

MTL ICC300 SERIES



ICC352 2-channel switch and proximity detector relay



- ◆ **Three port isolation between inputs, outputs and power supply**
- ◆ **Optional 24V switch interrogation voltage version**
- ◆ **Volt-free high current relay outputs**
- ◆ **Line fault detection facilities**
- ◆ **T- or G- section DIN-rail mounting.**

The ICC352 is a 2-channel switch and proximity detector relay. Each channel is provided with switches, located on top of the unit for easy accessibility, for phase reversal and for implementing line fault detection. The phase reversal feature enables output conditions to be interfaced for either state of the sensor while the line fault detection (LFD) function, when switched on, opens the output if the lines are short- or open-circuited. The latter is primarily intended for use with proximity detectors but can also be used with switches by adding two resistors to the input circuit as shown in the circuit diagram. LEDs on top of the unit indicate POWER ON and the status of each channel. The switch input, output and power supply sections are isolated from each other although individual switch input circuits share a common connection. The output relay contacts are rated for 250V, 10A AC and the switch interrogation voltage is factory-set at either 24V or 8.25V - see 'specification' for option details. The units, housed in 40mm wide polyamide casings, mount directly onto T- or G-section DIN rail.

SPECIFICATION

Number of channels

Two, interconnected, fully floating

Voltage applied to sensor - options

ICC352-T1 : 24V DC $\pm 10\%$ from 3k Ω

ICC352-T2 : 7.5V to 9.0V DC from 1k Ω

ICC352-T3 : 7.5V to 9.0V DC from 1k Ω

Input/output characteristics (each channel)

Output closed : if $> 2.1\text{mA}$ in sensor circuit

Output open : if $< 1.2\text{mA}$ in sensor circuit

Hysteresis : 200 μA nominal

(according to NAMUR and DIN 19234 standards for proximity detectors)

Phase reversal facility

Operations of both channels reversed by independent switches on top of the unit

Power supply failure protection

Output circuit opens if supply fails

Broken/shorted line protection (LFD)

Line fault detection for each channel enabled by independent switches on top of the unit

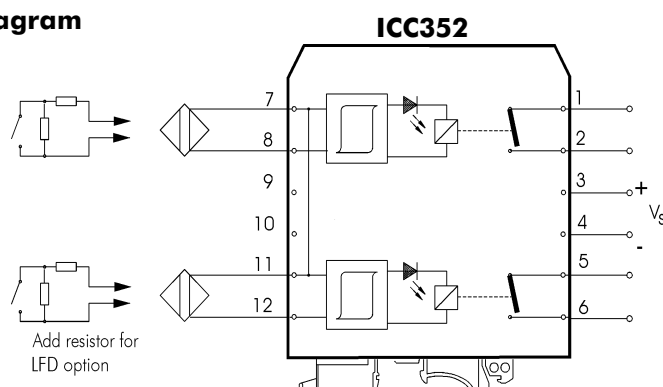
Output open : if input current $< 100\mu\text{A}$ (broken lines)

Output open : if input current $> 6.5\text{mA}$ (shorted lines)

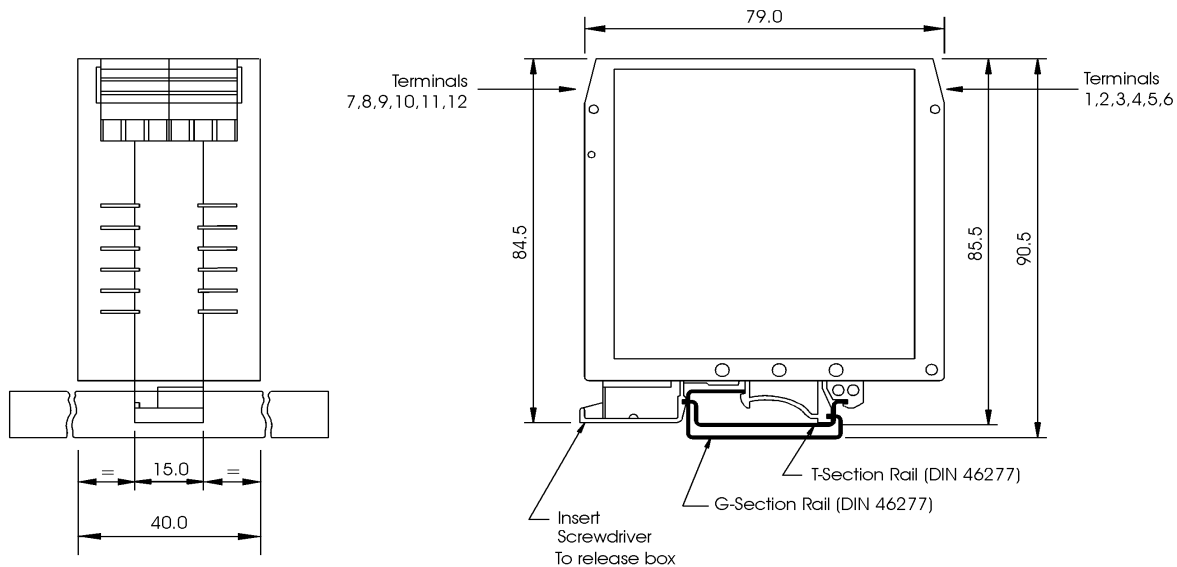
Note : To prevent false triggering of LFD, switch type sensors must be fitted with resistors (values specified in instruction manual) as shown in the circuit diagram, else LFD must be disabled.

(specification continued overleaf)

Circuit diagram



Dimensions and mounting (in mm)



Relay output characteristics

Each output single pole normally open
 Contact rating : 250V AC, 10A resistive, 2.5kVA
 30V DC, 10A resistive, 300W
 Contact life expectancy : 10^5 operations at maximum load
Note : Reactive loads must be suppressed sufficiently

Response time

15ms typical

LED indicators

Red : One provided for each channel, ON when relay energised (output closed)
 Green : One provided for POWER ON indication

Power supply voltage (V_s)

Option T1, T2 : 20 - 35V DC
 Option T3 : 20 - 48V DC

Power requirement

OPTION	@20V DC	@24V DC	@35V DC	@48V DC
T1	105mA	90mA	65mA	-
T2	65mA	55mA	45mA	-
T3	65mA	55mA	45mA	35mA

Isolation (between Input, output1, output2 & power supply)

1500V DC/AC

Common mode rejection ratio

150dB typical

RFI susceptibility

Conforms to IEC801.3

Ambient Temperature limits

-20 to +55°C (operating)
 -40 to +80°C (storage)

Humidity

5 to 95% RH, non-condensing

Terminals

Accommodate 2.5mm² conductors

Casing

40mm width polyamide casing

Mounting

Directly onto T or G section DIN rail to DIN 46277

Specifications subject to change without notice

TO ORDER

ICC352-T1 (For 20-35V supply, 24V at 3k Ω switch interrogation voltage)
 ICC352-T2 (For 20-35V supply, 7.5 to 9.0V at 1k Ω switch interrogation voltage)
 ICC352-T3 (For 20-48V supply, 7.5 to 9.0V at 1k Ω switch interrogation voltage)

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