

Insulating Adaptors



AI-D Series Insulated adaptors provide a method of insulating a cable gland or connection device from the equipment into which it has been fixed. This is achieved by inserting a glass filled nylon dielectric between the metallic male thread entering the equipment and the metallic female thread receiving the cable gland or connection device.

CENELEC

Sira 00ATEX1098 (Metric Female)
Sira 99ATEX1117U (Non-Metric Female)
II 2DG E Ex d IIC

CSA / A Ex

Class I, Zone 1, Ex d IIC
Class I Division 2 ABCD
Class II EFG, Class III

Ingress Protection: IP54, CSA Enclosure Type (NEMA) 3
To maintain higher levels of ingress protection additional sealing is required, refer to *Ingress Protection*

Impact Resistance: 7Nm

Ambient Temperature: -50 to +85°C

Threadforms: Metric, NPT, NPSM, ISO Pipe (BSP), PG, ET

Materials: Brass, 316 Stainless Steel, Aluminium

Insulating Material: 30% Glass Filled Nylon 12

Plating: Nickel, Zinc, other on application

Part Number: Please refer to *Part Numbering System*

Dimensions of Metric Versions

Size	Hex A/F	Hex A/C	Total Length	Male Length	Female Depth	Bore
M20	30.5	35.5	54.0	16.0	17.0	13.5
M25	37.6	43.2	54.0	16.0	17.0	19.0
M32	47.2	54.3	54.0	16.0	17.0	25.0
M40	55.9	64.1	54.0	16.0	17.0	30.0
M50	70.1	80.8	54.0	16.0	17.0	40.5
M63	80.0	92.0	54.0	16.0	17.0	53.0
M75	95.3	109.5	54.0	16.0	17.0	65.0
M80 x 2.0	100.0	114.0	63.0	20.0	22.0	70.0
M85 x 2.0	106.4	114.0	63.0	20.0	22.0	75.0
M90 x 2.0	106.4	114.0	63.0	20.0	22.0	80.0

For full material specifications and options please refer to *Material Specifications*.

Application

To avoid relying on the contact between cable termination & equipment enclosure for grounding the cable armour, an insulated adaptor can be fitted to both ends of the cable with a grounding device (i.e. earth tag/lug) fitted between the adaptor and the termination. The armour current can then be taken from the grounding device to ground in a controlled, positive manner that can be **inspected** easily.

Single Point Grounding

In many applications it is sufficient to ground the cable armour at one end. For single point grounding the insulated adaptors would again be used at both ends of the cable but with the earth tag fitted only to the end where grounding is required.

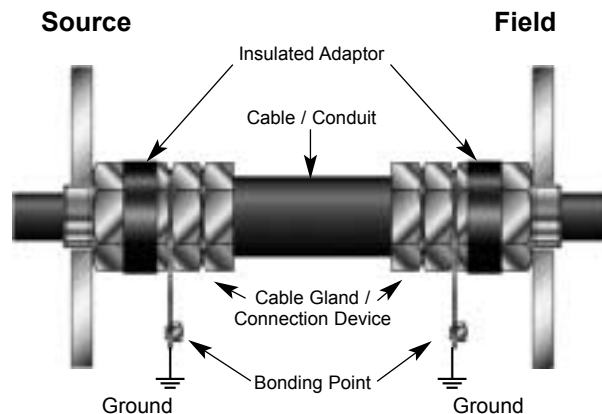
Single Point Grounding can:

- reduce the circulating currents that can cause heating of high capacity cables.
- reduce the risk of damage to electronic equipment within the enclosure in the event of a short circuit to ground through the enclosure.
- reduce the problems of electrical noise on the armour affecting the clean earth required for some sensitive instruments.

Electrical properties of insulating material

Dielectric strength: 90KV/mm
Volume resistivity: $8.6 \times 10^{14} \Omega/\text{cm}$
Min. Thickness of insulator: 5mm +/- 1mm
2KV 'Wet Withstand' Tested

STANDARD APPLICATION



SINGLE POINT GROUNDING

