

MTL4524S SOLENOID/ ALARM DRIVER

switch operated with 24V override, IIC

The MTL4524S 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 loads such as solenoids, alarms, LEDs and other low power devices that are certified as intrinsically safe or are classified as non-energy storing simple apparatus. By connecting a second safe-area voltage, the output can be disabled to permit, for example, a safety system to override a control signal.

SPECIFICATION

See also common specification

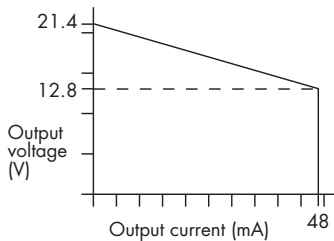
Number of channels

One

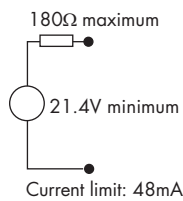
Location of load

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

Minimum output voltage



Equivalent output circuit



Hazardous-area output

Minimum output voltage: 12.8V at 48mA
Maximum output voltage: 24V from 180Ω
Current limit: 48mA

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

A 24V logic signal applied across terminals 8 and 9 allows the solenoid/alarm to be operated by the control input. If it is disconnected, the solenoid/alarm is off.

0 = < 2.0V applied across terminals 8 & 9

1 = > 9.0V applied across terminals 8 & 9
(nominal switching point 4.5V)

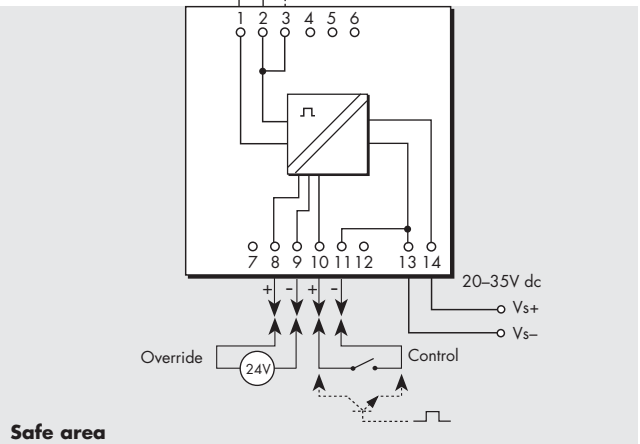
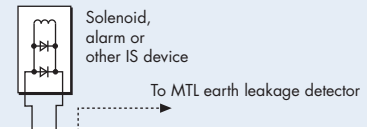
Control and override inputs

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

Hazardous area



Safe area

Terminal	Function
1	Output -ve
2	Output +ve
3	To earth leakage detector
8	Override +ve
9	Override -ve
10	Control +ve
11	Control -ve
13	Supply -ve
14	Supply +ve

LED indicators

Green: power indication

Yellow: output status, on when output circuit is active

Maximum current consumption

100mA at 24V dc

Power dissipation within unit

1.3W with typical solenoid valve, output on
1.9W worst case

Safety description

$V_c=25V$ $I_c=147mA$ $P_c=919mW$ $U_m = 253V$ rms or dc

