MTL4025 SOLENOID/ ALARM DRIVER

low current output

CE

The MTL4025 enables an on/off device in a hazardous area to be controlled by a volt-free contact or logic signal in the safe area. It can drive any loads such as solenoids, alarms, and LEDs that are certified as intrinsically safe or are classified as non-energy-storing simple apparatus. It also acts as a power supply for PLMS GD4001 and GD4002 gas detectors. For full configuration details please refer to the PLMS installation instructions. Earth fault detection can be provided by connecting an MTL4220 earth leakage detector to terminal 6.

SPECIFICATION

See also common specification, cable parameters and approvals

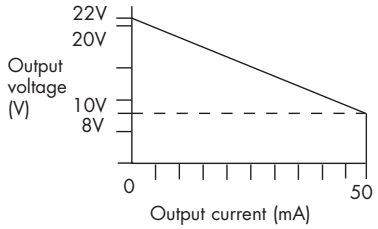
Number of channels

One

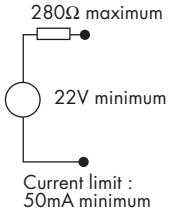
Location of load

Zone 0, IIC, T4–6 hazardous area if suitably certified
Div.1, Group A, hazardous location

Minimum output voltage



Equivalent output circuit



Maximum output voltage

25V from 269Ω

Output ripple

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

Control input

Suitable for switch contacts, an open collector transistor or logic drive

0 = input switch closed, transistor on or <1.4V applied across terminals 10 & 11

1 = input switch open, transistor off or >4.5V applied across terminals 10 & 11

Override input

An open collector transistor or a switch connected across terminals 8 and 9 can be used to turn the output off whatever the state of the control input

0 = transistor on or switch closed

1 = transistor off or switch open

Control and override inputs

Control input	Override input	Output state
0	0	off
0	1	on
1	0	off
1	1	off

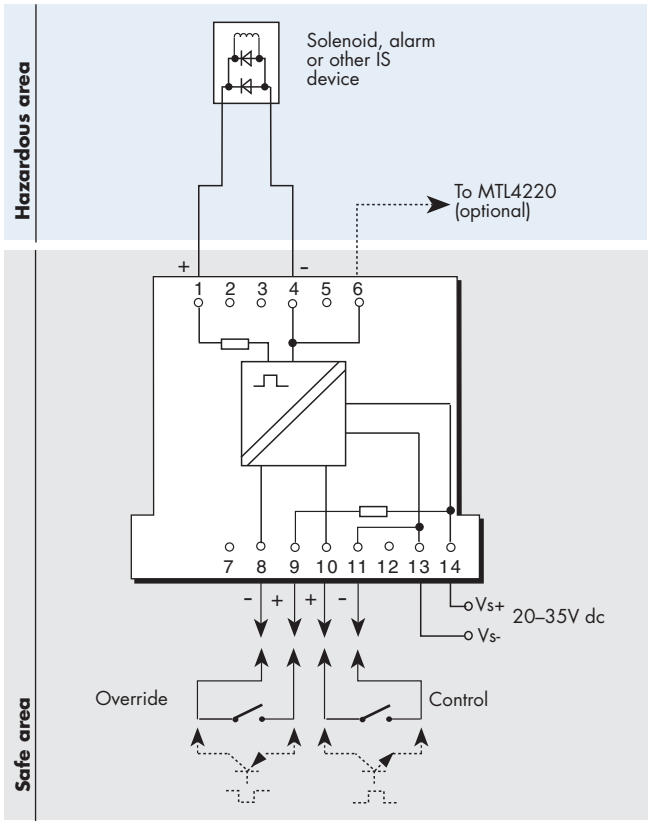
Response time

Output within 10% of final value within 100ms

'No-fail' earth fault protection

Enabled by connecting terminal 6 to an MTL4220 earth leakage detector

Fault on either line proclaimed: unit continues working



Terminal	Function
1	Output +ve
4	Output –ve
6	Optional link to MTL4220
8	Override –ve
9	Override +ve
10	Control +ve
11	Control –ve
13	Supply –ve
14	Supply +ve

LED indicators

Amber: one provided for status, ON when output circuit is active
Green: one provided for power indication

Power requirement, Vs

100mA at 24V dc
120mA at 20V dc
75mA at 35V dc

Power dissipation within unit

1.1W with typical solenoid valve, output on
1.9W worst case

Isolation

250V ac between safe- and hazardous-area circuits

Safety description

25V, 269Ω, 93mA

FM entity parameters

V_{oc} = 25V dc, I_{sc} = 93mA, C_a = 0.17µF, L_a = 4.2mH

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