



VOLTAGE TO CURRENT CONVERTER

OS-Ex-CR-1ST(V-CC) is a BV (ATEX) transformer isolated unit is used to convert a mV/voltage signal from a potentially explosive atmosphere (hazardous area) to a current output (0/4-20mA) in the non hazardous area.

FEATURES :

- * Manufactured according to European Standard EN 60079-0:12 and EN 60079-11:12.
- * Intrinsically safe control circuit is galvanically isolated from main, input and output circuit **-1500V, 50Hz.**

OPERATION

A 24V DC power supply (located in the non hazardous area) is connected to terminal 9(+) & 12(-). The voltage source (0-10V) at terminal 3(+) & 1(-). The input voltage is converted to current signal and then repeated accurately with same polarity across terminals 7(+) & 8(-) into the non hazardous area as a 0/4-20mA current signal.

Precision & low loss toroidal transformer are used between hazardous & non-hazardous area circuit ensuring a minimum loss in energy. Supply is galvanically isolated between hazardous and non-hazardous area circuit. As the system is truly floating there is no need to connect any intrinsic safe earth. Both the field mounted device (Voltage source.) 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 convert voltage signal from hazardous area to proportional direct analogue current signal in non-hazardous area.

TECHNICAL DETAILS

ART. NO. : [ODD 003 W]

| | | |
|--|---|-------|
| Power Supply Section | Terminals 9(+), 12(-) | |
| Supply Voltage (nominal) | 24V DC \pm 10% | |
| Ripple | \leq 10% | |
| Power Consumption | 1.5W | |
| Field Area | | |
| Input | 0-10VDC | |
| | Terminals 1(-) & 3(+). | |
| | Please specify the range | |
| | (While ordering) | |
| Parameters | | |
| Voltage u_i | 29.4V | |
| Current I_i | 90mA (2-Wire) resp. | |
| Intrinsically Safety Parameters | | |
| Explosion Group | II (1)G [Ex ia Ga] IIB/IIC IIC | |
| Maximum External Capacitance | 70nF | 400nF |
| Maximum External inductance | 0.2mH | 0.5mH |
| Fail Safe maximum Voltate U. | | |
| Power Supply | 250V r.m.s | |
| Safe Area Section | | |
| Output (Non-I.S) | 0/4-20mA ,Terminals 7(+), 8(-). | |
| Max. Load | 1 K Ω | |
| Transfer Characteristics | | |
| Calibrated accuracy at 20°C | 0.1% of full scale value | |
| Drift* | approx. \pm 2 μ A/°C | |
| Terminals | Self opening max. conductor size 22.5mm | |
| Max. Ambient Temperature | -20°C to 60°C | |
| Weight | ca. 150g | |

FEATURE:

- * DC 24 V operated.
- * Input 0-10V DC
- * Output 0/4-20mA
- * 3 port 1500V, 50Hz Galvanic isolation
- * 22.5mm Width
- * Mounting Clip onto 35mm rail as per DIN 46277

APPROVALS:

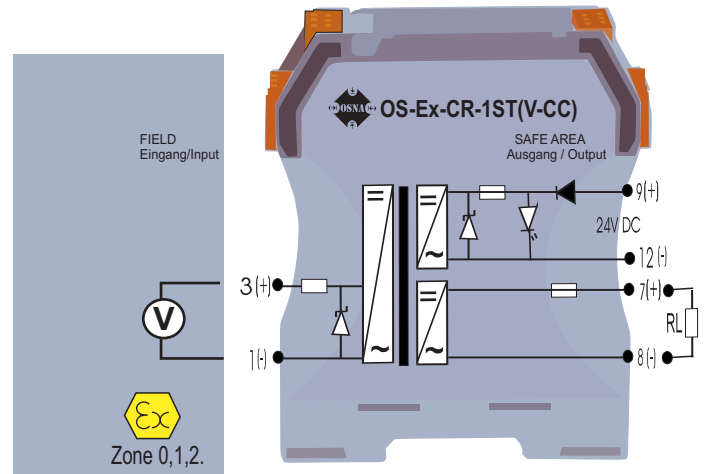
Confirming to EN 60079-0:2012 and EN 60079-11:2012. ZONE & GAS GROUP: ZONE1 & 2 Gas Group: IIC

BUREAU VERITAS Certificate No. EPS 16ATEX 1 019.

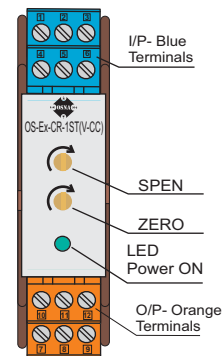
CIMFR Approval No. CIMFR/TC/P/2294

PESO Approval No. A/P/HQ/DL/104/5576(P410684)

CONNECTION



ASSEMBLY



DIMENSIONS

