

MTL3042 DC ISOLATOR

4/20mA

loop-powered for I/P converters

This unit acts like a direct-current transformer. Always powered from the safe-area side, it ensures that the same current flows in the safe and hazardous-area circuits and allows it to be controlled from either. It is intended primarily for isolating and passing on a 4/20mA signal from a controller to drive a current-to-pressure (I/P) converter or a position actuator. If the loop is sensitive to the volt drop introduced by the unit, then the separately powered MTL3045 should be used. Note that the lower-cost MTL3043 can also be used for driving I/P converters in many closed-loop applications with integral control where its lower accuracy is acceptable.

SPECIFICATION

See also 'Common specification'

Number of channels

One, fully floating

Location of I/P converter

Zone 0, IIC, T4-6 hazardous area if suitably certified

Div 1, Group A, hazardous location

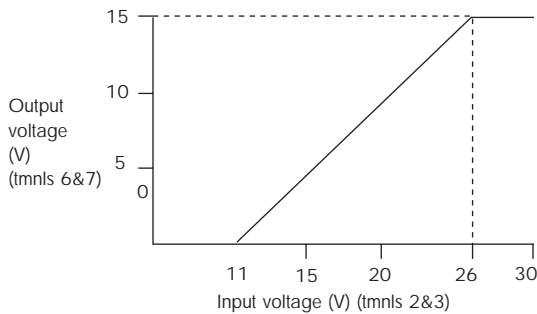
Input voltage

11 to 35V dc

Input and output signal range

4 to 20mA

Minimum output voltage at 20mA



Maximum output voltage

28V from 300Ω

Input and output circuit ripple

<100μA peak-to-peak

Transfer accuracy at 20°C

Better than 50μA

Temperature drift

<2μA/°C

Response time

Settles to within 10% of final value after typically 70ms

Power dissipation within unit

0.4W typical at 24V with 20mA signal

0.5W maximum at 35V with 20mA signal

Replaceable fuse

50mA, 5x20mm glass to DIN 41571 sht.2, semi-time-lag (M)

Safety description

28V, 300Ω, 93mA, $U_m = 250V$ rms or dc

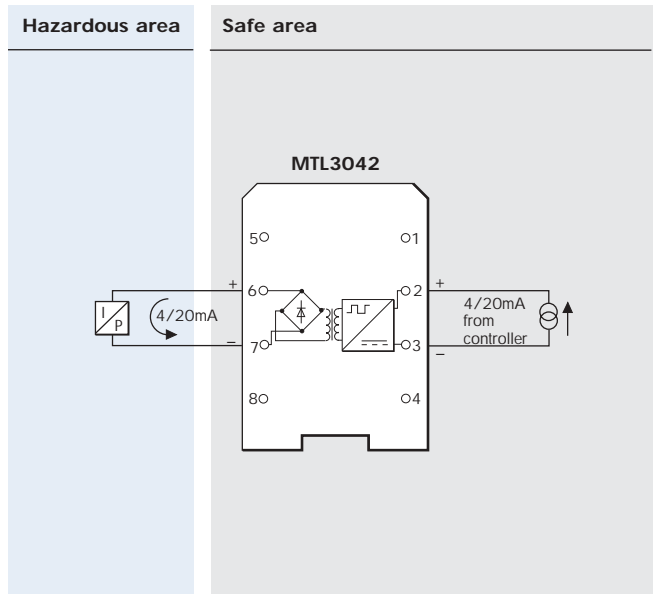
FM max entity parameters

$V_{OC} = 28V$, $I_{SC} = 93mA$, $C_a = 0.13\mu F$, $L_a = 4.0mH$

Weight

160g

Note: See MTL3045 for separately powered unit.



EUROPE (EMEA)
AMERICAS
ASIA PACIFIC
E-mail: enquiry@mtl-inst.com

Tel: +44 (0)1582 723633
Tel: +1 603 926 0090
Tel: +65 487 7887
Web site: www.mtl-inst.com

Fax: +44 (0)1582 422283
Fax: +1 603 926 1899
Fax: +65 487 7997