

MTL4623/R

SOLENOID/ALARM DRIVER

with line fault detection, IIC

With the MTL4623 interface, an on/off device can be controlled by a volt-free contact or logic signal. It is suitable for driving loads such as solenoids. Line fault detection (LFD), which operates irrespective of the output state, is signalled by a solid-state switch which de-energises MTL4623, or energises MTL4623R, if a field line is open or short-circuited. Earth fault detection can be provided by connecting an MTL4220 earth leakage detector to terminal 3.

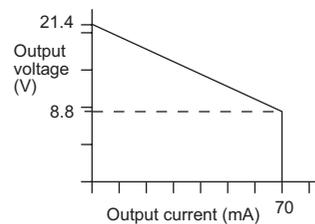
SPECIFICATION

See also common specification

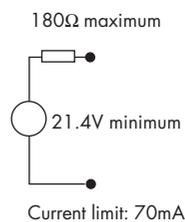
Number of channels

One

Minimum output voltage



Equivalent output circuit



Output

Minimum output voltage: 8.8V at 70mA
Maximum output voltage: 24V from 180Ω
Current limit: 70mA

Output ripple

< 0.5% of maximum output, peak to peak

Control input

Suitable for switch contacts, an open collector transistor or logic drive.
(Internal contact wetting voltage 12V @ 0.2mA contact closed.
Not suitable for voltage control via series diode.)

Output turns on if input switch closed, transistor on or < 1.4V applied across control input
Output turns off if input switch open, transistor off or > 4.5V applied across control input

Response time

Output within 10% of final value within 100ms

Line fault detection (LFD)

Open or short circuit in field cabling *de-energises** solid state line-fault signal.

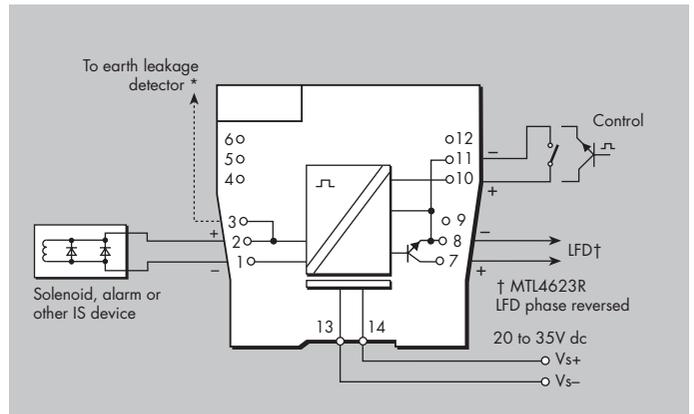
LFD transistor is switched *on**, provided that the field circuit impedance is > 55Ω and < 4kΩ.

* These conditions are reversed for the MTL4623R. This is to permit parallel connection of alarms between modules to provide a group alarm output.

Line fault signal characteristics

Maximum off-state voltage: 35V
Maximum off-state leakage current: 10μA
Maximum on-state voltage drop: 2V
Maximum on-state current: 50mA

MTL4623 / MTL4623R



LED indicators

Green: power indication
Yellow: output status, on when output active
Red: LFD indication, on when line fault detected

Maximum current consumption

125mA at 24V dc

Power dissipation within unit

1.4W with typical solenoid valve, output on
2.0W worst case

SIL capable

These models have been assessed for use in IEC 61508 functional safety applications. See data on MTL web site.

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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