



## 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 Harshesht 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



## 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 M $\Omega$
- **Dielectric Withstanding Voltage:** see chart on Page 4
- **Operating Voltage:** see chart on Page 4

## 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.

### 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

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## Mixed Power & Signal

### Technical Information

#### 2P + 6S

##### Connector rating:

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

##### Connector layout:

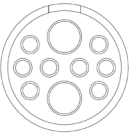


#### 2P + 8S

##### Connector rating:

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

##### Connector layout:

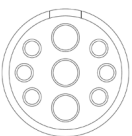


#### 3P + 6S

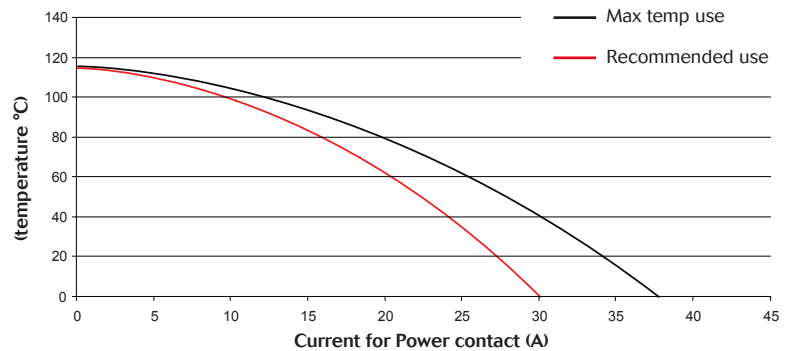
##### Connector rating:

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

##### Connector layout:

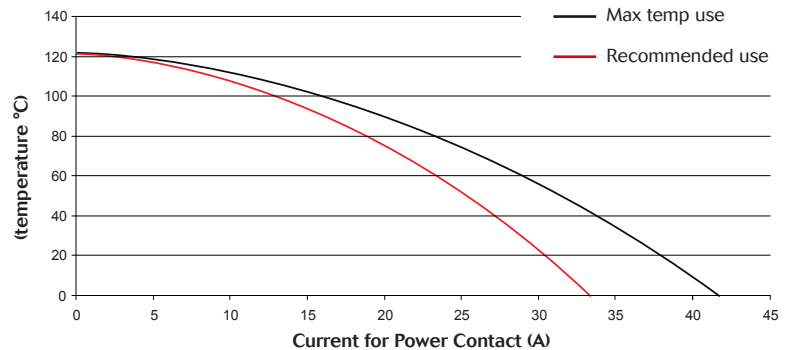


Power Derating curve - Signal Contact Fixed at 2A



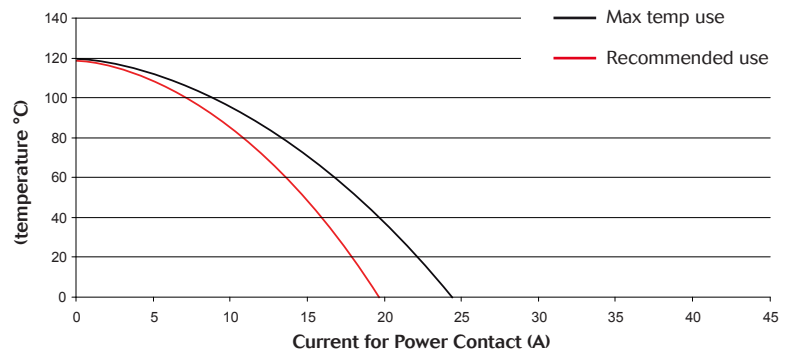
Signal Contact (cable awg 26) is powered at 2A  
Power Contact (cable awg 16): 0 to 35 A

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

Power Derating curve - Signal Contact Fixed at 2A

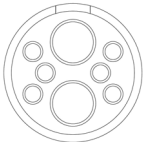
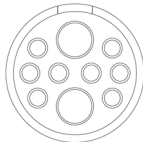
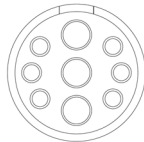


Signal Contact (cable awg 26) is powered at 2A,  
Power Contact (cable awg 20): 0 to 25 A

# 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
<b>Contact Diameter (mm)</b>			
Power contact diameter (mm)	2.0	1.6	1.3
Signal contact diameter (mm)	0.7	0.7	0.7
<b>Solder Wire Max. AWG</b>			
Power Solder wire Max. AWG	16	18	20
Signal Solder wire Max. AWG	26	26	26
<b>Current Rating</b>			
Power current rating	See Derating Curve on page 3		
Signal current rating	See Derating Curve on page 3		
<b>Contact Resistance (mΩ)</b>			
Power contact resistance (mΩ)	2.5	2.5	3
Signal contact resistance (mΩ)	5	5	5
<b>Dielectric Withstanding Voltage</b>	1500	1500	1500
<b>Operating Voltage (Vdc/Vrms)</b>	700/500	700/500	700/500

### Contacts

Solder contacts



Contacts		Usable Cables			Current Rating* (A)		Contact Resistance (mΩ)		Endurance (Cycles)
ØC	ØF	Core section (mm <sup>2</sup> )		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

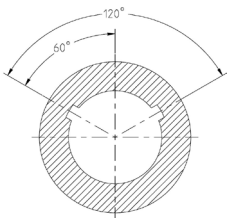
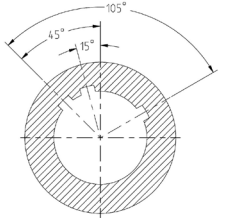
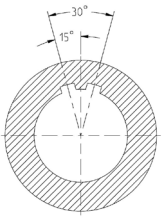
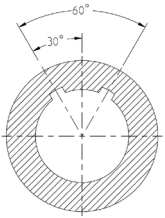
\*see chart on page 3

# 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

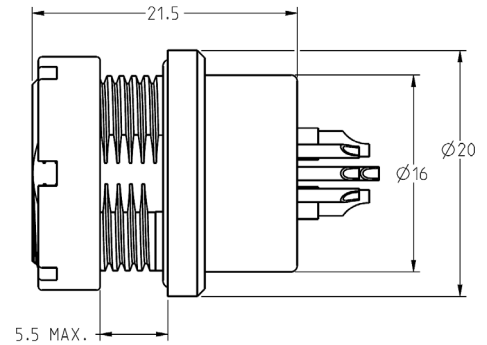
## Mixed Power & Signal

### Part Numbers

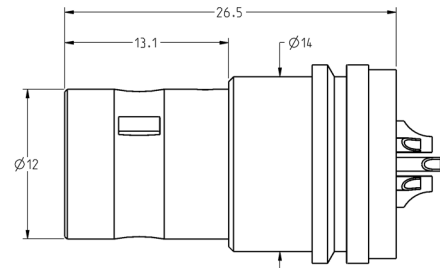
#### Existing Shell Style Part Numbers



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)

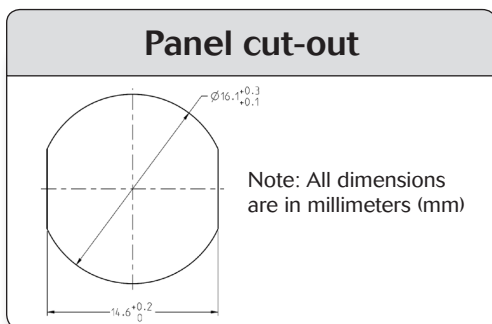
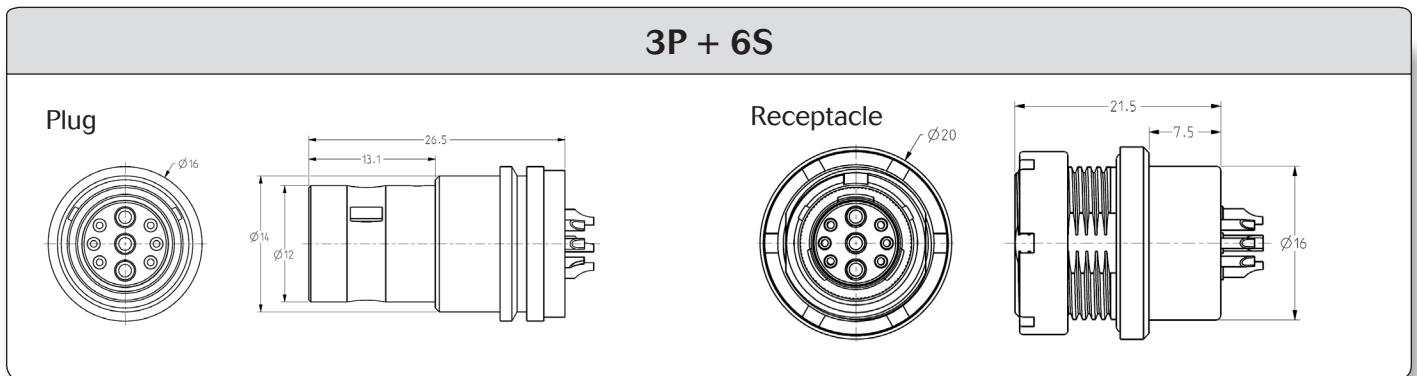
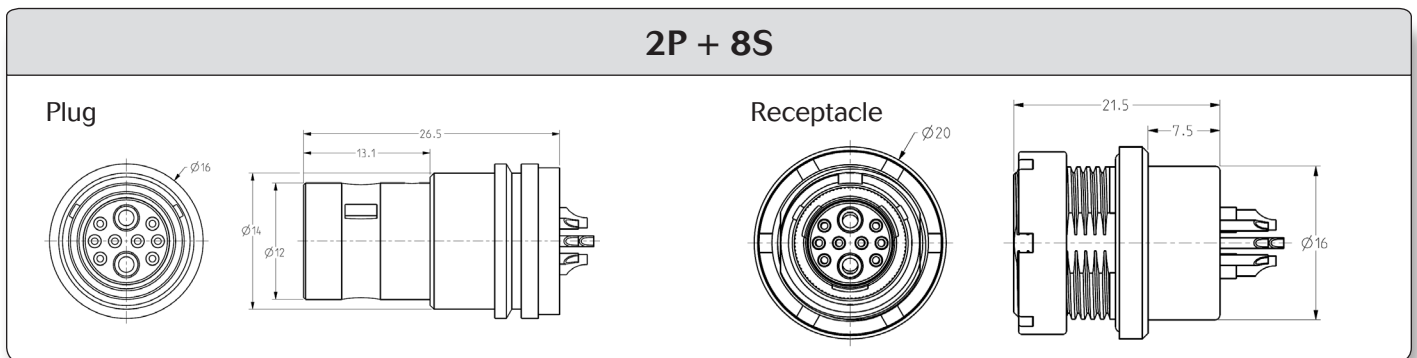
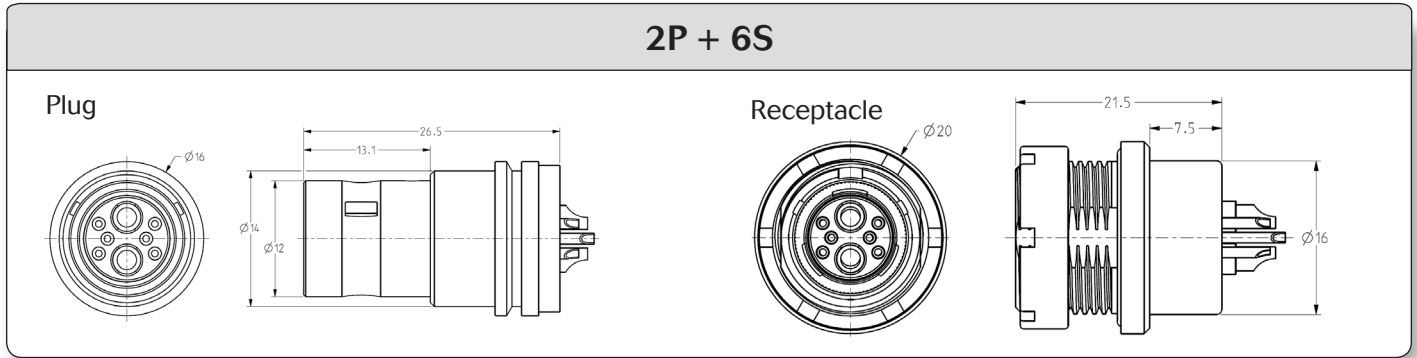
For other shell styles & part numbers see shell styles on page 8 and part number configurator on page 9.

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

# JDX Hybrid

## Mixed Power & Signal

### Dimensions



# JDX Hybrid

## Mixed Power & Signal

### 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

## Mixed Power & Signal

### Ordering Information

<b>BASIC SERIES</b>	<b>JDX</b>	<b>FD</b>	<b>2</b>	<b>T</b>	<b>001</b>	<b>M</b>	<b>S</b>	<b>N</b>	<b>[A]</b>
Shells Type - Receptacle <b>EP</b> – Front Panel Mount <b>ER</b> – Rear Panel Mount <b>EZ</b> – Rear Panel Mount PCB Capable, Protruding Front (With Grounding Pins) <b>ED</b> – Rear Panel Mount PCB Capable (With Grounding Pins) <b>EE</b> – Rear Panel Mount PCB Capable, Protruding Back (With Grounding Pins) <b>*IL</b> – In-Line Cable Receptacle									
Shells Type - Plug <b>*FD</b> – Straight Cable Plug <b>FA</b> – Front Panel Mount Plug <b>FB</b> – 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 <b>M:</b> Male <b>F:</b> Female									
Contact Termination <b>S</b> - Solder <b>P</b> - PCB Straight									
Surface Plating <b>N:</b> Non Reflective Black Chrome over Nickel <b>S:</b> Chrome over Nickel									
Shell Material (Brass is standard material) <b>A:</b> 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.