# Johnson

# **IP68** rated Waterproof Interconnects

Introducing the Johnson waterproof interconnect family consisting of a rugged design for harsh environments. All products meet industry-leading IP68 standards. The parts are designed with internal gaskets along with an outer gasket. They are waterproof in an unmated condition and designed for underwater applications including mil-aero, transportation, oil & gas, marine and Industrial IoT. The part range consists of RF jack and plug connectors and adapters in the SMA, TNC, MCX and MMCX families. Available in stainless steel and brass.

#### **Features**

- The SMA family operates up to 18 GHz.
- The TNC family are larger and more rugged.
- Adapters include hermetically sealed connectors to 1 x 10-8 cc/sec, making them ideal for high pressure, vacuum applications and the prevention of liquid or gas leakage.
- Ingress Protection ratings are used to specify the environmental protection of enclosures and casings around electronic products.
- IP86 devices backed by an international standard rating of IP68 are deemed fit enough to withstand dust, dirt and sand, and are resistant to submersion up to a maximum depth of 1.5m underwater for up to thirty minutes.

#### **Applications**

- Satellite communication equipment and base stations
- Remote monitoring communication
- Cable broadcast equipment
- GPS antennas

### 

<sup>st</sup> Digit	Definitio

- 0 No protection against contact and ingress of objects
- Protect against any large surface of the body, such as the back of hand. Protect against solid objects greater than 50mm in size.
- 2 Protect against access to hazardous parts by a finger or similar object. Protected against solid objects greater than 12.5mm in size.
- 3 Protected against access to hazardous parts with a tool or thick wire. Protected against solid objects greater than 2.5mm in size.
- 4 Protected against access to hazardous parts with a wire screw, etc. Protected against solid objects greater than 1mm in size.
- 5 Protected against access to hazardous parts. Dust protected.
- 6 Protected against access to hazardous parts. Dust-tight.

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#### <sup>nd</sup> Digit Definition

0	No protection
1	Protected against water drops.
2	Protected against water drops at a 15° angle.
3	Protected against water spray at 60° angle.
4	Protected against water splashing from any angle.
5	Protected against water jets from any angle.
6	Protected against powerful water jets and heavy seas.
7	Protected against the effects of temporary submerison in water. Test requires 30 minutes at 1 meter depth.
8	Protected against the effects of temporary submerison. Customer specetification applies and specific testing may be required.
9K	Protects against high pressures associated with steam cleaning.







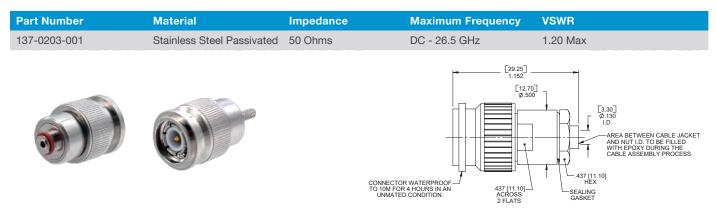






## Connectors

#### **TNC Straight Crimp Plug, RG316**



#### **TNC Straight Clamp Plug, RG316**

Part Number	Material	Impedance	Maximum Frequency	VSWR
137-0403-011	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max
			FERRI BODY DURIN INSTA OF CA	T END OF CRIMP WITH AN C-RING WITH AN C-RING T HE SPALED TO CABLE USING EPOXY RECOMMENDED SUPPLIER AND MICHAENDED SUPPLIER AND MICHAENDED SUPPLIER AND MICHAENDED SUPPLIER AND MICHAENDED SUPPLIER AND ASSEMBLY PROCESS

#### TNC R/A Crimp Plug, RG316, Low Profile

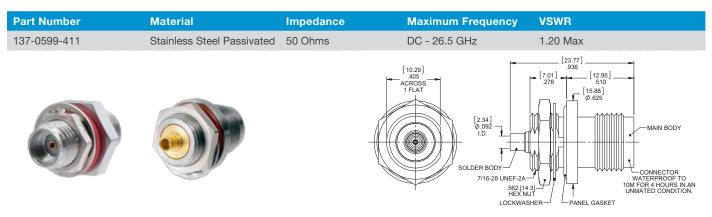
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Part Number	Material	Impedance	Maximum Frequency	VSWR
137-0403-101	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max
				[11.1] 437 THREADED CAP TO BE SEALED USING EPOXY OR SILICONE DURING THE CABLE ASSEMBLY PROCESS FRONT END OF CRIMP FERRULE SEALED TO BODY WITH AN O-RING DURING THE FERRULE INSTALLATION STEP OF CABLE ASSEMBLY PROCESS REAR OF CRIMP FERRULE TO BE
		TO	INNECTOR WATERPROOF 10 MFOR 4 HOURS IN AN UNMATED CONDITION PER IP68	SEALED TO CABLE USING EPOXY OR SILICONE DURING THE CABLE ASSEMBLY PROCESS

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#### TNC Bulkhead Mount Jack, 0.085" Cable, Front Mount



#### SMA Crimp Bulkhead Jack, RG174/RG316/LMR100

Part Number	Material	Impedance	Maximum Frequency	VSWR
142-0303-801	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max
			CONNECTOR WATERPROOF TO 100 FOR WATERPROOF TO 100 FOR WATERPROOF AN UNMATED CONDITION. [13.8 PANEL	

#### SMA Crimp Plug, RG174/RG316/LMR100

Part Number	Material	Impedance	Maximum Frequency	VSWR
142-0403-051	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max
			CONNECTOR WATERPROOF TO 10M FOR 4 HOURS IN AN UNMATED CONDITION PER IP88 FRONT END OF I CRIMPED TO O-FIN THE CABLE ASSET	BACK END OF CRIMP FERRULE TO BE SEALED TO CABLE WITH EDVIX (RESINTECH RT125 OR EOUIVALENT) OR SILCOME DURING DURING THE CABLE ASSEMBLY



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# Adapters

#### SMA Jack to MCX Bulkhead Adapter with Hex Nut

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
134-1001-401	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS
	C D		MCX JACK INTERFACE 1/4-36 UNS-2A 1/4-36 UNS-2A 1/4-36 UNS-2A 1/4-36 UNS-2A	CONNECTOR MEETS IP88 AND IS WATERPROOF TO UNMFOR 4 HOURS IN AN UNMATED CONDITION.

#### SMA Jack to MCX Bulkhead Adapter without Hex Nut

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
134-1001-411	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS
			MCX JACK INTERFACE	ET CONNECTOR WATERPROOF TO UNMATCH CONNECTOR WATERPROOF TO UNMATCH HOURS IN AN UNMATCH CONNECTOR

#### SMA Jack to MMCX Jack Bulkhead Adapter

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
134-1001-421	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS
Cin	<b>ch</b>	-	[7.4] 202 ACROSS 1FLAT MMCX JACK INTERFACE 5/16-32 UNEF-2A 	
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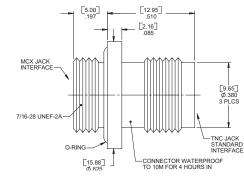


#### Material **Part Number** Impedance **Maximum Frequency Dielectric Withstanding Voltage** 134-1001-461 Stainless Steel Passivated 50 Ohms DC - 6 GHz 1,000 VRMS [31.04] 1.222 [10.29] .405 ACROSS 1 FLAT \_ [10.16] .400 [12.95] .510 [15.88] Ø.625 φ 7/16-28 UNEF-2A .562 [14.27] HEX NUT LOCKWASHER PANEL GASKET CONNECTOR WATERPROOF TO 10M FOR 4 HOURS IN AN UNMATED CONDITION PER IP68

#### TNC Jack to SMA Jack Bulkhead Adapter

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
134-1001-441	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS
			[sc	n] [12.05]

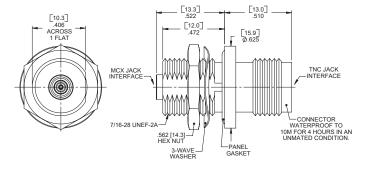




#### TNC Jack to MCX Bulkhead Adapter with Hex Nut

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
134-1001-451	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS







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#### **Part Number** Material Impedance **Maximum Frequency Dielectric Withstanding Voltage** 142-091-431 Brass, Nickel Plated 50 Ohms DC - 6 GHz 1,000 VRMS [25.0] .985 [10.3] .405 ACROSS 1 FLAT [7.0] .276 [10.1] [15.9] Ø.625 SMA JACK SMA JACK 6 WATERPROOF TO 10M FOR 4 HOURS IN AN UNMATED CONDITION. 7/16-28 UNEF-2A .562 [14.3] HEX NUT PANEL GASKET

#### SMA Jack to SMA Jack Bulkhead Adapter

### Contacts

#### SMA Bulkhead Jack, Solder Pot Contact

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
142-1701-401	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS
			CONNECTOR WATERPROP TO 10M FOR 4 HOERS IN AN UNMATED CONDITION. 	00] 15 0,050 0,052 1,0. 1,4-36 UNS-2A -312 (7.92) HCX NUT LOCKWASHER PANEL GASKET

#### SMA Bulkhead Jack, Tab Contact

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Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
142-1701-411	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS
	ch	CON TO 1 UN	HEX \LOC	-1/4-36 UNS-2A 12 [7:92] EX NUT EL GASKET
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#### SMA Bulkhead Jack, Post Contact

Part Number	Material	Impedance	Maximum Frequency	VSWR
142-1701-421	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max
		CONNEC TO 10M F UNMA	HEX \LC	1/4-36 UNS-2A 312 (7.92) HEX NUT OXKWASHER NEL GASKET



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