



Mixed Power and Signal Waterproof Connector

The JDX mixed power and signal connector offers the ability to integrate 2 or 3 power contacts with 6 to 8 signal contacts in one connector housing

Mixed power & signal layout	✓	Single Connector Solution for simplified cabling
Secure for Outdoor applications	✓	Waterproof, IP68 (Mated and Unmated)
Quick Release Breakaway Coupler	✓	Disengages at specified pull force levels for safe quick disconnects
Rugged	✓	Robust to withstand Harshest Environments
Flexible	✓	3 Layouts Available for multiple applications
Confirmed Mating	✓	Audible, Tactile, Visual
Space Savings	✓	Small footprint, allows access in tight applications
Shielding	✓	360° EMI Shielding

JDX Hybrid

Mixed Power & Signal



Description

- Mixed power & signal rugged sealed connector for high vibration and shock environments for both indoor and outdoor applications
- Waterproof, IP68 (Mated and Unmated)
- Shell available in Brass and Lightweight Aluminum
- Available in Shell Size 2
- 3 layouts for multiple applications
 - 2P + 6S (2 Power + 6 Signal)
 - 2P + 8S (2 Power + 8 Signal)
 - 3P + 6S (3 Power + 6 Signal)

Applications

- SOURIAU Sealed connectors can be used in a variety of markets including Industrial, Instrumentation, Medical, Mil-Aero, Broadcast Entertainment and Telecommunications.

Technical Information

Materials

- **Shell:** Brass or Aluminum
- **Shell Plating:** Black Chrome over Nickel
- **Insulator:** PEEK with 15% Glass filled
- **Contacts:** Brass
- **Contacts Plating:** Gold over Nickel
- **Potting Seal:** Epoxy Potting Compound

Electrical

- **Current Rating:** see chart on Page 3 & 4
- **Contact Resistance:** see chart on Page 4
- **Insulation Resistance:** 500 MΩ
- **Dielectric Withstanding Voltage:** see chart on Page 4
- **Operating Voltage:** see chart on Page 4

Environmental

- **Operating Temperature:** -40°C to +125°C
- **Salt Spray Resistance:** 96 hours
- **Sealing:** IP68 (Mated & Unmated)
- **RoHS Compliant**

Mechanical

- **Endurance:**
 - Shell: 2500 mating/unmating
 - Contacts: 1000 mating/unmating
- **Vibration:** 10 - 2000 HZ (per EIA 364)
- **Shock:** 50g duration 6ms (per MIL STD 1344A)
- Autoclavable

JDX Hybrid

Mixed Power & Signal

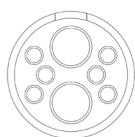
Technical Information

2P + 6S

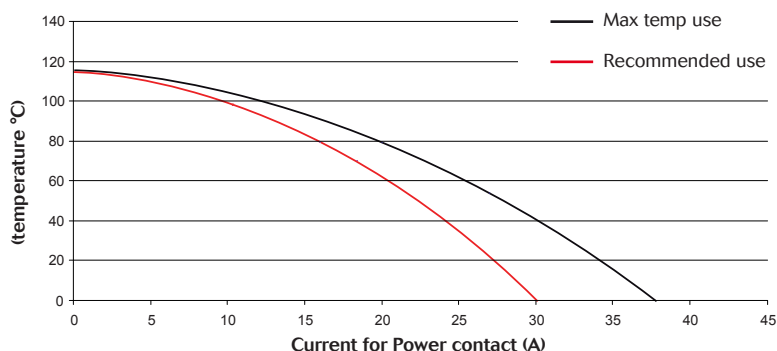
Connector rating:

- Power Contact: 26A at 30°C T-Rise
- Signal Contact: 2A

Connector layout:



Power Derating curve - Signal Contact Fixed at 2A



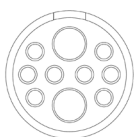
Signal Contact (cable awg 26) is powered at 2A
Power Contact (cable awg 16): 0 to 35 A

2P + 8S

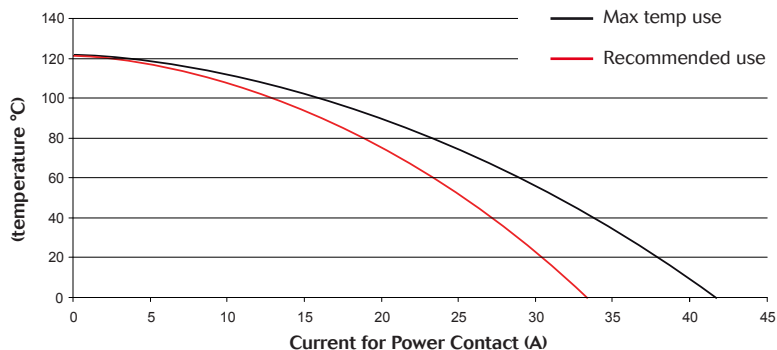
Connector rating:

- Power Contact: 26A at 30°C T-Rise
- Signal Contact: 2A

Connector layout:



Power Derating curve - Signal Contact Fixed at 2A



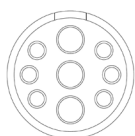
Signal Contact (cable awg 26) is powered at 2A,
Power Contact (cable awg 18): 0 to 40 A

3P + 6S

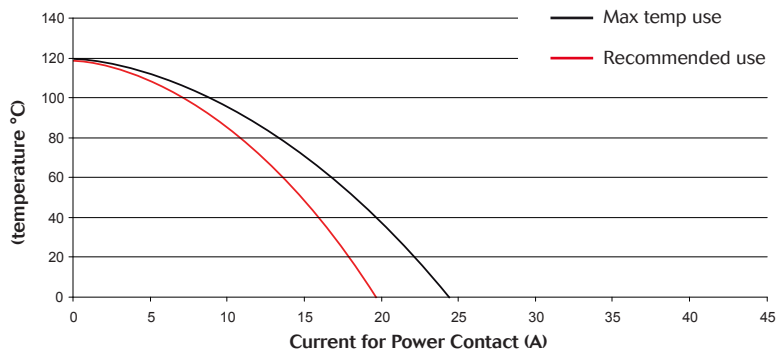
Connector rating:

- Power Contact: 17A at 30°C T-Rise
- Signal Contact: 2A

Connector layout:



Power Derating curve - Signal Contact Fixed at 2A

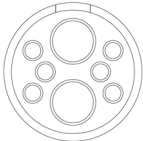
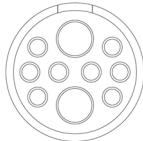
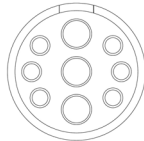


Signal Contact (cable awg 26) is powered at 2A,
Power Contact (cable awg 20): 0 to 25 A

JDX Hybrid

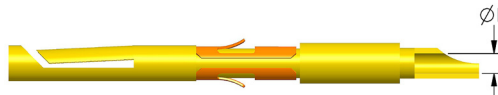
Mixed Power & Signal

Contact Layouts & Technical Information

Shell size 2	2P+6S	2P+8S	3P+6S
Male Insulator Wire Side			
Solder	S	S	S
PCB Straight Tails	P	P	P
Contact Diameter (mm)			
Power contact diameter (mm)	2.0	1.6	1.3
Signal contact diameter (mm)	0.7	0.7	0.7
Solder Wire Max. AWG			
Power Solder wire Max. AWG	16	18	20
Signal Solder wire Max. AWG	26	26	26
Current Rating			
Power current rating	See Derating Curve on page 3		
Signal current rating	See Derating Curve on page 3		
Contact Resistance (mΩ)			
Power contact resistance (mΩ)	2.5	2.5	3
Signal contact resistance (mΩ)	5	5	5
Dielectric Withstanding Voltage	1500	1500	1500
Operating Voltage (Vdc/Vrms)	700/500	700/500	700/500

Contacts

Solder contacts



Contacts		Usable Cables			Current Rating* (A)		Contact Resistance (mΩ)		Endurance (Cycles)
ØC	ØF	Core section (mm²)		AWG	Power Contact	Signal Contact	Power Contact	Signal Contact	
		Min.	Max.						
0.7	0.7	-	0.3	26	-	2	-	5	1000
1.3	1.1	-	0.6	20	17	-	3.0	-	1000
1.6	1.5	-	0.93	18	26	-	2.5	-	1000
2.0	1.9	-	1.34	16	26	-	2.5	-	1000

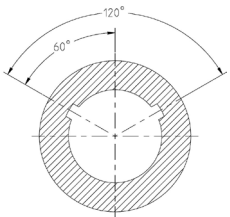
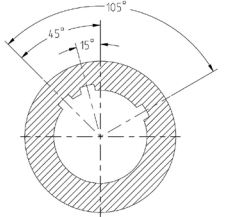
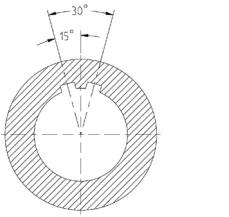
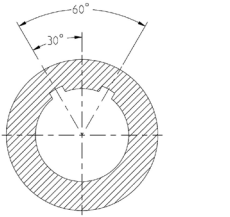
*see chart on page 3

JDX Hybrid

Mixed Power & Signal

Keying

Keying angles

Key	T	U	A	B
Plug & Receptacle				

Keying shells availability

Shell Styles for Plugs & Receptacles (see page 8)										
Shell size	Key	ED	EP	EE	ER	EZ	IL	FA	FB	FD
2	T	●	●	●	●	●	●	●	●	●
	U	●	●	●	●	●	●	○	●	●
	A	○	○	○	○	○	○	○	○	○
	B	○	○	○	○	○	○	○	○	○

- Available for JDX Series

Keying color codes

Keying	Contacts Standard Gender	Contacts Reverse Gender
T	Red	Purple
U	White	Yellow
A	Green	Orange
B	Blue	Light Brown

JDX Hybrid

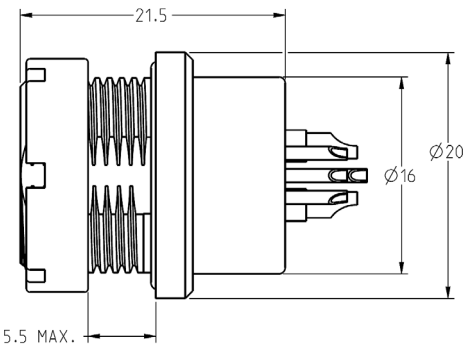
Mixed Power & Signal

Part Numbers

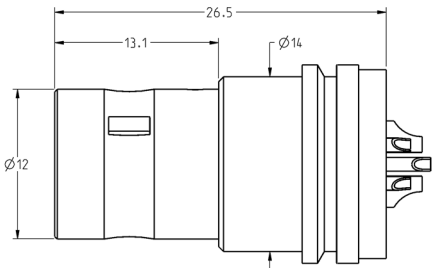
Existing Shell Style Part Numbers



ER: Rear Panel Mount



FD: Straight Cable Plug



Please note:
FD Straight Plug is supplied as overmolded cable assembly or as stand alone connector (strain relief boot not available for this product)

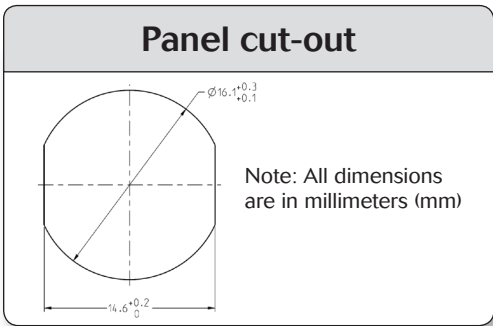
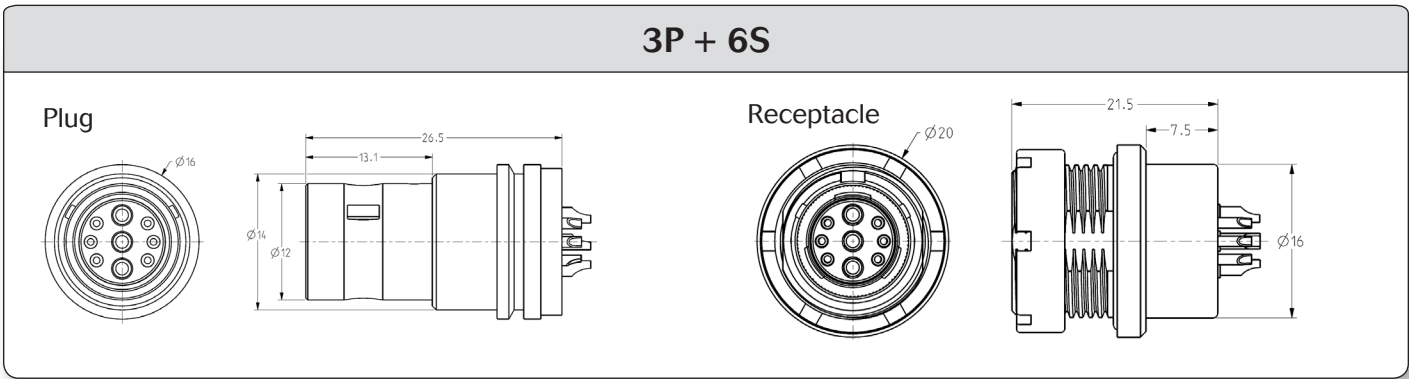
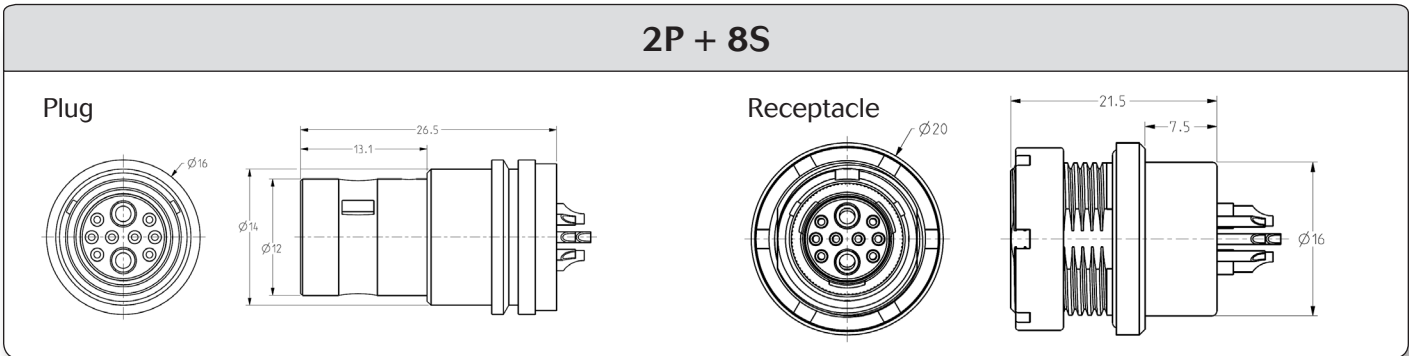
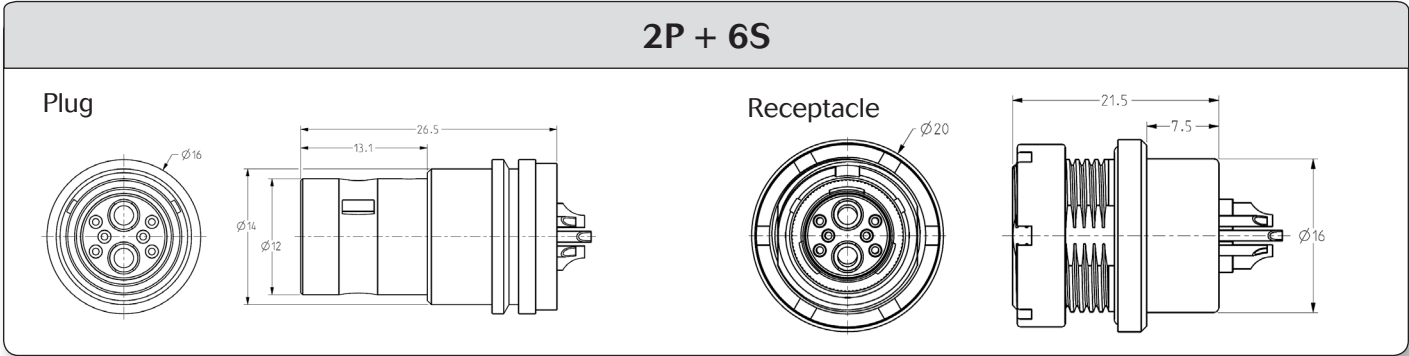
For other shell styles & part numbers see shell styles on page 8 and part number configurator on page 9.

Part Number	Description	Shell Style	Shell Size	Shell Type
JDXFD2T001MSN	2 Power / 6 Signal (2P + 6S)	FD	2	Plug
JDXFD2T002MSN	2 Power / 8 Signal (2P + 8S)	FD	2	Plug
JDXFD2T003MSN	3 Power / 6 Signal (3P + 6S)	FD	2	Plug
JDXER2T001FSN	2 Power / 6 Signal (2P + 6S)	ER	2	Receptacle
JDXER2T002FSN	2 Power / 8 Signal (2P + 8S)	ER	2	Receptacle
JDXER2T003FSN	3 Power / 6 Signal (3P + 6S)	ER	2	Receptacle

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Dimensions



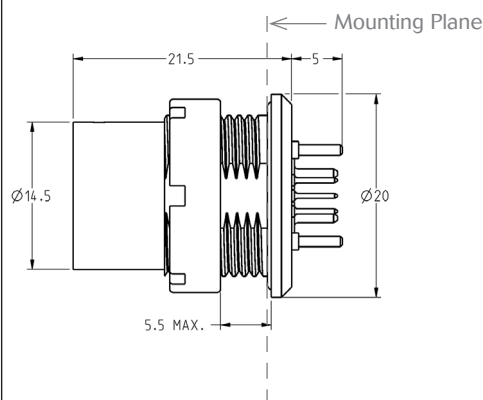
JDX Hybrid

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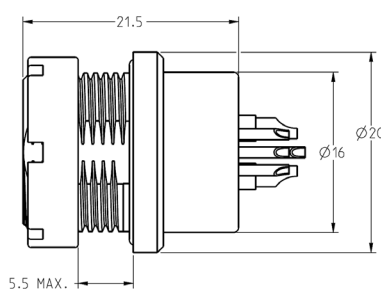
JDX Hybrid Shell Styles – Size 2

Receptacles

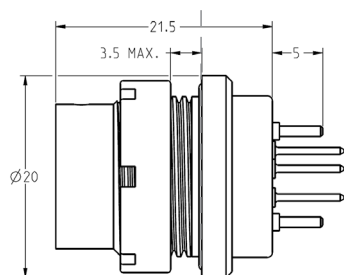
EZ: Rear Panel Mount PCB Capable
Protruding Front (With Grounding Pins)



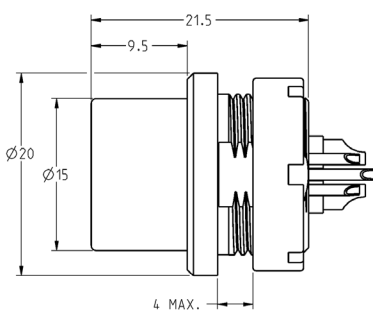
ER: Rear Panel Mount



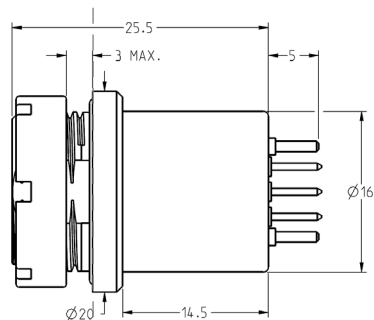
ED: Rear Panel Mount PCB Capable
(With Grounding Pins)



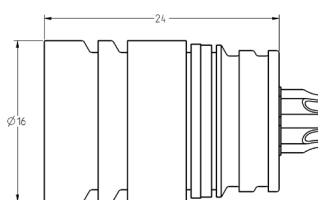
EP: Front Panel Mount



EE: Rear Panel Mount PCB Capable
Protruding Back (With Grounding Pins)



IL: In-Line Cable Receptacle

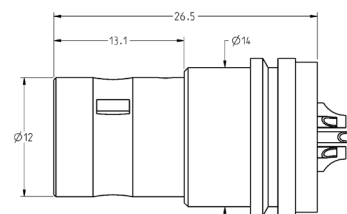


Please note:
IL In-Line Cable Receptacle is supplied
as overmolded cable assembly or as
stand alone connector (strain relief
boot not available for this product)

Mounting Plane →

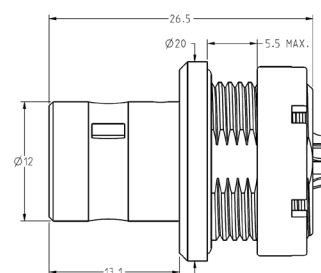
Plugs

FD: Straight Cable Plug

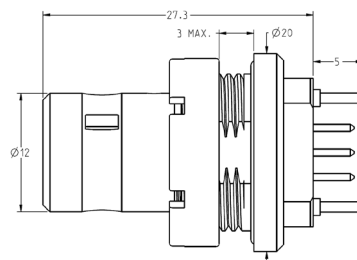


Please Note:
FD Straight Plug is supplied as
overmolded cable assembly or as
stand alone connector (strain relief
boot not available for this product)

FA: Front Panel Mount Plug



FB: Rear Panel Mount Plug
(With Grounding Pins)



Note: All dimensions are in
millimeters (mm)

JDX Hybrid

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Ordering Information

BASIC SERIES	JDX	FD	2	T	001	M	S	N	[A]
Shells Type - Receptacle EP – Front Panel Mount ER – Rear Panel Mount EZ – Rear Panel Mount PCB Capable, Protruding Front (With Grounding Pins) ED – Rear Panel Mount PCB Capable (With Grounding Pins) EE – Rear Panel Mount PCB Capable, Protruding Back (With Grounding Pins) *IL – In-Line Cable Receptacle									
Shells Type - Plug *FD – Straight Cable Plug FA – Front Panel Mount Plug FB – Rear Panel Mount Plug (With Grounding Pins)									
Shell Size 2									
Keying T - U - A - B (see page 5 for more keying details)									
Contact Layouts 001 - 2P + 6S (2 Power + 6 Signal) 002 - 2P + 8S (2 Power + 8 Signal) 003 - 3P + 6S (3 Power + 6 Signal)									
Contact Type M: Male F: Female									
Contact Termination S - Solder P - PCB Straight									
Surface Plating N: Non Reflective Black Chrome over Nickel S: Chrome over Nickel									
Shell Material (Brass is standard material) A: Add A for Aluminum Shell									

***Please note:** FD and IL 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 upon request.

Custom grommets and overmolds can be designed for any application.