

MTL5526 SWITCH-OPERATED RELAY

two-channel IS-output

The MTL5526 enables two separate IS circuits in a hazardous area to be relay-contact controlled by two on-off switches or logic signals in a safe area. Applications include the calibration of strain-gauge bridges; changing the polarity (and thereby the tone) of an IS sander; the testing of IS fire alarms; and the transfer of safe-area signals into an annunciator with IS input terminals not segregated from each other. The output-relay contacts are certified as non-energy-storing apparatus, and can be connected to any IS circuit without further certification, provided that separate IS circuits are such that they would remain safe if connected together.

SPECIFICATION

See also common specification

Number of channels

Two, fully floating

Location of control circuit

Safe area

Input/output characteristics

Contact/Logic mode

(Inputs suitable for switch contacts, an open-collector transistor or logic drive)

Relay energised if < 450Ω or < 1V applied

Relay de-energised if > 5kΩ or > 2V applied (35V max.)

Loop powered mode

Relay energised if > 20V

Relay de-energised if < 17V

Power supply failure protection

Relays de-energised if supply fails

Response time

25ms nominal

Contacts (suitable for connection to IS circuits)

1-pole changeover per channel

Contact rating

250V dc, limited to 30V dc for IS applications, 2A (reactive loads must be suppressed)

Contact life expectancy

2 x 10⁷ operations at maximum IS load

Relay drive (see switch setting table)

Switch selection of loop powered or contact/logic control for both channels. Further switch selects "1in2out" mode

LED indicators

Yellow: one provided for each channel, ON when relay is energised

Green: one provided for power indication

Power requirement, V_s

44mA at 24V dc

41mA at 20V dc

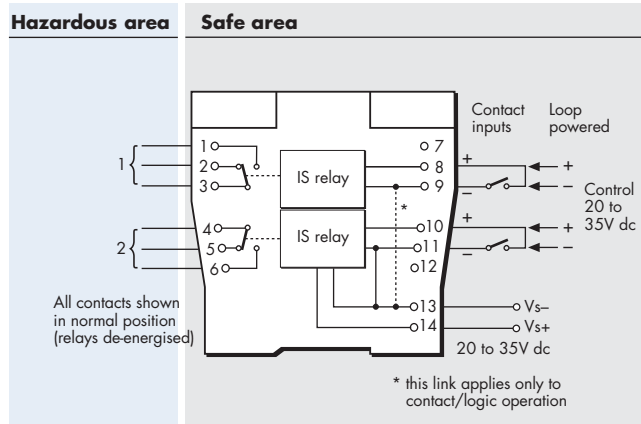
60mA at 35V dc

Power dissipation within unit

1.1W maximum at 24V

Safety description (each channel)

Non-energy-storing apparatus: relay contacts may be connected to any IS circuit without further consideration



Terminal	Function
1	IS relay output 1 (normally open)
2	IS relay output 1 (normally closed)
3	IS relay output 1 (common)
4	IS relay output 2 (common)
5	IS relay output 2 (normally closed)
6	IS relay output 2 (normally open)
8	Relay 1 control +ve
9	Relay 1 control -ve
10	Relay 2 control +ve
11	Relay 2 control -ve
13	Supply -ve
14	Supply +ve

User switch settings for operating mode

Mode	Function	SW1	SW2	SW3	SW4
Contact/Logic Input	2 ch	Off	On	On	On
	1in2out	On	On	On	On
Loop Powered	2 ch	Off	Off	Off	Off

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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MTL5500 SERIES COMMON SPECIFICATION

Please go to our website at www.mtl-inst.com for the latest information regarding safety approvals, certificates and entity parameters.

Connectors

Each MTL5500 unit is supplied with signal connectors, as applicable.

When using crimp ferrules for the hazardous and non-hazardous (safe) signal connectors the metal tube length should be 12mm and the wire trim length 14mm.

Isolation

250V rms, tested at 2200V rms minimum, between safe-area, hazardous-area and power supply terminals
50V ac or dc between safe-area circuits where applicable.

Supply voltage

20 – 35V dc

Location of units

Safe area

Terminals

Accepts conductors of up to 2.5mm² stranded or single-core

Mounting

MTL5500 series backplanes

Ambient temperature limits

-20 to +60°C (-6 to +140°F) operating
-40 to +80°C (-40 to +176°F) storage

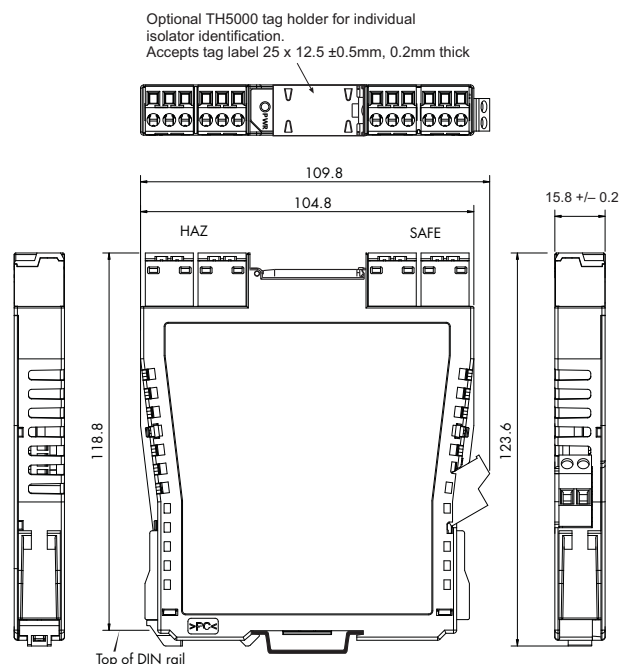
Humidity

5 to 95% relative humidity

Weight

110g approximately (except where indicated)

DIMENSIONS (mm)



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