

**Remote Sensor System
8 signal transmission type**

Transmitter : RPTA-8010-PU_ (Discontinued)
RPTA-8015-PU_

Output Sensor : RPEA-8010N-PU_ (Discontinued)
RPEA-8010P-PU_ (Discontinued)
RPEA-8015N-PU_
RPEA-8015P-PU_

Attention for Installation

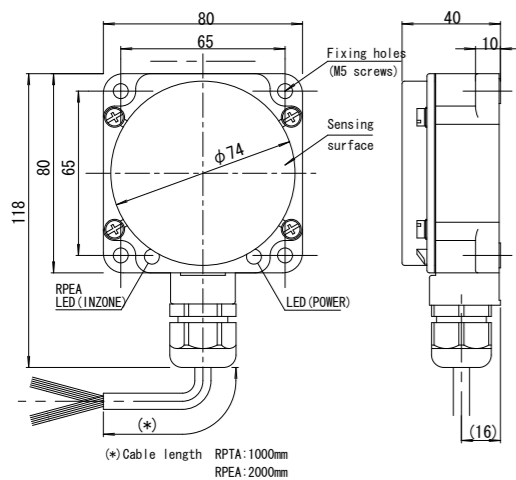
(Read this section thoroughly before installation.)

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

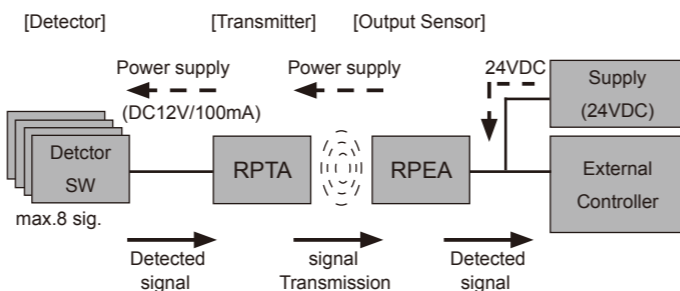
- ◆ Ensure the power is switched off during installation or maintenance operations.
- ◆ Use a regulated power supply, e.g. switch-model type. Simpler power supplies, such as a full-wave rectification type, will cause the permissible ripple rating to be exceeded and may cause malfunction.
- ◆ Ensure correct 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.
- ◆ When the resin (ABS or ABS + PBT) is used to the case or the transmission surface, please be sure to avoid organic solvent or liquid containing them to splash over.
- ◆ Please install cable end "wiring part" in so that there is no water and cutting fluid.
(Water is transmitted to the internal from the cable core, there is a possibility of causing a problem such as short circuit or corrosion)
- ◆ Please do not face the output sensor to a metal at all times to avoid metal overheating or damage of the components.

Dimension

Transmitter: **RPTA-8010-PU_**
Output Sensor: **RPEA-8010N-PU_ (NPN)**
RPEA-8010P-PU_ (PNP)



Construction of the system



[Function of each component]

- Detector : A standard detector switch is used as Detector.
Up to 8 switches can be connected with 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.

About 8010 series

"RPTA-8010-PU", "RPEA-8010N-PU" and "RPEA-8010P-PU" is discontinued.
Replacement see below.

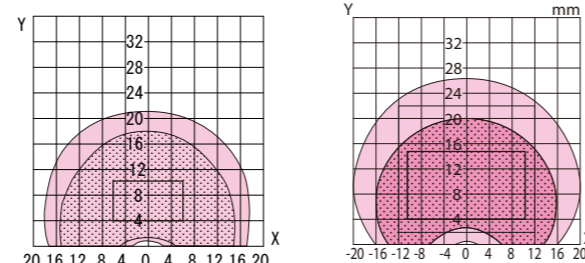
	Discontinued	Replacement
Transmitter	RPTA-8010-PU	RPTA-8015-PU
Output sensor (NPN)	RPEA-8010N-PU	RPEA-8015N-PU
Output sensor (PNP)	RPEA-8010P-PU	RPEA-8015P-PU

Transmitter and Output sensor of RPTA/RPEA-8010 and RPTA/RPEA-8015 can be used in combination each other. The transmission specification becomes RPTA/RPEA-8010's specification.

Typical transmitting diagram

[Example: Supply voltage at 24V DC]

RPTA-8010-PU / RPEA-8010 □ -PU RPTA-8015-PU / RPEA-8015 □ -PU



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

Red shaded area: Drive current ≤ 100mA
Pink shaded area: Drive current ≤ 50mA

- Wrong signal could be output when operating distance or center offset is out of specification range.
- Transmitter and Output sensor of RPTA/RPEA-8010 and RPTA/RPEA-8015 can be used in combination each other. The transmission specification becomes RPTA/RPEA-8010's specification.

Specification

Type code	Transmitter		RPTA-8010-PU_ (Discontinued)		RPTA-8015-PU_				
	Output sensor	NPN	RPEA-8010N-PU_ (Discontinued)	RPEA-8015N-PU_	PNP	RPEA-8010P-PU_ (Discontinued)	RPEA-8015P-PU_		
Transmission specification	Drive voltage	12V DC ± 1.5V				12V DC ± 1.5V			
	Distance	2...15mm		4...10mm		2...22mm		4...15mm	
	Center off-set	≤ ± 8mm		≤ ± 6mm		≤ ± 12mm		≤ ± 10mm	
	Drive current	≤50mA		≤100mA		≤50mA		≤100mA	
	No. of signal	max. 8				max. 8			
Specification of Output Sensor	Operational voltage	24V DC ± 5% (incl. ripple)				24V DC ± 5% (incl. ripple)			
	Current consumption	≤300mA				≤300mA			
	LED indication	Yellow : Inzone, Green : Power				Yellow : Inzone, Green : Power			
	Output signal	sensing signal 8 + Inzone signal 1				sensing signal 8 + Inzone signal 1			
Operating temperature	0...+50°C								
Protection class	IP 67								
Cable	PUR / φ 7.9, 12x0.18mm ²								

Applicable sensor	
Supply voltage	12V DC
Total current consumption*	≤ 100mA
Residual voltage	≤ 3.5V

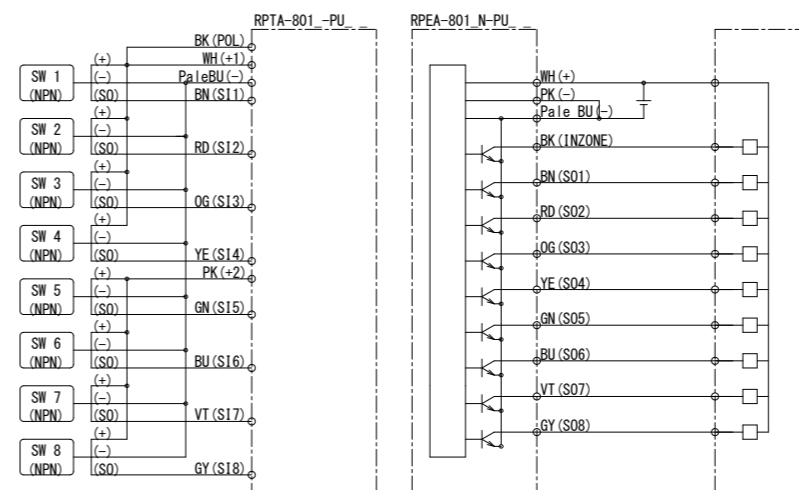
*Total current consumption of all connected sensor.

- Be sure to use a sensor which works definitely in the condition described above.
- 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 depends on the transmitting distance and the center off-set between Transmitter and Output Sensor. -refer to Transmitting diagram.

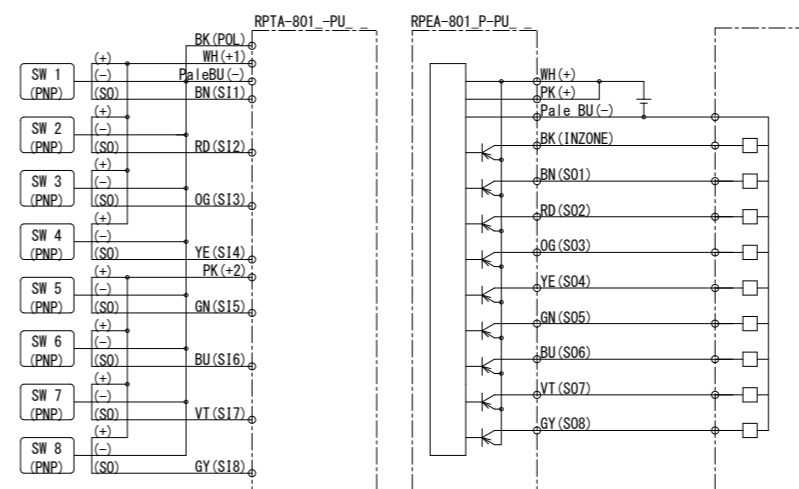
- ◆ Please note that the signal may become unstable (false signal or chattering) when the transmission distance and the center offset are outside the specification range.
- ◆ The inzone signal is a preliminary signal for confirming that the output signal is established within the specification range. Please note that it does not guarantee signals output outside the specification range.

Wiring diagram

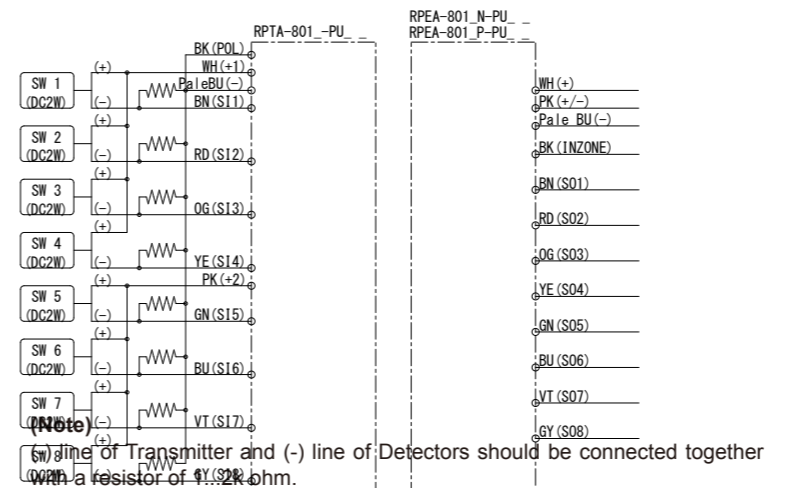
Connecting NPN type switch



Connecting PNP type switch



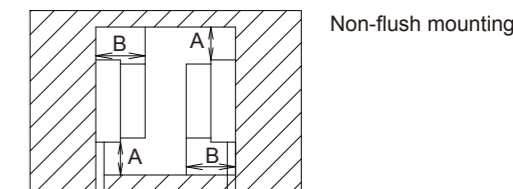
Connecting DC 2W type switch (incl. mechanical limit switches)



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 10 m, a measure to protect the sensor from surge current should be taken.

Influence of surrounding metal

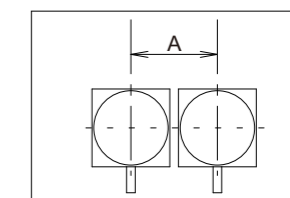
To avoid influence of surrounding metal, keep minimum spacing as described below;



Type number	A (mm)	B (mm)
RPTA-801_-PU_	20	40
RPEA-801_N/P-PU_		

Mutual interference

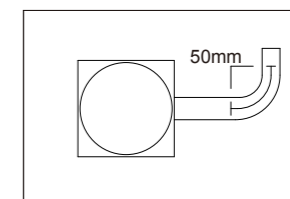
In order to prevent mutual interference between parallel-mounted sensors, keep minimum spacing as described below;



Type number	A (mm)
RPTA-801_-PU_	200
RPEA-801_N/P-PU_	

Bending radius of cable

The minimum bending radius for thesensors are 50mm.



* Never pull the cable strongly in installing.