



## TEM1603 Temperature Transmitters

The Tempatron TEM1603 temperature transmitters isolate and convert temperature measurement signals to a 4-20mA process output signal.

The range consists of two versions: the TEM1603P which accepts PT100 inputs and the TEM1603T which accepts seven common thermocouple types or a DC mV signal. The signal conditioners are housed in a compact DIN rail mounting enclosure and are powered from 11 to 30Vdc.

A USB port powered configuration module is available for connecting the transmitter to a PC for configuration using the free software. The transmitter is powered via the USB interface from the PC during the configuration process.

### Models Available

**TEM1603P** PT100 RTD Input  
Temperature Transmitter

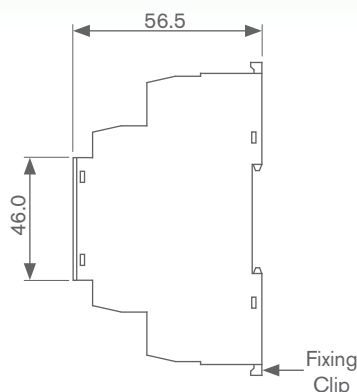
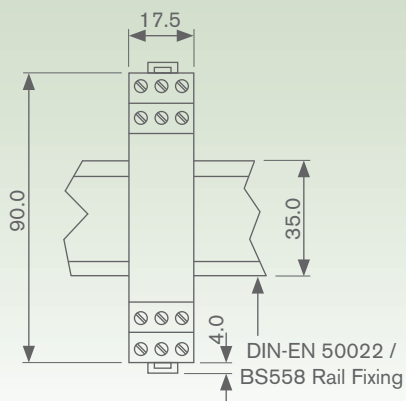
**TEM1603T** Thermocouple or DC mV Input  
Temperature Transmitter

### Product Features

- PT100 RTD input
- J, K, T, N, E, R or S type thermocouple or mV input
- 4-20mA two wire output
- Isolated input
- PC configurable using USB module
- 11 to 30Vdc powered
- Slimline 17.5mm wide enclosure
- DIN rail mounting
- Screw type fingerproof terminals

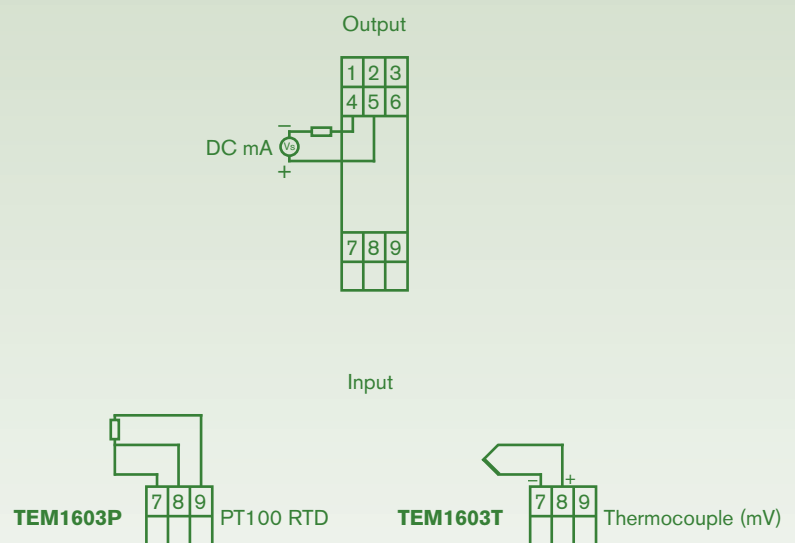
## For converting/isolating temperature or DC mV into a 4-20mA process signal

### Dimensions



All dimensions in mm

### Connections



**Ordering information**

Model	Code	Description
	TEM1603P	RTD Temperature Transmitter PT100 (-200 to 850°C)
	TEM1603T	Thermocouple Temperature Transmitter Thermocouples: K Type (-200 to 1370°C) J Type (-100 to 1200°C), E Type (-100 to 1000°C) N Type (-180 to 1300°C), T Type (-100 to 400°C) R & S Type (-10 to 1760°C), mV (-40 to 75mV)
Options	Code	Description
	USB-CONFIG	USB Configurator Module
Example	TEM1603P	

**Configuration**

This product is configured using the configurator module and software available from Tempatron. Connect the configurator to the USB port of a PC and the red wire to terminal 5 and black wire to terminal 4 on the transmitter.

The default configuration settings are as follows:-

	TEM1603P	TEM1603T
Input Type	N/A	= K
High Range	= 100	= 1000
Low Range	= 0	= 0
Units	= °C	= °C
Burnout	= Upscale	= Upscale

**Specification****Accuracy:**

- Thermocouple:  $\pm 0.25\%$  of scale range
- PT100:  $\pm 0.6\%$  of scale range
- Slide wire  $\pm 0.1\%$  of scale range

**Power Supply Voltage, Vs:**

- 11 to 30Vdc, 24V nominal giving maximum loop load of 600 ohms
- maximum load =  $(V_s - 11) / 0.021$  ohms

**Burden:**

- <1W

**TEM1603P Input Sensor:**

- 3 wire RTD (PT100)

**TEM1603T Input Sensor:**

- K, J, E, N, T, R & S type thermocouples
- -40 to +75mV

**Units:**

- °C or °F

**Current Output:**

- 2 wire current sink 4-20mA  
(full range 3.8 to 24mA)

**Loop Power Supply Output:**

- Yes

**Operating Temperature & Humidity:**

- -20°C to 70°C
- 10% to 95% rH (non-condensing)

**Enclosure:**

- DIN43880 (1 module width)
- Grey polyimide 6.6 self extinguishing
- Screw terminals (2.5mm max.)
- Case IP40

**Weight:**

- 70g

**Approval:**

- BS EN 61326

**Markings:**

- CE marked (meets EN61010-1 low voltage and EN50081-1/50082-1 EMC directives)

Specification subject to change without notice.

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# TEMPATRON

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