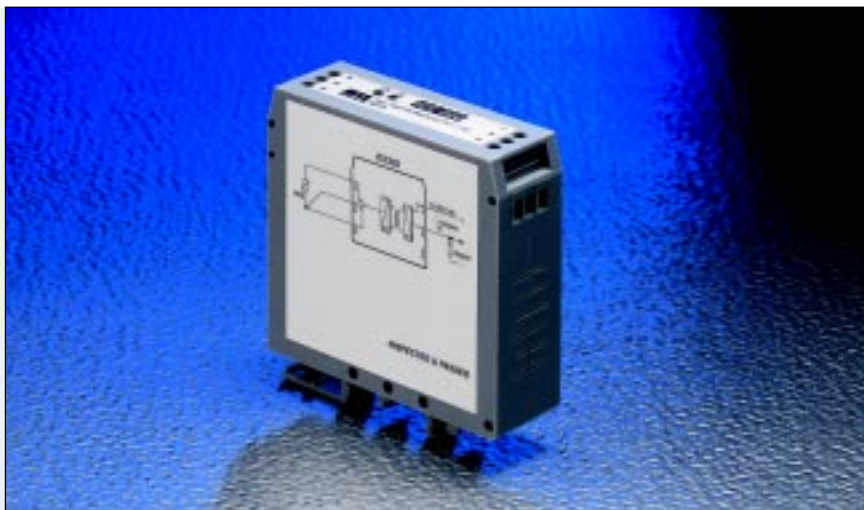


MTL ICC200 SERIES



ICC222 temperature converter, RTD input



- ◆ Galvanic isolation between input and output
- ◆ Versions available for a wide range of RTD inputs
- ◆ Optional choice of outputs; 1 to 5V or 4 to 20mA
- ◆ Eliminates earthing problems
- ◆ T- or G-section DIN-rail mounting

The ICC222 temperature converter accepts low-level dc signals from 2- or 3-wire resistance temperature detectors (RTDs) and converts these into 4 to 20mA or 1 to 5V dc outputs (depending upon option) proportional to the resistance and not to temperature. Individual models are factory calibrated to monitor various ranges of Pt100 RTDs according to users' requirements. Galvanic isolation between input and output signals simplifies interface wiring by eliminating possible earthing and ground loop problems.

SPECIFICATION

Number of channels

One

Input signal options

2- or 3-wire RTD to DIN43760 (see ordering code for details)

Output signal options

4 to 20mA: (ICC222-xx-O1)

1 to 5V dc: (ICC222-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

$V_S = 22 \text{ to } 35 \text{ V dc}$

RTD excitation current

Approximately 400 μ A

Maximum load (R_L) (current only)

$50(V_S - 17)\Omega$

Span adjustment

Approximately $\pm 2.5\%$ of span

Zero adjustment

Approximately $\pm 2.5\%$ of span

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

Better than 20 μ A

Temperature drift (zero)

$\pm 0.01\%$ of span/ $^{\circ}\text{C}$ or 10m Ω / $^{\circ}\text{C}$, whichever is greater

Temperature drift (span)

$\pm 0.005\%$ of input span/ $^{\circ}\text{C}$

Temperature drift (suppression/elevation [E])

$\pm 0.01\%$ of E/ $^{\circ}\text{C}$

Upscale current (open sensor)

>21mA; 29mA maximum

Response time

To reach 90% of span: 40ms

To reach 99.9% of span: 250ms

Common mode rejection ratio

150dB typical

RFI susceptibility

Conforms to IEC801.3

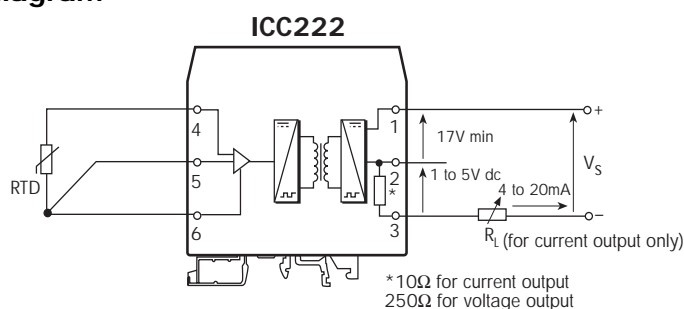
Ambient temperature limits

-20 $^{\circ}\text{C}$ to +55 $^{\circ}\text{C}$ (operating)

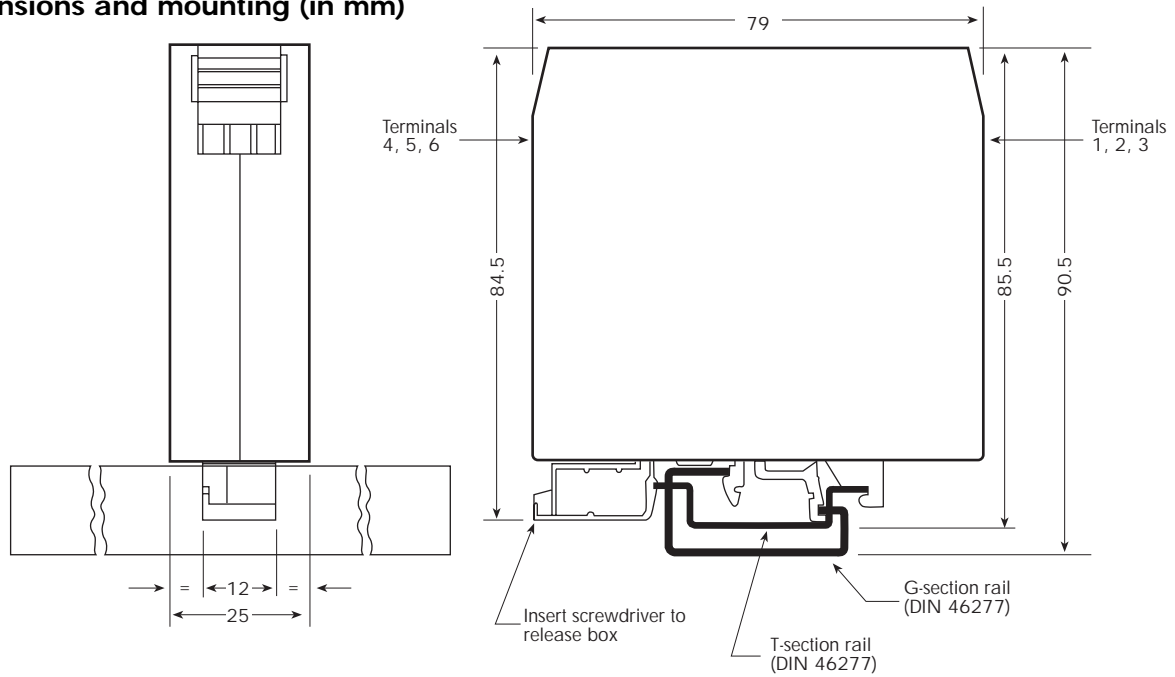
-40 $^{\circ}\text{C}$ to +80 $^{\circ}\text{C}$ (storage)

(specification continued overleaf)

Circuit diagram



Dimensions and mounting (in mm)



Humidity

5 to 95% RH, non-condensing

Terminals

Accommodate 2.5mm² conductors

Casing

25mm width polyamide casing

Mounting

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

TO ORDER:-

Please order by quoting **ICC222** followed by the appropriate **input** and **output** codes from the following table:-

Input		Output	
Option (RTD type & range °C)	Order code	Option	Order code
Pt100, -150 to 0	R1	4 to 20mA	O1
Pt100, -50 to +50	R2	1 to 5V	O2
Pt100, -50 to +100	R3		
Pt100, 0 to 100	R4		
Pt100, 0 to 200	R5		
Pt100, 0 to 250	R6		
Pt100, 0 to 300	R7		
Pt100, 0 to 400	R8		
Pt100, 0 to 500	R9		
Pt100, 100 to 200	R10		
Pt100, 100 to 300	R11		
Pt100, 100 to 400	R12		
Pt100, -50 to 200	R13		

Example: ICC222-R4-O1 refers to an ICC222 unit for a Pt100 RTD (with a range of 0 to 100°C) and the 4 to 20mA output option

Specification subject to change without notice

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