

# MTL ICC300 SERIES



***ICC312 repeater  
power supply,  
4 to 20mA,  
for 2-wire  
transmitters  
with dual outputs***



- ◆ **Three-port isolation between inputs, outputs and power supply**
- ◆ **Provides two outputs from one 4 to 20mA transmitter**
- ◆ **Line-fault detection feature provides alarm facilities**
- ◆ **Transfer accuracy better than 0.1% of span**
- ◆ **20 to 35V dc power supplies**
- ◆ **T- or G-section DIN-rail mounting**

The ICC312 is an independently powered isolator which provides both a fully isolated dc supply for energising a two-wire transmitter (or other 4 to 20mA current source) while also transferring the transmitter current to two separate isolated output circuits driving loads up to 1k $\Omega$ . Line-fault detection facilities (also isolated) are provided by an open collector which can be used to activate an alarm. When the input cable is broken, no current flows into terminal 8 and the line-fault detection (LFD) output is OFF. When a current greater than 1mA flows in the input, then LFD output is ON. Power supply required is 20 to 35V dc.

## SPECIFICATION

### Number of input channels

One (either terminals 7&8 or 8&9)

### Input channel (terminals 7 & 8)

2-wire transmitter supply: 4 to 20mA

### Input channel (terminals 8 & 9)

4 to 20mA current source

### Number of output channels

Two

### Input signal

4 to 20mA

### Isolation between input, output 1, output 2 and power supply

1500V dc/ac

### Power supply

20 to 35V dc

### Voltage available for transmitter

20V minimum at 20mA

### Voltage drop across input from current source (terminals 8 & 9)

2.4V maximum

### Power requirements (supplying a transmitter)

150mA maximum at 20V dc with a 20mA signal

120mA maximum at 35V dc with a 20mA signal

### Power requirements (from a current source)

110mA maximum at 20V dc with a 20mA signal

90mA maximum at 35V dc with a 20mA signal

### Load resistance

0 to 1k $\Omega$

### Transfer accuracy at 25°C for both outputs

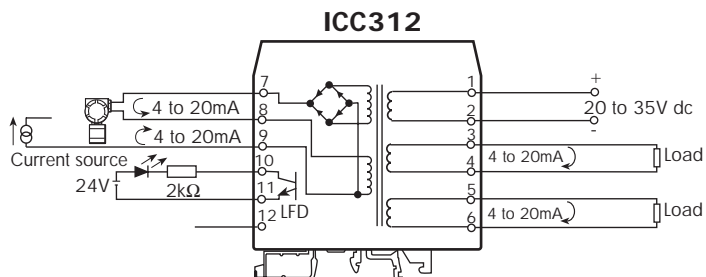
Better than 20 $\mu$ A

### Line-fault detection (LFD) output

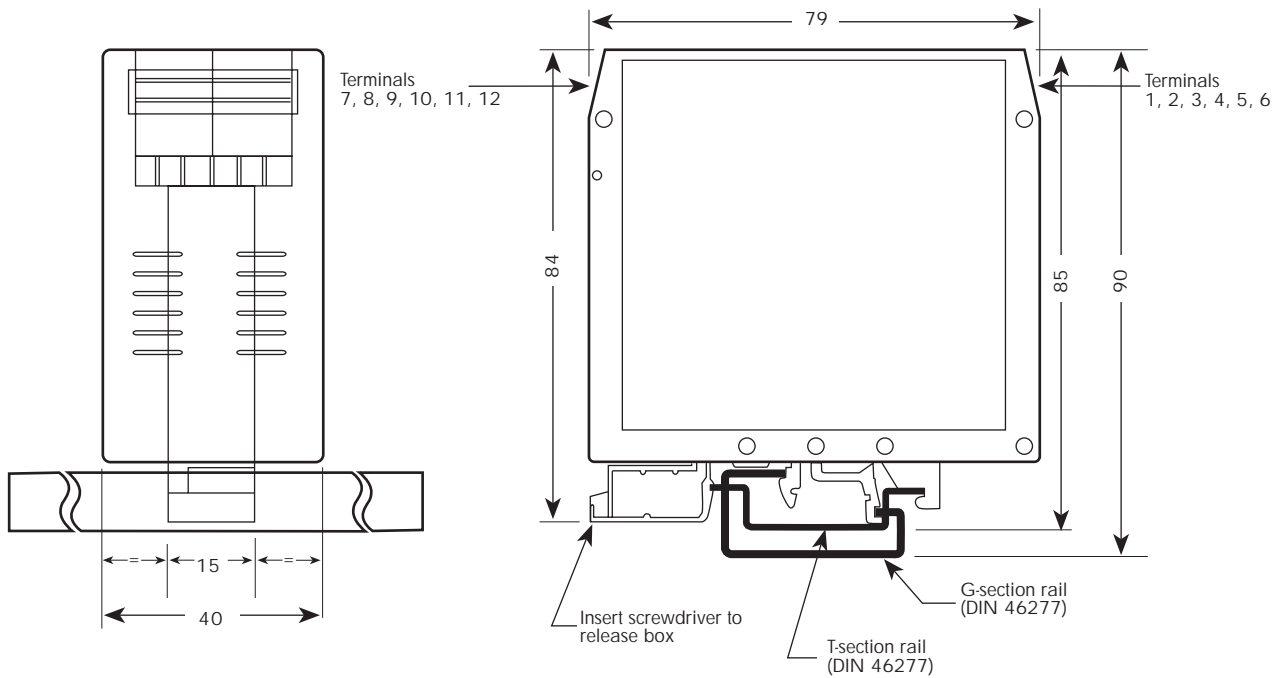
Transistor open collector output

(specification continued overleaf)

## Circuit diagram



## Dimensions and mounting (in mm)



### Response time

To reach 90% of span: 80ms

To reach 99.9% of span: 280ms

### LFD characteristics

Input current <0.2mA	Transistor OFF
Maximum permitted voltage:	26V dc
Maximum OFF leakage current:	150μA
Input current >1mA:	Transistor ON
Maximum permitted input current:	50mA
Maximum ON voltage:	1V

### Temperature drift

<1μA/°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

40mm width polyamide casing

### Mounting

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

## TO ORDER:-

**ICC312**

Repeater power supply, 4 to 20mA, with dual outputs

*Specification subject to change without notice*

## MTL Instruments Pvt Ltd

No 3 Old Mahabalipuram Road, Sholinganallur, Chennai 600119

Tel: 91 44 496 0552 Telefax: 91 44 496 0477 Fax: 91 44 496 1657

Email: mds.engg@mtlindia.sprintpg.ems.vsnl.net.in

A member of The MTL Instruments Group plc

