

Multiplier

OS Ex-CR-1-ST(CR-1-2U)

CURRENT REPEATER

OS Ex CR-1-ST(CR-1-2U) is a BV (ATEX) Approved transformer isolated unit used to power a 2 wire and 3 wire transmitters can be connected from the 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

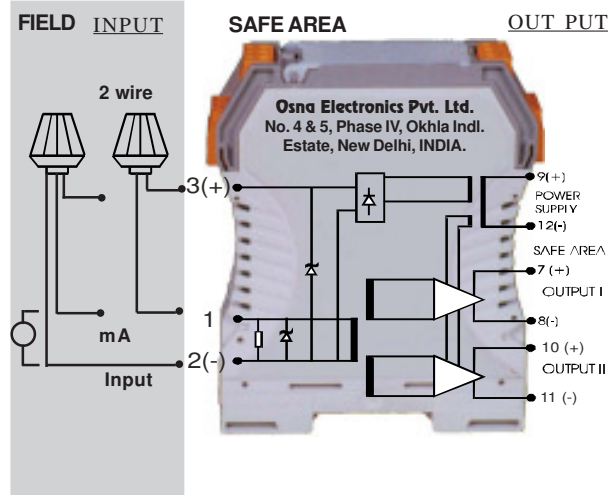
A power supply (located in the non-hazardous area.), which can be a unregulated power supply 24 VDC, connected to terminals 9(+), 12(-) of the current multiplier OS-CR Ex-1-ST(CR-1-2U), shall power the 2 wire/ 3 wire transmitter connected to terminals 3(+) & 1 or 1, 3 (+) & 2(-). The 4-20 mA Input signal is repeated very accurately with the same polarity across terminals 7(+) & 8 (-) and 10 (+) & 11(-) 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 0/4-20mA DC current incoming signal from hazardous area into a non-hazardous area.

- * Input 0/4-20mA / 2 wire / 3 wire Transmitter
- * Output, 2 x 0/4-20mA
- * 22.5mm Width
- * Maximum Load 750 Ohm
- * Smart Transmitter Compatible
- * Clip onto 35mm rail as per DIN 46277

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TECHNICAL DETAILS

ART. NO. : [ODA 107 0]

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

Hazardous Area Section

Input 1, 2(-) Active Current
0/4-20mA
1, 3(+) 2 Wire transmitter
1, 2(-) & 3(+) 3 Wire transmitter

Voltage available for transmitter 17.5 V DC at 20mA.

Parameters

Certificate No. EPS 16 ATEX 1 019
Voltage U_0 DC 29.4V
Current I_0 90mA (2-Wire)

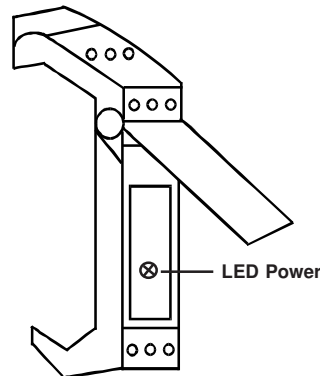
Intrinsically Safety Parameters

Explosion Group II (1)G [Ex ia Ga] IIB/IIC
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

Max. Load 750 Ohm
Output (Non-I.S) I 0/4-20mA Terminals 7(+), 8(-)
Output (Non-I.S) II 0/4-20mA Terminals 10(+), 11(-)
Replacable fuse 125mA
Calibrated accuracy at 20°C $\leq \pm 20 \mu A$
Ripple $\leq 60 \mu A$
Temperature Drift* approx. $+ 2 \mu A / ^\circ C$
Max. Ambient Temperature 60°C



1	2	3
4	5	6
Osna Electronics		
Type No.		
OS-Ex-CR-1ST (1-2U)		
10	11	12
7	8	9

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

Dimensions

