NOVARIS

The Lightning and Surge Protection Company

CEIA-318

Installation Manual

(0037-D4V1)

CONTENTS

Introduction

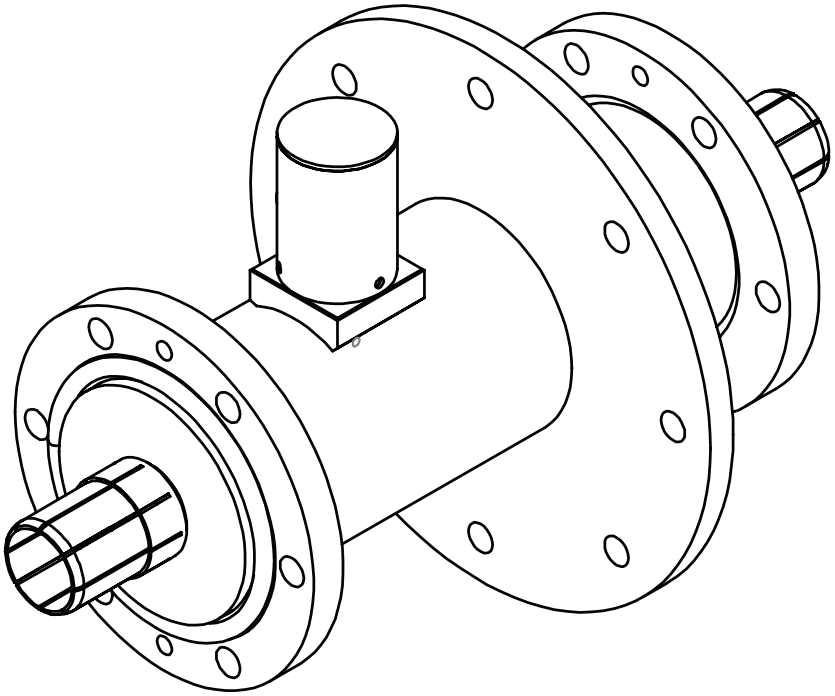
The CEIA is a specially designed surge protector for high powertransmission and broadcasting equipment that uses the EIA style ofconnectors to join the rigid line to the flexible feeder cable.

They come in standard diameters to suit the feeders of 7/8, 1 5/8and 3 1/8 inches. Other larger sizes up to 6 1/8 inch can be made tospecial order.

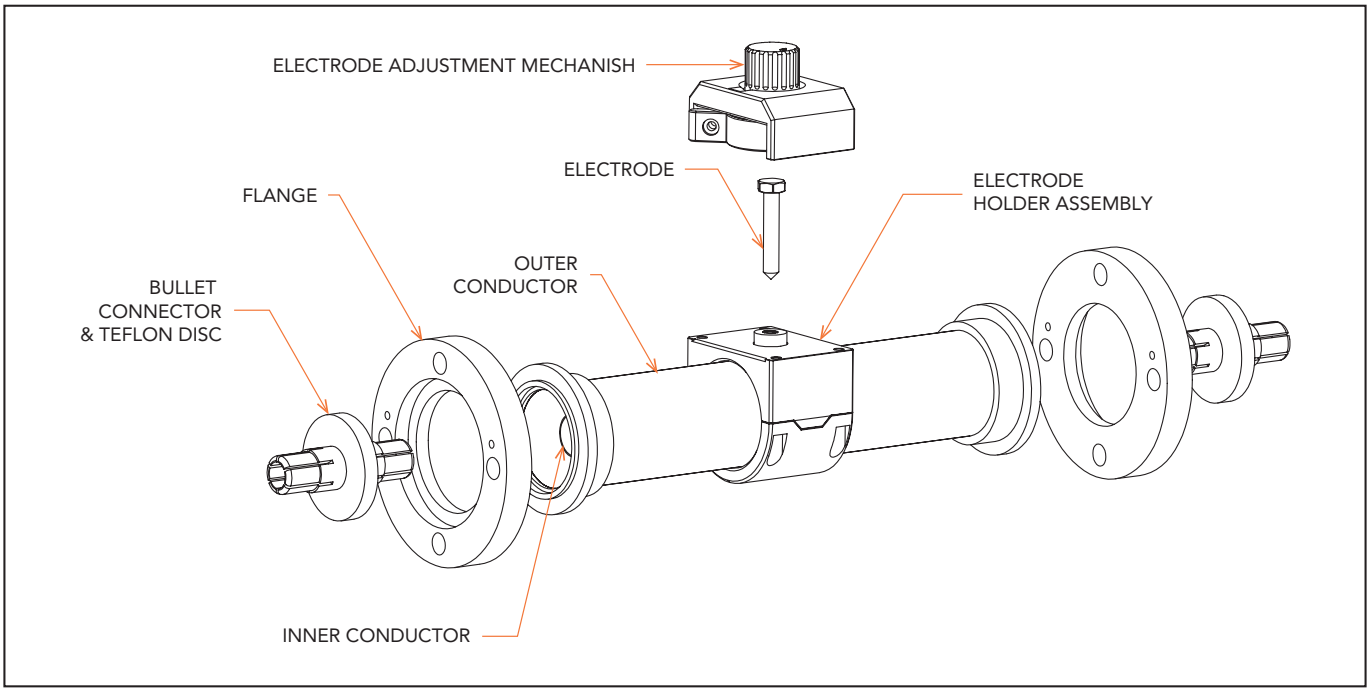
The CEIA units are normally installed just inside the building wherethe feeders join to the ridged lines using the EIA connectors in Figure 1 below. They can also be installed at a bulkhead/cable entryplate if the facility uses such a system.

Product Illustration

CEIA-078



** Image for illustrative purposes only*



Installation Direct to Feeder

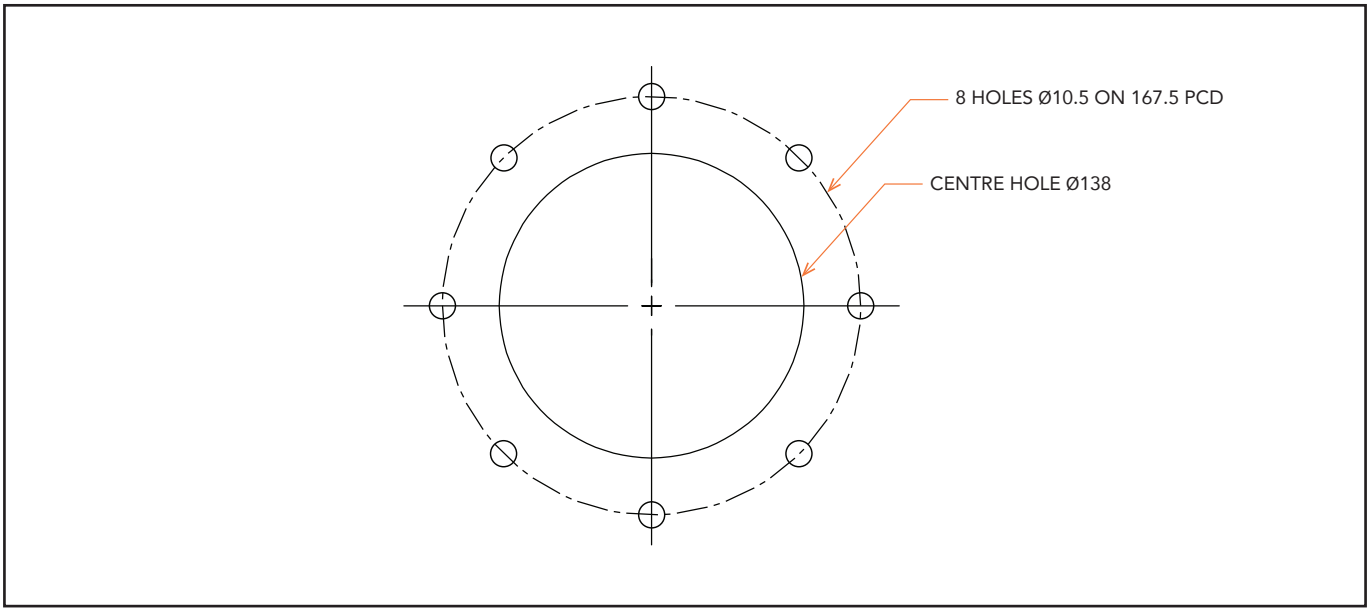
1. Before commencing any work ensure the transmitter is shut down and locked out of use in line with the local safety regulations.
2. If the feeders are pressurised with dry air or other gas, shut off the gas supply to the feeder and bleed down the pressure slowly.
3. To install the CEIA the joint between the antenna feeder and rigid line is disconnected by unbolting the flange bolts and the feeder pushed back a distance equal to thelength of the CEIA and bullets.
4. Remove the central bullet connector
5. Then the CEIA is connected by replacing the flange bolts to the ridged line using the new bullets supplied with the CEIA.
6. Place the Teflon discs into the ends of the CEIA housing around the bullets
7. Tighten all the bolts
8. Set up the spark gap as detailed in the section below (Table 1)
9. Re-pressurise the feeder if required
10. Turn the transmitter on

Figure 1. *EIA Connector*

Installation to Bulkhead or Cable Entry Plate

1. Before commencing any work ensure the transmitter is shut down and lockedout of use in line with the local safety regulations.
2. If the feeders are pressurised with dry air or other gas, shut off the gas supplyto the feeder and bleed down the pressure slowly.
3. Work out the best position to mount the CEIA.
4. Mark up the hole positions in accordance with the diagrams below and drill them to the correct sizes.
5. De-burr all the holes
6. Mount the CEIA to the plate using the nuts and bolts provided
7. Install a new EIA connector (Not supplied) to the feeder or ridged line asrequired
8. Insert the connector bullets
9. Place the Teflon discs into the ends of the CEIA housing around the bullets
10. Then using the bolts supplied connect the feeder and ridged lines to theflanges at the ends of the CEIA
11. Tighten all the bolts
12. Re-pressurise the feeder if required
13. Turn the transmitter on

Bulkhead Mounting Flange Dimension

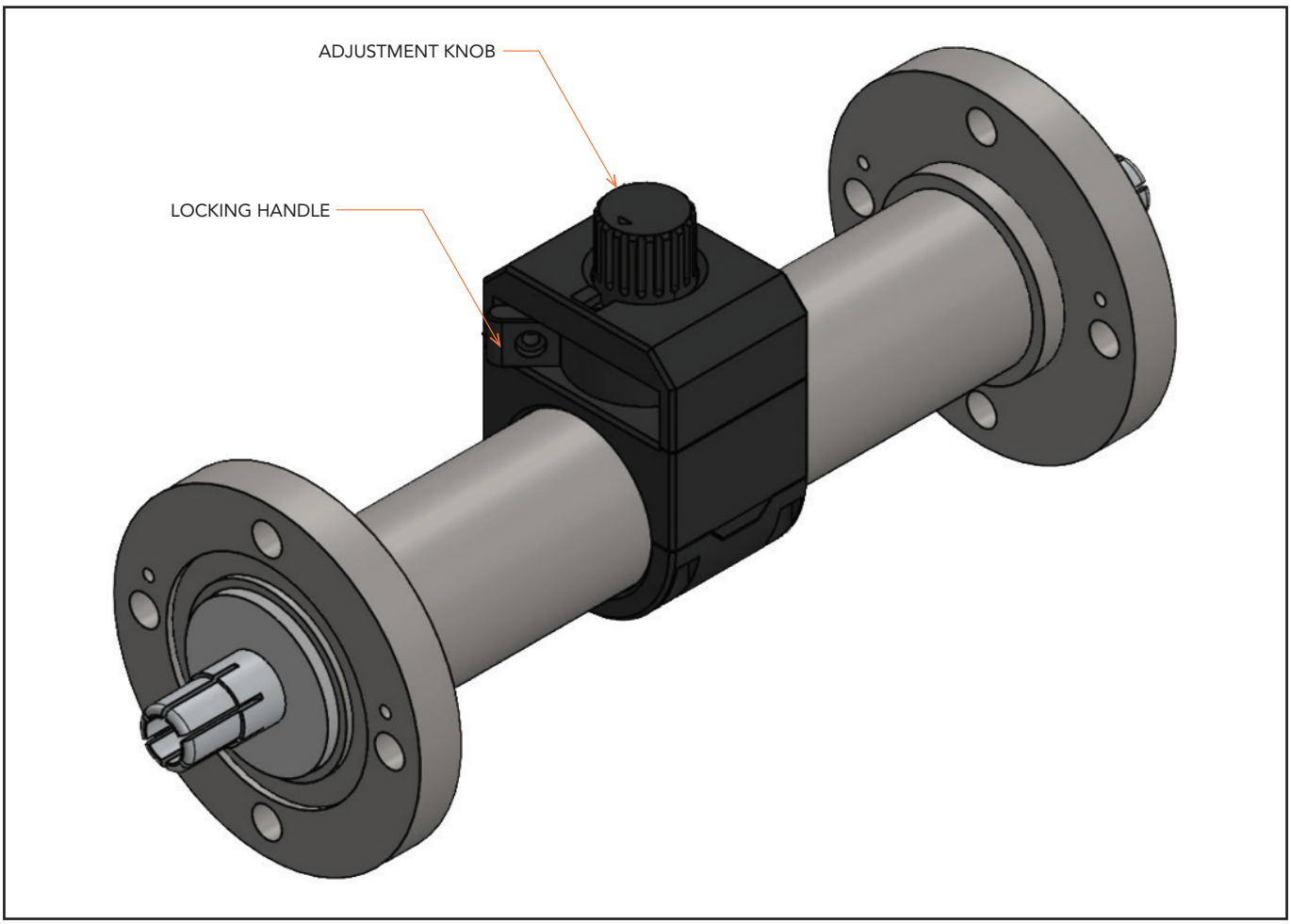


Set Up and Test

1. Ensure the transmitter is switched off and check the CEIA is earthed; Novaris recommends earthing the CEIA unit with 25mm x 1mm copper tape, braided wire, or solidcopper bar.
2. The gap setting is made using the electrode adjustment knob. This is achieved by releasing the locking handle and rotating the adjustment knob to the desired positionas per the table below.
   This procedure is detailed in steps 3 -8
3. To set the gap, first release the locking handle by unscrewing the locking screw and rotating the handle all the way anti clockwise.
4. Turn the adjustment knob clockwise until the electrode makes contact with the inner conductor. Contact is achieved when resistance is felt, do not over tighten as thismay result in damage to the unit.
5. Note the number indicated on the adjustment knob. One full turn of the knob corresponds to a 1mm change in gap. Adjust the electrode to the recommended gap as perthe table below.
6. Once the recommended gap is achieved, lock the electrode position by rotating the locking handle to its original position and tighten the locking screw.
7. Re-pressurise the feeder if required
8. Switch on the transmitter

NOTE: Do Not Attempt to Adjust the Electrode Whilst the Transmitter is Active

PEAK RF TRANSMITTER POWER	RECOMMENDED SPARK GAP DISTANCE
1 kW	1.5 mm
5 kW	2.5 mm
10 kW	3.5 mm
20 kW	5.0 mm
30 kW	6.0 mm
40 kW	7.0 mm
50 kW	8.0 mm



Spark Gap Maintenance

Periodically, especially after a sensor initiated shutdown or lightning strike, the electrode should be inspected and cleaned. Also inspectthe cable inner at the arc point for damage and replace or clean if necessary.

GLOBAL PRESENCE

HEADQUARTERS

NOVARIS PTY LTD

72 Browns Road Kingston
P O Box 2010 Kingston
Tasmania 7050 AUSTRALIA

+61 3 6229 7233
sales@novaris.com.au

REGIONAL OFFICE

NOVARIS TECHNOLOGIES (M) SDN BHD

No.25, Jalan MIVO 1,
Perindustrian Desa Aman,
47000, Sungai Buloh, Selangor,
MALAYSIA

+60 3 8966 0318
sales@novaris.com.my

NOVARIS (ASIA) PTE LTD

600 North Bridge Road
#11-08 Parkview Square
188778 SINGAPORE

+65 8741 6891
sales.asia@novaris.com.au

NOVARIS EUROPE B.V.

Oosterweg 62
9724 CK Groningen,
EUROPE

+31 50 280 5095
sales@novaris-europe.nl