

MTL ICC200 SERIES



ICC212 repeater power supply (for smart transmitters) /isolating driver



- ◆ Galvanic isolation between power supply, input and output
- ◆ Provides transmitter power supply
- ◆ Digital signal transmission for smart transmitters
- ◆ T- or G-section DIN-rail mounting
- ◆ Can be used as either repeater power supply or driver

ICC212 is a dual-purpose, current-to-current converter with three-port isolation. It provides a fully floating, isolated dc supply for energising a conventional 2- or 3-wire 4 to 20mA transmitter/'smart' transmitter and repeats the current in another isolated circuit, or accepts a 4 to 20mA signal from a controller/source to drive loads up to 650Ω. A 20–35V dc power supply is required for operation. The power supply terminations are at the top of the unit to enable this model to be used either as a repeater power supply or driver. For a 2-wire smart transmitter the unit also allows bi-directional transmission of digital communication signals superimposed on the 4 to 20mA signal so that the transmitter can be interrogated either from the operator station or by a hand-held configurator.

SPECIFICATION

Number of channels

One

Input and output signal range

0 to 20mA for normal operation
4 to 20mA for operations with digital communication

Isolation (between power supply, input and output)

1500V dc/ac

Power supply voltage (V_s)

20 to 35V dc

LED indicator

One green LED indicating POWER ON

Voltage available to transmitter

20V minimum at 20mA

Digital signal bandwidth

100Hz to 10kHz

Maximum load resistance

Conventional transmitters/drivers: 650Ω
Smart transmitters: 220Ω to 650Ω

Voltage drop across input from current source (terminals 5 & 6)

<1V

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

Better than 20μA

Temperature drift

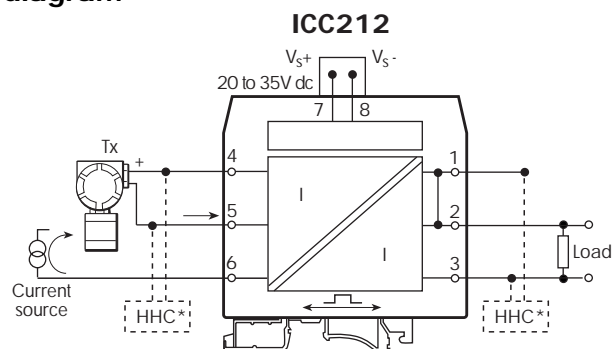
<1μA/°C

Response time

To reach 90% of span: 80ms
To reach 99.9% of span: 280ms

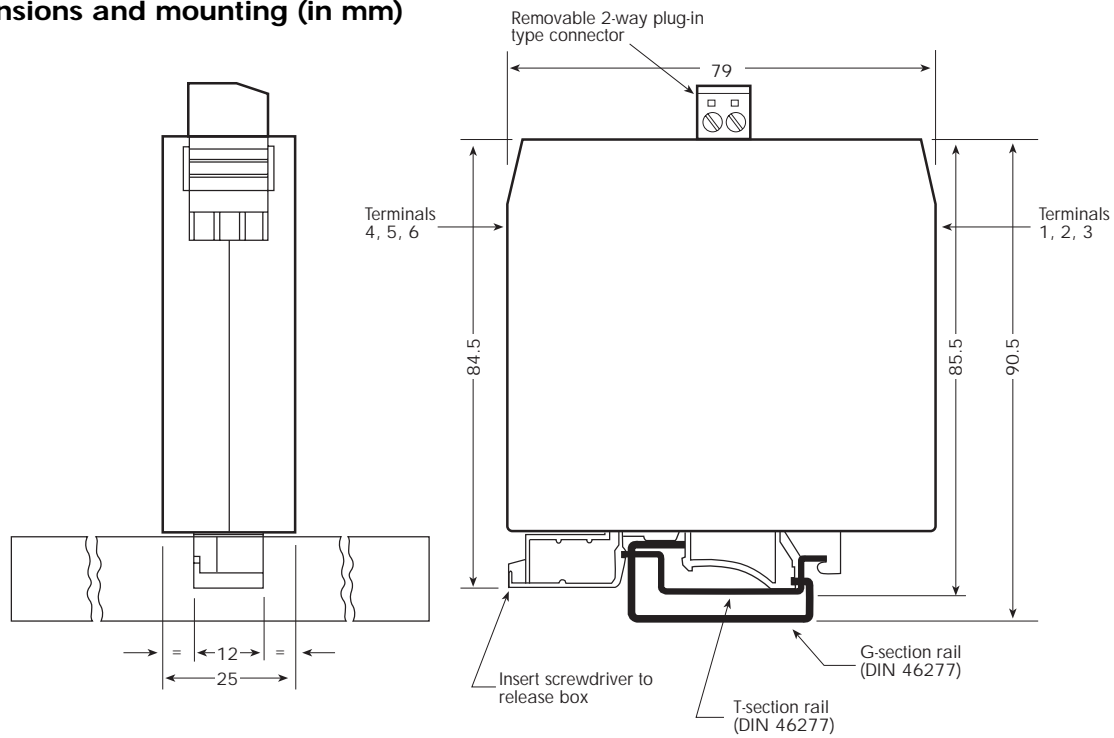
(specification continued overleaf)

Circuit diagram



* Hand-held configurator

Dimensions and mounting (in mm)



Power requirement (supplying a transmitter)

135mA max at 20V with a 20mA signal
95mA max at 35V with a 20mA signal

Power requirement (current source input)

90mA at 20V with 20mA signal
65mA at 35V with a 20mA signal

Common mode rejection ratio

150dB typical

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
For power supply, removable 2-way, plug-in type connector provided at the top of the unit

Casing

25mm width polyamide casing

Mounting

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

List of compatible devices for digital communication

All HART® compatible devices

TO ORDER:-

ICC212 Repeater power supply/isolating driver

Specification subject to change without notice

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Communication Foundation

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