

## CURRENT REPEATER

OS Ex CR-1-ST is a BV (ATEX) Approved transformer isolated unit used to power a 2 wire transmitter, repeating the 4-20mA current signal into the non hazardous area.

## FEATURES:

- \* Manufactured according to European Standard EN 60079-0:12 and EN 60079-11:12.
- \* Intrinsically Safe galvanically isolated from both main input and output control circuitry - **1500V, 50Hz.**
- \* Convenient plug in terminals enable a zero time error-free maintenance and pre-wiring of the control panel.

## OPERATION:

A power supply (located in the non-hazardous area.), which can be an unregulated 24 VDC power supply connected to terminals 9(+) & 12(-) of the current repeater OS Ex CR-1-ST, shall power the 2 wire transmitter. The 4-20 mA input signal is repeated very accurately with the same polarity across terminal 7(+) & 8(-) in to the non-hazardous area.

Low loss, precision toroidal transformers between the hazardous area and non-hazardous area circuits ensure a minimum loss in energy. Supply is also galvanically isolated between the hazardous and non hazardous circuits. As the system is truly floating there is no need to connect any intrinsic safe earth. Both the field mounted device (transmitter etc.) and also the controller in the non-hazardous area could be separately earthed if required without any adverse results on the accuracy of measurement.

## TECHNICAL DETAILS

### ART. NO. : [ODA003W]

**Power Supply Section** 24V DC  $\pm 10\%$   
at Terminals 9(+) & 12(-).

### Hazardous Area Section

**Input** 4-20 mA  
(2 wire transmitter)

**Voltage available for transmitter** Max. 17.5VDC at 20mA.

### Parameters

**Certificate No.** EPS 16 ATEX 1 019  
**Voltage  $U_o$**  DC 29,4V  
**Current  $I_o$**  90mA (2-Wire)

### Intrinsically Safety Parameters

**Explosion Group** IIC IIB  
**Maximum External Capacitance** 70nF 400nF  
**Maximum External inductance** 0.2mH 0,5mH

**Fail Safe maximum Voltage  $U_m$**   
**Power Supply** 250Vr.m.s.

### Safe Area Section

**Output (non-intrinsic) I** 4-20mA at Terminals 7(+) & 8(-)

**Replacable fuse** 125mA  
 **$R_L$  maximum Load** 1000 ohm  
**Calibrated accuracy at 20°C**  $< \pm 20 \mu A$

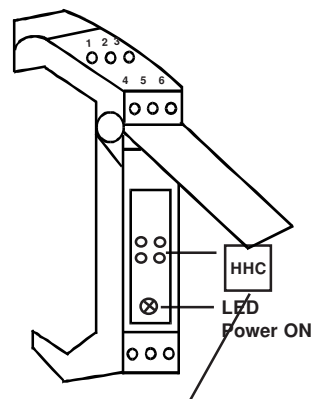
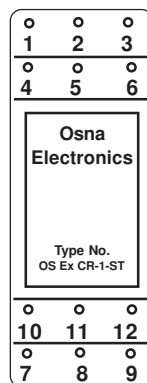
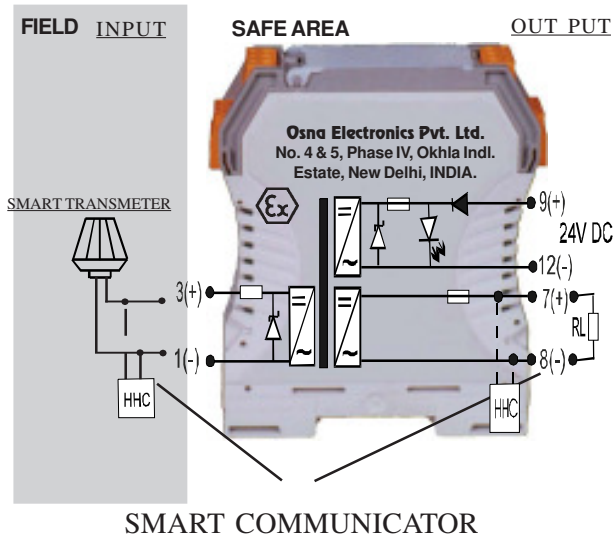
**Max. Ambient Temperature** 60°C

### Suited for the following SMART systems

\*ABB, Bailey, Chessel, Eckhardt-Foxboro, fuji, Honeywell, Smar, Yokogawa, Siemens ect.

- \* Input 4-20mA (Two wire Transmitter)
- \* 3 point Galvanic Isolation
- \* Output 4-20mA
- \* Smart Transmitter Compatible
- \* 22.5mm Width
- \* Clip onto 35mm rail as per DIN 46277

## OS Ex CR-1-ST



## TERMINAL FOR SMART COMMUNICATOR

