

Remote Sensor System
RP/A series 4 signal transmission type
M18 Transmitter: RPTA-1803
Output Sensor: RPEA-1803N / P
M30 Transmitter: RPTA-3005
Output Sensor: RPEA-3005N / P

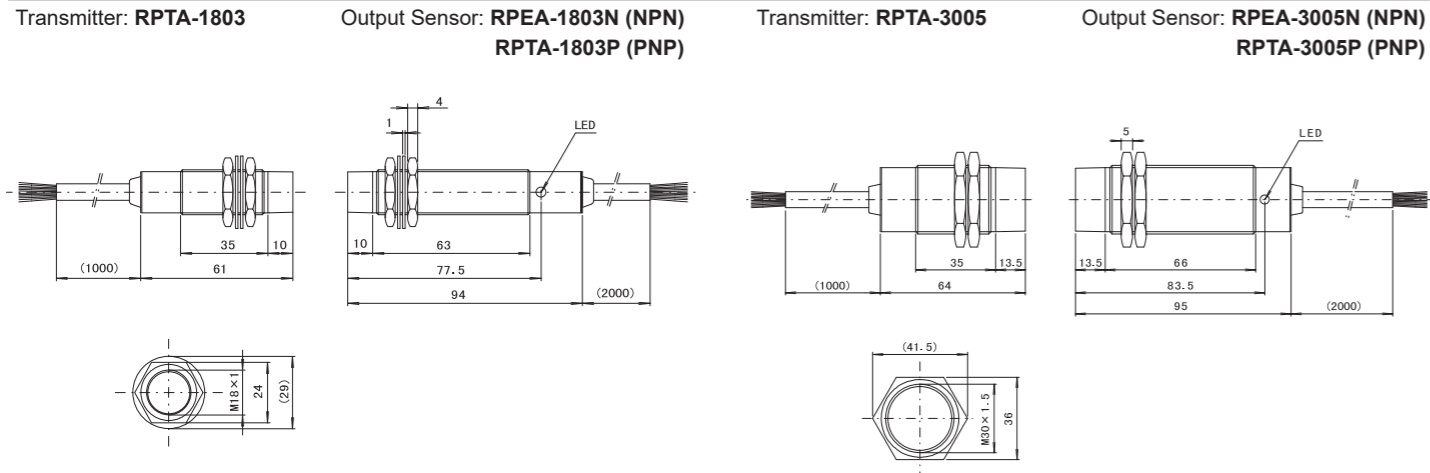
Attention for Installation

(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



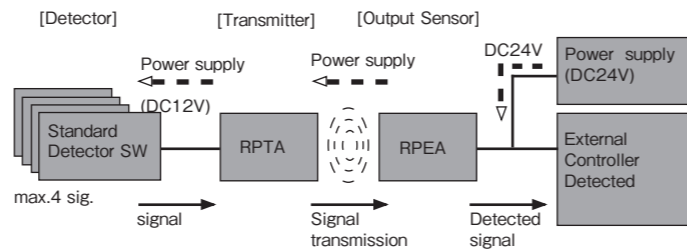
Specification

Type number	RPTA-1803	RPEA-1803N/P
Rated transmitting distance	0.5...3mm	
Sender off-set	≤ ± 2.5mm	≤ ± 2mm
Drive current	≤ 20mA	≤ 30mA
Drive voltage	12 ± 1.5V DC	
Supply voltage	24V DC ± 5% (incl. ripple)	
Current consumption	≤ 170mA	

Type number	RPTA-3005	RPEA-3005N/P
Rated transmitting distance	1...5mm	
Sender off-set	≤ ± 6mm	≤ ± 3mm
Drive current	≤ 30mA	≤ 40mA
Drive voltage	12 ± 1.5V DC	
Supply voltage	24V DC ± 5% (incl. ripple)	
Current consumption	≤ 150mA	

- ◆ Total current consumption of detectors must not exceed the rated drive current. Reduce the switches when the total current consumption exceeds the drive current.
- ◆ 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

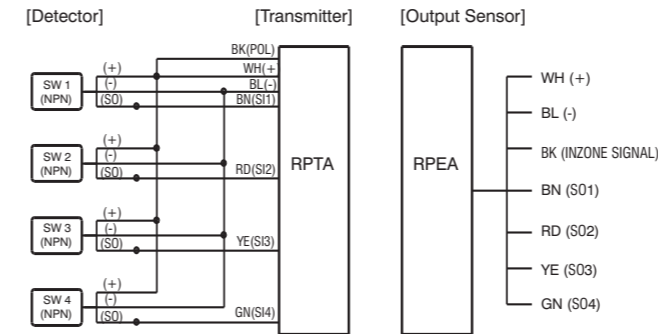


[Function of each component]

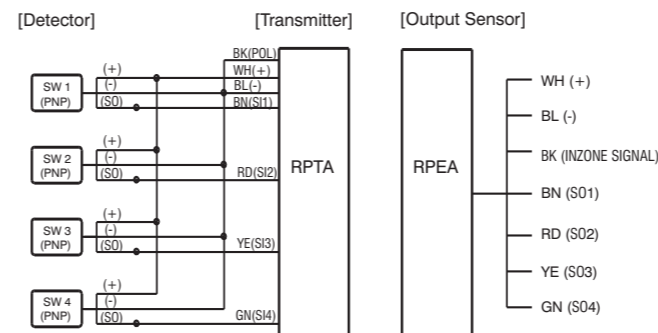
- Detector** : Connects detector switches (max.8) and transmits the detected signals to Transmitter.
- Transmitter** : Provides power for Detector, also passes detected signals from Detector to Output Sensor.
- Output Sensor**: Puts out detected signal to external controller, also sends power for operating of Detector and Transmitter.

Wiring diagram

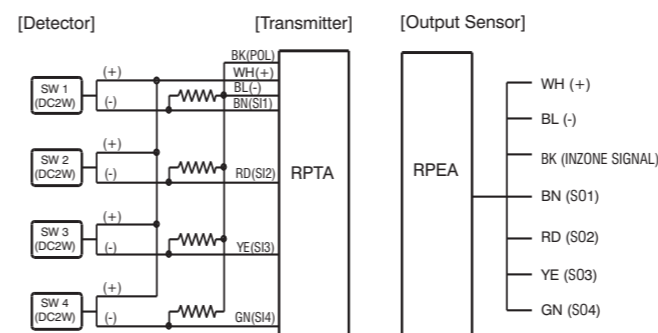
Connecting NPN type switch



Connecting PNP type switch



Connecting DC 2W type switch (incl. mechanical limit switches)



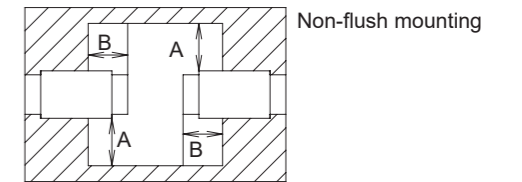
(Note)

(-) line of Transmitter and (-) line of Detectors should be connected together with a resistor of 1-2kohm.

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.

Influence of surrounding metal

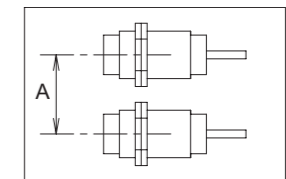
To avoid influence of surrounding metal, keep minimum spacing as described below;



Type number	A (mm)	B (mm)
RPTA-1803 RPEA-1803N/P	18	18
RPTA-3005 RPEA-3005N/P	40	32

Mutual interference

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

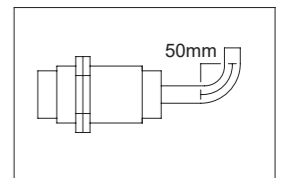
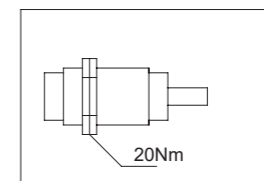


Type number	A (mm)
RPTA-1803 RPEA-1803N/P	110
RPTA-3005 RPEA-3005N/P	300

Installation

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

The minimum bending radius for these sensors are 50mm.



* Never pull the cable strong in installing.

Transmitting area diagram

