

MTL4524 – MTL5524

SOLENOID/ALARM DRIVER

switch operated with override, IIC

The MTLx524 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.

The MTL4524 allows a second safe-area switch or logic signal to be connected enabling the output to be disabled to permit, for example, a safety system to override a control signal.

The MTL5524 has its phase reversed by connecting a wire link between pins 8 and 9.

SPECIFICATION

See also common specification



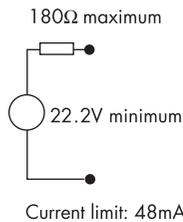
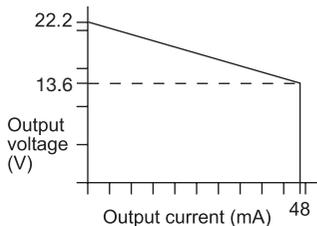
Number of channels

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

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
1 = input switch open, transistor off or >4.5V applied

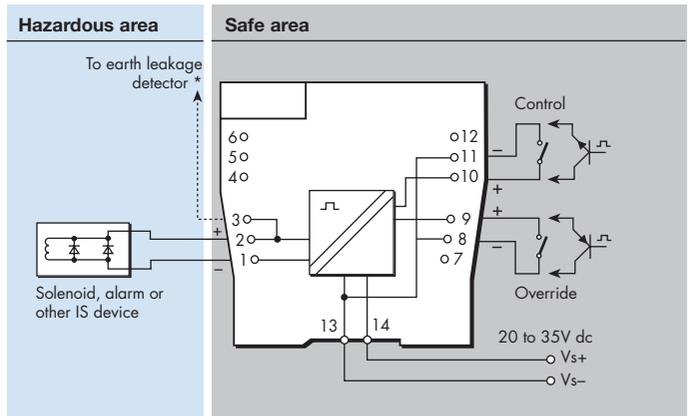
Override input on MTL4524

An open collector transistor or a switch connected across the terminals 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

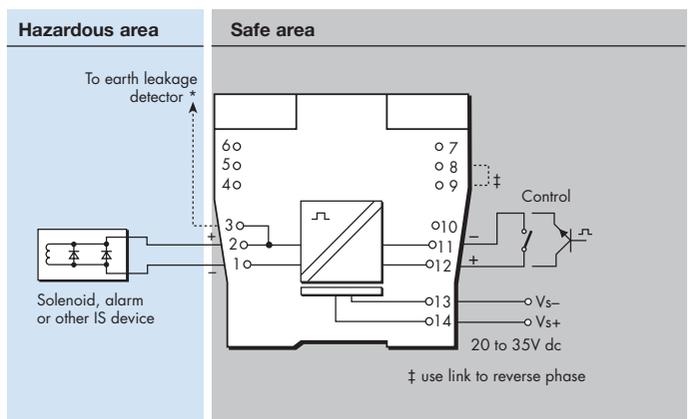
Control and override inputs on MTL4524

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

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Response time

Output within 10% of final value within 100ms

* 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.

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