MTL MTL Series Service Manual

MTL3042

1. Description

MTL3042 acts like a direct-current transformer. Always powered from

3. Product Information

MTL3042 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

www.autronexa.com

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, Um = 250V rms or dc

FM max entity parameters

Voc = 28V, Isc = 93mA, Ca = 0.13µF, La = 4.0mH

Weight

160g

Note: See MTL3045 for separat