

DC INPUT

DCT-3

3-WIRE ISOLATED TRANSMITTER

- DC CURRENT/VOLTAGE INPUTS
- ACCURACY OF 0.04%
- SUPERB STABILITY OF $0.1\mu\text{V}/^\circ\text{C}$
- 1 K Ω LOOP LOAD AT 24V SUPPLY
- LOW COST
- 3-YEAR WARRANTY



The DCT-3 isolated transmitter accepts input voltages of up to 100 Vdc or input currents of up to 100 mA and generates a proportional 4-20 mA process output current.

Auto-zero front-end circuitry provides a superb thermal stability and allows an input span as low as 1.5 mV or 2 μ A.

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 DCT-3 three-wire configuration allows a loop load of 300 Ω at a voltage supply of as low as 10 volts and 1000 Ω at 24 V.

Shunt resistor, zero and span parameters are user configured by means of three internal resistors located behind the unit's cover. Two (Zero and Span) front accessible multi-turn potentiometers 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 DCT-3 units can be mounted side by side, with no wasted space in high density installations.

SPECIFICATIONS

DCT-3

INPUT: DC voltage or current

INPUT TERMINALS:

- +In/H: High voltage range
- +In/L: Low voltage range, and current
- In : Common (most negative)

INPUT RANGES (for full output span):

- Low voltage range: 1.5 to 100mV
- High voltage range: 100mV to 100V
(Up to 300 Vdc optional)
- Current range: 2µA to 100mA

INPUT IMPEDANCE:

- Low voltage: >1000 MΩ
- High voltage: >1MΩ
- Current input: 5Ω
(75 for over-current protection option)

OUTPUT: 4 - 20 mA (25 mA limited)

SUPPLY VOLTAGE:

10 - 32 Vdc (reverse polarity protected)

LOOP RESISTANCE:

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

SUPPLY AND LOAD VARIATION EFFECT:

< ±0.03% of span for full change

CURRENT CONSUMPTION: 15 mA typical (@Io=0)

ISOLATION: 600 Vdc or peak AC

RESPONSE TIME: 320 msec (0-98%)

ACCURACY (Including linearity, hysteresis and repeatability):

< ±0.04% 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: -40 to +85°C

STORAGE TEMPERATURE: -40 to + 85°C

HUMIDITY: 5 to 95% relative, non condensed

HOUSING: Plastic polycarbonate

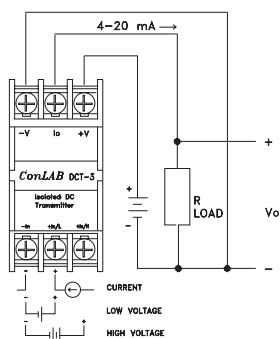
PROTECTION LEVEL:

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

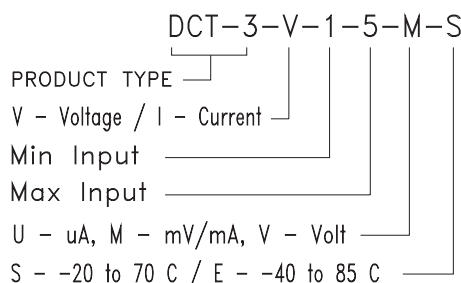
MOUNTING: Standard 35 mm DIN rail

WEIGHT: 150 grams

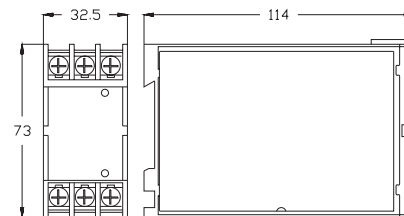
Connection Diagram



Ordering Information



Dimensions(mm)



data subject to change without notice

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