

**INSTRUCTION MANUAL**  
**INTRINSICALLY SAFE TRANSMITTER TYPE EDS/C & P**

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## **INTRODUCTION**

The I.S. Transmitter is certified for use in a Hazardous Area by BASEEFA to EEx ia IIC T4 and comprises of a junction box, head electronics and a gas sensor, giving a dc output in the range 0.2 to 1.0V dependent upon gas concentration.

The I.S. Transmitter is available in two models:-

- a) EDS/C suitable for Electrochemical Cell Sensors.
- b) EDS/P suitable for Catalytic (Pellistor) Sensors.

Note the EDS/P must only be fitted with a type EDF sensor which is certified flameproof.

**\*\* FOR SPECIFICATIONS AND CALIBRATION INSTRUCTIONS SEE INDIVIDUAL DATA SHEETS \*\***

### **ATEX Essential Safety Requirements**

1. The equipment must only be installed, operated and maintained by trained competent personnel.
2. This apparatus has been designed in accordance with EN50 014 and EN50 020, therefore the apparatus has been designed to meet the fault tolerant requirements of Associate Apparatus for Category 'ia'.
3. The installation and maintenance must be in accordance with all appropriate international, national and local standard codes of practice and site regulations for intrinsically safe apparatus.
4. The installation and maintenance must be in accordance with the instructions contained in the installation and maintenance manual.
5. Access to the circuitry must not be made during operation.
6. The product must not be subjected to mechanical and thermal stresses in excess of those permitted in the certification documentation and the instruction manual. If necessary the product must be protected by an enclosure to prevent mechanical damage.
7. The product must not be installed in a position where it may be attacked by aggressive substances.
8. The product must be protected from excessive dust by an enclosure etc.
9. The product can not be repaired by the user and must be replaced by an equivalent certified product. Repairs should only be carried out by the manufacturer or approved repairer.

## MARKING

All units have a rating label which carries the following important information:-


Model type: IS TRANSMITTER TYPE EDS/C or P

Temp:  $-20^{\circ}\text{C} < \text{Ta} < 60^{\circ}\text{C}$

Code: EEx ia IIC T4

Certificate no. BAS02ATEX1233

Epsilon x,  
gas group  
and category:  II 1 G

CE marking,  
Notified body  
number:  1180

Serial no. (serial number must be entered here)

Year of construction: (year of manufacture must be entered here)

## Installation

***Hazardous Area products should be installed by competent personnel only.***

Both models of the I.S. Transmitter must be connected to the Safe Area wiring via a suitable Zener Barrier located in the Safe Area. Contact EDL for the correct Zener Barrier model number.

It is important to note that Zener barriers and I.S. Transmitters contain electronic circuitry and fuses “potted” in epoxy resin, which once damaged are therefore not replaceable. The fuses inside the Zener Barrier will blow if even temporary short circuits are placed on the sensor wiring thus rendering the Zener barrier inoperable and not repairable. Great care should therefore be taken to avoid inadvertent short circuits.

To maintain intrinsic safety in the marine, insulated return electrical, environment isolation must be provided in the form of a transformer incorporated in an approved DC to DC inverter or a mains power supply (eg our Type 3 Power Supply Unit) incorporating a suitable transformer.

The I.S. Transmitter should be located in a suitable position for the detection of the target gas, the advice of a competent authority should be sought. However the unit must not be mounted in areas where they are likely to receive mechanical or moisture damage and should not be installed in areas of high air flow due to the electrostatic hazard. In addition the unit should only be cleaned with a damp cloth. EDL can supply filter inserts and splash protectors to help reduce moisture damage.

It is important to note that the capacitance and either the inductance or the inductance to resistance (L/R) ratio of the cable installed must not exceed the values stated on the appropriate IS Transmitter Data Sheet.



**Please note the - DECLARATION OF CONFORMITY**

**And the EC-TYPE EXAMINATION CERTIFICATE**

**Graphics have been removed to reduce the size of the document for download purposes.**

**The full manual and certificates can be obtained by contacting Electronic Devices Ltd.**