

MTL ICC300 SERIES



ICC323 2-channel millivolt isolator



- ◆ **Three-port isolation between inputs, outputs and power supply**
- ◆ **Suitable for most THC types and dc mV sources**
- ◆ **User selectable safety drive for THC burnout**
- ◆ **No on-site calibration required**
- ◆ **Transfer accuracy better than 0.05% of reading**
- ◆ **T- or G-section DIN-rail mounting**

The ICC323 is a 2-channel unit that accepts signals from thermocouples or other dc millivolt sources, isolates them and provides them as outputs for appropriate receiving equipment and is therefore ideal for applications in which thermocouple signals are fed directly to receivers without first being converted into 4 to 20mA signals. A switch on top of the unit is provided to select either upscale or downscale safety drive, for both channels, in the event of thermocouple burnout or a cable breakage. The input signal range is $\pm 75\text{mV}$, more than sufficient to cope with all common thermocouple outputs. Also, no calibration procedures are called for. Transfer accuracy, at 25°C is 0.05% (for inputs greater than $\pm 10\text{mV}$) and $5\mu\text{V}$ (for inputs less than $\pm 10\text{mV}$). Power supplies required are 20 to 35V dc.

SPECIFICATION

Number of channels

Two, fully floating

Input signal source

dc mV source

Input and output signal range

$\pm 75\text{mV}$

Input impedance

$> 500\text{k}\Omega$

Output impedance

$< 250\Omega$

Response time

To reach 90% of span: 30ms

To reach 99.9% of span: 80ms

Transfer accuracy at 25°C

0.05% of reading for inputs $> \pm 10\text{mV}$

$5\mu\text{V}$ for inputs $< \pm 10\text{mV}$

Temperature drift (with source

impedance of $< 500\Omega$)

$1\mu\text{V} + 0.002\%$ of input/°C, typically

$2\mu\text{V} + 0.004\%$ of input/°C, maximum

Safety drive on THC burnout (user selectable)

Up/down scale at $> 10\text{mV/s}$ or OFF

Power requirement

30mA maximum at 20 to 35V dc

Power dissipation within unit

1.1W maximum at 35V

Isolation (between power supply, input 1, input 2, output 1 and output 2)

1500V dc/ac

Supply voltage

20V to 35V dc

Common mode rejection ratio

150dB typical

RFI susceptibility

Conforms to IEC801.3

Ambient temperature limits

-20°C to +55°C (operating)

-40°C to +80°C (storage)

Humidity

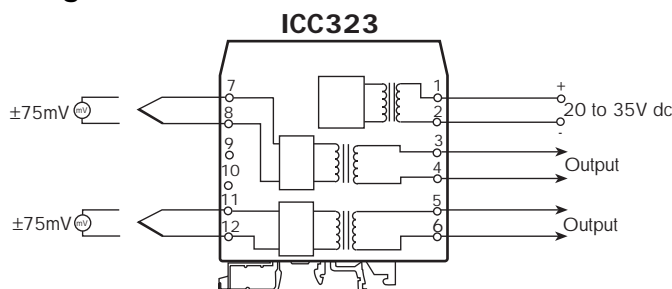
5 to 95% RH, non-condensing

Terminals

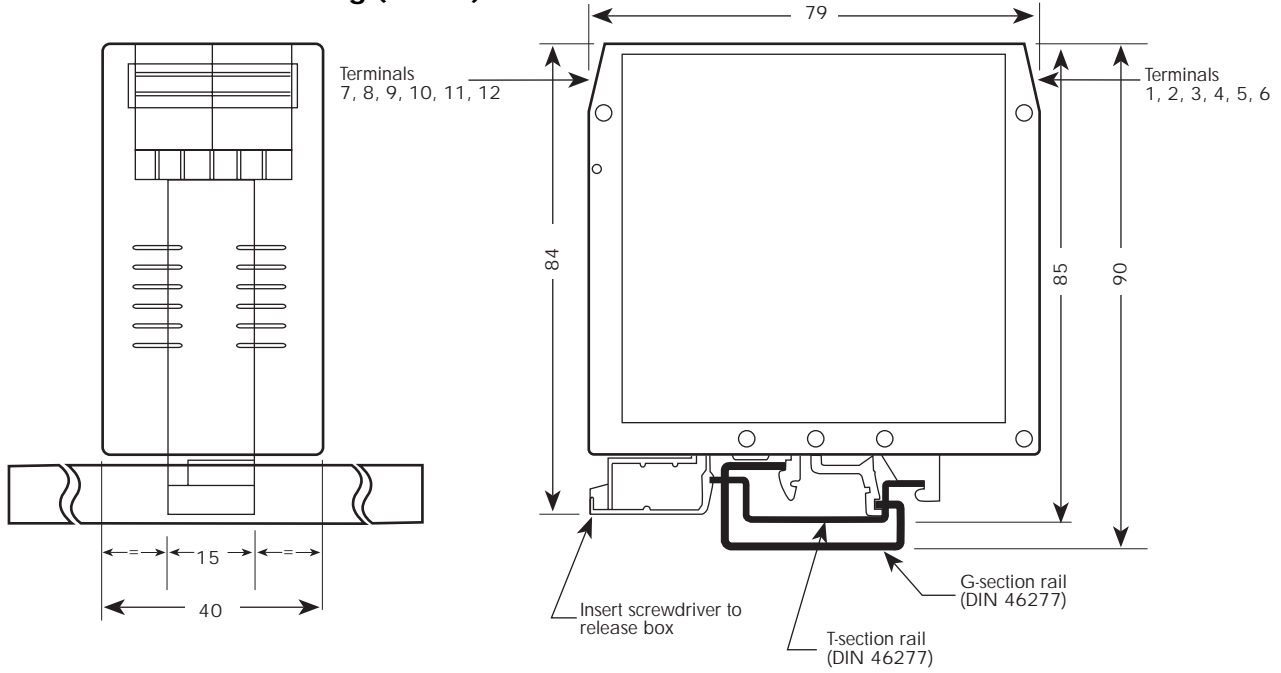
Accommodate 2.5mm² conductors

(specification continued overleaf)

Circuit diagram



Dimensions and mounting (in mm)



Casing

40mm width polyamide casing

Mounting

Directly onto T- or G-section DIN-rail to
DIN46277

TO ORDER:-

ICC323 2-channel millivolt isolator

Specification subject to change without notice

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