Remote Sensor System
User's Guide

Remote Sensor system /Analog sugnal
Resistance Thermometer Sensor
1 signal transmission

Transmitter: **RTT-1804-PT1B**
Output Sensor : **RTE-1804E-PU**

Attention for Installation

(Read this section thoroughly before installation.)

Before using the Remote Sensor, read this manual carefully. During installation and operation, pay close attention to the safety aspect.

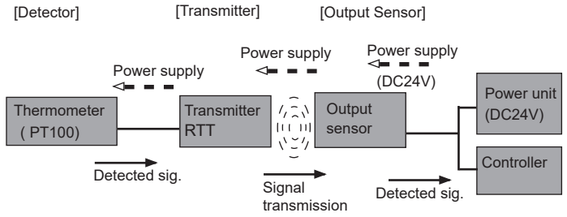
◆ Ensure the power is switched off during installation or maintenance operations.

◆ Use a regulated power supply, e.g. switch-model type. Simpler power supplies, such as a full-wave rectification type, will cause the permissible ripple rating to be exceed and may cause malfunction.

◆ Ensure correct connections by reference to the wiring diagram.

◆ To avoid malfunction caused by induction noise, cable should be kept apart from motor or other power cable.

Construction of the system



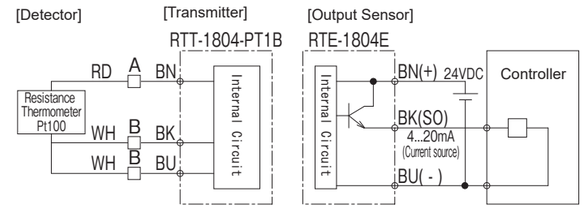
【Function of each component】

Detector :Connect a resistance thermometer sensor PT100 as a detectors and it detect temperature.

Transmitter : (1) Detects resistance value which changes depending on temperature.
(2) The internal CPU makes the temperature data out of the result of (1) which based on the reference resistance value which is specified by JIS-C1604, then chenges the temperature data to digital signals and transmits the signals to the Output Sensor.

Output Sensor: Change the temperature data to analog signal (4...20mA) and output to external unit and supplies power for operation of Transmitter at the same time.

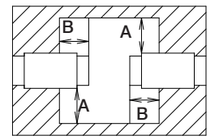
Wiring diagram



【Causion】
Please note that the cable length of an output sensor may not longer than 10m. The CE marking verifies that our products comply with the requirements of EMC directive. The surge test to an output sensor is not carried out.
When using RTT or RTE with cable length longer than10 m a measure to protect the sensor from serge current should be taken.

Influence of surrounding metal

To avoid influence of surrounding metal, keep minimum spacing as described below;

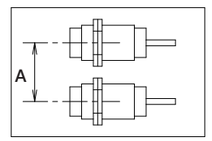


Non-flush mounting

Type number	A (mm)	B (mm)
RTT-1804-PT1B	20	15
RTE-1804E-PU		

Mutual interference

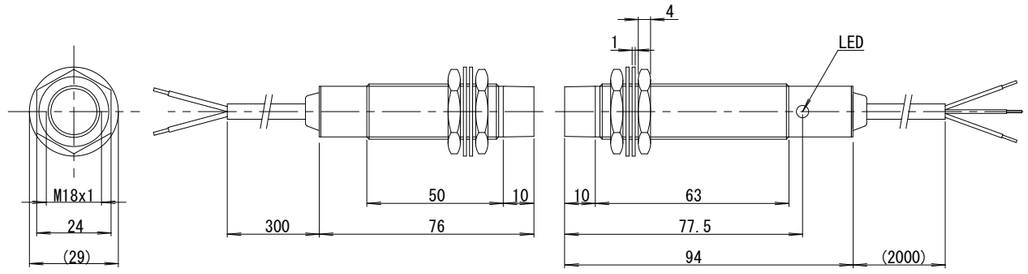
In order to prevent mutual interference between parallel-mounted sensors, keep minimum spacing as described below;



Type number	A (mm)
RTT-1804-PT1B	110
RTE-1804E-PU	

Dimension

Transmitter: **RTT-1804-PT1B** Output Sensor: **RTE-1804E-PU**



A035

Specification

Type number	RTT-1804-PT1B	RTE-1804E-PU
Rated transmitting distance	1...4mm	
Center off-set	≦± 2.5mm	
Supply voltage	-	DC 24V ± 5% (incl.ripple)
Current consumption	-	≦ 150mA

OperatingTemperature		0...+60℃
Protection class		IP67
Material	Housing	Nickel plated brass
	Active surface	Nylon12

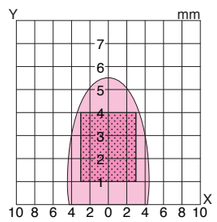
- For detector, please use a resistance thermometer sensor that meets JIS C1604.
- The temperature range is allowd
  RTT-1804-PT1B10-PU / RTT-9012-PT1B10-PU : 0...100 degree C
  RTT-1804-PT1B20-PU / RTT-9012-PT1B20-PU : 0...200 degree C
  RTT-1804-PT1B30-PU / RTT-9012-PT1B30-PU : 0...300 degree C
- Output is current source , therefore please connect the load between output and negative.

◆ Please note that the signal may become unstable (false signal or chattering) when the transmission distance and the center offset are outside the specification range.

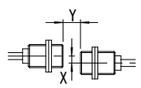
◆ The inzone signal is a preliminary signal for confirming that the output signal is established within the specification range. Please note that it does not guarantee signals output outside the specification range.

Typical Transmitting Diagram

【Example: Supply voltage at 24V DC】



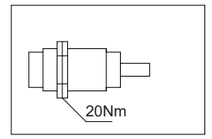
X:center off-set(mm)
Y:transmitting distance(mm)



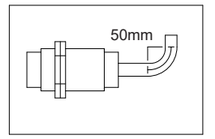
Rated transmitting area

Installation

Tightening troque for attached nut is 20Nm(200kgf·cm).



The minimum bending radius for the sensors are 50mm.



＊ Never pull the cable strongly in installing.

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