MTL MTL Series Service Manual

ICC312

1. Description

MTL Repeater Power Supply: ICC312

3. Product Information

MTL Repeater Power Supply: ICC312

ICC312 repeater power supply,4 to 20mA, for 2-wire transmitters

with dual outputs

20 to 35V dc power supplies

3 port isolation between inputs, outputs and power supply

Line-fault detection feature provides alarm facilities

Provides two outputs from one 4 to 20mA transmitter

T- or G-section DIN-rail mounting

Transfer accuracy better than 0.1% of span

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 to1kΩ.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 is20 to 35V dc.

SPECIFICATION

Number of input channels

One (either terminals 7&8 or 8&9) Input channel (terminals7&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

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1500V dc/ac Power supply

20 to 35V dc

Voltage available for transmitter

20V minimum at 20mA Voltage drop across input from current source (terminals8& 9)

2.4V maximum

Power requirements (supplying a transmitter)

150mA maximum at 20V dc with a20mA signal

120mA maximum at 35V dc with a20mA signal

Power requirements (from a current source)

110mA maximum at 20V dc with a20mA signal

90mA maximum at 35V dc with a20mA signal Load resistance

0to 1kΩ

Transfer accuracy at 25℃ for both outputs

Better than 20μA

Line-fault detection(LFD) output

Transistor open collector output

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

Ambient temperature limits

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

5 to 95% RH, non-condensing Terminals

Accommodate 2.5mmconductors Casing