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

IP68

1st Digit	Definition
0	No protection against contact and ingress of objects
1	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.

2nd 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.

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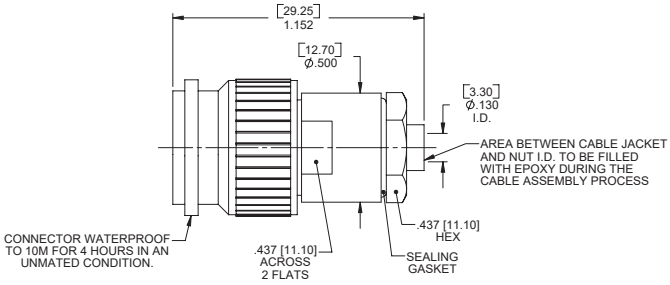
Please read our datasheet & drawing disclaimer here.

IP68 Rated Waterproof Interconnects

Connectors

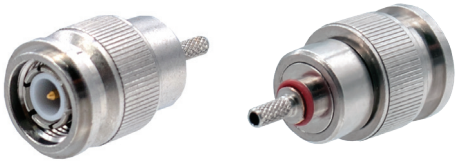
TNC Straight Clamp Plug, RG316

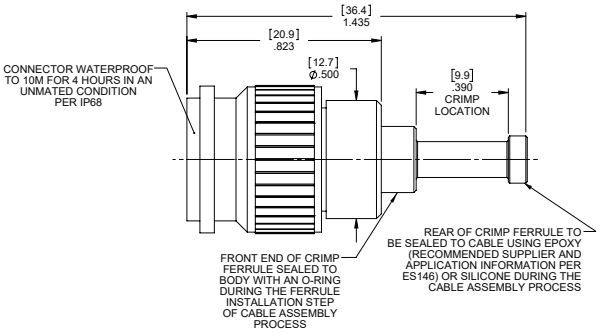
Part Number	Material	Impedance	Maximum Frequency	VSWR
137-0203-001	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max



TNC Straight Crimp Plug, RG316

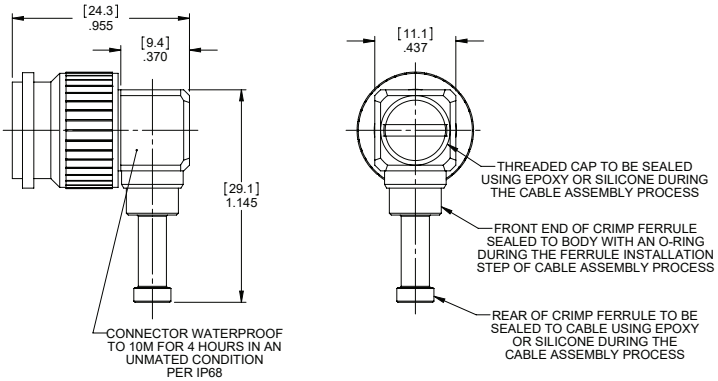
Part Number	Material	Impedance	Maximum Frequency	VSWR
137-0403-011	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max





TNC R/A Crimp Plug, RG316, Low Profile

Part Number	Material	Impedance	Maximum Frequency	VSWR
137-0403-101	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max



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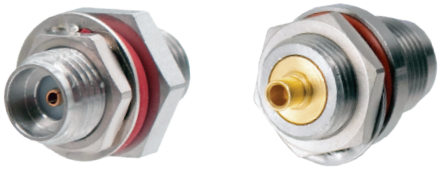
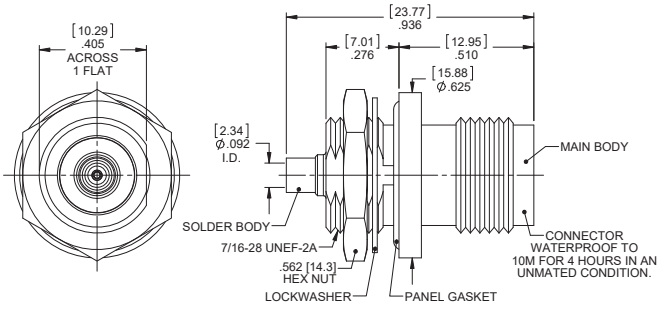
TNC Bulkhead Mount Jack, 0.085” Cable, Front Mount

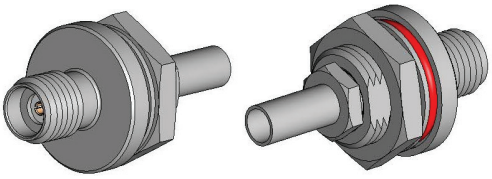
Part Number	Material	Impedance	Maximum Frequency	VSWR
137-0599-411	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max

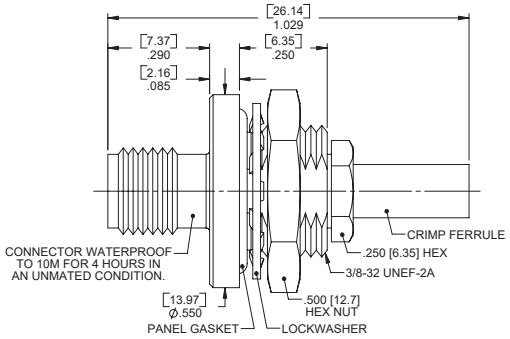




SMA Crimp Bulkhead Jack, RG174/RG316/LMR100

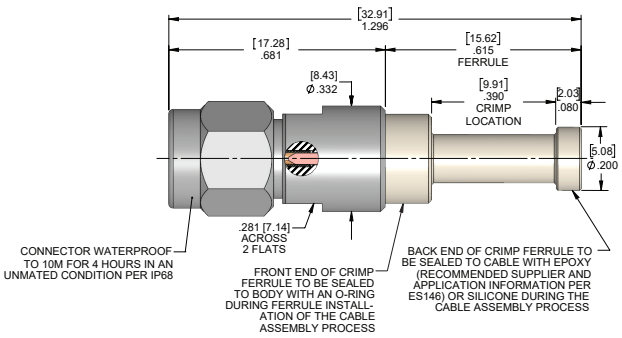
Part Number	Material	Impedance	Maximum Frequency
142-0303-801	Stainless Steel Passivated	50 Ohms	DC - 18 GHz





SMA Crimp Plug, RG174/RG316/LMR100

Part Number	Material	Impedance	Maximum Frequency
142-0403-051	Stainless Steel Passivated	50 Ohms	DC - 18 GHz



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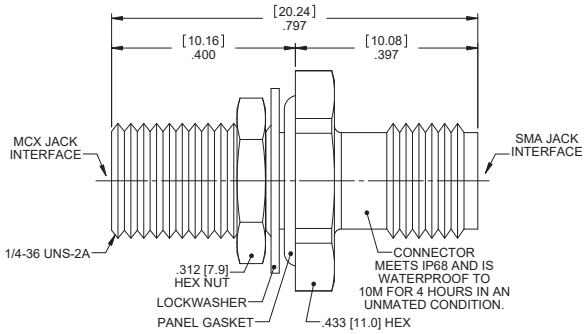
Adapters

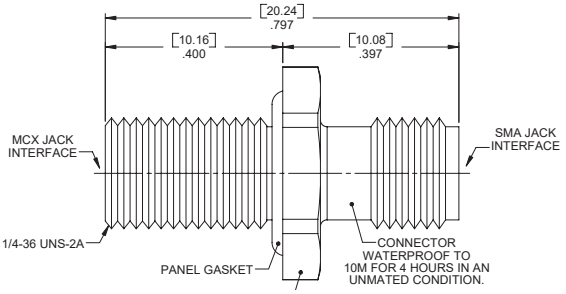
SMA Jack to MCX Bulkhead Adapter with Hex Nut

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
134-1001-401	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS



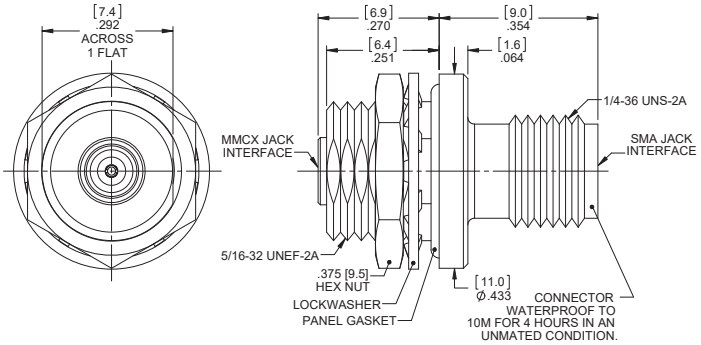
SMA Jack to MCX Bulkhead Adapter without Hex Nut

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
134-1001-411	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS



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



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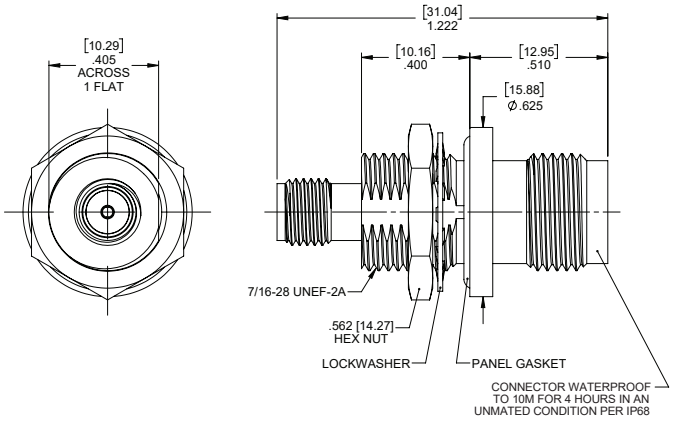
JOHNSON™

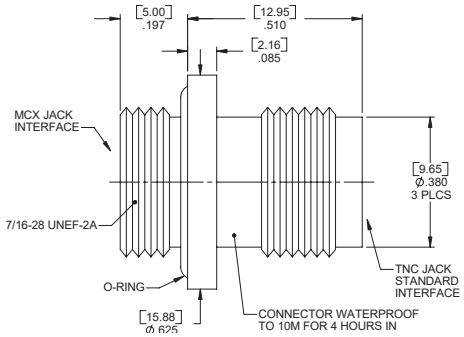
TNC Jack to SMA Jack Bulkhead Adapter

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
134-1001-461	Stainless Steel Passivated	50 Ohms	DC - 6 GHz	1,000 VRMS



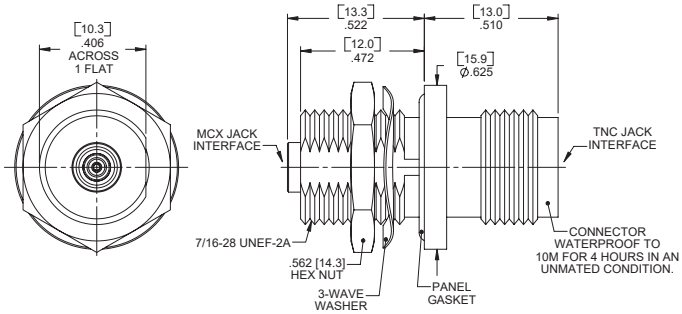
TNC Jack to MCX Bulkhead Adapter

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



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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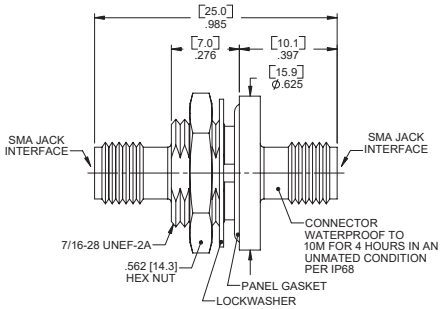
SMA Jack to SMA Jack Bulkhead Adapter

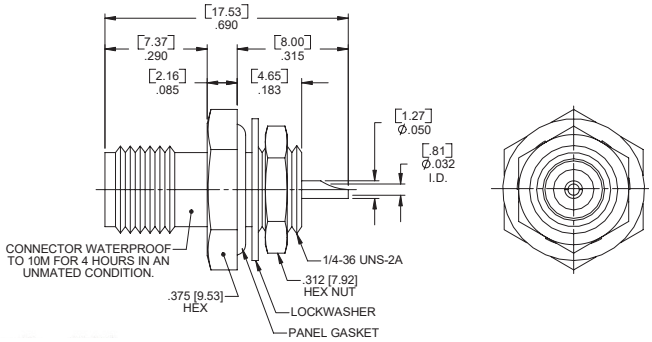
Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
142-0901-431	Brass, Nickel Plated	50 Ohms	DC - 18 GHz	1,000 VRMS



Contacts

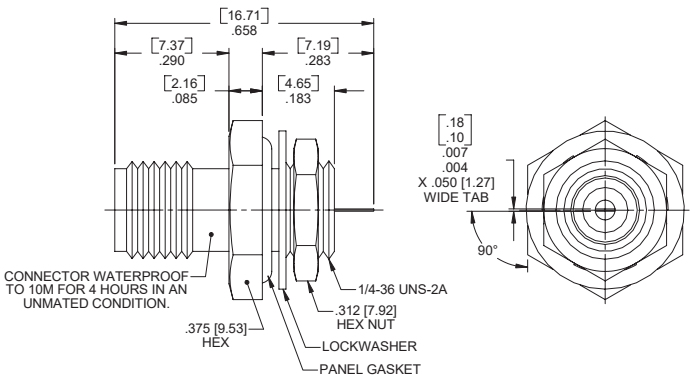
SMA Bulkhead Jack, Solder Pot Contact

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
142-1701-401	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS



SMA Bulkhead Jack, Tab Contact

Part Number	Material	Impedance	Maximum Frequency	Dielectric Withstanding Voltage
142-1701-411	Brass, Nickel Plated	50 Ohms	DC - 6 GHz	1,000 VRMS



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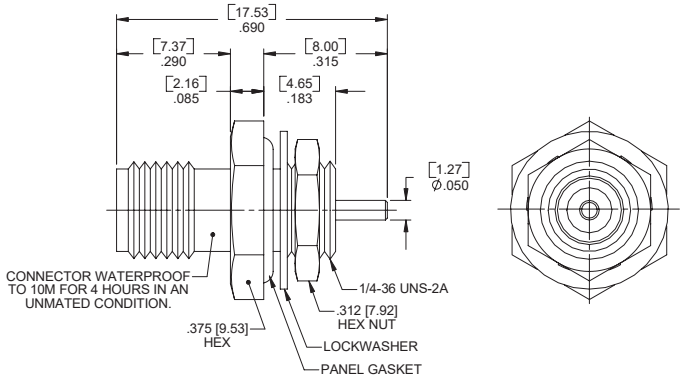
SMA Bulkhead Jack, Post Contact

Part Number	Material	Impedance	Maximum Frequency	VSWR
142-1701-421	Stainless Steel Passivated	50 Ohms	DC - 26.5 GHz	1.20 Max



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