

CURRENT REPEATER

OS Ex-CR-1ST(CR-1) is a (BAREAU VERITAS) ATEX approved transformer isolated unit used to repeat a current signal of 0/4-20mA, flowing in a hazardous area accurately in a non hazardous area also 2 wire or 3 wire transmitter can be powered in the hazardous area. The unit can also be used to repeat active (source) current of 0/4 ... 20mA into the non hazardous area.

FEATURES :

- * Manufactured according to European Standard EN 60079-0:2012 and EN 60079-11:2012.
- * 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 a unregulated power supply 24 VDC, connected to terminals 9(+) & 12(-) of the current repeater OS-Ex CR-1 shall power the 2 wire/ 3 wire transmitter connected to terminals 1 & 3(+) or 1, 2(-) & 3 (+). The 4-20 mA input signal is repeated very accurately with the same polarity across terminals 7(+) & 8(-) into 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.

APPLICATION :

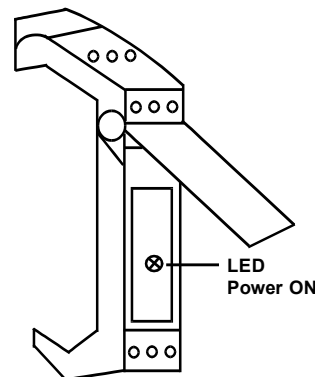
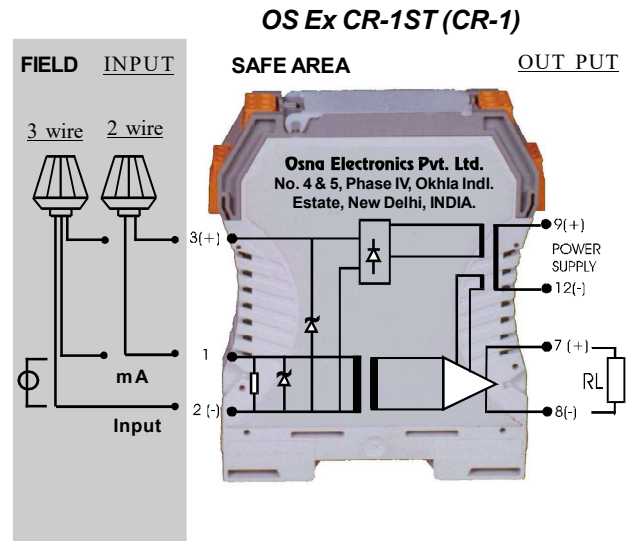
To isolate and repeat a 0/4-20 mA DC current incoming signal from hazardous area into a non-hazardous area.

TECHNICAL DETAILS

ART. NO. : (ODA 005 W)

Power Supply Section	Terminals 9(+), 12(-)
Supply Voltage (nominal)	24V DC \pm 10%
Power Consumption	1.5W
Field Area	
Input	2 Wire Transmitter Terminals 1 & 3(+). 3 Wire Transmitter Terminals 1, 2(-) & 3(+), 0/4-20mA active current Terminals 1 & 2(-)
Voltage available for transmitter	Max. 17.5V DC at 20mA
Parameters	
Certificate No.	EPS 16 ATEX 1 019
Voltage U_o	29.4V
Current I_o	93mA (2-Wire) resp. 115mA (3-Wire)
Fail Safe maximum Voltage U_m	
Power Supply	250V r.m.s
Safe Area Section	
Output (Non-I.S)	0/4-20mA, Terminals 7(+), 8(-).
RL maximum	750 Ohm
Calibrated accuracy at 20°C	$< \pm 20\mu A$
Weight	ca. 150g
Max. Ambient Temperature	Max. +55°C

- * Input 0/4-20mA / 2 wire / 3 wire transmitter
- * 3 port galvanic isolation
- * Output 0/4-20mA
- * 22.5mm Width
- * Smart Transmitter Compatible



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Osna Electronics		
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APPROVALS :

Confirming to EN 60079-0:2012 and EN 60079-11:2012. BUREAU VERITAS Certificate No. EPS 16 ATEX 1 019.

DIMENSIONS:

