

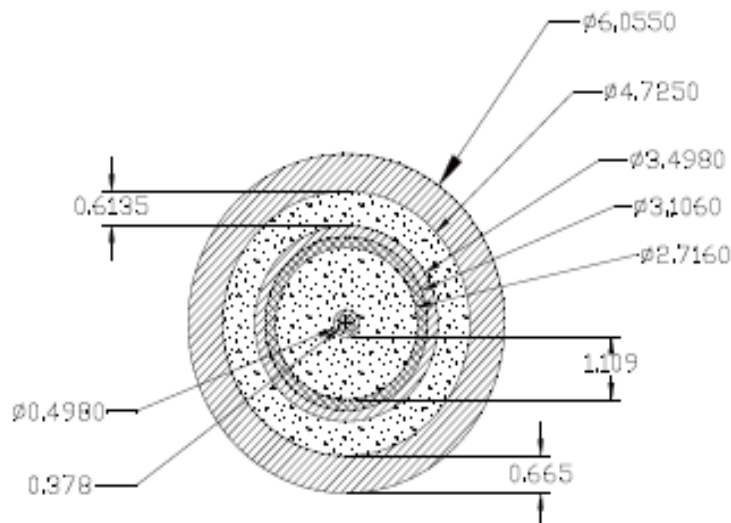
Introduction:

Tri-Axial Cable is a mineral insulated coaxial cable. Tri-Axial Mineral Insulated (MI) cables are typically used within the reactor core. Tri Axial Cable operates in high neutron flux fields and at temperatures of up to 700 °C whilst maintaining a high insulation resistance. At their typical operating temperature of 550 °C, the insulation is better than 3×10^{-9} amps per meter. The overall cable dimensions can be specified for each application.



Fig: Tri-Axial Cable

Drawing of Tri-Axial Cable



Application of Tri-Axial Cable

- Tri-Axial Cable offer varied screening properties for different applications.
- Tri-Axial cables are intended for transmission of high frequency signals.

Advantages of Tri-Axial Cable:

- Tri-Axial cables have good high frequency screening.
- Tri-Axial Cable is suitable for wide range of signal application.
- Tri-Axial cable has very high insulation resistance to minimize signal loss.

Specifications

Conductor	Copper Zirconium alloy with SS316 Cladded
Outer Sheath:	SS316L
Inner Sheath:	Copper Zirconium alloy with SS316 Cladded
Insulation Material:	High Purity Magnesium Oxide (MgO > 99.4 %)
Outer Sheath diameter:	6.0 mm
Inner Sheath Diameter:	3.48 mm
Conductor Diameter:	0.50 mm
Insulation Resistance at Room Temperature between Central Conductor and Inner Sheath	$> 10^{12} \Omega$ at 1000 VDC
Insulation Resistance at Room Temperature between Inner Sheath and Outer Sheath	$> 10^{12} \Omega$ at 100 VDC

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