	17200			
Shielding Ring	Copper Alloy (Proprietary)	—		3 - 7	

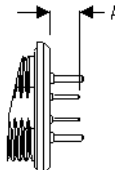
Mechanical, Climatic & Electrical

Characteristics	Values	Standard	Method
Endurance	>2,500 cycles	Mil-Std-1344A	2016.1
Insulation resistance	>500M ohm	ANSI-EIA-364-D	21
EMI Shielding	(60dB min. up to 100MHz) (35dB min. up to 1GHz)	ANSI-EIA-364-D	66
Thermal Shock	- 40 C to + 125 c 5 cycles	ANSI-EIA-364-D	32
Mechanical Shock	300 g, 3ms	ANSI-EIA-364-D	27
Vibrations	10 to 2000 HZ y = 15 g	Mil-Std-1344A	2005.1
Random Vibrations		ANSI-EIA-364-D	28, test concision 4
Altitude Immersion	3 cycles (3*30min),		3
Humidity	240 hours @ 40 C 90%RH	ANSI-EIA-364-D	31
Resistance to Fluids	Kerosene JP8 (NATO code F34) Gasoline ASTM D 4814* Mineral oil NATO code H515	ANSI-EIA-364-D	10
Protection index	IP68 mated & un-mated	IEC 529	14.2.8
Operating temperature	- 40 C to + 125 c 5 cycles		

Sealed Breakaway Connector



Solder Contacts2								
	Contact		Usable Cables Core Section (mm) AWG			Max Current Rating (A)	Contact Resistance (mΩ)	Endurance # of Cycles
	C	F	min	max	AWG			
	0.5	0.5	—	—	28	5	10	>1,000
	0.7	0.63	—	0.3	26	7	5	>1,000
	0.9	0.8	—	0.21	24	10	3.5	>1,000
	1.3	1.1	—	0.6	20	15	3	>1,000
	1.6	1.5	—	0.93	18	17	2.5	>1,000
	2	1.9	—	1.34	16	30	2.5	>1,000

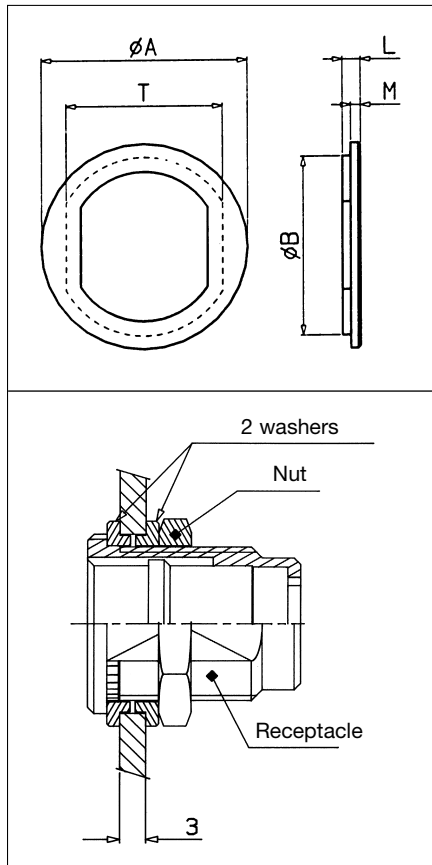
PCB Contacts		
	0.5 mm female PCB tail length size 0	Dimension "L" 4 mm
	0.7 mm female PCB tail length size 0	Dimension "L" 4 mm
	0.9 mm female PCB tail length size 0	Dimension "L" 4 mm
	0.7 mm female PCB tail length size 2	Dimension "L" 6.0 mm
	0.9 mm female PCB tail length size 2	Dimension "L" 6.0mm
	1.3 mm female PCB tail length size 2	Dimension "L" 6.0 mm

Push-Pull connectors



Accessories JBX

• Insulating washer



Part number	Shell size	Ø A	B	L	M	N	T	E
JBX 00 RI [*]	00	10	8.8	1.8	1	0.8	8	4.4
JBX 0 RI [*]	0	12	10.8	1.8	1	0.8	9.9	6.4
JBX 1 RI [*]	1	16	13.8	1.8	1	0.8	12.2	8.4
JBX 2 RI [*]	2	21	17.8	2.2	1.2	0.8	16.2	8.2
JBX 3 RI [*]	3	25	21.8	2.2	1.2	0.8	20.2	10.1

* Washer colors as protective boots.
In size 00, available only in black.

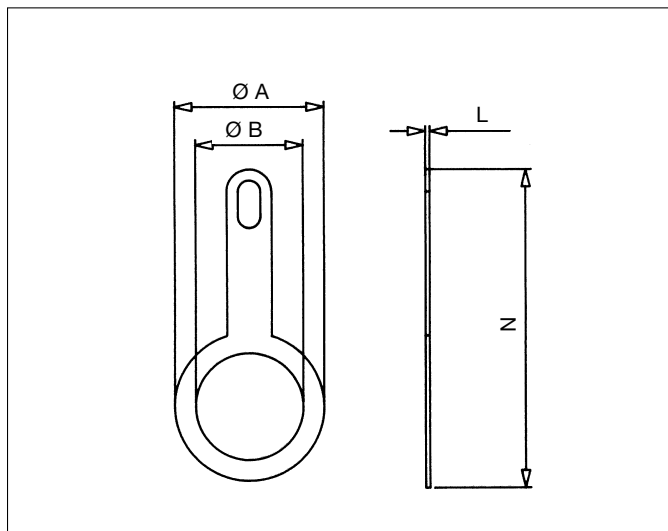
Material : PA 6/6

Working temperature : - 40°C ; + 125°C
- 40°F ; + 257°F

Using 2 washers for receptacle / panel insulating

Be careful : usable for the JAX and JBX series but not for sealed connectors (JKX and sealed JBX size 2).

• Grounding washer



Part number	Shell size	Dimensions			
		Ø A	Ø B	L	N
JAX RA 00 251	00	10	7.2	0.3	21.5
JAX RA 0 251	0	13	9.1	0.3	24
JAX RA 1 251	1	16	12.2	0.3	24
JAX RA 2 251	2	21	15.1	0.8	35
JAX RA 3 251	3	25	18.1	0.8	37

Material : - Brass
- Nickel plated (3 µm)

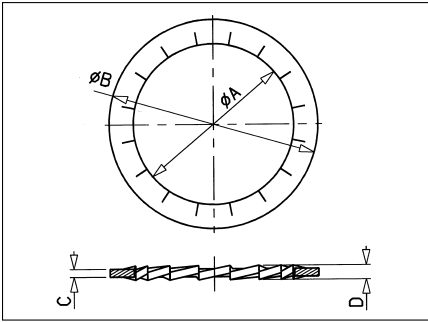
Be careful : usable for the JBX series but not for sealed connectors (JKX and sealed JBX size 2).



Push-Pull connectors

Accessories JBX

• Locking washer



Part number	Shell size	Dimensions			
		ϕA	ϕB	C	D
JAX RE 00	00	7.3	10	0.5	1
JAX RE 0	0	9.2	12.5	0.6	1
JAX RE 1	1	12.2	16	0.6	1

Piece parts JBX-JKX

• Crimp contacts (if ordered separately)

Shell size	ϕ contact	Part Number	
		Crimp pin	Crimp socket
0	0.9	JBX 0 CT MC 09	JBX 0 CT FC 09
	0.7	JBX 0 CT MC 07	JBX 0 CT FC 07
1	1.3	JBX 1 CT MC 13	JBX 1 CT FC 13
	0.9	JBX 1 CT MC 09	JBX 1 CT FC 09
	0.7	JBX 1 CT MC 07	JBX 1 CT FC 07
2	2	JBX 2 CT MC 20	JBX 2 CT FC 20
	1.6	JBX 2 CT MC 16	JBX 2 CT FC 16
	1.3	JBX 2 CT MC 13	JBX 2 CT FC 13
	0.9	JBX 2 CT MC 09	JBX 2 CT FC 09
	0.7	JBX 2 CT MC 07	JBX 2 CT FC 07
3	2	JBX 3 CT MC 20	JBX 3 CT FC 20
	1.6	JBX 3 CT MC 16	JBX 3 CT FC 16
	1.3	JBX 3 CT MC 13	JBX 3 CT FC 13
	0.9	JBX 3 CT MC 09	JBX 3 CT FC 09
	0.7	JBX 3 CT MC 07	JBX 3 CT FC 07

• Solder contacts (if ordered separately)

Shell size	ϕ contact	Part Number	
		Solder pin	Solder socket
0	0.9	JBX 0 CT MS 09	JBX 0 CT FS 09
1	1.3	JBX 1 CT MS 13	JBX 1 CT FS 13
	0.9	JBX 1 CT MS 09	JBX 1 CT FS 09
2	2	JBX 2 CT MS 20	JBX 2 CT FS 20
	1.6	JBX 2 CT MS 16	JBX 2 CT FS 16
	1.3	JBX 2 CT MS 13	JBX 2 CT FS 13
	0.9	JBX 2 CT MS 09	JBX 2 CT FS 09
3	2	JBX 3 CT MS 20	JBX 3 CT FS 20
	1.6	JBX 3 CT MS 16	JBX 3 CT FS 16
	1.3	JBX 3 CT MS 13	JBX 3 CT FS 13
	0.9	JBX 3 CT MS 09	JBX 3 CT FS 09

Solder contacts of 0.5 mm and 0.7 mm of diameter not available separately (always fixed into the insulator).

Push-Pull connectors



Piece parts JBX-JKX

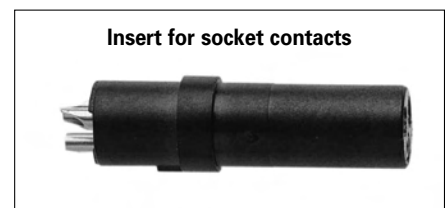
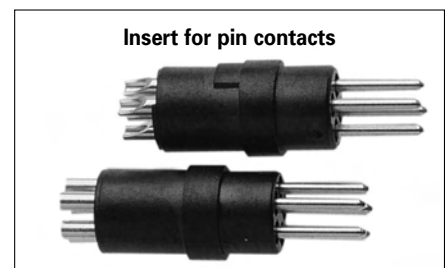
- Inserts for removable solder and crimp contacts (if ordered separately)

Shell size	Insert	Insert Part Number	
		Pin contacts	Socket contacts
0	02	JBX 0 BI 02 MS	JBX 0 BI 02 FS
	03	JBX 0 BI 03 MS	JBX 0 BI 03 FS
	04	JBX 0 BI 04 MS	JBX 0 BI 04 FS
	05	JBX 0 BI 05 MS	JBX 0 BI 05 FS
1	02	JBX 1 BI 02 MS	JBX 1 BI 02 FS
	03	JBX 1 BI 03 MS	JBX 1 BI 03 FS
	04	JBX 1 BI 04 MS	JBX 1 BI 04 FS
	05	JBX 1 BI 05 MS	JBX 1 BI 05 FS
	06	JBX 1 BI 06 MS	JBX 1 BI 06 FS
	07	JBX 1 BI 07 MS	JBX 1 BI 07 FS
2	08	JBX 1 BI 08 MS	JBX 1 BI 08 FS
	02	JBX 2 BI 02 MS	JBX 2 BI 02 FS
	03	JBX 2 BI 03 MS	JBX 2 BI 03 FS
	04	JBX 2 BI 04 MS	JBX 2 BI 04 FS
	05	JBX 2 BI 05 MS	JBX 2 BI 05 FS
	06	JBX 2 BI 06 MS	JBX 2 BI 06 FS
	07	JBX 2 BI 07 MS	JBX 2 BI 07 FS
	08	JBX 2 BI 08 MS	JBX 2 BI 08 FS
	10	JBX 2 BI 10 MS	JBX 2 BI 10 FS
	12	JBX 2 BI 12 MS	JBX 2 BI 12 FS
3	16	JBX 2 BI 16 MS	JBX 2 BI 16 FS
	18	JBX 2 BI 18 MS	JBX 2 BI 18 FS
	19	JBX 2 BI 19 MS	JBX 2 BI 19 FS
	03	JBX 3 BI 03 MS	JBX 3 BI 03 FS
	04	JBX 3 BI 04 MS	JBX 3 BI 04 FS
	07	JBX 3 BI 07 MS	JBX 3 BI 07 FS
	10	JBX 3 BI 10 MS	JBX 3 BI 10 FS
	14	JBX 3 BI 14 MS	JBX 3 BI 14 FS
3	18	JBX 3 BI 18 MS	JBX 3 BI 18 FS
	22	JBX 3 BI 22 MS	JBX 3 BI 22 FS
	30	JBX 3 BI 30 MS	JBX 3 BI 30 FS



- Inserts with fixed solder contacts (if ordered separately)

Shell size	Insert	Insert Part Number	
		Pin contacts	Socket contacts
00	04	JBX 00 BI 04 MPS	JBX 00 BI 04 FPS
0	04	JBX 0 BI 04 MSS	JBX 0 BI 04 FSS
	05	JBX 0 BI 05 MSS	JBX 0 BI 05 FSS
	06	JBX 0 BI 06 MPS	JBX 0 BI 06 FPS
	07	JBX 0 BI 07 MPS	JBX 0 BI 07 FPS
1	07	JBX 1 BI 07 MSS	JBX 1 BI 07 FSS
	08	JBX 1 BI 08 MSS	JBX 1 BI 08 FSS
	10	JBX 1 BI 10 MPS	JBX 1 BI 10 FPS
2	12	JBX 2 BI 12 MSS	JBX 2 BI 12 FSS
	16	JBX 2 BI 16 MSS	JBX 2 BI 16 FSS
	18	JBX 2 BI 18 MSS	JBX 2 BI 18 FSS
	19	JBX 2 BI 19 MSS	JBX 2 BI 19 FSS
3	22	JBX 3 BI 22 MSS	JBX 3 BI 22 FSS
	30	JBX 3 BI 30 MSS	JBX 3 BI 30 FSS



Push-Pull connectors

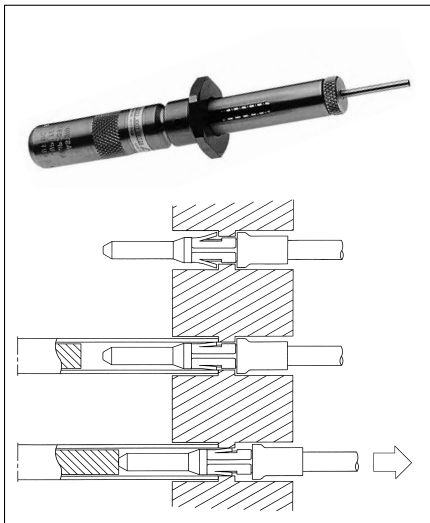


Toolings JBX - JKX

• Manual extraction tools

Contacts automatically extracted

The extraction tool is similar for both male and female contacts.



Shell size	Ø Contacts	SOURIAU Part number	ASTRO Part number
0	0.7	JBX OUT DC 07	ATJP 2045
	0.9	JBX OUT DC 09	ATJP 2057
1	0.7	JBX OUT DC 07	ATJP2045
	0.9	JBX OUT DC 09	ATJP 2057
	1.3	JBX OUT DC 13	ATJP 2077
2	0.7	JBX OUT DC 07	ATJP 2045
	0.9	JBX OUT DC 09	ATJP 2057
	1.3	JBX OUT DC 13	ATJP 2077
	1.6	JBX OUT DC 16	ATJP 2095
	2.0	JBX OUT DC 20	ATJP 2115
3	0.7	JBX OUT DC 07	ATJP 2045
	0.9	JBX OUT DC 09	ATJP 2057
	1.3	JBX OUT DC 13	ATJP 2077
	1.6	JBX OUT DC 16	ATJP 2095
	2.0	JBX OUT DC 20	ATJP 2115

The contact is automatically extracted without the need of pulling onto the cable.

Push-Pull connectors



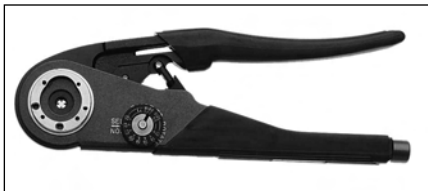
Toolings JBX - JKX

• Crimping tool



Specifications MIL-C-22520 / 7.01

Contacts 0.7 mm - 0.9 mm and 1.3 mm	MIL P/N - SOURIAU P/N	Supplier P/N
	MIL-22520/7-01	Daniels : MH860 Buchanan : 616 336



Specifications MIL-C-22520 / 1.01

Contacts 1.6 mm and 2 mm	MIL P/N - SOURIAU P/N	Supplier P/N
	MIL-22520/1-01	Daniels : AF8 Buchanan : 615 708

• Locator for pin and socket 0.7 - 0.9 mm and 1.3 mm contacts



Shell size	Ø contacts	AWG	Male contact			Female contact		
			SOURIAU P/N	DANIELS P/N	ASTRO P/N	SOURIAU P/N	DANIELS P/N	ASTRO P/N
0	0.7	22 - 24 - 26	JBX 0 OUT LP07	86 - 223	/	JBX 0 OUT LS07	86 - 224	/
	0.9	20 - 22 - 24	JBX 0 OUT LP09	86 - 225	/	JBX 0 OUT LS09	86 - 226	/
1	0.7	22 - 24 - 26	JBX 1 OUT LP07	86 - 196	642 - 001	JBX 1 OUT LS07	86 - 197	642 - 004
	0.9	20 - 22 - 24	JBX 1 OUT LP09	86 - 198	642 - 002	JBX 1 OUT LS09	86 - 199	642 - 005
	1.3	18 - 20 - 22	JBX 1 OUT LP13	86 - 200	642 - 003	JBX 1 OUT LS13	86 - 201	642 - 006
2	0.7	22 - 24 - 26	JBX 2 OUT LP07	86 - 202	642 - 007	JBX 2 OUT LS07	86 - 203	642 - 010
	0.9	20 - 22 - 24	JBX 2 OUT LP09	86 - 204	642 - 008	JBX 2 OUT LS09	86 - 205	642 - 011
	1.3	18 - 20 - 22	JBX 2 OUT LP13	86 - 206	642 - 009	JBX 2 OUT LS13	86 - 207	642 - 012
3	0.7	22 - 24 - 26	JBX 3 OUT LP07	86 - 217	642 - 014	JBX 3 OUT LS07	86 - 214	642 - 017
	0.9	20 - 22 - 24	JBX 3 OUT LP09	86 - 218	642 - 015	JBX 3 OUT LS09	86 - 215	642 - 018
	1.3	18 - 20 - 22	JBX 3 OUT LP13	86 - 219	642 - 016	JBX 3 OUT LS13	86 - 216	642 - 019

• Turret with locator for pin and socket 1.6 mm and 2 mm contacts



Shell size	Ø contacts	AWG	Male and female contacts		
			SOURIAU P/N	DANIELS P/N	ASTRO P/N
2	1.6	14 - 16 - 18	JBX 2 OUT LT16	TH 564	650 - 030
	2	12 - 14 - 16	JBX 2 OUT LT20	TH 565	650 - 031
3	1.6	14 - 16 - 18	JBX 3 OUT LT16	TH 566	650 - 038
	2	12 - 14 - 16	JBX 3 OUT LT20	TH 567	650 - 035

Custom Connector and Cable Assemblies



Examples of custom designs derivated from standard connectors lines

- **Watertight receptacles**



- **JBX series**, Custom Receptacle Design

- **Black conductive plating**



- **JKX series**, black chrome plating

Mouser Electronics

Authorized Distributor

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