

# Rotating Coaxial Connector

ISO 9001 Certified

*NEW*

*DC-18 GHz*

*Rotating Coaxial Connectors*



Times Microwave Systems has developed yet another world's first — the Rotating Coaxial Connector, a continuously rotating 360° connector capable of operating broadband from DC-18GHz. Designed specifically to fit Times Microwave Systems entire range of ultra high performance cable assemblies, this innovative connector solves the traditional problems of cable assembly fatigue failure due to constant flexing. It also provides a better alternative to using additional coaxial broadband rotating joints with their high cost and inherent poor electrical performance.

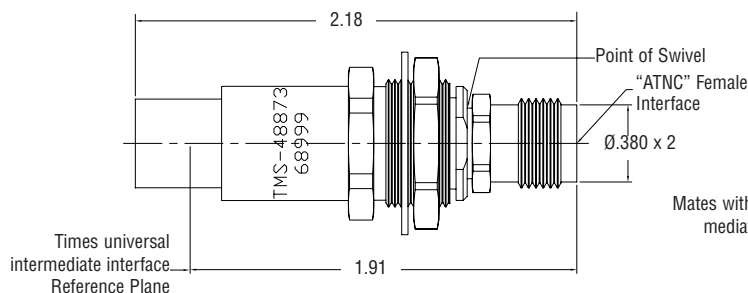
Times' unique Rotating Coaxial Connector provides design engineers the vital link between stationary and movable parts, allowing antennas to be located on surfaces that require constant movement, such as: flight control surfaces, opening doors and panels, or folding structures on aircraft wing tips or helicopter tail booms. They also can be located at the bottom of Quick Erecting Antenna Mast systems, eliminating the need to connect/disconnect cables when erecting or retracting, or used to raise or lower masts from a moving vehicle. With the Rotating Coaxial Connector, self-retracting test cables can be furnished on reels to greatly simplify testing.

#### Features:

- Operates Broadband from DC-18 GHz
- Specified for up to 1 Million 360° Cycles of Rotation
- Rugged, Corrosion Resistant Stainless Steel and Titanium Design for Demanding Military Applications
- Lighter Weight and 50 % Lower Insertion Loss than Traditional Rotating Joints

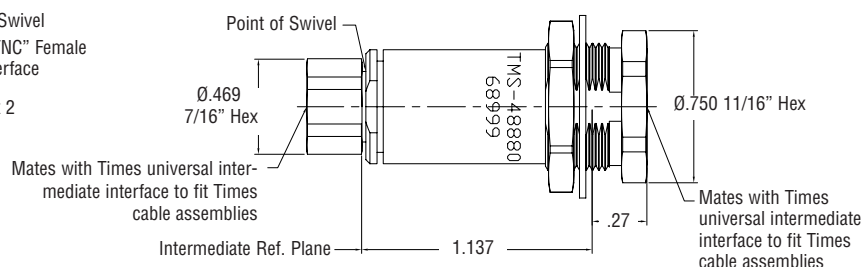
# Rotating Coaxial Connector Specifications:

**SD48873 Rotating Connector**



**SD48880 In line Rotating Connector**

(fits in series between two Times Microwave Cable Assemblies)



Electrical Specification	
Frequency Range	DC-18 GHz
VSWR	DC-12 GHz 1.25:1 Max      12-18 GHz 1.45:1 Max
VSWR Variation	WOW (VSWR variation with rotation) 1.02:1 Max
Insertion Loss	DC-12 GHz 0.2 dB Max      12-18 GHz 0.3 dB Max Variation with rotation +/- 0.05 dB Max, Tracking with temperature < 0.1 dB between units
Phase Tracking with Temperature	< 3°, DC-18 GHz between units
Added Noise	-100 dBc to -150 dBc depending on frequency
Power Handling	1 KW peak (Ambient temp and Sea Level), Average (CW) Power, 50 Watts Maximum
Mechanical Specification	
Connector Type	Output connector either DC-18 GHz TNC Female per MIL-C-87104/2 or Times universal intermediate interface to fit Times cable assemblies
Operating Temperature Range	-40° C to + 125° C
Storage Temperature Range	-70° C to + 125° C
Starting Torque	Maximum 0.3 Nm
Rotation Speed	350 RPM Maximum
Life	1 Million revolutions
Weight	150 Grams
Chemical Resistance, Salt Fog, Humidity, Vibration	In accordance with MIL-T-81490 and MIL-C-87104
Shock/Vibration	In accordance with Mil-Std 810 C, D, & E
Materials Specifications	
Outer Body	Grade 303 Stainless Steel per ASTM A582, Passivity per QQ-P-35 or Titanium Alloy per Ti-6Al-4V, Passivity per ASTM F86-04
Rotating Connector Body & Interface Inner Contact	Beryllium Copper per ASTM B196, Gold Plated per MIL-G-45204

The Rotating Coaxial Connector option compliments our range of Miltech™, MTL™ and JSF™ ultra low loss, high reliability MIL-T-81490 Qualified flexible microwave coaxial cable assemblies.

The Rotating Coaxial Connector also lends itself to non RF/Microwave applications such as DC power transfer and potentially data transfer applications. Consult Times Microwave Systems for more information concerning your applications.



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