

# MTL ICC200 SERIES



## ICC201 voltage to current/ voltage isolator



- ◆ Galvanic isolation between input and output
- ◆ Optional choice of inputs; 1 to 5V, 0 to 10V or 0 to 5V
- ◆ Optional choice of outputs; 1 to 5V or 4 to 20mA
- ◆ Eliminates earthing problems
- ◆ T- or G-section DIN-rail mounting

The ICC201 is a loop-powered isolator which provides galvanic isolation for voltage signals from sensors and instruments in the field and control instrumentation; so simplifying interface wiring by eliminating possible earthing and ground loop problems. Options are available for input voltage ranges of 1 to 5V, 0 to 10V and 0 to 5V respectively combined with choices of 4 to 20mA or 1 to 5V output ranges. Simple signal checking facilities are provided by incorporating an internal resistor (10Ω for 4 to 20mA output versions or 250Ω for 1 to 5V output versions) in the output circuit.

### SPECIFICATION

#### Number of channels

One

#### Input signal options

1 to 5V dc: (ICC201-I1-xx)  
0 to 10V dc: (ICC201-I2-xx)  
0 to 5V dc: (ICC201-I3-xx)

#### Output signal options

4 to 20mA: (ICC201-xx-O1)  
1 to 5V dc: (ICC201-xx-O2)

#### Isolation between input and output

1500V dc/ac

#### Power supply required

For 4 to 20mA output  
 $V_S \text{ min} = 17 + (R_L \times 0.02) \text{V dc}$   
 $V_S \text{ max} = 35 \text{V dc}$   
For 1 to 5V output  
 $V_S = 22 \text{ to } 35 \text{V dc}$

#### Maximum load ( $R_L$ ) (current only)

$50(V_S - 17) \Omega$

#### Input impedance

>100kΩ

#### Response time

To reach 90% of span: 40ms  
To reach 99.9% of span: 250ms

#### Transfer accuracy at 25°C (including non-linearity and hysteresis)

Better than 20μA

#### Temperature drift

<0.01% of span/°C

#### 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 2.5mm<sup>2</sup> conductors

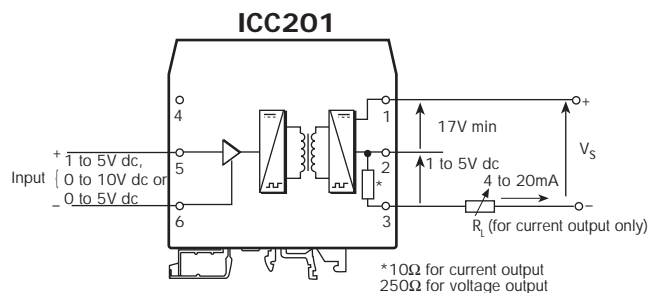
#### Casing

25mm width polyamide casing

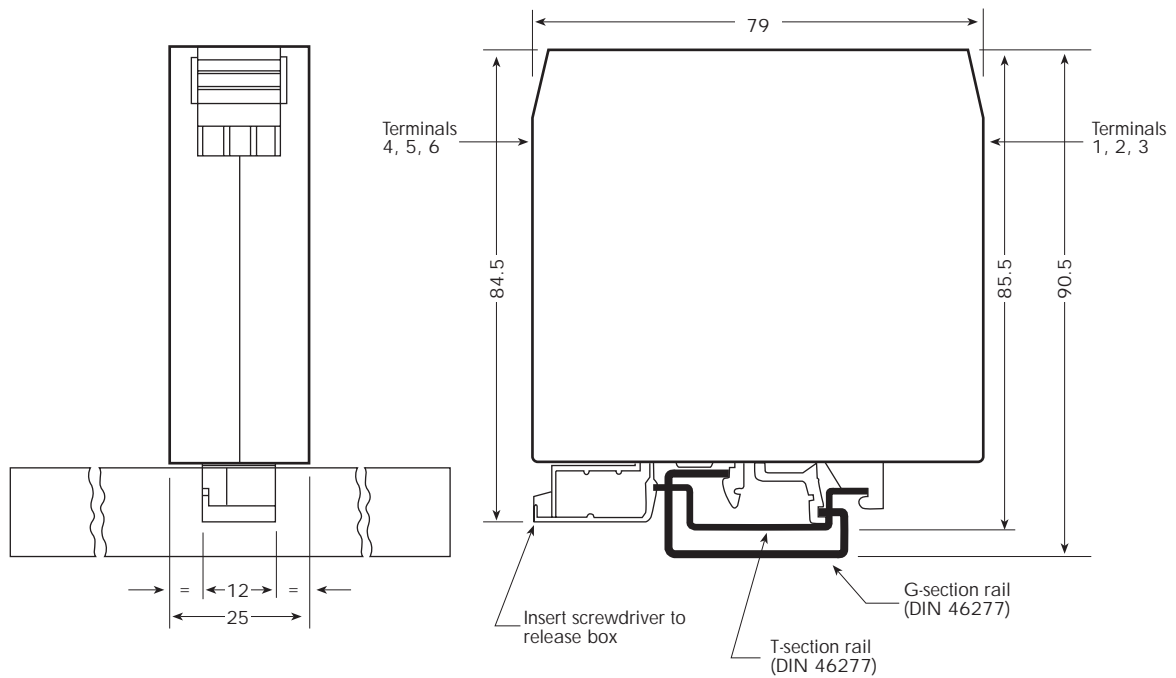
#### Mounting

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

### Circuit diagram



## Dimensions and mounting (in mm)



### TO ORDER:-

- ICC201-I1-O1** Voltage to current isolator (with 1 to 5V dc input and 4 to 20mA output)
- ICC201-I2-O1** Voltage to current isolator (with 0 to 10V dc input and 4 to 20mA output)
- ICC201-I3-O1** Voltage to current isolator (with 0 to 5V dc input and 4 to 20mA output)
- ICC201-I1-O2** Voltage to voltage isolator (with 1 to 5V dc input and 1 to 5V dc output)
- ICC201-I2-O2** Voltage to voltage isolator (with 0 to 10V dc input and 1 to 5V dc output)
- ICC201-I3-O2** Voltage to voltage isolator (with 0 to 5V dc input and 1 to 5V dc output)

*Specification subject to change without notice*

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