

**Remote Sensor System**  
Switch signal / Weld-immune  
4 signal transmission type

- M18 Transmitter:** RPT4-1803D-PU  
**Output Sensor:** RPE4-1803N / P-PU  
**M30 Transmitter:** RPT4-3005D-PU  
**Output Sensor:** RPE4-3005N / P-PU

**Attention for Installation**

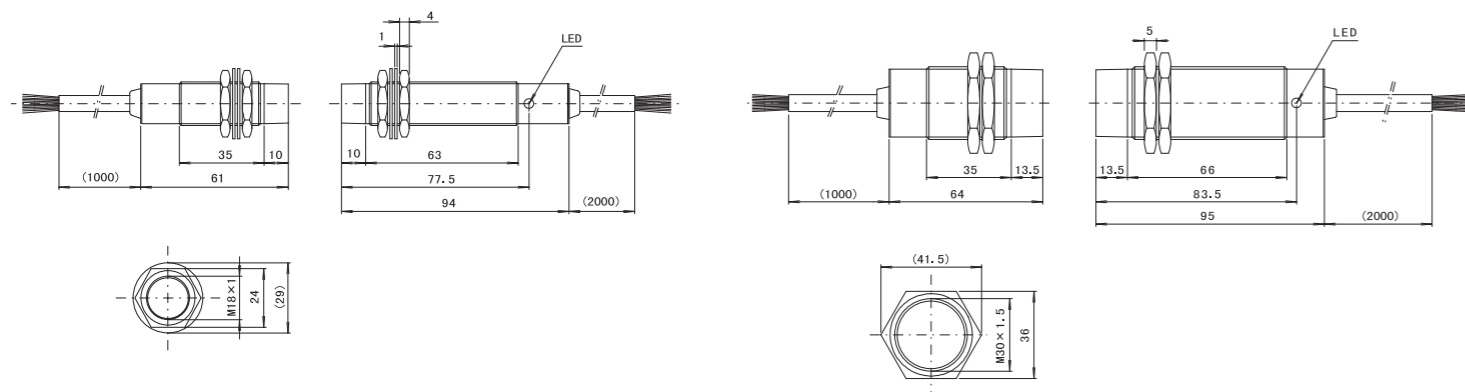
(Read this section thoroughly before installation.)

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 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.
- ◆ 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: **RPT4-1803D-PU** Output Sensor: **RPE4-1803N-PU (NPN)**  
**RPT4-1803P-PU (PNP)** Transmitter: **RPT4-3005D-PU** Output Sensor: **RPE4-3005N-PU (NPN)**  
**RPT4-3005P-PU (PNP)**

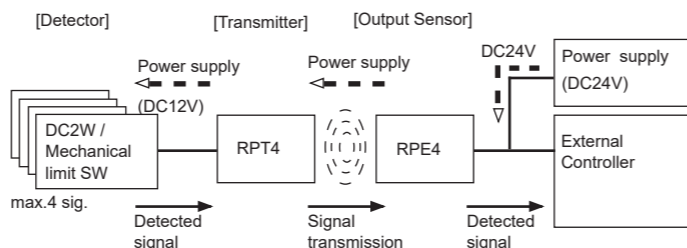


**Specification**

Type number	RPT4-1803D	RPE4-1803N/P
Rated transmitting distance	0.5...3mm	
Center off-set	≤ ± 2mm	
Drive current	≤ 5.0mA (per switch)	
Drive voltage	12 ± 1.5V DC	
Supply voltage	24V DC ± 5% (incl. ripple)	
Current consumption	≤ 170mA	
Type number	RPT4-3005D	RPE4-3005N/P
Rated transmitting distance	1...5mm	
Center off-set	≤ ± 6mm	
Drive current	≤ 5.0mA (per switch)	
Drive voltage	12 ± 1.5V DC	
Supply voltage	24V DC ± 5%(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**

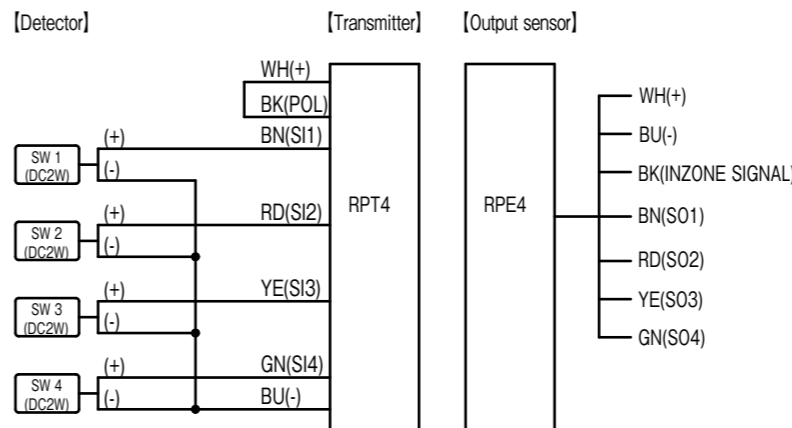


**【Function of each component】**

- 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.

**Wiring diagram**

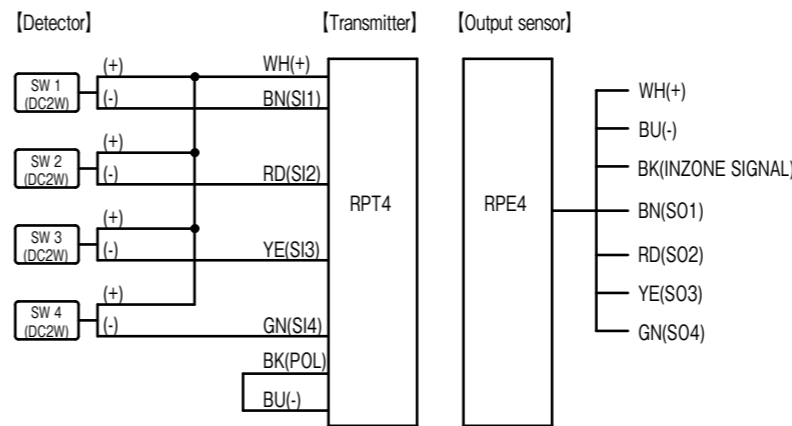
-COMMON(Transmitter)



**(Note)**

White(+) and Black (POL) of Transmitter should be connected together.

+COMMON(Transmitter)



**(Note)**

Blue (-) and Black (POL) of Transmitter should be connected together.

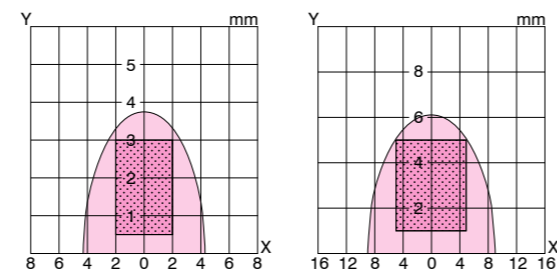
Please note that the cable length of an output sensor may not longer than 10m. The CE marking verifies that our products comply with the requirements of EMC directive. The surge test to an output sensor is not carried out. When using an output sensor with cable length longer than 10m, a measure to protect the sensor from surge 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 / NPN both of them are available

**Transmitting area diagram**

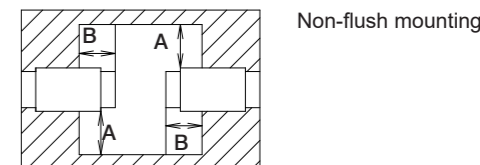
[Example: Supply voltage at 24V DC]



X: Center off-set (mm)  
Y: Transmitting distance (mm)  
Rated transmitting area

**Influence of surrounding metal**

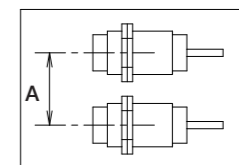
To avoid influence of surrounding metal, keep minimum spacing as described below;



Type number	A (mm)	B (mm)
RPT4-1803D	18	18
RPE4-1803N/P	-	-
RPT4-3005D	40	32
RPE4-3005N/P	-	-

**Mutual interference**

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

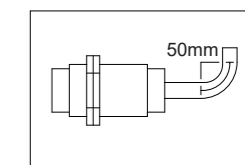
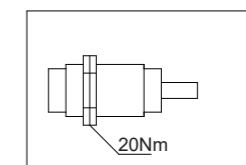


Type number	A (mm)
RPT4-1803D	110
RPE4-1803N/P	-
RPT4-3005D	300
RPE4-3005N/P	-

**Installation**

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

The minimum bending radius for theseensors are 50mm.



\* Never pull the cable strong in installing.