MTL MTL Series Service Manual

MTL3045

1. Description

The MTL3045 isolates and passes on a 4/20mA or 0/20mA signal

3. Product Information

The MTL3045 isolates and passes on a 4/20mA or 0/20mA signal from a controller to drive a current-to-pressure (I/P) converter, a position actuator, or any other load up to 800Ω in the hazardous area. Its high output capability of 16V at 20mA combined with the low (4V) drop across its input terminals, and its excellent accuracy, make it the first choice for these applications.

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 resistance

≤200Ω (4V at 20mA)

Input and output signal range

0 to 20mA

Maximum load resistance

800Ω (16V at 20mA)

Output resistance

>2MΩ

Input and output circuit ripple

<40µA peak-to-peak

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Transfer accuracy at 20°C

Better than 20µA

Temperature drift

<1µA/°C

Response time

Settles to within 10% of final value after typically 55ms

Power requirement

65mA typical at 24V

90mA maximum at 20 to 35V

Power dissipation within unit

1.5W typical at 24V with 20mA signal

2.3W maximum at 35V with 20mA signal

Replaceable fuse

125mA, 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

150g

OTHER APPLICATIONS

The MTL3045 can be used, in conjunction with the MTL3046B, to transfer measurement or control signals through a hazardous area separating two safe areas.