

# Pt-100 INPUT

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## 3-WIRE ISOLATED TRANSMITTER

RTT-3

- HIGH ACCURACY
- PLATINUM LINEARIZATION
- LEAD LENGTH COMPENSATION
- 1 K $\Omega$  LOOP LOAD AT 24V SUPPLY
- LOW COST
- 3-YEAR WARRANTY



The RTT-3 isolated transmitter accepts any 2 or 3 wire RTD (platinum, copper, nickel) and generates a proportional 4-20 mA process output current.

Standard features include linearization for platinum RTDs and the ability to accept input from two RTDs in order to extract their differential temperatures.

Exceptional input to output high common mode rejection (CMR) and high degree of filtering eliminate false output signals and provide a low ripple output current.

The RTT-3 three-wire configuration allows a loop load of 300 $\Omega$  at a voltage supply of as low as 10 volts and 1000 $\Omega$  at 24 V.

Calibration is performed by means of replacing three internal resistors for the coarse range setting and two (Zero and Span) front accessible multi-turn potentiometers which are used for the final fine tuning.

The unit is housed in a low profile, polycarbonate plastic enclosure, mounted on a standard DIN rail.

The RTT-3 units can be mounted side by side, with no wasted space thus obtaining high density installation.

# SPECIFICATIONS

# RTT-3

**INPUT:**

3-wire Pt-100 according to BS 1904 and DIN 43760 characteristics.  
Option: Pt-50, 500, Cu-10, Ni-120

**MINIMUM INPUT SPAN:** 10°C

**LEADS COMPENSATION ERROR:** < ±0.1°C/ 20Ω leads resistance

**SENSOR EXCITATION:** < 1 mA

**OUTPUT:** 4 - 20 mA (25 mA limited)

**LOOP RESISTANCE:**

$R_{max}(\Omega) = (V_{supply}-4)/.02$   
300Ω at 10 V supply  
1000Ω at 24 V supply

**SUPPLY VOLTAGE:** 10 - 32 Vdc (reverse polarity protected)

**SUPPLY AND LOAD VARIATION EFFECT:**

< ±0.03% of span for full change

**CURRENT CONSUMPTION:** 15 mA typical (@I<sub>o</sub>=0)

**ISOLATION:** 600 Vdc or peak AC

**RESPONSE TIME:** 160 msec (0-98%)

**ACCURACY (Including linearity, hysteresis and repeatability):**

< ±0.1% of span

**ADJUSTABILITY:**

Zero: ±35% of span minimum  
Span: ±30% of span minimum

**CMR:** 132dB typical, 127dB minimum

**TEMPERATURE STABILITY:** ±0.01 % of span/1°K

**OPERATION TEMPERATURE:**

-20 to 70°C  
Option: -30 to +85°C  
Storage: -40 to +90°C

**HUMIDITY:** 5 to 95% relative, non condensed

**HOUSING:** Plastic polycarbonate

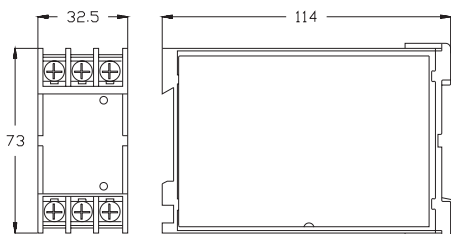
**PROTECTION LEVEL:**

Box: According to IP-50  
Terminals: According to IP-10

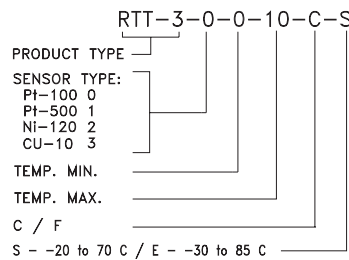
**MOUNTING:** Standard 35 mm DIN rail

**WEIGHT:** 150 grams

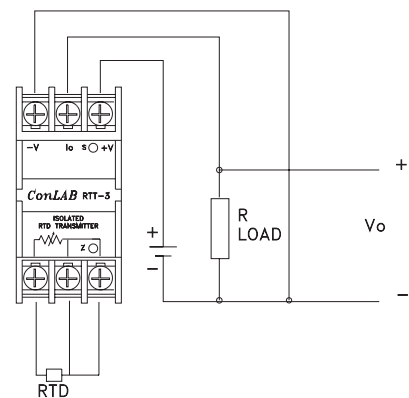
Dimensions (mm)



Ordering Information



Connection Diagram



data subject to change without notice

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