

MTL ICC300 SERIES



ICC317 general purpose trip amplifier



- ◆ Provides transmitter supply
- ◆ 4 to 20mA or 1 to 5V inputs
- ◆ Factory-set LFD and RPT options
- ◆ Phase reversal facilities for both relays
- ◆ 10A relay contacts
- ◆ T- or G-section DIN-rail mounting

The ICC317 is an independently powered low-cost general-purpose trip amplifier with relay outputs. It accepts inputs from 4 to 20mA or 1 to 5V sources and provides a transmitter power supply. Hysteresis of approximately 1.5% of span is provided to prevent the relays hunting. Two 2mm test sockets are provided on top of the unit with a phase reversal switch for normally energised and normally de-energised operation. Set-point adjustment is provided by a multi-turn trimpot accessible through the top of the unit. An isolated line-fault detection (LFD) open collector output or 0 to 10V signal repeat (RPT) option is also provided.

SPECIFICATION

Number of channels

One

Input signals

4 to 20mA between terminals 11 (+ve) and 12 or transmitter return line to 11
1 to 5V dc between terminals 10 (+ve) and 12

Input impedance

<25Ω + 0.3V maximum for 4 to 20mA input across terminals 11 & 12
>100kΩ for 1 to 5V input across terminals 10 & 12

Power supply

20 to 35V dc

Transmitter supply

20V min at 20mA between terminals 9 and 11

Output relay characteristics

Each output single pole normally open
Contact rating: 250V ac/10A, 2.5kVA resistive
30V dc/10A, 300W resistive

Contact life expectancy: 10⁵ operations at maximum load

Note: inductive loads must be suppressed sufficiently

LED indicators

One red LED for each output: ON when relay activated
One green LED indicating POWER ON

Parameter monitoring

0 to 10V through 2mm test socket on top of the unit corresponding to input
Accuracy better than 0.1% of span

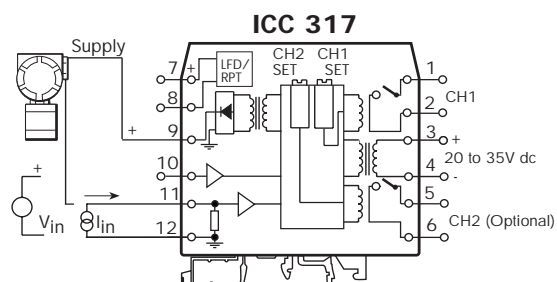
Optional RPT

0 to 10V available at terminals 7 (+ve) & 8

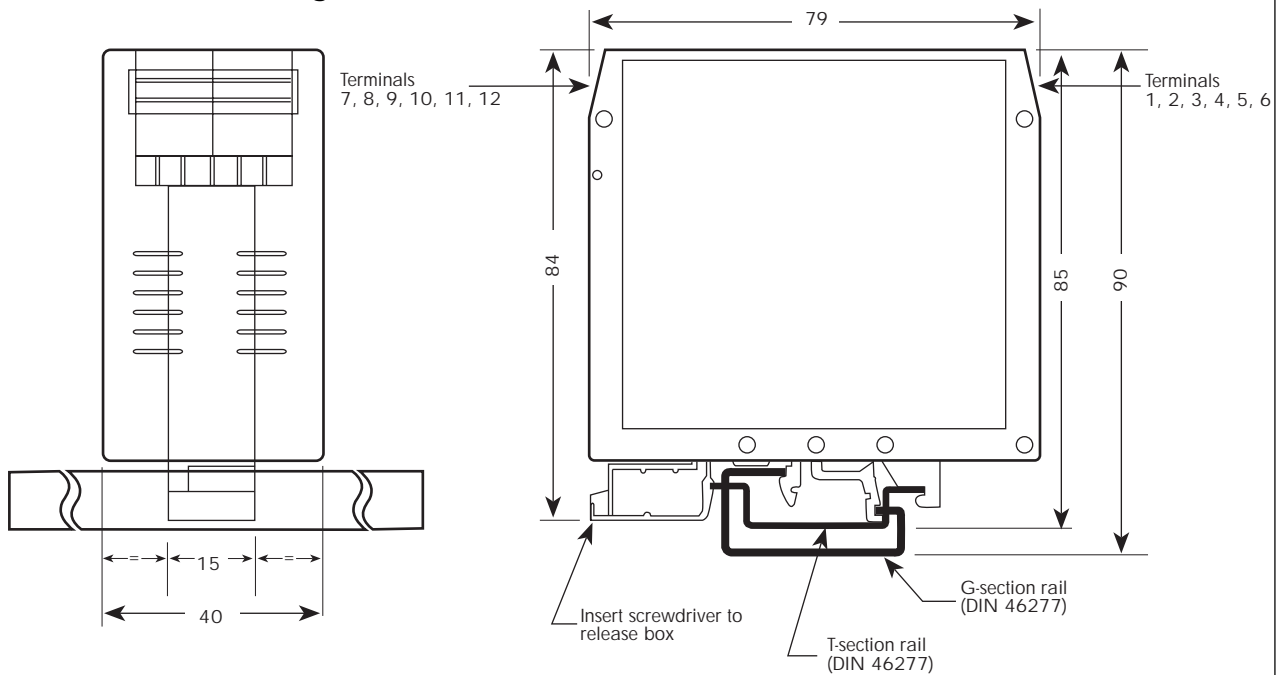
Not isolated from input (terminal 8 shorted internally to terminal 12)
Maximum output impedance <500Ω

(specification continued overleaf)

Circuit diagram



Dimensions and mounting (in mm)



Optional LFD

Line-fault detect output characteristics
 Transistor open collector output:
 When input current < 0.2mA: transistor is ON
 Maximum permissible voltage: 26V
 Maximum OFF leakage current: 150µA
 When input current > 1.5mA: transistor is OFF
 Maximum permissible input current: 50mA
 Maximum ON voltage: 1.5V

Trip accuracy (including non-linearity and hysteresis)

Better than 0.3% of span

Temperature drift

< 0.01% of span/°C

Response time

Relay: 250ms
 Output, to reach 90% of span: 200ms
 to reach 99.9% of span: 600ms

Hysteresis

1.5% of span (typical)

Set-point adjustment

1 to 100% of the input

Isolation between power supply, input, each relay and LFD (optional)

1500V dc/ac

Supply voltage

20 to 35V dc, 2.4W maximum

Power requirements (powering a transmitter and relays ON)

135mA maximum at 20V dc with 20mA current sink
 85mA maximum at 35V dc with 20mA current sink

Power requirements (sourcing current at 20mA and relays ON)

100mA maximum at 20V dc with 20mA current source
 60mA maximum at 35V dc with 20mA current source

RFI susceptibility

Conforms to IEC801.3

Ambient temperature limits

-20 to +55°C (operating)
 -40 to +80°C (storage)

Humidity

5 to 95% RH, non-condensing

Terminals

Accommodate 2.5mm² conductors

Casing

40mm width polyamide casing

Mounting

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

TO ORDER:-

ICC317-T1-LFD Trip amplifier with one set-point and one SPST output
 ICC317-T2-LFD Trip amplifier with two set-points and two SPST outputs
 ICC317-T3-LFD Trip amplifier with one set-point and one DPST output
 ICC317-T1-RPT Trip amplifier with one set-point and one SPST output
 ICC317-T2-RPT Trip amplifier with two set-points and two SPST outputs
 ICC317-T3-RPT Trip amplifier with one set-point and one DPST output

Specification subject to change without notice

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