Remote Sensor System User's Guide

Power Remote Sensor
RP Series 2 signal transmittion type
M18 Transmitter: RPT2-1804D-PU
Output Sensor: RPE2-1804N / P-PU
M30 Transmitter: RPT2-3005D-PU
Output Sensor: RPE2-3005N / P-PU

Attention for Installation

(Read this section thoroughly before installation.)

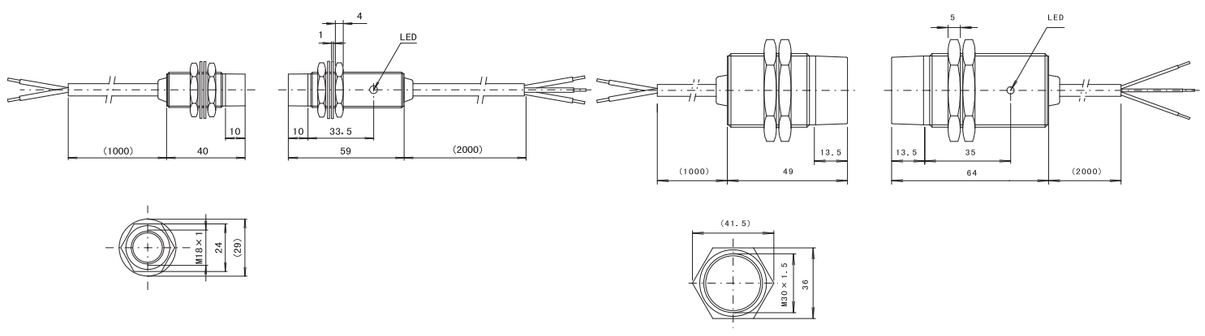
Before using the Remote Sensor, read this manual carefully.
During installation and operation, pay close attention to the safety aspect.

- ◆ 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.
- ◆ 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.

Dimension

Transmitter: **RPT2-1804D-PU** Output Sensor: **RPE2-1804N-PU (NPN)** **RPT2-1804P-PU (PNP)**

Transmitter: **RPT2-3005D-PU** Output Sensor: **RPE2-3005N-PU (NPN)** **RPT2-3005P-PU (PNP)**



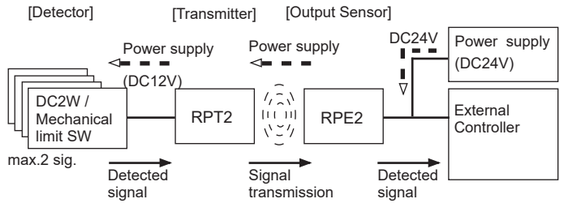
Specification

Type number	RPT2-1804D	RPE2-1804N/P
Rated transmitting distance	0.5 ～ 4mm	
Center off-set	≦± 2.5mm	
Drive current	5.0...6.5mA (per switch)	
Drive voltage	12 ± 1.5V DC	
Supply voltage		24V DC ± 10% (incl. ripple)
Current consumption		≦ 150mA

Type number	RPT2-3005D	RPE2-3005N/P
Rated transmitting distance	0.5 ～ 5mm	
Center off-set	≦± 5mm	
Drive current	5.0...6.5mA (per switch)	
Drive voltage	12 ± 1.5V DC	
Supply voltage		24V DC±10%(incl. ripple)
Current consumption		≦ 150mA

◆ The drive current is dependent on the transmission distance between Transmitter and Output Sensor the degree of off-set between them-refer to Transmitting area diagram.

Construction of the system



【Function of each component】

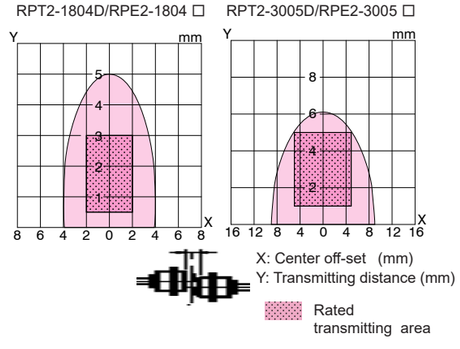
Detector : Connects DC2W or mechanical limit switches (max.4) and transmits the detected signals to Transmitter.

Transmitter : Provides power for Detector, also passes detected signals from Detector to Output Sensor.

Output Sensor: Puts out detected signal to external controller, also sends power for operating of Detector and Transmitter.

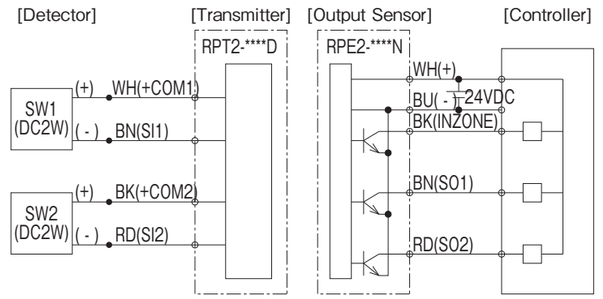
Transmitting area diagram

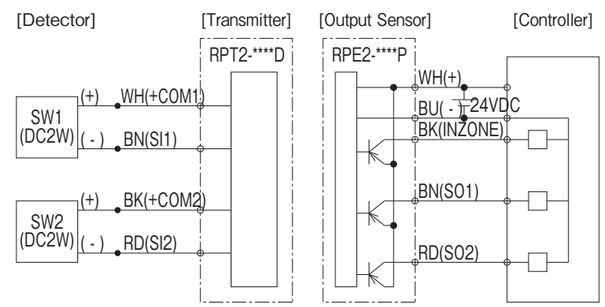
【Example: Supply voltage at 24V DC】



Wiring diagram

Connecting DC2W type switch (incl. mechanical limit switch)





Note

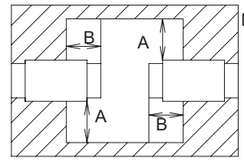
Please note that the cable length of an output sensor may not longer than 10m. The CE marking verifies that our products comply with the requirements of EMC directive. The surge test to an output sensor is not carried out.
When using an output sensor with cable length longer than 10m, a measure to protect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

In using the Terminal boxes for connecting Detectors and Transmitter (option), set the change over switches as the following instruction.

Change over switch for 2 wire / 3 wire type switches - > OFF
Change over switch for PNP / NPN - > PNP

Influence of surrounding metal

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

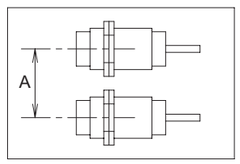


Non-flush mounting

Type number	A (mm)	B (mm)
RPT2-1804D RPE2-1804N/P	20	15
RPT2-3005D RPE2-3005N/P	30	20

Mutual interference

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

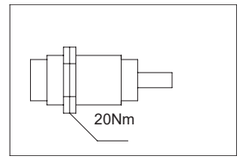


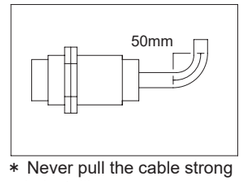
Type number	A (mm)
RPT2-1804D RPE2-1804N/P	110
RPT2-3005D RPE2-3005N/P	300

Installation

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

The minimum bending radius for thesensors are 50mm.





∗ Never pull the cable strong in installing.

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