MTL MTL Series Service Manual

MTL3021

1. Description

The MTL3021 enables a device in a hazardous area to be controlled

3. Product Information

The MTL3021 enables a device in a hazardous area to be controlled by a switch or voltage change in the safe area. It can drive any certified intrinsically safe, low-power load, for example a solenoid or alarm, as well as non-energy-storing ‘simple apparatus’ such as an LED. The unit’s input/output isolation allows field cables to be earthed and the control switch to be connected into either side of the 24V dc supply circuit.

SPECIFICATION

See also 'Common specification'

Number of channels

One, fully floating

Location of load

Zone 0, IIC, T4–6 hazardous area if suitably certified (3021)

Div 1, Group A, hazardous location (3021)

Input voltage

20 to 35V dc

Input current

20mA + (35V ÷ input voltage) x output current in mA

Maximum input current

130mA (MTL3021)

Maximum output voltage

28V from 300Ω, current limited at 65mA (MTL3021)

Output ripple

<0.5% of maximum output, peak-to-peak

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Response time

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

Power requirement (MTL3021)

95mA typical at 24V

130mA maximum at 20 to 35V

Power dissipation within unit (MTL3021)

1.9W typical at 24V with 50mA output

2.1W maximum at 35V with 50mA output

Replaceable fuse

200mA, 5x20mm glass to DIN 41571 sht.2, semi-time-lag (M)

Safety description

28V, 300Ω, 93mA, Um = 250V rms or dc (MTL3021)

FM max entity parameters

Voc = 28V, Isc = 93mA, Ca = 0.13µF, La = 4.0mH (MTL3021)

Weight

140g