

# 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



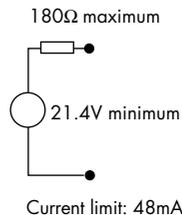
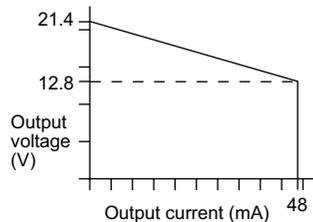
#### Number of channels

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: 12.8V at 48mA  
Maximum output voltage: 24V from 180Ω  
Maximum off-state output voltage: 4V from 180Ω  
Current limit: 48mA

#### 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)

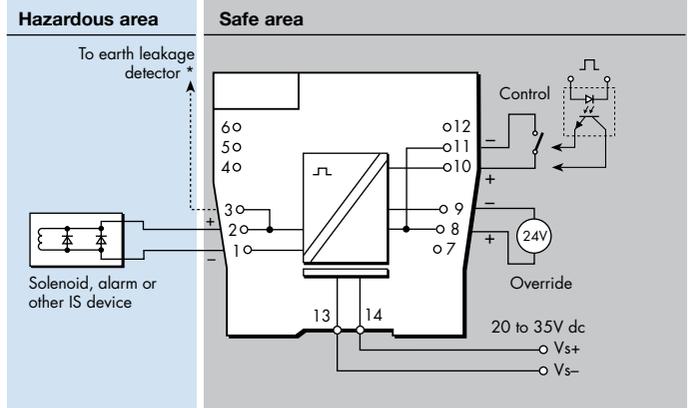
#### Control and override inputs

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

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\* Signal plug HAZ1-3 is required for access to this function

#### 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.

See data on MTL web site and refer to the safety manual.

The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.



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EPS4524S Rev4 200913