

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 a floating 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

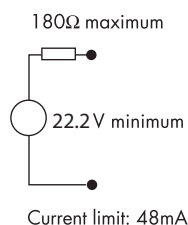
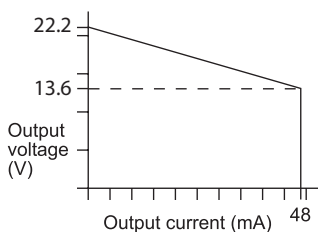
Number of channels

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: 13.6V at 48mA
Maximum output voltage: 24V from 180Ω
Maximum off-state output voltage: 4V from 180Ω
Current limit: 48mA minimum

Output ripple

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

Control input (must be fully-floating)

Suitable for switch contacts or an opto-isolator
0 = input switch closed, transistor on or < 1.4V applied
1 = input switch open, transistor off or > 4.5V applied

Override input

A 24V logic signal applied across the terminals 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)

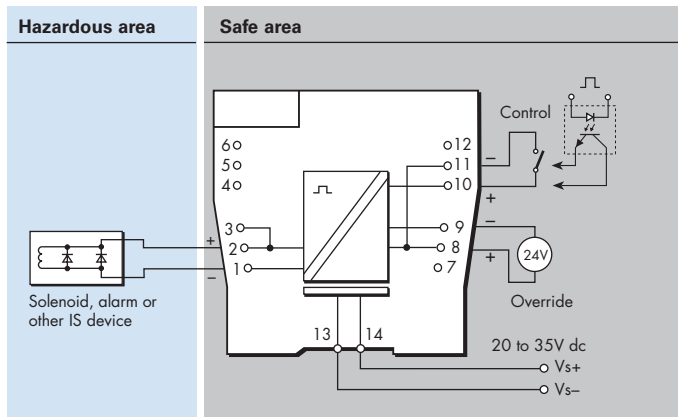
Control and override inputs

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

MTL4524S



LED indicators

Green: power indication
Yellow: output status, on when output 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

$U_o=25V$ $I_o=147mA$ $P_o=0.92W$ $U_m=253V$ rms or dc



SIL capable

These models have been assessed for use in IEC 61508 functional safety applications. SIL2 capable for a single device (HFT=0) SIL3 capable for multiple devices in safety redundant configurations (HFT=1) See data on MTL web site and refer to the safety manual.



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