

**Remote Sensor system /Analog signal
Load Cell 1 signal transmission**

Transmitter : RNT-1804-LC □□ -PU
Output Sensor : RTE-1804E-PU

Attention for Installation

(Read this section thoroughly before installation.)

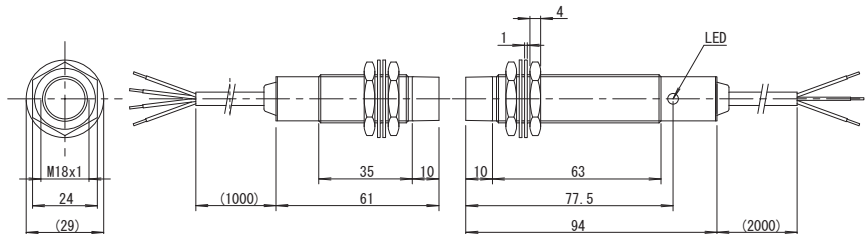
Before using the Remote Sensor, read this manual carefully. During installation and operation, pay close attention to the safety aspect.

- ◆ 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 exceeded 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.

Dimension

Transmitter: RNT-1804-LC □□ -PU01

Output Sensor: RTE-1804E-PU02



A040

Specification

Type number	RNT-1804-LC□□-PU	RTE-1804E-PU
Rated transmitting distance	1 ~ 4mm	
Center off-set	± 2.5mm	
Supply voltage	-	DC 24V±5%(incl. ripple)
Current consumption	-	≤ 150mA
Cable spec.	φ5.5/4x0.25mm ²	φ5/3x0.34mm ²

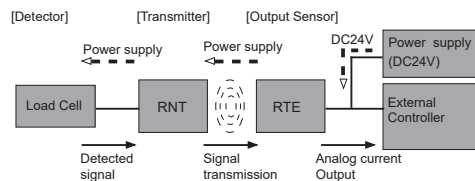
◆ Please note that the signal may become unstable (false signal or chattering) when the transmission distance and the center offset are outside the specification range.

◆ 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.

- Use a compression load cell (350 ohm±/-10%) as a detector.
- Connect the load between output and negative, for current output is current source.

Input Sensity	Type code of Transmitter
1mV/V	RNT-1804-LC10-PU-__
1.5mV/V	RNT-1804-LC15-PU-__
2mV/V	RNT-1804-LC20-PU-__

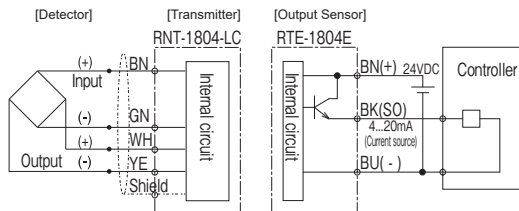
Construction of the system



[Function of each component]

- Detector** :Connects a load cell as the detector and it detects strain quantity.
- Transmitter** :(1) Detects minute output voltage which changes depending on strain quantity.
(2) Converts the output voltage into digital signals and transmits the signals to the Output Sensor.
- Output Sensor**:Converts the strain quantity data transmitted from the Transmitter into analog signals (4...20mA) and output it to external unit and supplies power for operation of the Transmitter.

Wiring diagram



(*) Instrument, such as ammeter, should be connected between output and minus.

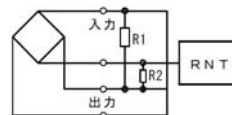
Note

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 an output sensor with cable length longer than 10m, a measure to protect the sensor from serge current should be taken.

Zero balance

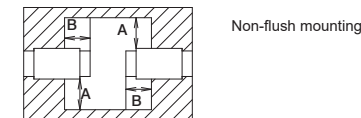
Since zero balance for output of load cell is not programmed inside, it should be done outside.

* Adjust load cell output to be 0mV at R1 or R2 (some hundreds kohm)



Influence of surrounding metal

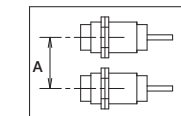
To avoid influence of surrounding metal, keep minimum spacing as described below;



Type number	A (mm)	B (mm)
RNT-1804-LC □□ -PU	20	15
RTE-1804E-PU		

Mutual interference

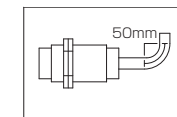
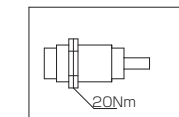
In order to prevent mutual interference between parallel-mounted sensors, keep minimum spacing as described below;



Type number	A (mm)
RNT-1804-LC □□ -PU	110
RTE-1804E-PU	

Installation

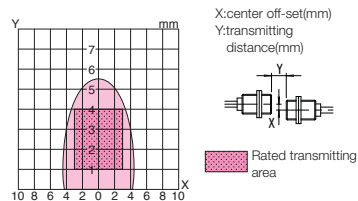
Tightening torque for attached nut is 20Nm(200kgf·cm). The minimum bending radius for the sensors are 50mm.



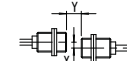
* Never pull the cable strongly in installing.

Transmitting area diagram

[Example: Supply voltage at 24V DC]



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



Rated transmitting area