

Wireless power supply & Signal transmission

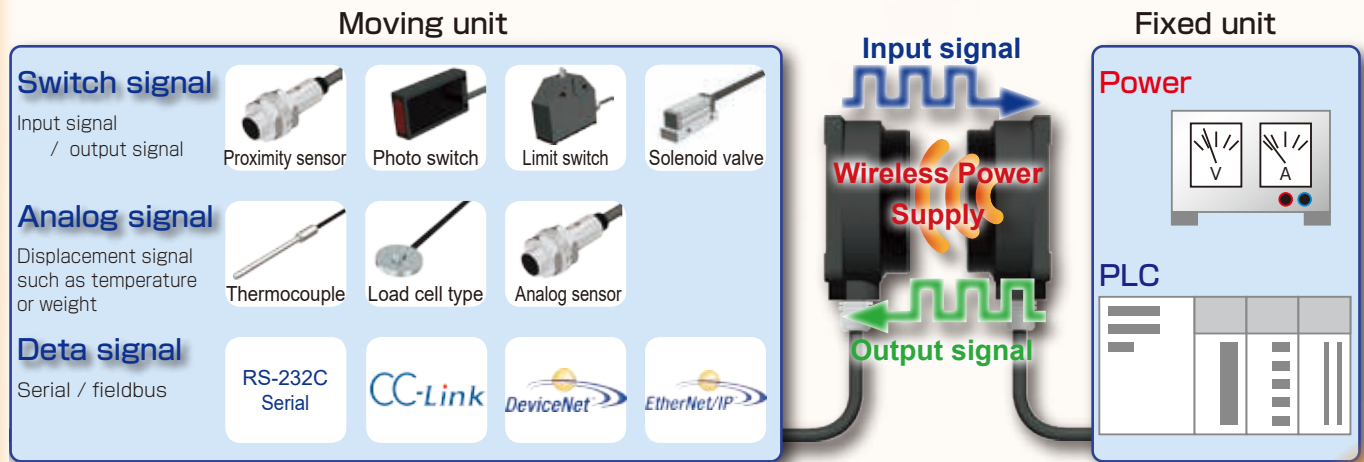
# Remote System



# Wireless Power Supply & Signal Transmission

# Remote System

B & PLUS Remote System is an original connection system which supplies power and transmits signals inductively between a remote and a local position.



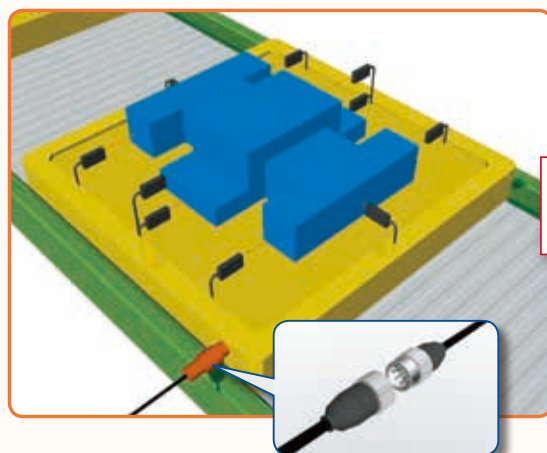
In stead of the cable wiring, it performs the 12V/24V power supply and various signal transmission simultaneously.

**What's  
Remote ?**

B & PLUS Remote System solves a various problems of wiring and greatly contributes to automation or efficiency.

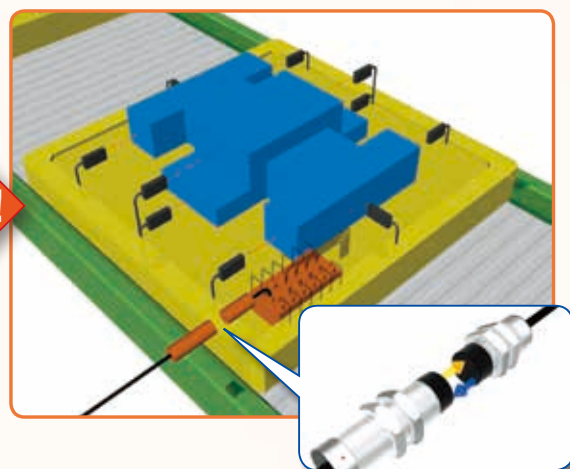
**Feature!**

## Wiring by connectors or cables



**Solution!**

## Remote System



In the case of cables, the limit of motion or damage or cable breakage by degradation of the cable itself. In the case of connector, a need to attach and detach, bareakage of pin or concerns of water or the foreign substance at the time of attaching of detaching. It takes maintenance cost caused by the problems mentioned above.

Removable steps are unnecessary to Remote System. When a set of Remote System face each other,automatically power is supplied and signals is transmitted. Owing to protective structure IP67, there is no worries on water, oil or dust.

## Application

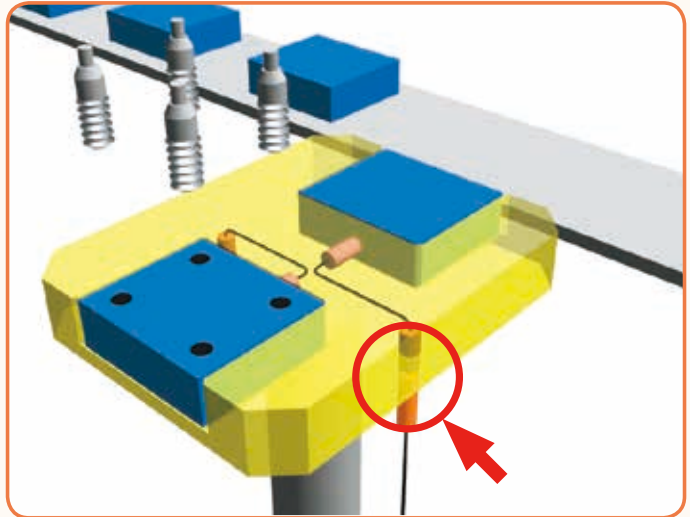
### At the rotating part

#### Before

- × Cable breakage by cable tangling.

#### After

- No cable tangling solves cable breakage trouble.
  - No limitation of the cable, no inversion of the jig.
- In addition! Transmitter and detector are integrated.  
So Installation is simple.



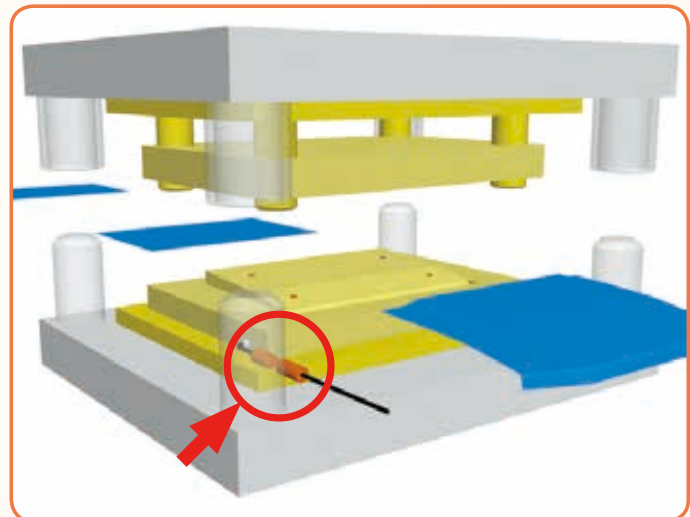
### At the removable part

#### Before

- × Time loss caused by attaching or detaching of connector when exchanging die.

#### After

- Speed of operation will be greatly improved because it is OK just to set a die.



### At the moving part

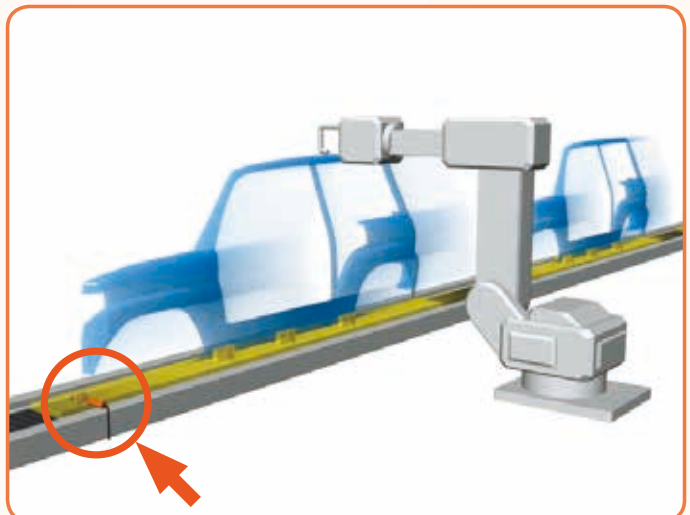
#### Before

- × A line often stops because of the contact defectiveness caused by the foreign substance.
- × The maintenance of the connector is frequent.

#### After

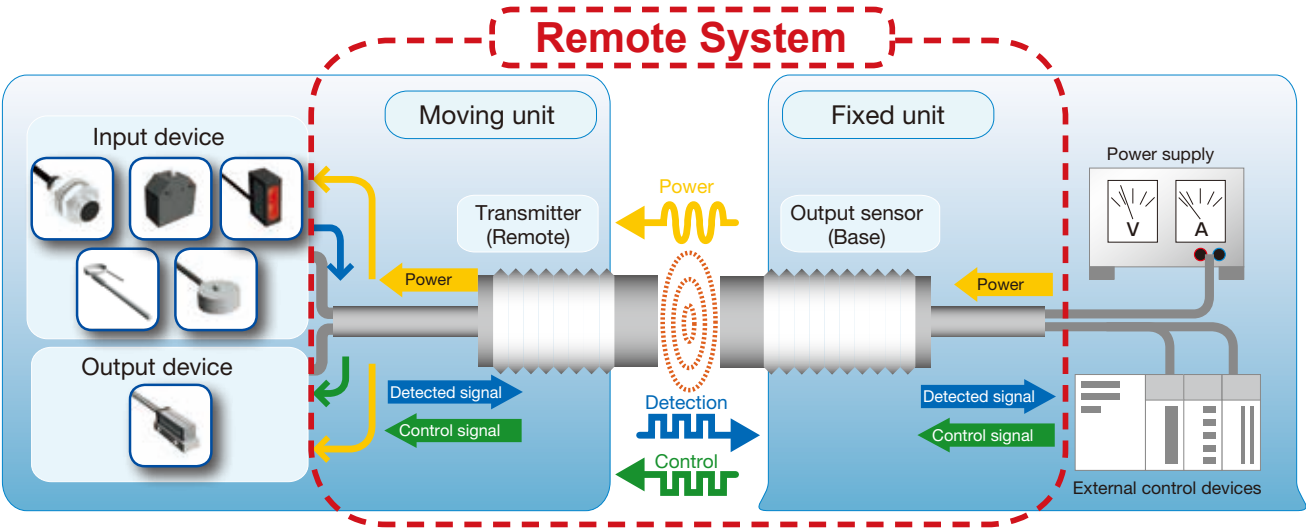
- Abort of line caused by poor contact will be solved.
- No pin maintenance is necessary because it becomes noncontact.

In addition! For Anti-weld slag type, weld slag is avoided to adhere.





Function of Remote System



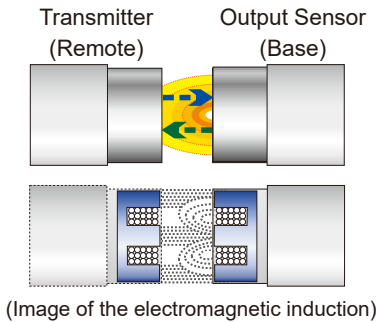
Remote System is an original connection system which supplies power and transmits signals simultaneously in wireless. Remote System is composed of the Transmitter (Remote) attached to moving unit and the Output Sensor (Base) attached to fixed unit.

Principle of Remote System

Remote System is an unique system that the power supply and signal transmission are performed in the electromagnetic induction principle. When the Transmitter comes into the transmittable field of the Output Sensor, power is supplied as well as signal is transmitted to the Transmitter by inductive coupling.

Wireless Power Supply System by electromagnetic inductive

Power which inputted to the Output sensor of Remote System change to AC magnetic field by internal circuit and coil. Power that are changed magnetic field transmit to the coil of Transmitter. AC magnetic field which sent to Transmitter are changed to DC power. It built Wireless Power Supply System by inductive coupling.



Comparison with other methods

The electromagnetic induction method of the Remote system is superior to other methods in the enviromental nature or feeding efficiency, resistance, and it can transmit stable wireless feeding and signal in the various environment.

	Transmitted power	Size	Frequency band	Condition			Distance	Supply efficiency	Commu- nication
				Partition	Noise	Dirt			
Remote System (Electromagnetic induction)	0.06 ~ 210W	φ 12 ~	Dozens KHz ~	○	◎	◎	△	◎	◎
Resonance method	Several kilowatts	□ 50cm ~	LF ~ HF band	○	△	◎	◎	△	△
Microwave wireless	1KW	□ 10cm ~	Microwave band	○	○	○	◎	×	△



## Features

### Simultaneous operation of feeding and signal transmission



Wireless feeding and signal transmission are simultaneously operated by a set of Remote system.

### Non-metallic Partition is no problem



Even if there is glass or nonmetal partition such as resin, wireless feeding and signal transmission is possible.

### Getting wet is no problem



Protection class of our Remote System is IP67, and can be used under heavy duty factory automation conditions. (with minor exception)

### Direct input/output with controller



Detected signal is parallel output from output sensor and direct input is OK to I/O unit. Direct connection to each slave and master unit is available in Data communication type

## Product overview

### Function & Features

### Application

### Product range

### Description of terms

## Solution

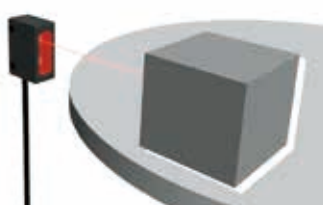
Since B & Plus Remote system realize wireless feeding and signal transmission, it can solve the various problems caused by the wiring of a cable / connector.

### Cable trouble



There are no worries for cable breakage as there is no cable tangled.

### False detection



Solution of miss-detecting owing to the sensor installed outside.

### Substitute of slip ring



Possible to communicate even if there are water, oil, dirt or mine dust

### Connector trouble



Solution of poor contact with broken or pin contact degradation

### Cost saving



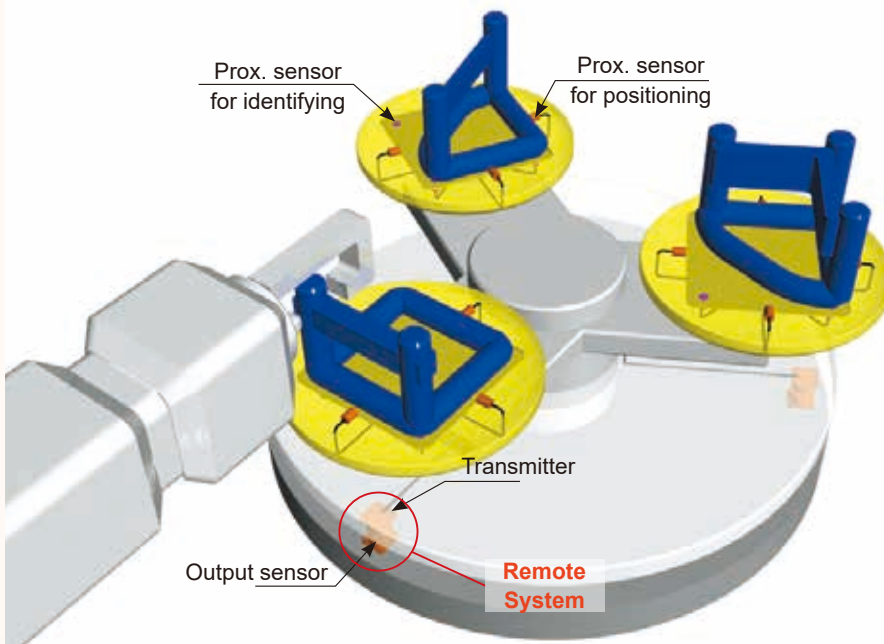
reduce the maintenance cost occurred in the case of troubles

### Working hour saving



Reduce attaching or detaching time to change units

## Identifying and verifying workpiece on a turntable



Continuous cycle of Loading, welding and unloading. By using 3 jigs mounted on a turntable turning 120 degree at a time. Remote system supplies power to 8 proximity sensors and transmits their switching state.

### Previous problems

- Cable breakage from stress.
- Time loss from home positioning due to physical limitation of the cable.

**Solution!**

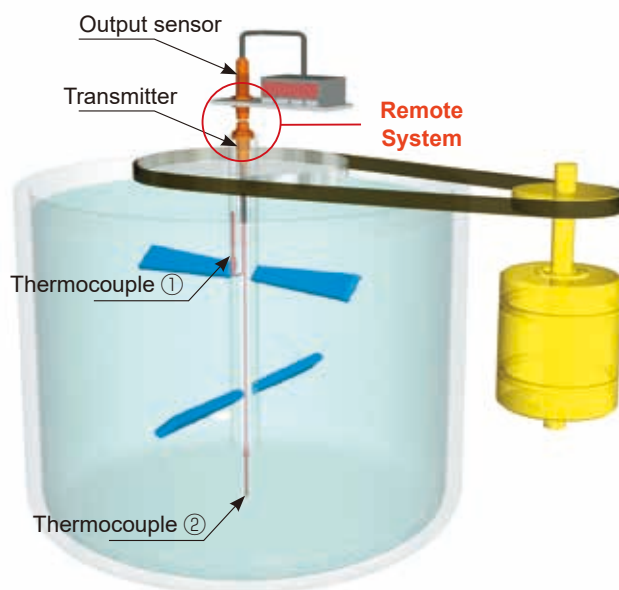


**Remote System**

### After improvement

- Eliminated stress points, eliminated cable breakage problems.
- Turntable can turn continuously, without homing. Improved efficiently.

## Monitoring temperature at the center of a stirring tank



### Previous problems

- Very difficult to properly mix the materials without knowing center temperature of the tank.

**Solution!**



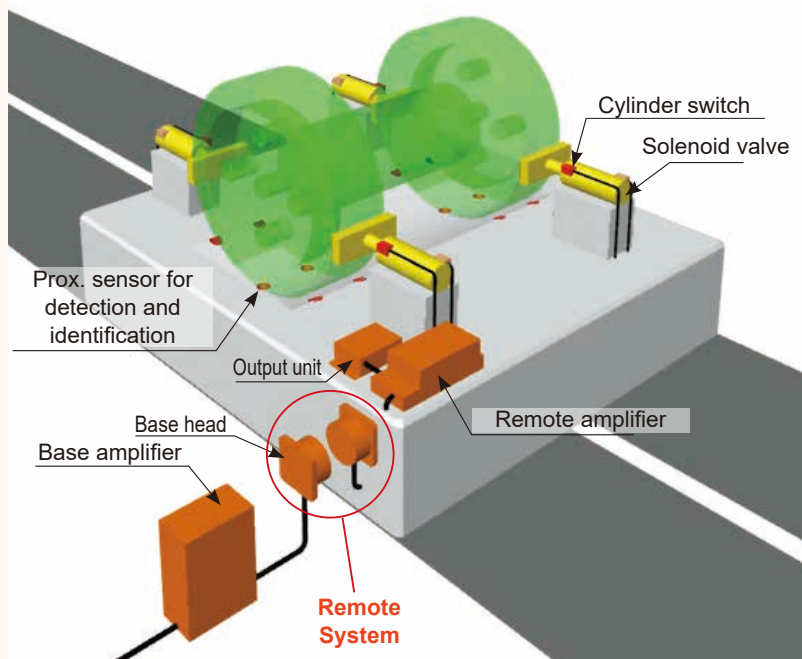
**Remote System**

### After improvement

- Placed thermocouple in the center, measuring accurate temperature.
- Measured data of a thermocouple is transmitted, while agitating.

Monitor center temperature of the content in the tank, adjust the speed of agitator accordingly. Remote Sensor is installed on top of the agitator shaft, and transmits the measuring data of the thermocouple.

## Workpiece identification, solenoid valve actuation and clamp confirmation on pallet

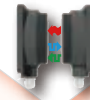


Automatically identify and mount the workpiece from it's shape.  
Remote System sends power to 32 proximity sensors and 4 solenoid valves also transmits their signals.

## Previous problems

- Change-out of large pallets are time consuming and labor intensive.

## Solution!

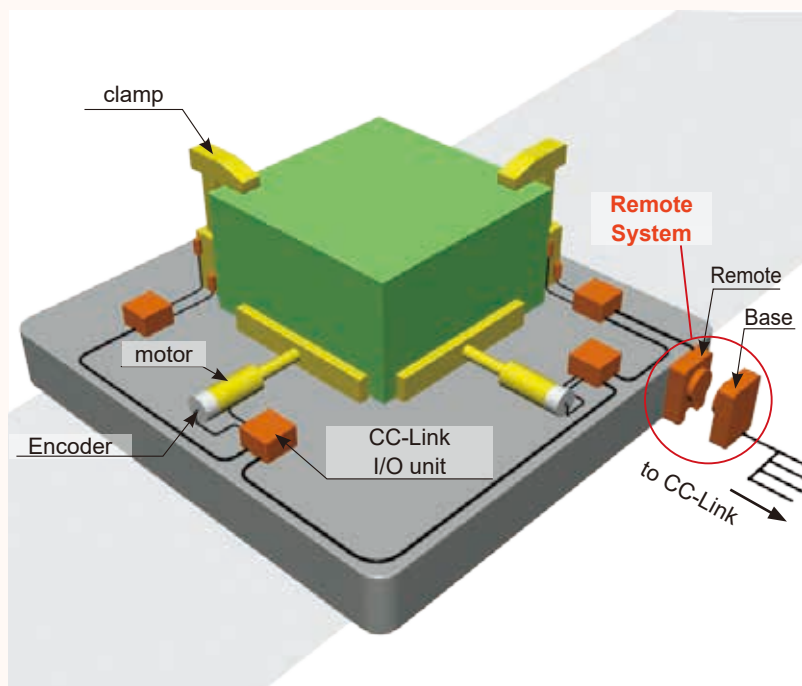


## Remote System

### After improvement

- Identification, mount and seating confirmation of the workpieces are automated, preparation time was reduced drastically.

## Jig adjustment and clamp confirmation on pallet



Control a Motor, an encoder, a solenoid valve and a sensor installed on the pallet. Utilizing field BUS CC-Link. Remote System sends power to CC-Link remote I/O on a pallet and transmits CC-Link data.

## Previous problems

- Desire to manage whole assembly line with CC-Link.
- Mount adjustment manually done by operators.

## Solution!



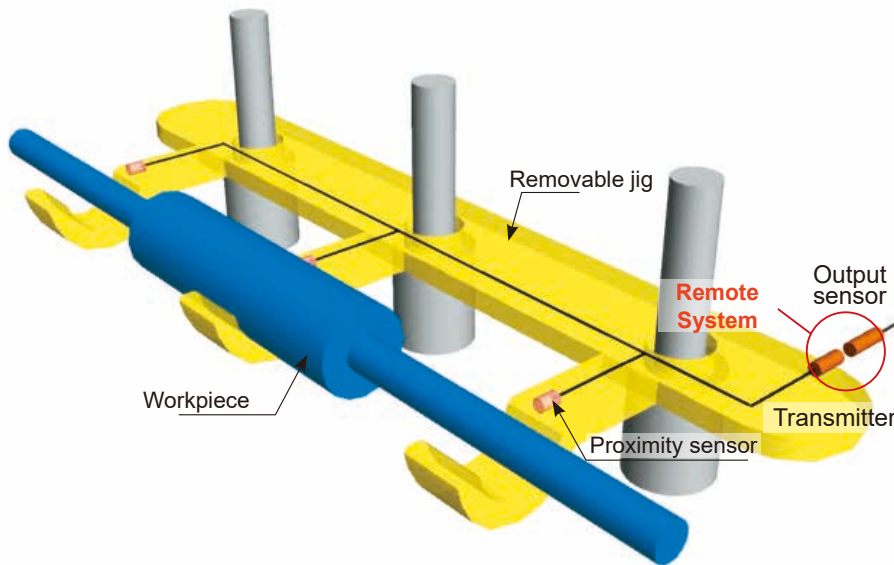
## Remote System

### After improvement

- Sending of power and the data communication of CC-Link are performed simultaneously without hardwiring.
- Automated adjustment of the jig improved loading efficiency.



## Confirming workpiece on a removable jig



### Previous problems

- Manual attaching and detaching of the connectors required for every jig replacement.

### Solution!



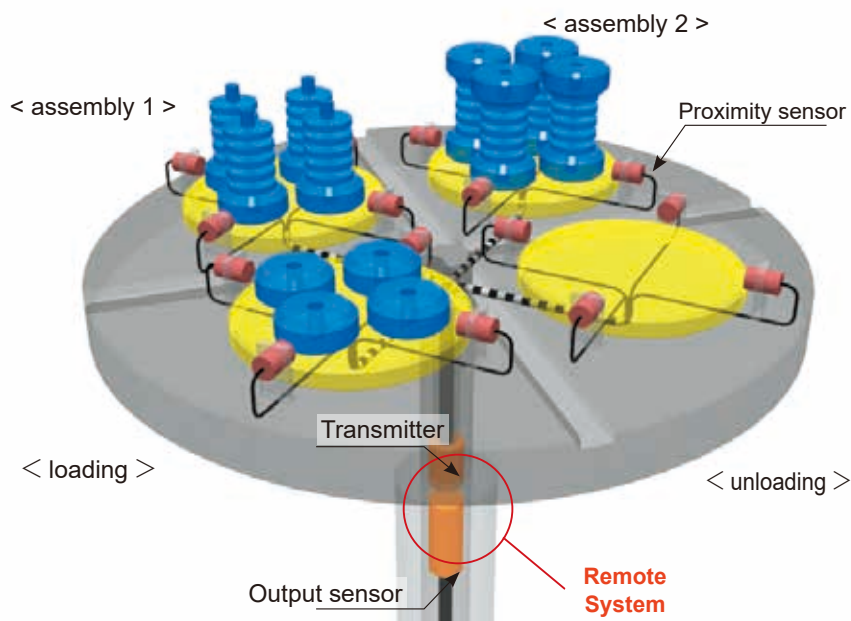
### Remote System

### After improvement

- Eliminated connection process.
- Faster change-out time.
- Eliminated wear and tear components.

Replace welding jig according to the shape of the workpiece.  
Confirm the seating of the workpiece, and weld.  
Remote system sends power to proximity sensors and transmits their switching state.

## Confirming presence of workpiece on a turntable (360 degree continuous transmission)



### Previous problems

- No productive method to install sensors on a turntable available.
- Seating of workpieces visually confirmed by operator every time.

### Solution!



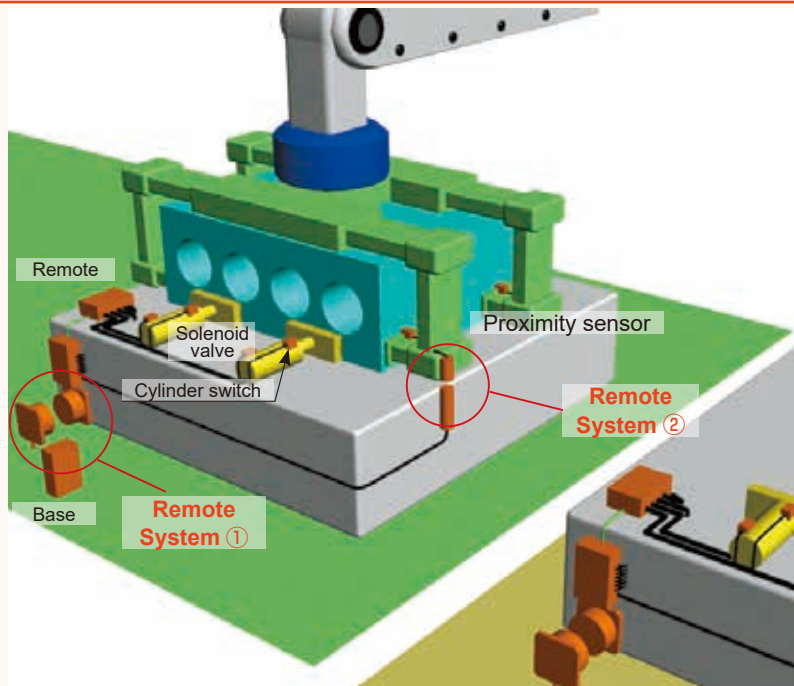
### Remote System

### After improvement

- Successfully installed 16 functional sensors.
- Eliminated visual confirmation enabled full automation.
- Continuous use of all sensors possible by heads installed in the center.

Load, assembly and unload process, by using 4 jigs on a turntable. Turning 90 degree at a time.  
Remote system is installed on the center. Providing power to 16 sensors and transmits their signals simultaneously.

## Confirmation of workpiece on pallet and robot hand ( Two air gaps transmission)



### Previous problems

- Desire to eliminate connection leadtime of sensors and solenoid valves on the pallet.
- Also have desire to eliminate connection time for robot hand change-outs.

### Solution!



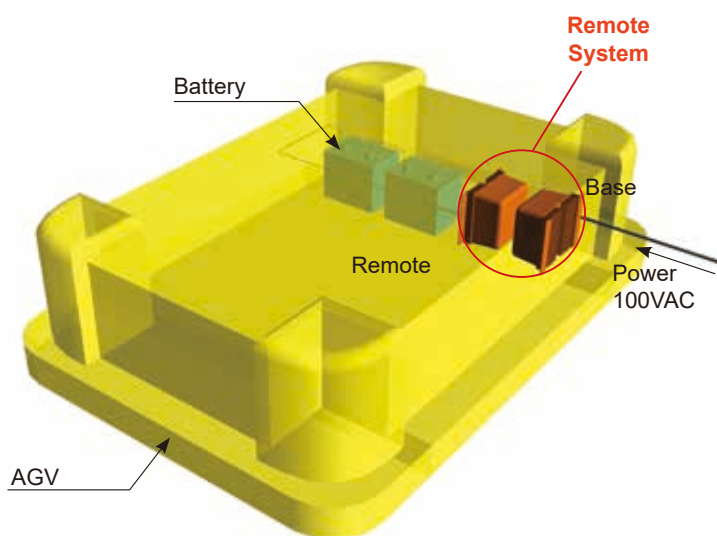
### Remote System

### After improvement

- Eliminated connection labor on the pallet eliminated time loss.
- Also eliminated connection labor on robot hand change-outs.
- Production line was fully automated.

Confirm and mount workpiece by utilizing sensors and solenoid valves, also workpiece recognition on robot hand transmitted through pallet with the 2 airgap transmission.

## Battery charging of automatic guided vehicle (AGV)



### Previous problems

- Desire to eliminate battery change-outs during operation hours.
- Desire to extend interval of the battery charges.

### Solution!



### Remote System

### After improvement

- Eliminated need for battery change-outs.
- Extended interval of full charging, improved efficiency.
- No exposed terminals, no risk to operators.

The battery of AGV units are partly charged during the waiting time at stops.

## Product overview

### Function & Features

### Application

### Product range

### Description of terms

Wireless power supply and detected signal transmission

## Remote Sensor System



< applications >

- Confirming work piece on the turntable and pallet.
- Monitoring the temperature of the die or heatup container.

Wireless Power Supply	Drive voltage	12V DC or 24V DC
	Drive current	5mA ... 550mA
Signal transmission	Switch signal	Standard sensor : 1 ... 16 signals Exclusive proximity sensor : 1, 8 signals
	Analog Signal	Thermocouple, Resistance thermometer, Load cell, Analog sensor

### Switch signal transmission

#### Regular type

For DC 3 wire sensor

Regular type

Number of signal : 1, 4, 8

Terminal unit type

Number of signal : 8, 16



#### Terminal unit type



For DC 2 wire sensor

Regular type

Number of signal : 1, 2, 4, 8, 15

Terminal unit type

Number of signal : 8, 16



For exclusive proximity sensor

Number of signal : 1, 8



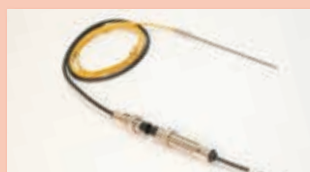
### Analog signal transmission

For Thermocouple

Number of signal :

K type : 1, 2

J type : 2



Thermocouple (1 signal, 2 signals)



Resistance thermometer (1 signal)

For Resistance thermometer

Number of signal : 1

For Load cell

Number of signal : 1

For Analog sensor

Number of signal : 1



Load cell type (1 signal)



Analog sensor type (1 signal)

If you can not find the applicable products in this catalogue, please contact us.

We will endeavor to provide a "Remote System" to fulfill your needs as far as possible.



T-slot shape



Ring shape



## Wireless power supply and bi-directional signal transmission

### Remote Coupler System



- < applications >
- Confirming of the work piece on the moving device and start up the solenoid valve
  - Transmits the inspection data of pallet

Wireless Power Supply	Drive voltage	24V DC
	Drive current	300mA, 1A, 2A
Signal transmission	Switch signal	4+4, 8+8, 64+32
	Data Signal	RS-232C, CC-Link, DeviceNet

#### Switch signal transmission

##### 4+4 transmission

Bi-directional transmission of 4 detected signals+ 4 control signals



##### 8+8 transmission

Bi-directional transmission of 8 detected signals+ 8 control signals



##### 64+32 transmission

Bi-directional transmission of 64 detected signals+ 32 control signals



Interface with the host computer:  
Parallel,  
CC-Link,  
DeviceNet,  
EtherNet/IP

#### Data Signal transmission



RS-232C



DeviceNet



CC-Link

## Wireless Power Supply

### Remote Power Supply System



- < applications >
- Wireless power supply to the movable devices
  - Charging at the AGV parking spot

Wireless Power Supply	Drive Voltage / current	24V DC / 1A, 2A
Wireless charging	Output Voltage / current	30V DC / 7A

#### Power supply only

##### Parallel

24V DC/2A



##### Overlap

24V DC/1A



#### Power supply only

##### Parallel

30V DC/7A  
(It varies depending on battery voltage)



CE not acquired  
Use only in Japan

## Product overview

### Function & Features

### Application

### Product range

### Description of terms

# Description of terms

Terms listed in this catalog are described below.

< Name of each part of Remote system >

It is described as "Transmitter"/"Output sensor" in Remote Sensor System and "Remote part"/"Base part" in the power supply system.

In this section, it describes that "Transmitter and Remote part" as "Transmitter", "Output sensor and Base part" as "Output sensor"

## 1) Transmitter and Output sensor

By facing Transmitter and Output sensor, Remote system performs wireless transmission of the power and signals by inductive coupling.

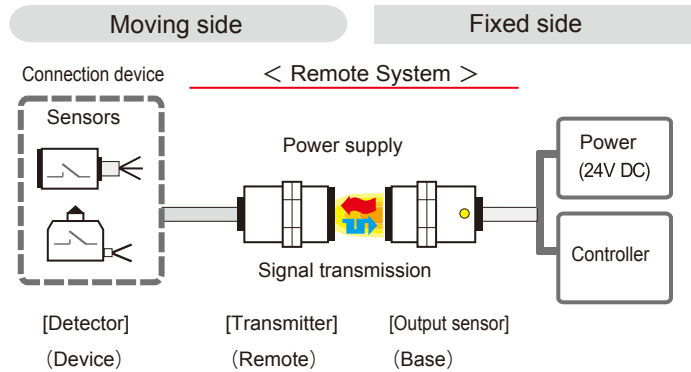
### Transmitter (Remote)

Transmitter is mounted to the moving side such as pallet and connects devices such as switches, which are used on the moving side.

Transmitter receives power from the output sensor, it supplies power to connected devices and transmits the I/O signals to output sensor.

### Output sensor (Base)

Output sensor is mounted on the fixed unit and connected to the external control devices and external power supply. When transmitter comes in the transmission area of output sensor, it performs signal transmission and communication with external control devices simultaneously.



## 2) Drive voltage / Drive current

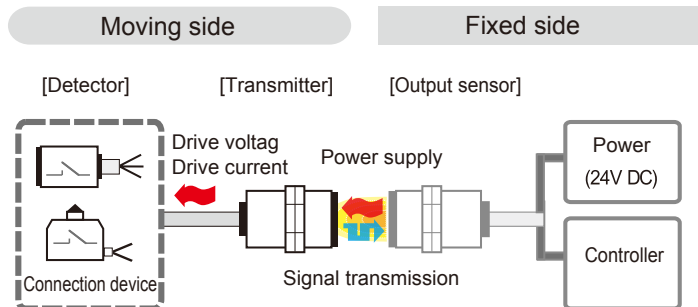
Power supplied from transmitter to those connected devices such as sensors and actuators is described as "Drive voltage" and "Drive current".

### Drive voltage

The voltage, which is supplied from transmitter to connected devices. It is kept constant in the rated transmission distance.

### Drive current

The current, which is supplied from transmitter to connected devices. Please design the system so that the total current consumption of connecting devices does not exceed the value of drive current.



## 3) Operating voltage and Current consumption

Operating voltage and current consumption are the power which is supplied to the output sensor of the fixed unit.

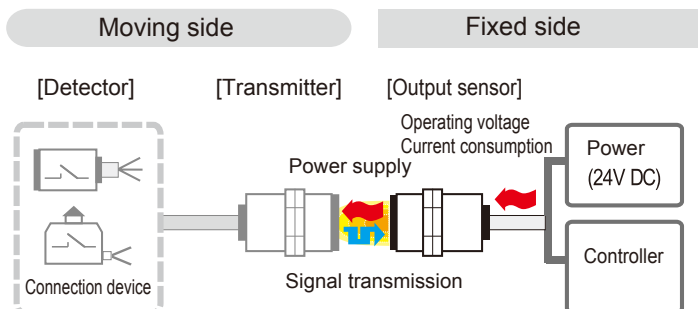
### Power supply

The voltage to operate the output sensor and supply power to the transmitter. If the voltage is below the operating voltage range, power cannot be supplied to the transmitter and then signal transmission cannot be performed.

### Current consumption

The current to drive the output sensor, transmitter, and devices which are connected to the transmitter.

To confirm the existence of the transmitter, the output sensor consumes a slight current in its stand-by mode.



## 4) Operating distance and Center offset

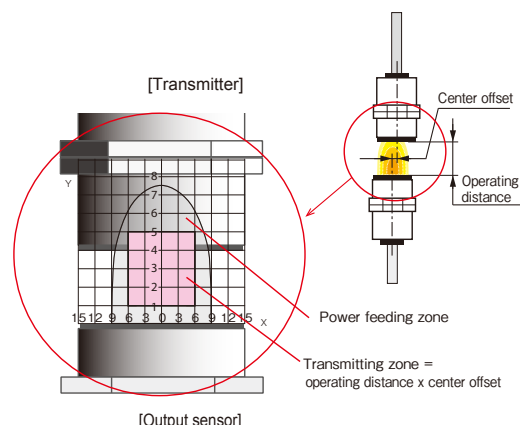
Operating distance and center offset indicates the area where the rated power supply and the signal transmission between transmitter and output sensor can be performed stable.

### Operating distance

The distance between the active face of transmitter and output sensor.

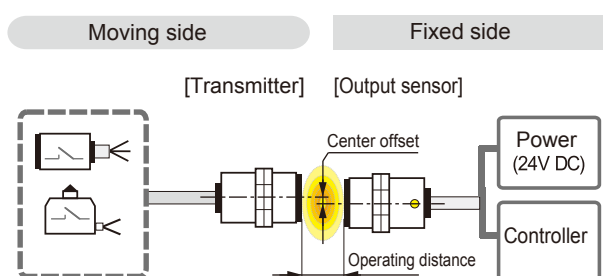
### Center offset

The deviation of the center axis of each of the transmitter and the output sensor.



## 5) Inzone

It means that the transmitter exists in the output sensor's power feeding range and the signal transmission status is available. The output sensor outputs the signal and indicates the LED during Inzone. (There are some exceptions.)



## 6) Frequency of operation and Response delay

The signal transmission speed of Remote system is indicated by "response delay" in switch signal transmission type and by "frequency of operation" in analog signal transmission type.

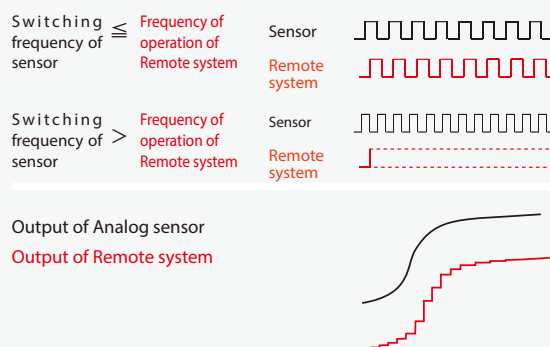
### Frequency of operation

The speed, which the switch signal transmission type remote system transmits the ON/OFF signals, it is shown as "maximum frequency" in the catalog. When transmits the signals that do the ON/OFF 10 times per 1 second with the frequency of operation of 30Hz Remote system, when the signal do ON/OFF more than 30 times, it is not output in normal waveform.

### Response delay

It is a time that after the transmitter of the analog signal transmission Remote system detected the sensor signal and until the output sensor outputs corresponding signal.

### The sensor output and Remote system output



## 7) Residual voltage and Load capacity of the available sensor

As a condition of detector sensor, which can be connected to th Remote system / switch signal transmission type transmitter, the value of "residual voltage" and "load capacity" are defined.

### Residual voltage

The voltage between power + and - when detector sensor is ON. If this voltage is larger, "ON voltage" to the transmitter of remote system becomes smaller and transmitter cannot recognize ON. Please use the sensor with the residual voltage less than 3.5V.

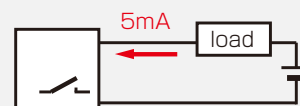
### Load current

DC 2 wire Remote system Transmitter flows 5 mA as load. If the load capacity of the connected sensor is less than 6mA-100mA, unit doesn't work due to the insufficient load capacity. Please use the sensor with the lower limit of load capacity 5mA.

Residual voltage  
less than 3.5V



Load current  
less than 5mA





## 【Notes for designing】

---

- Remote System is a system, which supplies/transmits the power/signals wirelessly to the switches. Please do not use the system except for this purposes.
- Please design the system to work safely in case of the unit malfunction or external power supply failure.
- For power supply / condition of use, design the system not to exceed the specifications of the unit as indicated in the user's guide or manuals
- Some of products with the wireless power supply over 24V/500mA, it is recommended to install to the metal in order to mitigate the effects of self-heating.
- Remote Coupler system, which supplies the power over 24V/1A, make sure to avoid metals within the 45mm of the transmission surface.

## 【Precautions】

---

- Please supply prescribed power by the specification. Do not exceed the specified rated voltage as it may cause overheating or ignition.
- When wiring the power supply and signal line, please follow to the attached user's guide or instruction manuals for correct wiring. Mis-wiring or wrong connection may cause unexpected malfunction and breakdown of the unit.
- Remote Coupler system, which supplies the power over 24V/1A, when power was turned on while cutting chips or pieces of metal exist on the transmission surface, the head and the metal piece heats up and this may cause for unexpected accidents or damage to the equipment. Please be sure to run the system after removing metal chips and slugs from the transmission surface. (Especially, when a tiny piece of metal exists on the transmission surface, it may get to over 100 degree C.)
- The total current consumption of connecting switch and driving units must not exceed the value of drive current.
- Please turn off the Remote System before any performances such as mounting, maintenance or breakdown.
- Please do not dismantle / modify the unit. It may cause breakdown or malfunction of the unit as well as cause for fire.
- When disposing the product, please treat it as industrial waste.

## Radio law in Japan

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Remote System as below corresponds to "Equipment which use high frequency more than 10kHz and have power more than 50W" in the radio law Article 100. These are System of "High frequency utilization equipment". Thus, it needs to apply in accordance with the procedures of High Frequency Utilization equipment of Ministry of Internal Affairs and Communications. For more information, please refer to the website of the Telecommunications Ministry of Internal Affairs and Communications.

Remote Power Supply System :

Charging unit : RCS210-PB24  
Power Supply unit : RCS240-AC1  
Passive head : RCS240PH  
Active head : RCS240AH

Please refer to the instruction of User's guide supplied with the products for installation and operation.

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Product list

Remote Sensor

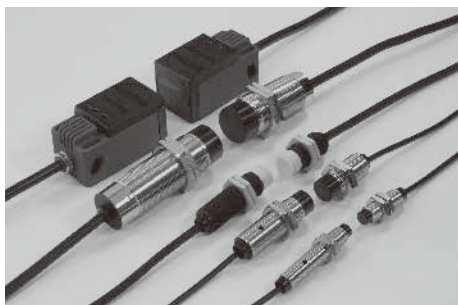
Remote Coupler

Remote Power Supply

Accessories

#### Switch signal transmission

#### DC 3-wire Detector type



■ DC 3-wire standard sensors can be used on the moving part.



Remote system supplies power to standard sensors - such as proximity sensors, photoelectric sensors and reed switches - and also transmits their detected signals. DC 2 wire sensor can be connected via resistor.

■ Wide square transmission surface type is available.

Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog  
sensor type

Exclusive  
Proximity sensor

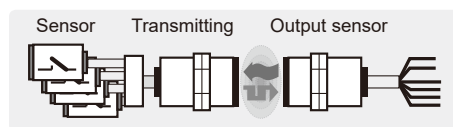
Terminal box  
Other unit

Custom  
Products

#### Regular type



The simplest configuration of Remote Sensor systems. Up to 8 of DC 3-wire sensors can be connected and each signal is parallel output.



Transmission Specifications				Type Code		Remark	Page
No. of Signals	Size	Max. Operating distance	Drive voltage & max. current	Transmitter	Output sensor		
1	M18	4 mm	12V DC 30 mA	RPT-1804 □ -PU-01	RPE-1804 □ -PU-02		32
				RPT-1804 □ -PU-CP0.3	RPE-1804 □ -PU-CP0.3	Pre-wired connector	
				RPT-TF1804 □ -PU-01	RPE-TF1804 □ -PU-02	Anti-weld slag	
				RPT-TF1804 □ -PU-CP0.3	RPE-TF1804 □ -PU-CP0.3	Pre-wired connector	
	M30	8 mm	12V DC 30 mA	RPT-3008 □ -PU-01	RPE-3008 □ -PU-02		33
				RPT-3008 □ -PU-CP0.3	RPE-3008 □ -PU-CP0.3	Pre-wired connector	
				RPT-TF3008 □ -PU-01	RPE-TF3008 □ -PU-02	Anti-weld slag	
				RPT-TF3008 □ -PU-CP0.3	RPE-TF3008 □ -PU-CP0.3	Pre-wired connector	
4	M18	3 mm	12V DC 30 mA	RPTA-1803-PU-01	RPEA-1803 □ -PU-02		34
				RPTA-TF1803-PU-01	RPEA-TF1803 □ -PU-02	Anti-weld slag	
	M30	5 mm	12V DC 30 mA	RPTA-3005-PU-01	RPEA-3005 □ -PU-02		35
				RPTA-TF3005-PU-01	RPEA-TF3005 □ -PU-02	Anti-weld slag	
8	M30	5 mm	12V DC 150 mA	RGPT-3005-V1215-PU-01	RGPE-3005-V1215 □ -PU-02		36
	40 x 40	8 mm	12V DC 200 mA	RGPT-4008-V1220A-PU-01	RGPE-4008-V1220 □ A-PU-02		37
				RGPT-4008-V1220B-PU-01	RGPE-4008-V1220 □ B-PU-02		
	80 x 80	22 mm	12V DC 100 mA	RPTA-8015-PU-01	RPEA-8015 □ -PU-02		38
12	90 x 90	12 mm	24V DC 300 mA	RGPT-9012-V2430-PU-01	RGPE-9012-V2430 □ -PU-02		39
	45 x 45	5 mm	12V DC 230 mA	RS12T-422-PU-01	RS12E-422 □ -PU-02		40

-Please be sure to use transmitter and output sensor in the combination of the same size with same specifications.

-The drive voltage and current is the power which is supplied to sensors from the Transmitter. The drive current is affected by transmission distance and center offset.

#### Pre-wired connector

Reduced the wiring procedures. M12 connector (Transmitter;female, output sensor; male) is included. The standard cable length is 30 cm.

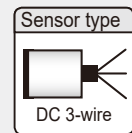
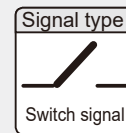


#### Anti-weld slag

With the fluorine resin coated housing and fluorine resin cap, weld splatter is less likely to stick.



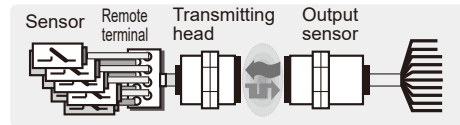




## Terminal unit type



Change the transmitter to connectorized and make it easy and accurate wiring. Downsizing the head by separating transmitter. 8 or 16 sensors are connectable. Wireless power supply 24 V DC/550 mA type is available.



Transmission Specifications				Type Code			Remark	Page
No. of Signals	Size	Max. Distance	Drive voltage Drive current	Transmitter Remote terminal	Transmitting head	Output sensor		
8	M30	8mm	12V DC 150 mA	RS8TA-222P-S04	RSH8T-030-PU-CP1.0	RSH8E-030 □ -PU-02	Anti-weld slag	42•43
				RS8T-222P-S04	RSH8T-TF030-PU-CP1.0	RSH8E-TF030 □ -PU-02		
16	M30	8mm	12V DC 150 mA	RS16TA-211P-S04	RSH16T-030-PU-CP1.0	RSH16E-030 □ -PU-02	Anti-weld slag	44•45
				RS16T-211P-S04	RSH16T-TF030-PU-CP1.0	RSH16E-TF030 □ -PU-02		
		5mm	24V DC 550mA	RS16TB-211P-S04	RSH16TB-030-PU-CP1.0	RSH16EB-030P-PU-02		46•47

## Terminal Box (Accessories)



Terminal box for connecting detector sensors and general transmitter.  
For RPK series, by switching internal DIP switch, DC 2wire sensor can be connected to the DC 3 wire Remote system.

Product range	Type Code	Remark	Page
Standard type 	4 detectors	RPK-2102	DC 3-wire and 2-wire sensor
	8 detectors	RPK-2101	DC 3-wire and 2-wire sensor 8x1 side
		RPK-2103	DC 3-wire and 2-wire sensor 4x2 side
Waterproof type 	8 detectors	RPK-A098-02	DC 3-wire and 2-wire sensor 4x2 side
		RPK-A098-03	DC 3-wire and 2-wire sensor 8x1 side
		RPK-B148-02	DC 3-wire and 2-wire sensor
Connector type 	4 detectors	RPK-4C01- □	DC 3-wire and 2-wire sensor
	8 detectors	RPK-8C01- □	DC 3-wire and 2-wire sensor
		RPK-8C01L- □	applicable Transmitter RGPT-xxxx
AC conversion unit 	4 detectors	RGP4T-AC100-KB02A	applicable Transmitter RGPT-9012. Converts the drive voltage 24 V DC into 100 V AC.

Operation checker for transmitter and output sensor is available.

Type Code Example	<p>□ in type code means N → NPN or P → PNP.          _ _ at the end means cable length. The standard cable length has been described in meter.          Examples are showed below.</p>		
	<p>Transmitter RPT-1804N-PU-01</p> <p>N=NPN Cable length(m)          P=PNP 01=1m (standard)          D=DC2W 02=2m          03=3m</p>	<p>Output sensor RPE-1804N-PU-02</p> <p>N=NPN Cable length(m)          P=PNP 02=2m (standard)          03=3m          05=5m</p>	<p>(Pre-wired connector) Basic Code - CP0.3</p> <p>Cable length(m)          0.3=30cm (standard)          0.5=50cm</p>

The standard cable length is 1m for the Transmitter, 2 m for the Output sensor and 0.3 m for the Transmitter and the Output sensor of pre-wired connector type.

Product list

Remote Sensor

Remote Coupler

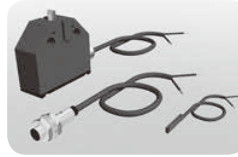
Remote Power Supply

Accessories

#### DC 2-wire Detector type



■ DC 2-wire standard sensors can be used on the moving part.



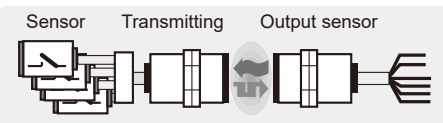
Supply the power as well as transmit the signals to general sensors such as proximity switches, auto switches and limit switches.

■ Anti-weld slag type is available.

#### Regular type



The simplest configuration of Remote Sensor systems. Up to 15 of 2-wire sensors can be connected and each signal is parallel output.



Transmission Specifications				Type Code		Remark	Page
No. of Signals	Size	Max. Distance	Drive voltage / Drive current	Transmitter	Output sensor		
1	M12	2 mm	12V DC 5 mA	RPT-1202D-PU-01	RPE-1202 □ -PU-02		48
				RPT-1202D-PU-CP0.3	RPE-1202 □ -PU-CP0.3	Pre-wired connector	
	M18	4 mm		RPT-1804D-PU-01	RPE-1804 □ -PU-02		49
				RPT-1804D-PU-CP0.3	RPE-1804 □ -PU-CP0.3	Pre-wired connector	
				RPT-TF1804D-PU-01	RPE-TF1804 □ -PU-02	Anti-weld slag	
				RPT-TF1804D-PU-CP0.3	RPE-TF1804 □ -PU-CP0.3	Anti-splatter, Pre-wired	
	M30	8 mm		RPT-3008D-PU-01	RPE-3008 □ -PU-02		50
				RPT-3008D-PU-CP0.3	RPE-3008 □ -PU-CP0.3	Pre-wired connector	
				RPT-TF3008D-PU-01	RPE-TF3008 □ -PU-02	Anti-weld slag	
				RPT-TF3008D-PU-CP0.3	RPE-TF3008 □ -PU-CP0.3	Anti-splatter, Pre-wired	
50x25	1.5mm		RPT-F0D-PU-01	RPE-F0 □ -PU-02	Flat Type	51	
2	M18	4 mm	12V DC 5 mA×2	RPT2-1804D-PU-01	RPE2-1804 □ -PU-02		52
				RPT2-1804D-CP0.3		Transmitter:Pre-wired connector	
				RPT2-TF1804D-PU-01	RPE2-TF1804 □ -PU-02	Anti-weld slag	
				RPT2-TF1804D-CP0.3		Transmitter:Pre-wired connector	
	M30	5 mm	RPT2-3005D-PU-01	RPE2-3005 □ -PU-02		53	
			RPT2-3005D-CP0.3		Transmitter:Pre-wired connector		
			RPT2-TF3005D-PU-01	RPE2-TF3005 □ -PU-02	Anti-weld slag		
			RPT2-TF3005D-CP0.3		Transmitter:Pre-wired connector		
4	M18	3 mm	12V DC 5 mA×4	RPT4-1803D-PU-01	RPE4-1803 □ -PU-02		54
		RPT4-TF1803D-PU-01		RPE4-TF1803 □ -PU-02	Anti-weld slag		
	M30	5 mm		RPT4-3005D-PU-01	RPE4-3005 □ -PU-02		55
				RPT4-TF3005D-PU-01	RPE4-TF3005 □ -PU-02	Anti-weld slag	
8	M18	3 mm	12V DC 5 mA×8	RPT8-1803D-PU-01	RPE8-1800 □ -PU-02		56
					RPT8-TF1803D-PU-01	RPE8-TF1800 □ -PU-02	
	M30	7 mm	22V DC 5 mA×8	RPT8-3007D-PU-01	RPE8-3000 □ -PU-02		57
					RPT8-TF3007D-PU-01	RPE8-TF3000 □ -PU-02	
	M18	3 mm	12V DC 5 mA×8	RS08TA-018D-PU-01	RS08EA-018 □ -PU-02	80 degree C	58
	M30	7 mm		RS08TA-030D-PU-01	RS08EA-030 □ -PU-02	80 degree C	59
15	M30	5 mm	12V DC 5 mA×15	RPT15-3005D-PU-01	RPE15-3000 □ -PU-02		60
					RPT15-TF3005D-PU-01	RPE15-TF3000 □ -PU-02	

- Please be sure to use transmitter and output sensor in the combination of the same size with same specifications.

- The drive voltage and current is the power which is supplied to sensors from the Transmitter. The drive current is affected by transmission distance and center offset.

#### Pre-wired connector

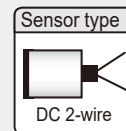
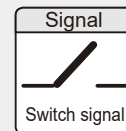
The pre-molded M12 connector reduces the wiring procedures. (Transmitter:female, Output sensor:male).The standard cable length is 30 cm.



#### Anti-weld slag

With the fluorine resin coated housing and fluorine resin cap, weld splatter is less likely to stick.

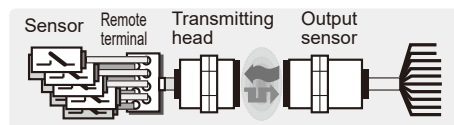




## Terminal unit type



Change the transmitter to connectorized and make it easy and accurate wiring. Downsizing the head by separating transmitter. 8 or 16 sensors are connectable.



Transmission Specifications				Type Code			Remark	Page
No. of signals	- Size	Max. Distance	Drive voltage Drive current	Transmitter		Output sensor		
				Remote terminal	Transmitting head			
8 signals	M30	8mm	22V DC 5 mA x 8	<b>RS8TA-222D-S04</b>	<b>RSH8T-030-PU-CP1.0</b>	<b>RSH8E-030 □ -PU-02</b>	Anti-weld slag	62•63
				<b>RS8T-222D-S04</b>	<b>RSH8T-TF030-PU-CP1.0</b>	<b>RSH8E-TF030 □ -PU-02</b>		
16 signals	M30	8mm	22V DC 5 mA x 16	<b>RS16TA-211D-S04</b>	<b>RSH16T-030-PU-CP1.0</b>	<b>RSH16E-030 □ -PU-02</b>	Anti-weld slag	64•65
				<b>RS16T-211D-S04</b>	<b>RSH16T-TF030-PU-CP1.0</b>	<b>RSH16E-TF030 □ -PU-02</b>		

## Exclusive proximity sensor:RXD (Accessories)

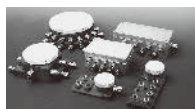


Exclusive proximity sensor RFD series can be used as detector for DC2 wire Remote Sensor just like the general 2 wire.




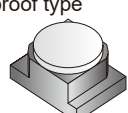

Applicable Remote Sensor	Rated sensing Distance	Size	Type Code		Remark	Page
			Cable type	Pre-wired connector type		
DC 2-wire Detector type Transmitter or Remote terminal	1.5 mm	M8	<b>RFD-0801-PU-01</b>	—		106
	2 mm	M12	<b>RFD-1202-PU-01</b>	<b>RFD-1202-PU-CP1.0</b>		
	5 mm	M18	<b>RFD-1805-PU-01</b>	<b>RFD-1805-PU-CP1.0</b>		
	10 mm	M30	<b>RFD-3010-PU-01</b>	<b>RFD-3010-PU-CP1.0</b>		

## Terminal Box (Accessories)



Terminal box for connecting detector sensors and general transmitter.

When wiring DC 2wire Remote Sensor to the terminal box RPK series, please be sure to set the Dip switch to "OFF"

Product range		Type Code		Remark	Page
Standard type 	- A box for factory automation system is used as the housing. - Protection class; IP 65	4 detectors	<b>RPK-2102</b>	DC 3-wire and 2-wire sensor	108
		8 detectors	<b>RPK-2101</b>	DC 3-wire and 2-wire sensor 8x1 side	
			<b>RPK-2103</b>	DC 3-wire and 2-wire sensor 4x2 side	
			<b>RFK-3101</b>	DC 2-wire	109
Waterproof type 	- Original "α-box" which has a round screw lid. - Protection class; IP 67.	8 detectors	<b>RPK-A098-02</b>	DC 3-wire and 2-wire sensor 4x2 side	110
			<b>RPK-A098-03</b>	DC 3-wire and 2-wire sensor 8x1 side	
			<b>RPK-B148-02</b>	DC 3-wire and 2-wire sensor	
		15 detectors	<b>RPK-B148-03</b>	DC 2-wire	110
		8 detectors	<b>RFK-A098-02</b>	DC 2-wire 4 x 2 side	111
			<b>RFK-A098-03</b>	DC 2-wire 8 x 1 side	
Connector type 	- Detectors can be connected to Terminal Box with connectors. - Protection class; IP 67.	4 detectors	<b>RPK-4C01- □</b>	DC 3-wire and 2-wire sensor	112
		8 detectors	<b>RPK-8C01- □</b>	DC 3-wire and 2-wire sensor	

Operation checker for transmitter and output sensor is available.

Type Code Example	□ in type code means N → NPN or P → PNP.		
	__ at the end means cable length. The standard cable length has been described in meter.		
	Examples are showed below.		
	Transmitter <b>RPT-1804N-PU-01</b> N=NPN Cable length(m) P=PNP 01=1m (standard) D=DC2W 02=2m 03=3m	Output sensor <b>RPE-1804N-PU-02</b> N=NPN Cable length(m) P=PNP 02=2m (standard) 03=3m 05=5m	(Pre-wired connector) <b>Basic Code</b> - CP0.3 Cable length(m) 0.3=30cm (standard) 0.5=50cm

The standard cable length is 1m for the Transmitter, 2 m for the Output sensor and 0.3 m for the Transmitter and the Output sensor of pre-wired connector type.

## Product list

## Remote Sensor

## Remote Coupler

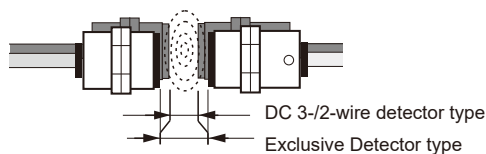
## Remote Power Supply

## Accessories

#### Exclusive Detector type



- By using exclusive sensor which works with low electric power, it has longer transmission distance compare to the same size Remote Sensor for general sensors.



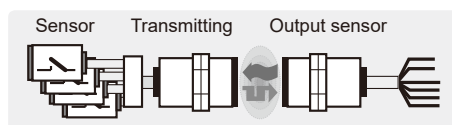
- For 1 signal transmission type, there is a "Detector/Transmitter cable molded" type is available.

#### Regular type



Remote Sensor which uses the exclusive proximity sensor RXD.

1 or 8 RXD series switch(s) can be connected and each signal is parallel output.



Transmission Specifications			Type Code		Remark	Page
No. of signals	Size	Max. Distance	Transmitter	Output sensor		
1	M12	2 mm	RXT-1202-PU-01	RXE-1202 □ -PU-02	Pre-wired connector for a mechanical sensor	66
			RXT-1202-PU-CP0.3	RXE-1202 □ -PU-CP0.3		
			RST-1202-PU-01			
	M18	5 mm	RXT-1805-PU-01	RXE-1805 □ -PU-02	Pre-wired connector	67
			RXT-1805-PU-CP0.3	RXE-1805 □ -PU-CP0.3		
8	M18	5 mm	RXT8-1805-PU-01	RXE8-1800 □ -PU-02		68
	M30	10 mm	RXT8-3010-PU-01	RXE8-3000 □ -PU-02		69

- Please be sure to use transmitter and output sensor in the combination of the same size with same specifications.

#### Pre-wired connector

Reduced the wiring procedures. M12 connector (Transmitter ; female, output sensor ; male) is included. The standard cable length is 30 cm.



#### Type Code Example

□ in type code means N → NPN or P → PNP.

\_\_ at the end means cable length. The standard cable length has been described in meter. Examples are showed below.

Transmitter  
RXT-1805-PU-01

Cable length(m)  
01=1m (standard)  
02=2m  
03=3m

Output sensor

RXE-1805N-PU-02

N=NPN  
P=PNP  
Cable length(m)  
02=2m (standard)  
03=3m  
05=5m

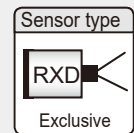
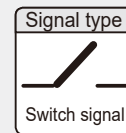
(Pre-wired connector)

Basic Code - CP0.3

Cable length(m)  
0.3=30cm (standard)  
0.5=50cm

The standard cable length is 1m for the Transmitter, 2 m for the Output sensor and 0.3 m for the Transmitter and the Output sensor of pre-wired connector type.





## Exclusive proximity sensor:RXD (Accessories)



Switches for RXT and RXT8 series. flush mountable and no LED indication.

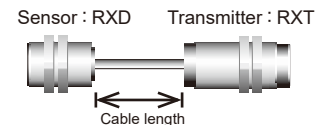


Applicable Remote Sensor	Rated sensing Distance	Size	Type Code		Remark	Page
			Cable type	Pre-wired connector		
Transmitter RXT-xxxx RXT8-xxxx	1.5 mm	M8	<b>RXD-0801-PU-01</b>	---		107
	2 mm	M12	<b>RXD-1202-PU-01</b>	<b>RXD-1202-PU-CP1.0</b>		
	5 mm	M18	<b>RXD-1805-PU-01</b>	<b>RXD-1805-PU-CP1.0</b>		
	10 mm	M30	<b>RXD-3010-PU-01</b>	<b>RXD-3010-PU-CP1.0</b>		

## Detector/Transmitter cable molded type



RXD/RXT cable molded type, which 1 signal transmission type transmitter RXT and the detector switch RXD are molded on the both ends of a cable is available.

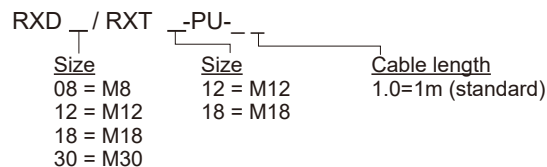


- No wiring is required and can start mountings immediately
- No cable joints increases waterproofness.

Detector	Cable length	Transmitter
RXD-0801-PU	30 cm (0.3)	RXT-1202-PU RXT-1805-PU
RXD-1202-PU	50 cm (0.5)	
RXD-1805-PU	1 m (1.0)	
RXD-3010-PU	1.5 m (1.5) 2 m (2.0)	

### How to order detector/transmitter cable molded type

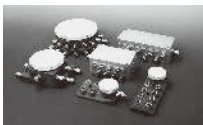
As stated below, please specify the size and cable length for each of detector and transmitter.



example : sensor : RXD-1202 +Transmitter:RXT-1805 + cable length50cm

**RXD12/RXT18-PU-0.5**

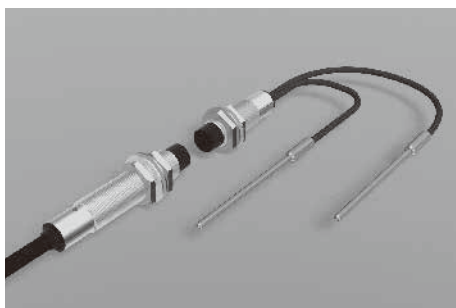
## Terminal Box (Accessories)



Terminal box for connecting exclusive proximity sensor RXD and Transmitter RXT8.

Product range			Type Code		Remark	Page
Standard type	Waterproof type	Connector type	8 detectors	<b>RFK-3101</b>	Standard type	109
				<b>RFK-A098-02</b>	Waterproof type	111
				<b>RFK-A098-03</b>	Waterproof type	
				<b>RFK-8C01</b>	Connector type	113

### Analog signal transmission

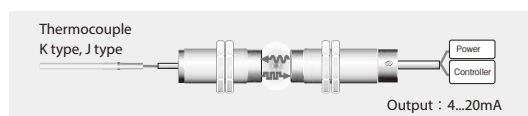



- Transmits the displacement output of thermocouple or load cell. Output the corresponding analog value.

### Thermocouple type



Transmit the temperature measuring signal of thermocouple K/J type and output it as 4...20mA.

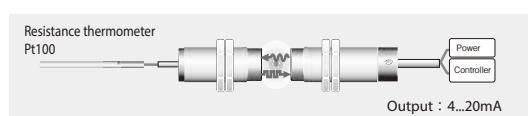



Sensor type	Measuring range	No. of Signals	Max. Distance	Size	Type Code Transmitter	Output sensor	Page
 K type	0...1000°C	1	4 mm	M18	<b>RTT-1804-K100</b>	<b>RTE-1804E-PU-02</b>	70
Thermocouple	K type	2	4 mm	M18	<b>RS02T-018-K1000</b>	<b>RS02E-018E-PU-02</b>	72
	0...300°C	2	4 mm	M18	<b>RS02T-018-K300</b>		73
	J type	2	4 mm	M18	<b>RS02T-018-J300</b>		

### Resistance thermometer type



Transmit the temperature measuring signal of platinum resistance temperature detector Pt100 and output it as 4...20mA.

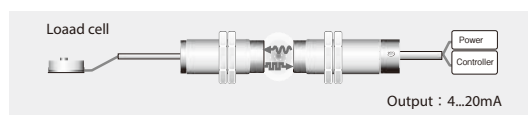



Sensor type	Measuring range	No. of Signals	Max. Distance	Size	Type Code Transmitter	Output sensor	Page
 Resistance thermometer Pt100	0...100°C	1	4 mm	M18	<b>RTT-1804-PT1B10-PU-01</b>	<b>RTE-1804E-PU-02</b>	74
	0...200°C				<b>RTT-1804-PT1B20-PU-01</b>		
	0...300°C				<b>RTT-1804-PT1B30-PU-01</b>		

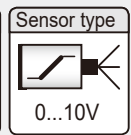
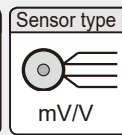
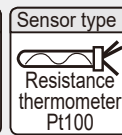
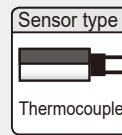
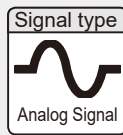
### Load cell type



Transmit output signal of compression load cell and output it as 4...20mA.



Sensor type	Input sensitivity	No. of Signals	Max. Distance	Size	Type Code Transmitter	Output sensor	Page
 compression type Load cell	1mV/V	1	4 mm	M18	<b>RNT-1804-LC10-PU-01</b>	<b>RTE-1804E-PU-02</b>	76
	1.5mV/V				<b>RNT-1804-LC15-PU-01</b>		
	2mV/V				<b>RNT-1804-LC20-PU-01</b>		




## Analog sensor type



Transmit output signal of analog sensor and output it as 0...10V.



Sensor type	Output voltage	No. of Signals	Max. Distance	Size	Type Code Transmitter	Output sensor	Page
 Analog sensor	0...10V	1	2.5 mm	M18	<b>RNT-1803-VS10-PU-01</b>	<b>RNE-1803A-PU-02</b>	78

Product list

Remote Sensor

Remote Coupler

Remote Power Supply

Accessories

Type Code Example	<p>__ at the end means cable length. The standard cable length has been described in meter. Please specify in the following manner.</p>	
	<p>Transmitter RTT-1804-PT1B10-PU-01</p> <p>Cable length(m) 01=1m 02=2m 03=3m</p> <p>The standard cable length is 1m.</p>	<p>Output sensor RTE-1804E-PU-02</p> <p>Cable length(m) 02=2m 03=3m 05=5m</p> <p>The standard cable length is 2m.</p>

Please be sure to use transmitter and output sensor in the combination of the same size with same specifications.

### Switch signal transmission

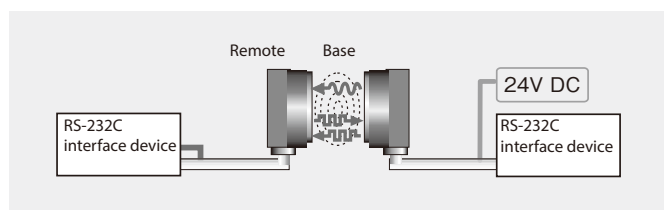


- Possible to bi-directionally transmit detector signal and control signal of moving part.
- 8 + 8 signals transmission type transmit bi-directional signal and simultaneously supply 24DC/2A.
- For 64+32 transmission type, various types of Base Amplifiers corresponding to various fieldbus are provided.

### 4+4 transmission



The simple configuration without an amplifier.  
Transmit bi-directional signals of 4 detectors and 4 actuators and simultaneously supply power 24VDC/300mA.

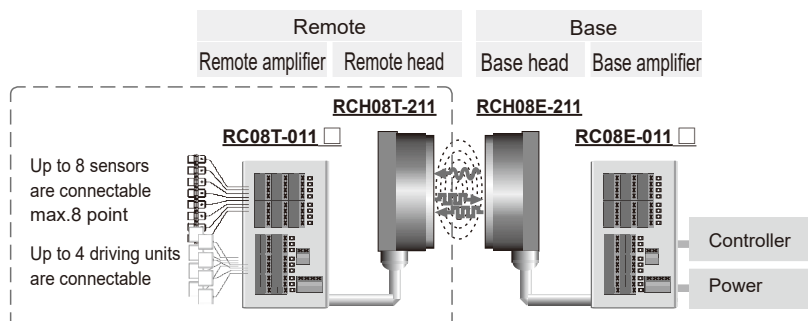


Drive voltage Drive current	No.of Signals	Max. Distance	Type Code		Page
			Remote	Base	
24V DC / 300mA	4+4	10 mm	RHPT8-8010 <input type="checkbox"/> -C3-PU-01	RHPE8-8010 <input type="checkbox"/> -C3-PU-02	82

### 8+8 signals transmission (Separate amplifier)



Transmit 8+8 bi-directional signals and simultaneously supply power 24VDC/2A.



Drive voltage Drive current	No.of Signals	Max. Distance	Type Code				Page
			Remote		Base		
			Remote amplifier	Remote head	Base head	Base amplifier	
24V DC / 2A	Input 8 Output 8	9 mm	RC08T-011 <input type="checkbox"/> -000	RCH08T-211-PU-01	RCH08E-211-PU-02	RC08E-011 <input type="checkbox"/> -000	84·85

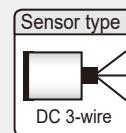
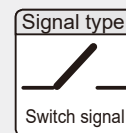
### Type Code Example

☐ in type code means N → NPN or P → PNP.  
\_ \_ at the end means cable length. The standard cable length has been described in meter.  
Please specify in the following manner.  
<Example> 4 + 4 transmission type

Remote: **RHPT8-8010N-C3-PU-01**  
 N=NPN  
 P=PNP  
 Cable length(m)  
 01=1m  
 02=2m  
 03=3m  
 The standard cable length is 1m.

Base: **RHPE8-8010N-C3-PU-02**  
 N=NPN  
 P=PNP  
 Cable length(m)  
 02=2m  
 03=3m  
 05=5m  
 The standard cable length is 2m.



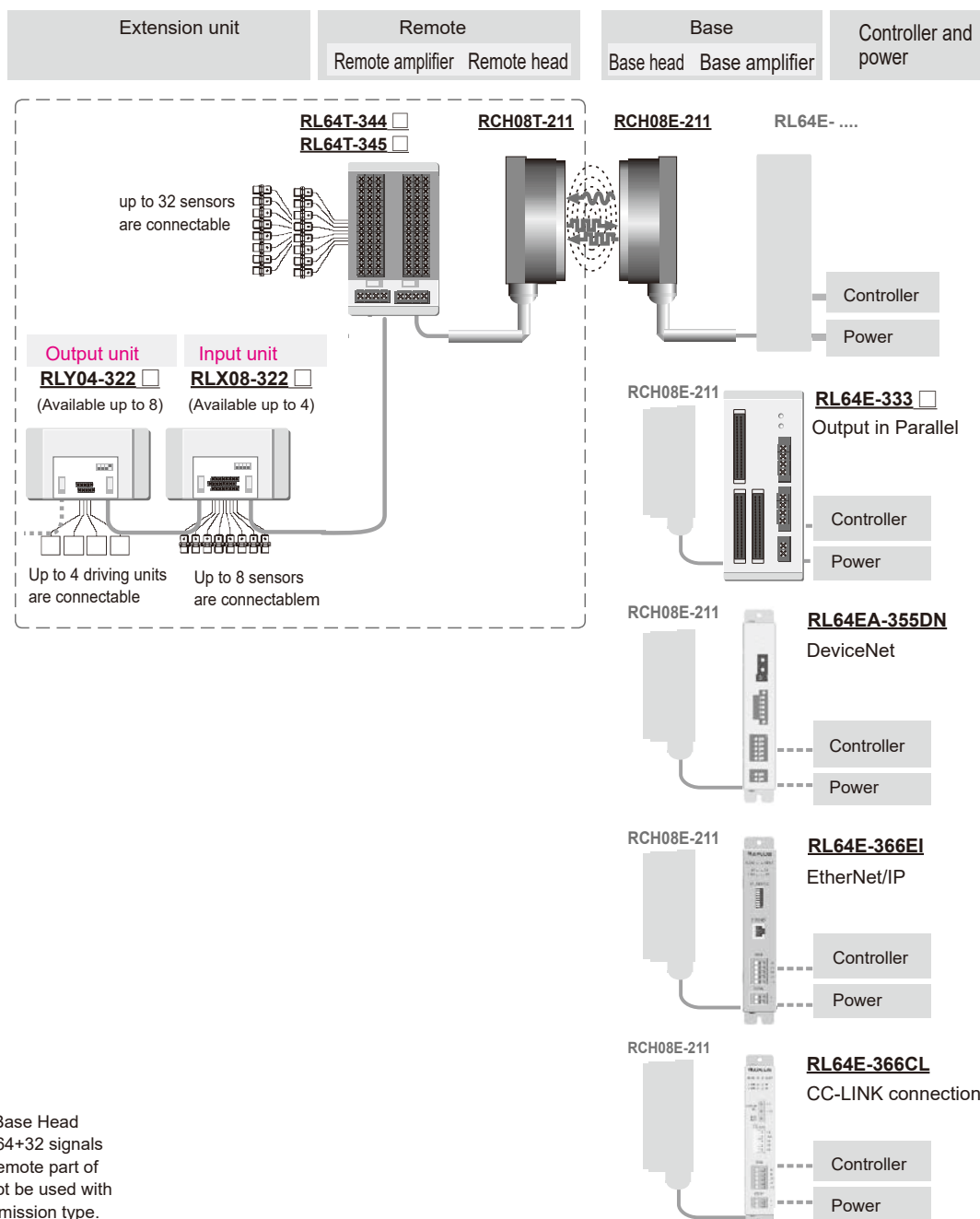


## 64+32 signals transmission (Separate amplifier)

Drive voltage / Drive current	No. of Signals	Max. Distance	Type Code				Page
			Remote Remote amplifier	Remote head	Base head	Base Base amplifier	
24V DC / 2A	Input 64 Output 32	9 mm	<b>RL64T-344</b> <input type="checkbox"/> -000 <b>RL64T-345</b> <input type="checkbox"/> -000	<b>RCH08T-211-PU-01</b>	<b>RCH08E-211-PU-02</b>	<b>RL64E-333</b> <input type="checkbox"/> -000 <b>RL64EA-355DN-000</b> <b>RL64E-366CL-000</b> <b>RL64E-366EI-000</b>	84 · 86
Extension unit	Number of connectable I/O	Type Code	Remark				Page
Input unit	8x4	<b>RLX08-322</b> <input type="checkbox"/>	In the case when no sensor is connected to Remote Amplifier, a maximum of 8 units can be connected.				87
Output unit	4x8	<b>RLY04-322</b> <input type="checkbox"/>					87

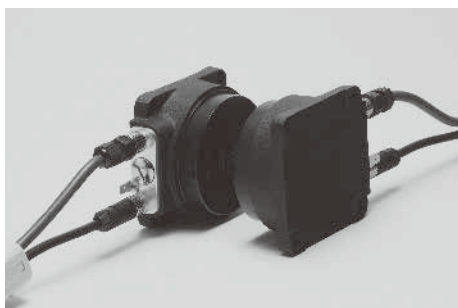


Extension unit makes it possible to connect a maximum of 64 input and 32 output. Simultaneously transmit I/O signal and supply power 24VDC/2A.



The same Remote Head or Base Head can be used both to 8+8 or 64+32 signals transmission type. But the Remote part of 8+8 transmission type can not be used with the Base part of 64+32 transmission type. The opposite is true.

### Data Signal transmission

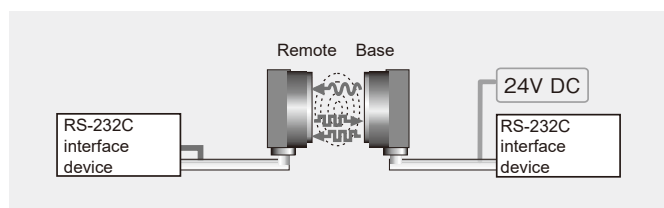


- The supply of 24VDC and bi-directional signal transmission are possible with 1 unit.
- Install units of CC-Link or DeviceNet and build a fieldbus network around equipments with rotating or moving motion.

### RS-232C type



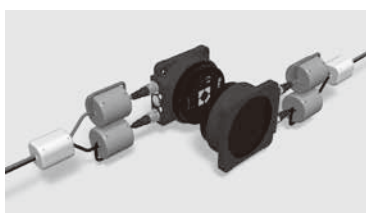
Supply 24V/1A in wireless and simultaneously communicate between RS-232C interface system with noncontact.



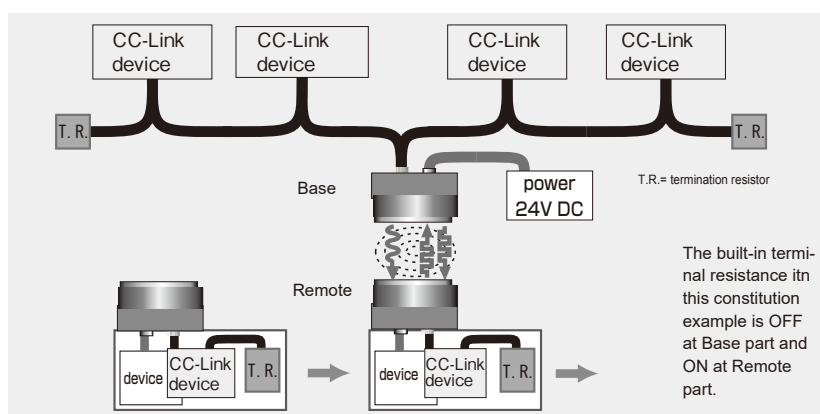
Drive voltage / current	Size	Max. Distance	Type Code		Page
			Remote	Base	
24V DC / 1A	90x90	10 mm	<b>RCD11T-211-PU-01</b>	<b>RCD11E-211-PU-02</b>	90

'\_\_' of type code is the cable length.  
The standard cable length is Remote :1 m, Base :2 m.

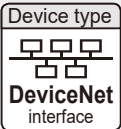
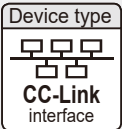
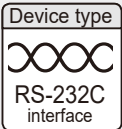
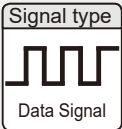
### CC-Link type



Relay the CC-Link data transmission and simultaneously supply 24VDC/2A in wireless.



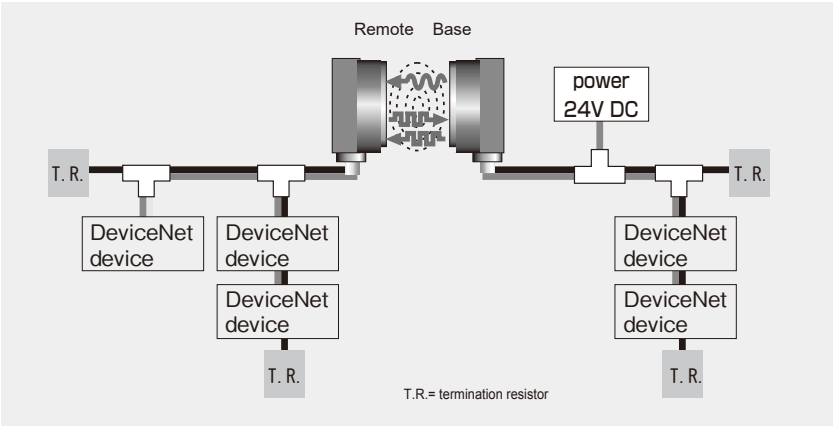
Drive voltage / current	Size	Max. Distance	Type Code		Remark	Page
			Remote	Base		
24V DC / 2A	97x90	5 mm	<b>RCD22T-211-CLC</b>	<b>RCD22E-211-CLC</b>		92



DeviceNet type



Inductively relay DeviceNet communication data and simultaneously supply 24VDC/2A



Drive voltage / current	Size	Max. Distance	Type Code		Page
			Remote	Base	
24V DC / 2A	97x90	5 mm	<b>RCD33T-211-DNC</b>	<b>RCD33E-211-DNC</b>	94

Product list

Remote Sensor

Remote Coupler

Remote Power Supply

Accessories

### Power Supply System



■ Remote system for exclusive use of power supply.

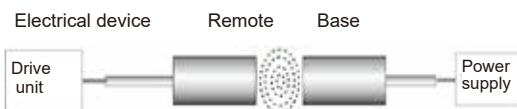
■ Possible to attach or detach the power line in the water-plashing condition.

### 2A Power Supply / Parallel Coupling



24V DC/2A power supply.

As it is face type, approaching both in vertical or horizontal direction is possible.

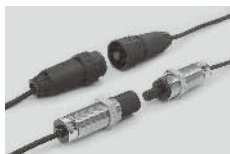


Drive voltage / current	Max. Distance	Size	Type Code Remote	Base	Page
24V DC / 2A	9mm	90 x 90	<b><u>RVT-211-22-PU-01</u></b>	<b><u>RVE-211-2-PU-02</u></b>	98

Remote Power Supply

Parallel

### 1A Power Supply / Overlap Coupling



24V DC/1A power supply.

On Ø43 type, screw-in housing can be manually attached or detached



Drive voltage / current	Size	Type Code Remote	Base	Page
24V DC / 1A	M30	<b><u>RVTI-030-21-PU-01</u></b>	<b><u>RVEI-030-2-PU-02</u></b>	100
	φ 43	<b><u>RVTI-C01-21-PU-01</u></b>	<b><u>RVEI-C01-2-PU-02</u></b>	101

Exclusive Proximity sensor

Terminal box Other unit

Custom Products

Type Code Example

\_\_ at the end means cable length. The standard cable length has been described in meter. Please specify in the following manner.

Remote  
RVT-211-22-PU-01

Cable length(m)  
01=1m  
02=2m  
03=3m

The standard cable length is 1m.

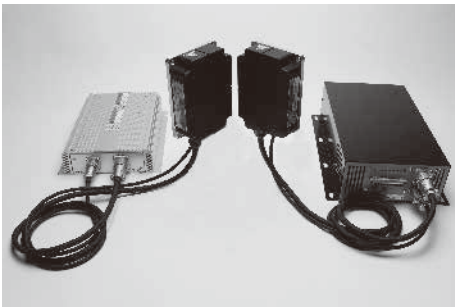
Base  
RVE-211-2-PU-02

Cable length(m)  
02=2m  
03=3m  
05=5m

The standard cable length is 2m.

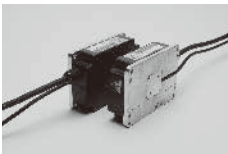


Power Charging System

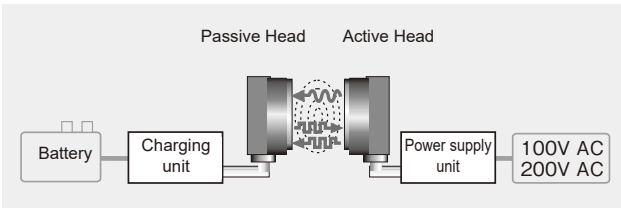


- Remote System for wireless charging
- Suitable for battery charging of AGV

30V DC/7A Charging / Parallel Coupling



Wireless charging of 210W.  
As it is face type, approaching both  
in vertical or horizontal direction is  
possible.



Output voltage / current	Max. Operating distance	Type Code				Page
		Remote		Base		
		Charging unit	Passive Head	Active Head	Power Supply unit	
30V DC / 7A (Output changes by the battery voltage)	10 mm	RCS210-PB24*	RCS240PH*	RCS240AH*	RCS240-AC1*	102 · 103

\*Use only in japan.  
CE not acquired.

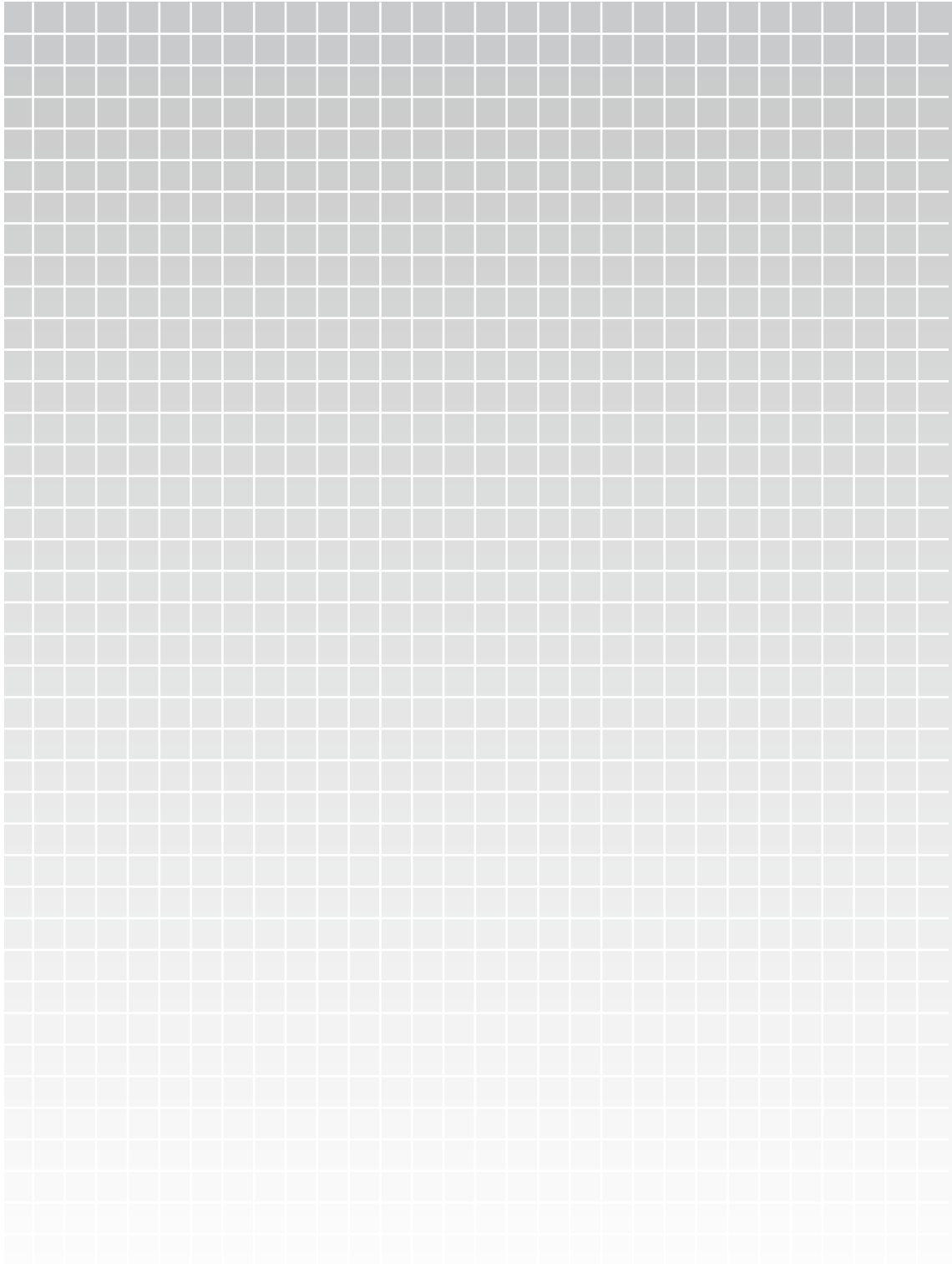
Product  
list

Remote  
Sensor

Remote  
Coupler

Remote  
Power  
Supply

Accessories



Remote Sensor System	Switch signal Transmission	DC 3-wire Detector type	Regular type	32	
			Terminal unit type	42	
		DC 2-wire Detector type	Regular type	48	
			Terminal unit type	62	
		Exclusive detector type			66
	Analog Signal Transmission	Thermocouple type			70
		Resistance thermometer type			74
		Load cell type			76
		Analog sensor type			78

**Remote  
Sensor**

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive sensor

Terminal box  
Other unit

Wiring

Discontinued  
plans

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# Remote Sensor System

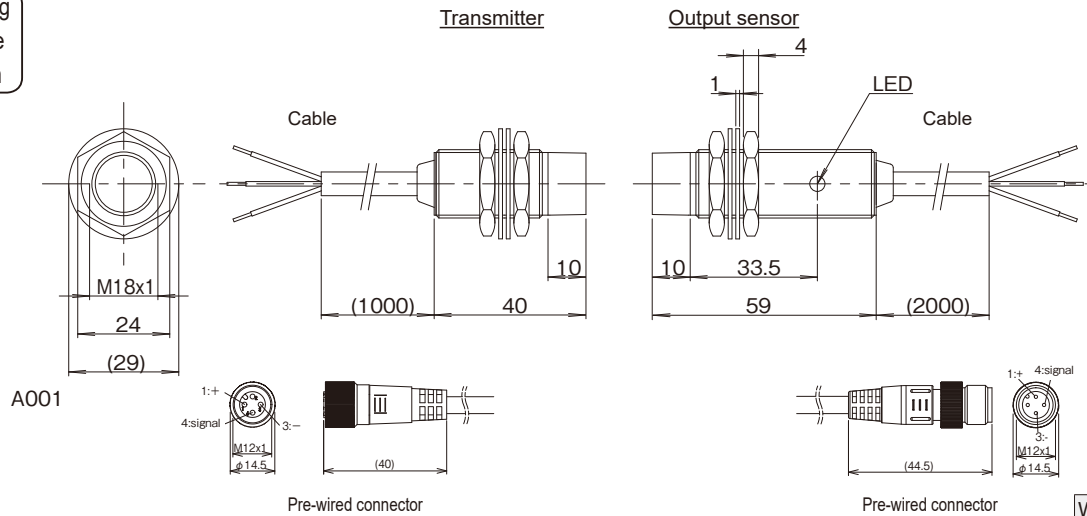
## Switch Signal

DC 3-wire Detector type / Regular type  
1 signal transmission

1signal

for 1 sensor / Size : M18

Operating distance  
0...4mm



Wiring C001 / P.118

Transmitter			
		Cable	Pre-wired connector
Type	NPN	<b>RPT-1804N-PU-01</b>	<b>RPT-1804N-PU-CP0.3</b>
Code	PNP	<b>RPT-1804P-PU-01</b>	<b>RPT-1804P-PU-CP0.3</b>
Drive voltage		12V ± 1.5V DC	
Drive current		≤ 30mA	
No. of Input signal		1 signal	
Operating distance		0...4mm	0...3mm      0...2.5mm
Center offset		±3mm	±2.5mm      ±2mm
Drive current		≤ 5mA	≤ 20mA      ≤ 30mA
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / ϕ 5 , 3x0.34mm <sup>2</sup>	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 45g + Cable 35g x 1m / +Connector cable 30cm 40g	
Anti-weld slag type		Cable	Pre-wired connector
Type Code	NPN	<b>RPT-TF1804N-PU-01</b>	<b>RPT-TF1804N-PU-CP0.3</b>
	PNP	<b>RPT-TF1804P-PU-01</b>	<b>RPT-TF1804P-PU-CP0.3</b>
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Output sensor			
		Cable	Pre-wired connector
Type	NPN	<b>RPE-1804N-PU-02</b>	<b>RPE-1804N-PU-CP0.3</b>
Code	PNP	<b>RPE-1804P-PU-02</b>	<b>RPE-1804P-PU-CP0.3</b>
Supply voltage		24V DC ±5% (including ripple)	
Current consumption		≤ 150mA	
No. of Output signal		1 signal	
Load current		≤ 50mA	
Frequency of operation		25Hz	
LED		Signal output indication	
Operating temperature		0...+50℃	
Protection class		IP67	
Cable		PUR / ϕ 5 , 3x0.34mm <sup>2</sup>	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 60g + Cable 35g x 2m / +Connector cable 30cm 30g	
Anti-weld slag type		Cable	Pre-wired connector
Type Code	NPN	<b>RPE-TF1804N-PU-02</b>	<b>RPE-TF1804N-PU-CP0.3</b>
	PNP	<b>RPE-TF1804P-PU-02</b>	<b>RPE-TF1804P-PU-CP0.3</b>
	Material	Housing:Fluorinated resin coated/Activeface:Fluorinated resin	

### Applicable sensor

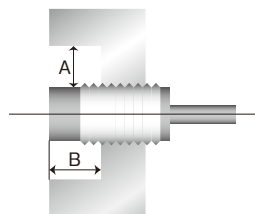
Supply voltage	12V DC
Current consumption	≤ 30mA
Residual voltage	≤ 3.5V
Leakage current	---

Please sure to use applicable detector switch according to the specification on left.

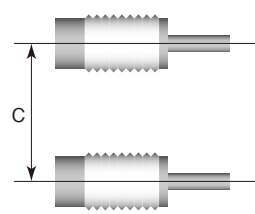
### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

#### Surrounding metal



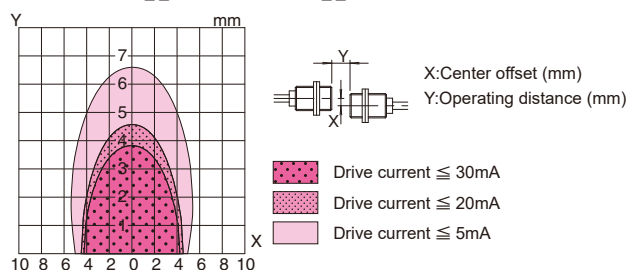
#### Parallel installation



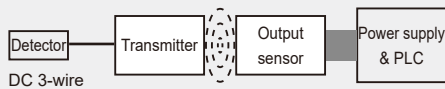
Type Code	A(mm)	B(mm)	C(mm)
RPT-1804 □ -PU-__	20	15	110
RPE-1804 □ -PU-__			

### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPT-1804 □ -PU-\_\_ / RPE-1804 □ -PU-\_\_







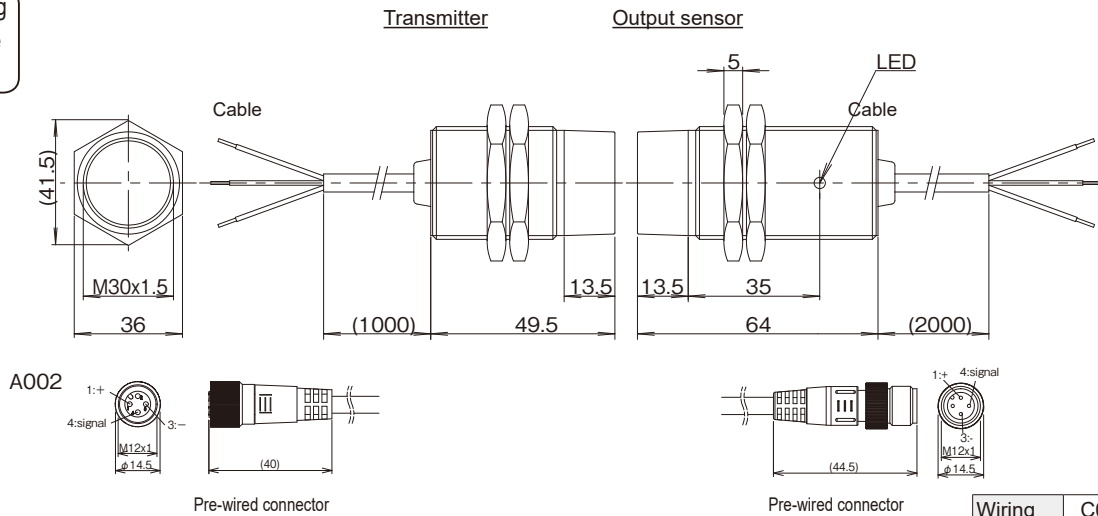
RPT-18  
RPE-18

RPT-30  
RPE-30

1  
signal

for max.8 sensors / Size : M30

Operating distance  
1...8mm



Transmitter			
		Cable	Pre-wired connector
Type	NPN	<b>RPT-3008N-PU-01</b>	<b>RPT-3008N-PU-CP0.3</b>
Code	PNP	<b>RPT-3008P-PU-01</b>	<b>RPT-3008P-PU-CP0.3</b>
Drive voltage		12V ± 1.5V DC	
Drive current		≤ 30mA	
No. of Input signal		1 signal	
Operating distance		1...8mm	1...6mm      1...4.5mm
Center offset		±5mm	±4mm      ±3mm
Drive current		≤ 5mA	≤ 20mA      ≤ 30mA
Operating temperature		0...+50℃	
Protection class		IP67	
Cable		PUR / ϕ 5 , 3x0.34mm <sup>2</sup>	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 110g + Cable 35g x 1m / +Connector cable 30cm 40g	
Anti-weld slag type		Cable	Pre-wired connector
Type Code	NPN	<b>RPT-TF3008N-PU-01</b>	<b>RPT-TF3008N-PU-CP0.3</b>
	PNP	<b>RPT-TF3008P-PU-01</b>	<b>RPT-TF3008P-PU-CP0.3</b>
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Output sensor			
		Cable	Pre-wired connector
Type	NPN	<b>RPE-3008N-PU-02</b>	<b>RPE-3008N-PU-CP0.3</b>
Code	PNP	<b>RPE-3008P-PU-02</b>	<b>RPE-3008P-PU-CP0.3</b>
Supply voltage		24V DC ±5% (including ripple)	
Current consumption		≤ 150mA	
No. of Output signal		1 signal	
Load current		≤ 50mA	
Frequency of operation		25Hz	
LED		Signal output indication	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / ϕ 5 , 3x0.34mm <sup>2</sup>	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 130g + Cable 35g x 2m / +Connector cable 30cm 30g	
Anti-weld slag type		Cable	Pre-wired connector
Type Code	NPN	<b>RPE-TF3008N-PU-02</b>	<b>RPE-TF3008N-PU-CP0.3</b>
	PNP	<b>RPE-TF3008P-PU-02</b>	<b>RPE-TF3008P-PU-CP0.3</b>
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Wiring C001 / P.118

## Applicable sensor

Supply voltage	12V DC
Current consumption	≤ 30mA
Residual voltage	≤ 3.5V
Leakage current	---

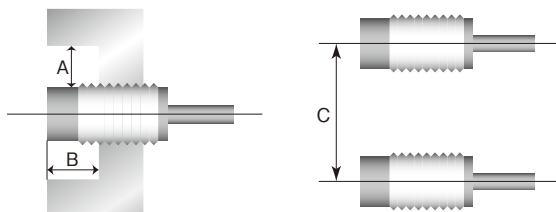
Please sure to use applicable detector switch according to the specification on left.

## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

■ Surrounding metal

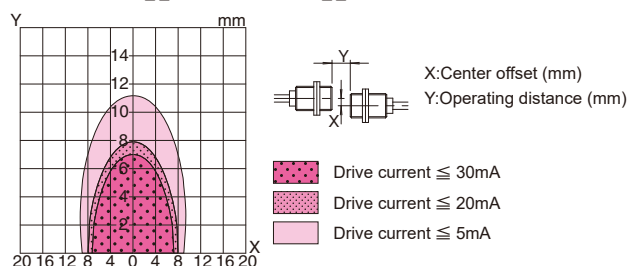
■ Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RPT-3008 □ -PU-__	30	20	300
RPE-3008 □ -PU-__			

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPT-3008 □ -PU-\_\_ / RPE-3008 □ -PU-\_\_



Signal type  
Switch signal

Sensor type  
DC 3-wire

Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive  
sensor

Terminal box  
Other unit

Wiring

Discontinued  
plans

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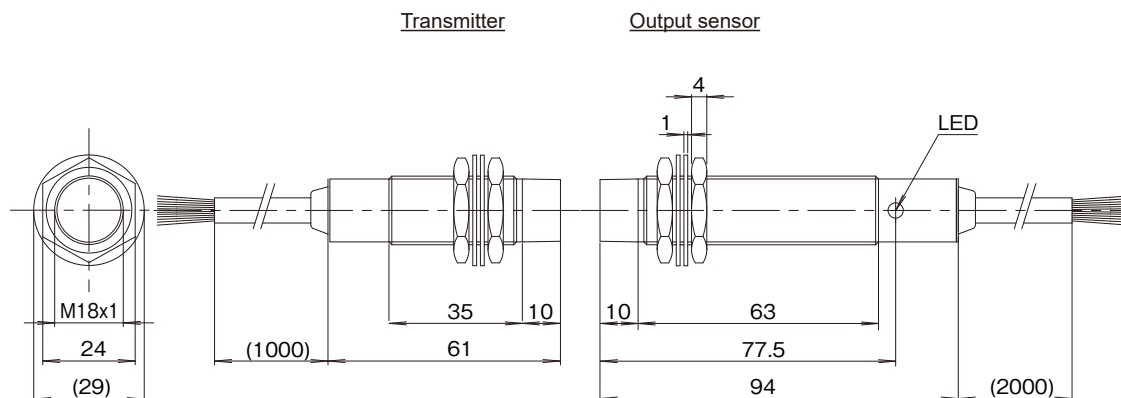
# Remote Sensor System Switch Signal

DC 3-wire Detector type/ Regular type  
4 signals transmission

4 signals

for max.4 sensors / Size : M18

Operating distance  
0.5...3mm



A003

Wiring C002 / P.118

		Transmitter		
Type	NPN	RPTA-1803-PU-01		
Code	PNP			
Drive voltage		12V ± 1.5V DC		
Drive current		≤ 30mA		
No. of Input signals		4 signals		
Operating distance		0.5...3mm	0.5...3mm	
Center offset		±2.5mm	±2mm	
Drive current		≤ 20mA	≤ 30mA	
Operating temperature		0...+50°C		
Protection class		IP67		
Cable		PUR / φ 6.3 , 7x0.3mm <sup>2</sup>		
Material		Housing		
		Nickel plated brass		
		Active face		
		Nylon 12		
Weight		Body 60g + Cable 60g x 1m		
Anti-weld slag		NPN		
Type	Code	RPTA-TF1803-PU-01		
		PNP		
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

Output sensor		
Type	NPN	RPEA-1803N-PU-02
Code	PNP	
RPEA-1803P-PU-02		
Supply voltage	24V DC ±5% (including ripple)	
Current consumption	≤ 170mA	
No. of Output signals	4 signals + 1 signal ( Inzone )	
Load current	max.50mA per output	
Frequency of operation	30Hz	
LED	Inzone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / ϕ 6.3 , 7x0.3mm <sup>2</sup>	
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight	Body 90g + Cable 60g x 2m	
Anti-weld slag	NPN	RPEA-TF1803N-PU-02
Type	Code	
	PNP	RPEA-TF1803P-PU-02
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

## Applicable sensor

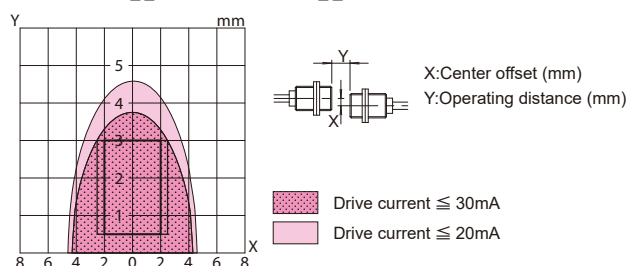
Supply voltage	12V DC
Total current consumption*	≤ 30mA
Residual voltage	≤ 3.5V
Leakage current	---

Please sure to use applicable detector switch according to the specification on left.

\*Total current consumption of all connected sensor.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

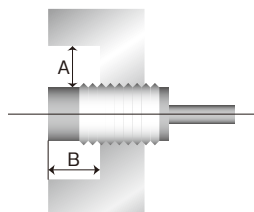
RPTA-1803-PU-\_\_ / RPEA-1803 □ -PU-\_\_



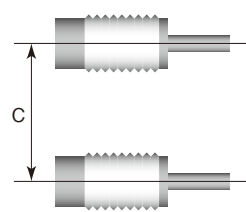
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

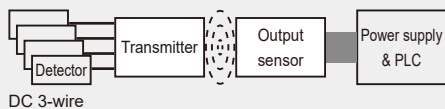
### Surrounding metal



### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RPTA-1803-PU-__	18	18	110
RPEA-1803 □ -PU-__			



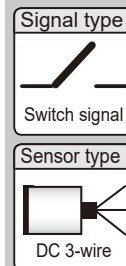
RPTA-18  
RPEA-18

RPTA-30  
RPEA-30

4  
signals

for max.4 sensors / Size : M30

Operating distance  
1...5mm



Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive  
sensor

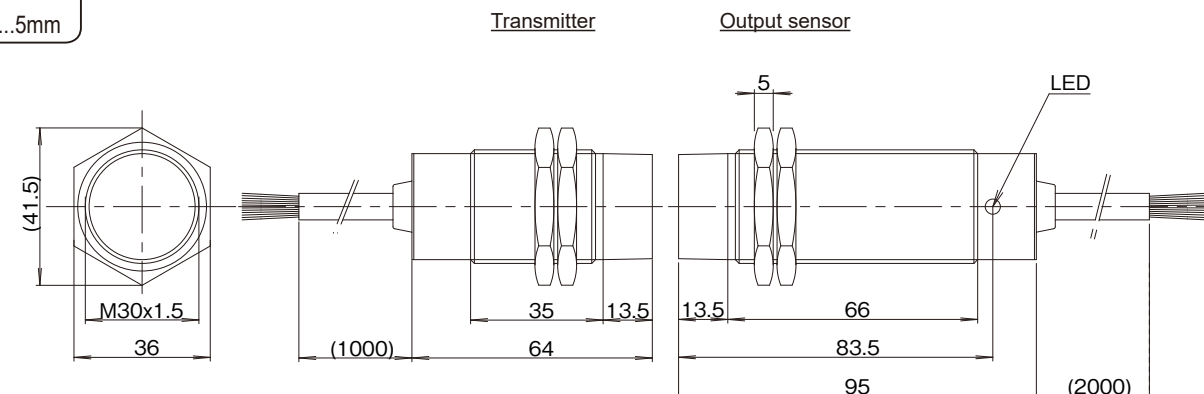
Terminal box  
Other unit

Wiring

Discontinued  
plans

Index

35



A004

Wiring C002 / P.118

Transmitter		
Type	NPN	RPTA-3005-PU-01
Code	PNP	
Drive voltage		12V ± 1.5V DC
Drive current		≤ 40mA
No. of Input signals		4 signals
Operating distance		1...5mm
Center offset		±6mm
Drive current		≤ 30mA
Operating temperature		0...+50°C
Protection class		IP67
Cable		PUR / φ 6.3 , 7x0.3mm <sup>2</sup>
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight		Body 130g + Cable 60g x 1m
Anti-weld slag	NPN	RPTA-TF3005-PU-01
Type Code	PNP	
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Output sensor		
Type	NPN	RPEA-3005N-PU-02
Code	PNP	RPEA-3005P-PU-02
Supply voltage		24V DC ±5% (including ripple)
Current consumption		≤ 150mA
No. of Output signals		4 signals + 1 signal ( Inzone )
Load current		max.50mA per output
Frequency of operation		30Hz
LED		Inzone
Operating temperature		0...+50°C
Protection class		IP67
Cable		PUR / φ 6.3 , 7x0.3mm <sup>2</sup>
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight		Body 160g + Cable 60g x 2m
Anti-weld slag	NPN	RPEA-TF3005N-PU-02
Type Code	PNP	RPEA-TF3005P-PU-02
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

## Applicable sensor

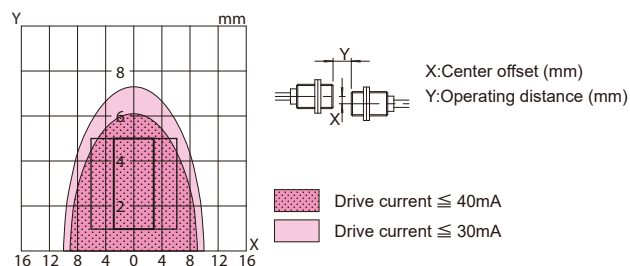
Supply voltage	12V DC
Total current consumption*	≤ 40mA
Residual voltage	≤ 3.5V
Leakage current	---

\*Total current consumption of all connected sensor.

Please sure to use applicable detector switch according to the specification on left.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPTA-3005-PU-\_\_ / RPEA-3005 □ -PU-\_\_

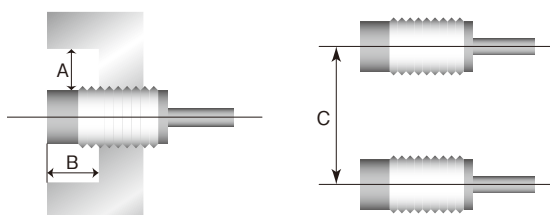


## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

■ Surrounding metal

■ Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RPTA-3005-PU-__	40	32	300
RPEA-3005 □ -PU-__			

B&PLUS

# Remote Sensor System Switch Signal

DC 3-wire Detector type / Regular type  
8 signals transmission

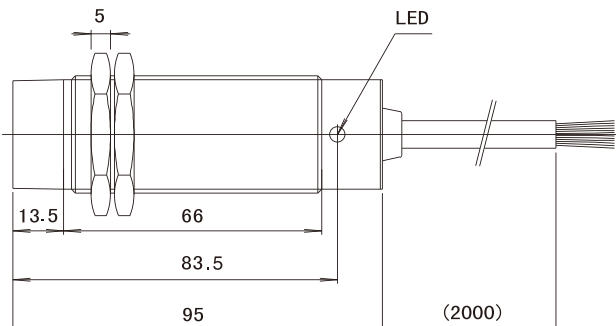
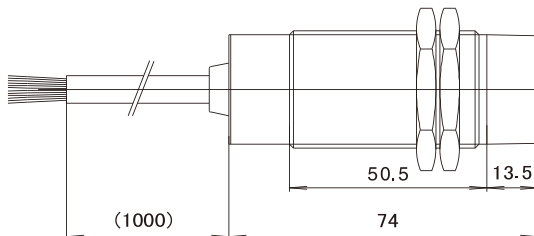
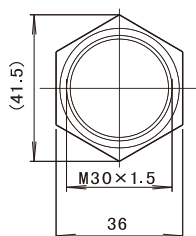
8 signals

for max.8 sensors / Size : M30

Operating distance  
2...5mm

Transmitter

Output sensor



A005

Wiring C004 / P.119

Transmitter	
Type	NPN
Code	PNP
<b>RGPT-3005-V1215-PU-01</b>	
Drive voltage	12V ± 1.5V DC
Drive current	≤ 150mA
No. of Input signals	8 signals
Operating distance	2...5mm
Center offset	±3mm
Drive current	≤ 150mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 7.7 , 2x0.5mm <sup>2</sup> + 9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 150g + Cable 75 g × 1m
Remark	

Output sensor	
Type	NPN
Code	PNP
<b>RGPE-3005-V1215N-PU-02</b>	
Supply voltage	24V DC ±10% (including ripple)
Current consumption	≤ 400mA
No. of Output signals	8 signals + 1 signal ( Inzone )
Load current	max.50mA per output
Frequency of operation	60Hz
LED	Inzone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 7.7 , 2x0.5mm <sup>2</sup> + 9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 180g + Cable 75 g × 2 m
Remark	

## Applicable sensor

Supply voltage	12V DC
Total current consumption*	≤ 150mA
Residual voltage	≤ 3.5V
Leakage current	---

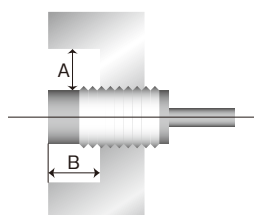
\*Total current consumption of all connected sensor.

Please sure to use applicable detector switch according to the specification on left.

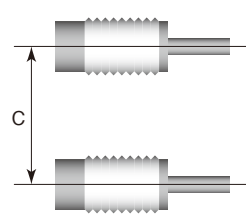
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal



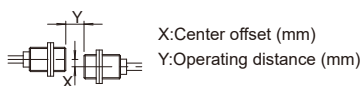
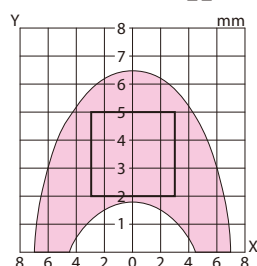
### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RGPT-3005-V1215-PU-__	30	20	200
RGPE-3005-V1215 □ -PU-__			

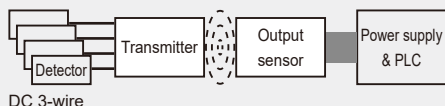
## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RGPT-3005-V1215-PU-\_\_ / RGPE-3005 □ -V1215-PU-\_\_



Drive current ≤ 150mA



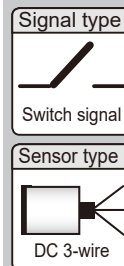
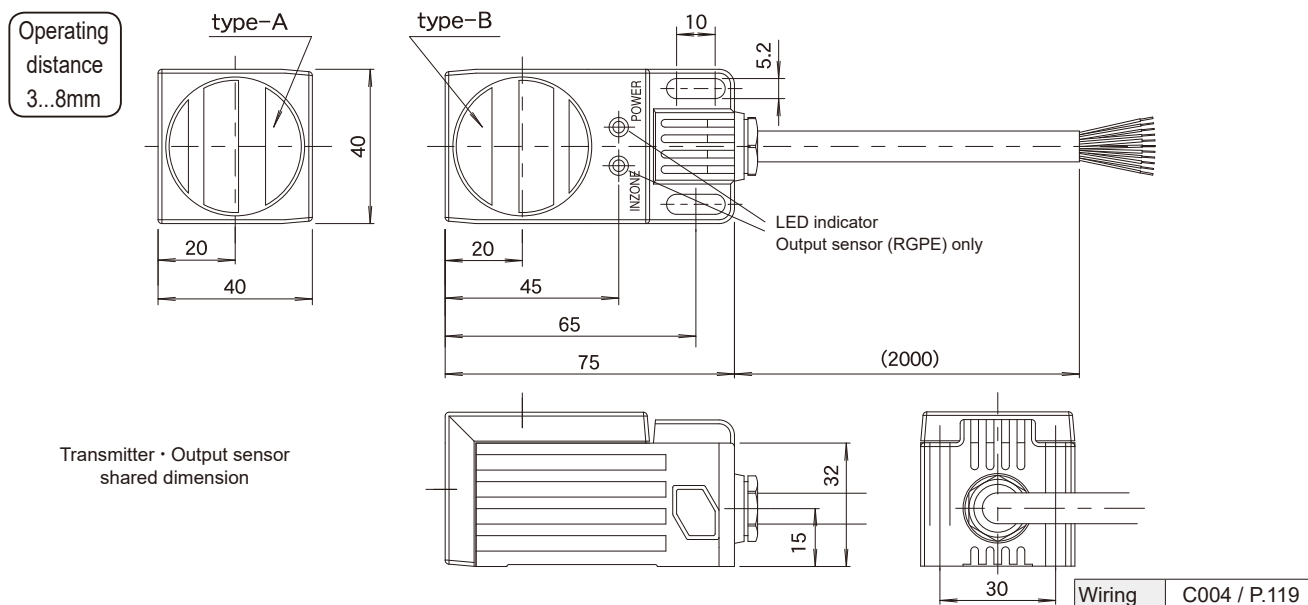


RGPT-30  
RGPE-30

RGPT-40  
RGPE-40

8  
signals

for max.8 sensors / Size : 40 x 80



Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Transmitter	
Type	NPN
Code	PNP
<b>RGPT-4008-V1220A/B*-PU-01</b>	
Drive voltage	12V $\pm$ 1.5V DC
Drive current	$\leq$ 200mA
No. of Input signals	8 signals
Operating distance	3...8mm
Center offset	$\pm$ 3mm
Drive current	$\leq$ 200mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 7.7 , 2x0.5mm <sup>2</sup> + 9x0.18mm <sup>2</sup>
Material Housing	Aluminum (metal part)
Active face	ABS+PBT (resin part)
Weight	Body 220g + Cable 75 g $\times$ 1 m
Remark	*Selectable active face A (front) or B (top).

Output sensor	
Type	NPN
Code	PNP
<b>RGPE-4008-V1220NA/B*-PU-02</b>	
Supply voltage	24V DC $\pm$ 10% (including ripple)
Current consumption	$\leq$ 500mA
No. of Output signals	8 signals + 1 signal ( Inzone )
Load current	max.50mA per output
Frequency of operation	60Hz
LED	InZone (Yellow) / Power (Green)
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 7.7 , 2x0.5mm <sup>2</sup> + 9x0.18mm <sup>2</sup>
Material Housing	Aluminum (metal part)
Active face	ABS+PBT (resin part)
Weight	Body 220g + Cable 75 g $\times$ 2 m
Remark	*Selectable active face A (front) or B (top).

### Applicable sensor

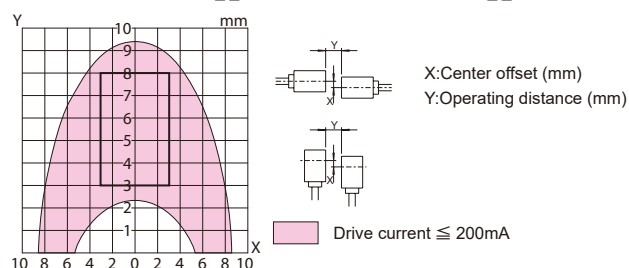
Supply voltage	12V DC
Total current consumption*	$\leq$ 200mA
Residual voltage	$\leq$ 3.5V
Leakage current	---

\*Total current consumption of all connected sensor.

Please sure to use applicable detector switch according to the specification on left.

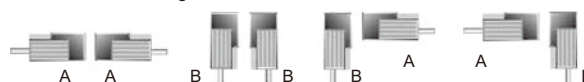
### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RGPT-4008-V1220A/B-PU-\_\_ / RGPE-4008-V1220 □ A/B-PU-\_\_



### Combination between RGPT-4008 and RGPE-4008

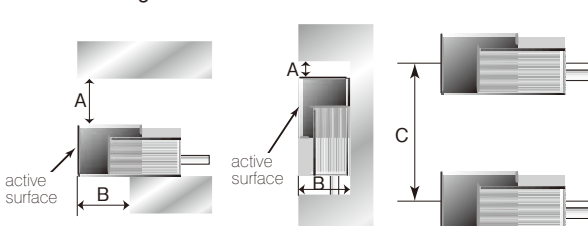
Refer to the followings for the combination of active faceA and B



### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal



Type Code	A(mm)	B(mm)	C(mm)
RGPT-4008-V1220A/B-PU-__	40	40	300
RGPE-4008-V1220 □ A/B-PU-__			

# Remote Sensor System

## Switch Signal

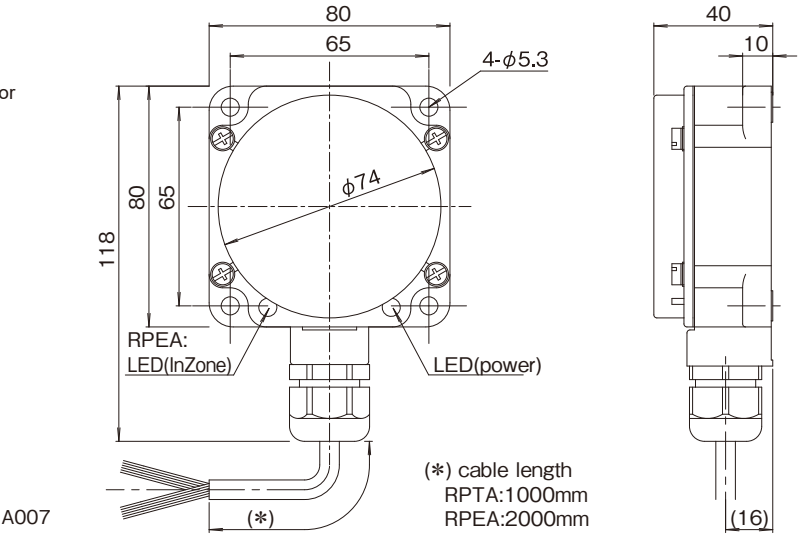
DC 3-wire Detector type / Regular type  
8 signals transmission

8 signals

for max.8 sensors / Size : 80 x 80

Operating distance  
2...15mm

Transmitter · Output sensor  
shared dimension



Wiring C003 / P.118

Transmitter		
Type	NPN	RPTA-8015-PU-01
Code	PNP	
Drive voltage	12V ± 1.5V DC	
Drive current	≤ 100mA	
No. of Input signals	8 signals	
Operating distance	2...22mm	4...15mm
Center offset	±12mm	±10mm
Drive current	≤ 50mA	≤ 100mA
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / ϕ 7.9 , 12x0.18mm <sup>2</sup>	
Material	Housing	Nylon
	Active face	Nylon
Weight	Body 440g + Cable80 g × 1m	
Remark		

Output sensor		
Type	NPN	RPEA-8015N-PU-02
Code	PNP	
		RPEA-8015P-PU-02
Supply voltage	24V DC ±5% (including ripple)	
Current consumption	≤ 300mA	
No. of Output signals	8 signals + 1 signal ( Inzone )	
Load current	max.50mA per output	
Frequency of operation	30Hz	
LED	InZone (Yellow) / Power (Green)	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / ϕ 7.9 , 12x0.18mm <sup>2</sup>	
Material	Housing	Nylon
	Active face	Nylon
Weight	Body 440g + Cable80 g × 2 m	
Remark		

### Applicable sensor

Supply voltage	12V DC
Total current consumption*	≤ 100mA
Residual voltage	≤ 3.5V
Leakage current	---

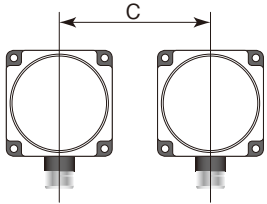
Please sure to use applicable detector switch according to the specification on left.

### Installation notes

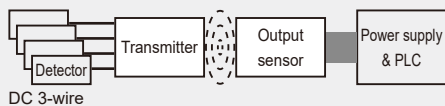
In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

■ Surrounding metal

■ Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RPTA-8015-PU-__	20	40	200
RPEA-8015 □ -PU-__			



RPTA-80  
RPEA-80

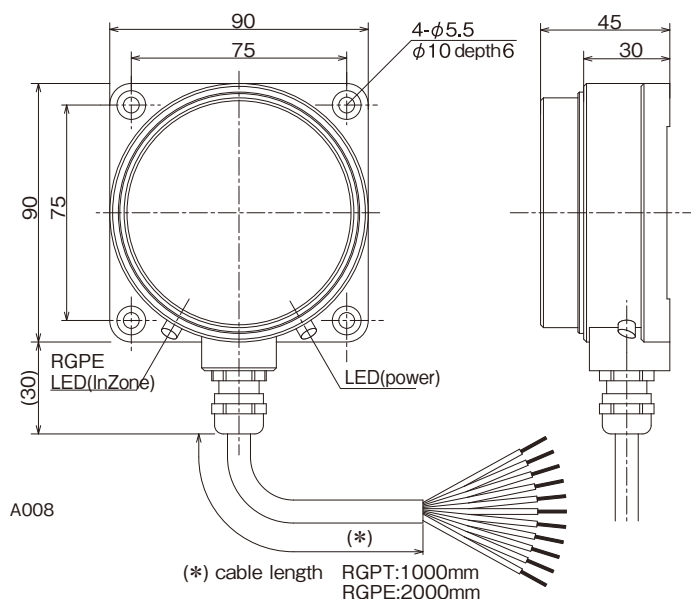
RGPT-90  
RGPE-90

8  
signals

for max.8 sensors / Size : 90 x 90

Operating  
distance  
4...12mm

Transmitter · Output sensor  
shared dimension



Wiring C004 / P.119

Transmitter	
Type	NPN
Code	PNP
	<b>RGPT-9012-V2430-PU-01</b>
Drive voltage	24V ± 1.5V DC
Drive current	≤ 300mA
No. of Input signals	8 signals
Operating distance	4...12mm
Center offset	±7mm
Drive current	≤ 300mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 7.7 , 2x0.5mm <sup>2</sup> + 9x0.18mm <sup>2</sup>
Material	Housing: Aluminum + alumite processing (metal part)
	Active face: ABS+PBT (resin part)
Weight	Body 650g + Cable 80 g × 1 m
Remark	The AC 2-wire sensor can be connected by the interchange conversion amplifier unit (P.114).

Output sensor	
Type	NPN
Code	PNP
	<b>RGPE-9012-V2430N-PU-02</b>
	<b>RGPE-9012-V2430P-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)
Current consumption	≤ 1A
No. of Output signals	8 signals + 1 signal ( Inzone )
Load current	max.50mA per output
Frequency of operation	60Hz
LED	InZone (Yellow) / Power (Green)
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 7.7 , 2x0.5mm <sup>2</sup> + 9x0.18mm <sup>2</sup>
Material	Housing: Aluminum + alumite processing (metal part)
	Active face: ABS+PBT (resin part)
Weight	Body 650g + Cable 80 g × 2 m
Remark	

## Applicable sensor

Supply voltage	24V DC
Total current consumption*	≤ 300mA
Residual voltage	≤ 6V
Leakage current	---

\*Total current consumption of all connected sensor.

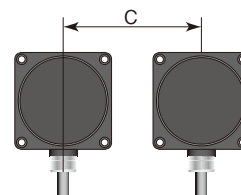
Please sure to use applicable detector switch according to the specification on left.

## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

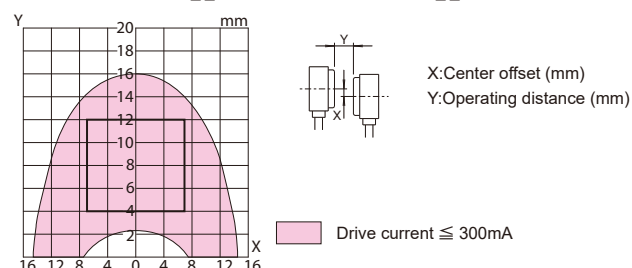
■ Surrounding metal

■ Parallel installation

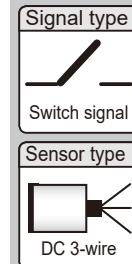


## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RGPT-9012-V2430-PU-\_\_ / RGPE-9012-V2430 □ -PU-\_\_



Type Code	A(mm)	B(mm)	C(mm)
RGPT-9012-V2430-PU-__	50	45	300
RGPE-9012-V2430 □ -PU-__			



Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive  
sensor

Terminal box  
Other unit

Wiring

Discontinued  
plans

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# Remote Sensor System

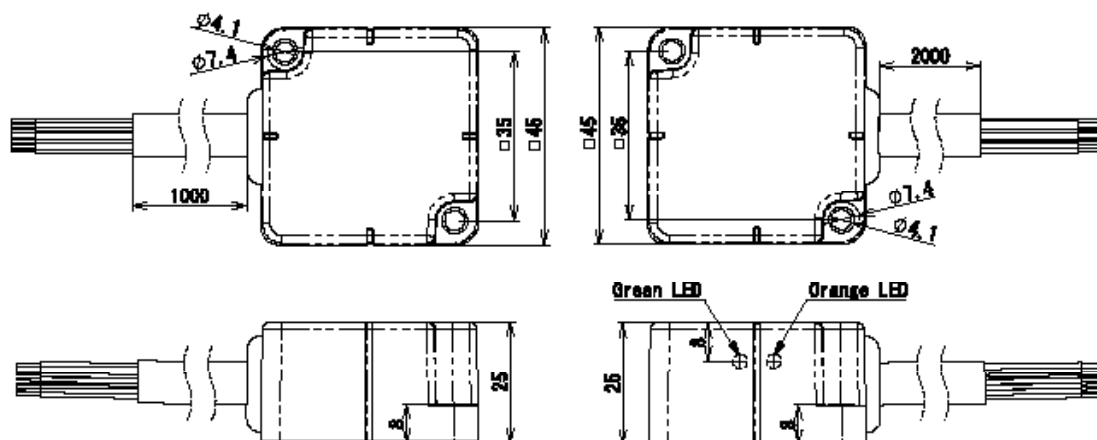
## Switch Signal

DC 3-wire Detector type / Regular type  
12 signals transmission

12 signals

for max.12 sensors / Size : 45 x 45

Operating distance  
2...5mm



Wiring C028 / P.120

Transmitter	
Type code	DC 3-wire RS12T-422-PU-01
Drive voltage	12V $\pm$ 1.5V DC
Drive current	$\leq$ 230 mA
No. of Input signals	12 signals
Operating distance	2...5mm
Center offset	$\pm$ 3mm
Drive current	230 mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 8.6 , 2x0.5mm <sup>2</sup> + 13x0.18mm <sup>2</sup>
Material Housing	ABS
Weight	Body 75 g + Cable 105 g x 1m
Remark	

Output sensor	
Type code	NPN RS12E-422N-PU-02
	PNP RS12E-422P-PU-02
Operating voltage	24V DC $\pm$ 10% (incl.ripple)
Current consumption	$\leq$ 600mA
No. of output signal	12 signals
Load current	max.50mA (1 signal. )
Frequency of operation	60Hz
LED	Status LED (Green) , Output LED (Orange)
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 8.6 , 2x0.5mm <sup>2</sup> + 13x0.18mm <sup>2</sup>
Material Housing	ABS
Weight	Body 80 g + Cable 105 g x 2m
Remark	

If you use a DC-2 wire sensor, wire through a 1 to 2 K  $\Omega$  resistance.

### Applicable sensor

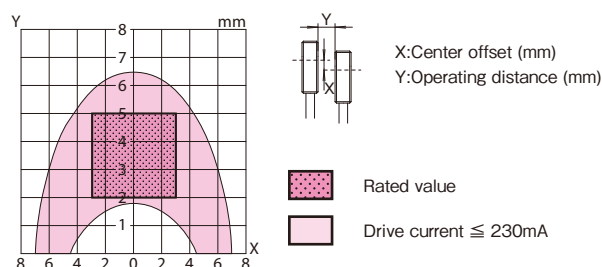
Supply voltage	12V DC
Total current consumption*	$\leq$ 230 mA
Residual voltage	$\leq$ 3.5V
Load current	---

Use detection sensors which meet conditions in the left table.

\*Total consumption current of connected sensors.

### Typical Transmitting Diagram (Supply voltage at 24V /non-flush mount)

RS12T-422-PU / RS12E-422N-PU, RS12E-422P-PU

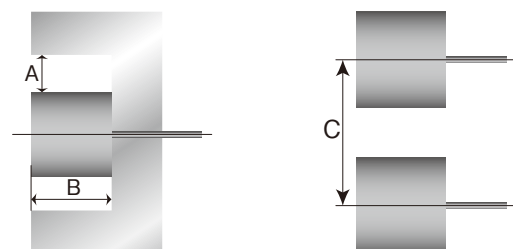


### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, provide the minimum free zone as described below.

■ Surrounding metal

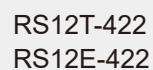
■ Parallel installation



Type code	A*	B	C
RS12T-422-PU	30	23	250
RS12E-422N-PU			
RS12E-422P-PU			

(mm)


\* When you install it, a metal can have contact with one side of the body except for the sensing surface.



# 12signals

[illegible]

Switch signal



DC 3-wire

## Remote Sensor

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance thermometer type

Load cell type

Analog sensor type

Exclusive  
sensor

Terminal box  
Other unit

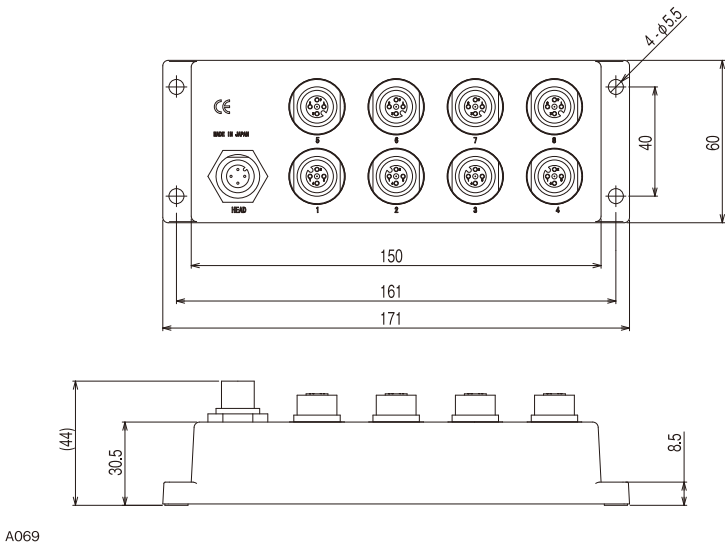
## Wiring

Discontinued plans

Index



for max. 8 sensors    Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.

Wiring    C025 / P.124

Transmitter / Remote terminal	
Type Connector type 1	RS8TA-222P-S04
Code Connector type 2	RS8T-222P-S04
Sensor type	DC 3-wire PNP (M12 connector 4-pin : 1:+, 3:-, 4:SI)
Drive voltage	12V DC $\pm$ 10%
Drive current	150mA (depending on the operating distance and the center offset : See Typical Transmitting Diagram on next page)
Operating temperature	0...+50°C
Protection class	IP67
Connection sensor	Connector M12 (Female) x 8
Transmitting head	Connector M12 (Male) x 1
Material Housing	PPS
Weight	600 g
Remark	The unused connectors should be protected by a protection cap. (option:Type Code XS2Z-12)

Applicable sensor

Supply voltage	12V DC
Total current consumption*	$\leq$ 150mA
Residual voltage	$\leq$ 3.5V
Leakage current	---

\*Total current consumption of all connected sensor.

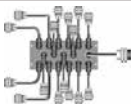
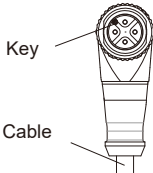
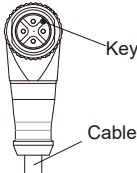
Please sure to use applicable detector switch according to the specification on left.

Applicable angle connector type (Detector's connector)

When using an angle connector, please use a connector of which key is positioned same as the following figure.

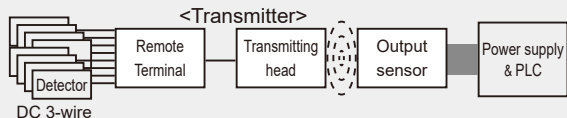
1 :Applicable to RS8TA-222\_

2 :Applicable to RS8T-222\_



The direction of the cable is shown in the left figure.

The straight connector can be used to both type of Remote Terminal.



RS8TA-222  
RS8T-222

RSH8T-30  
RSH8E-30

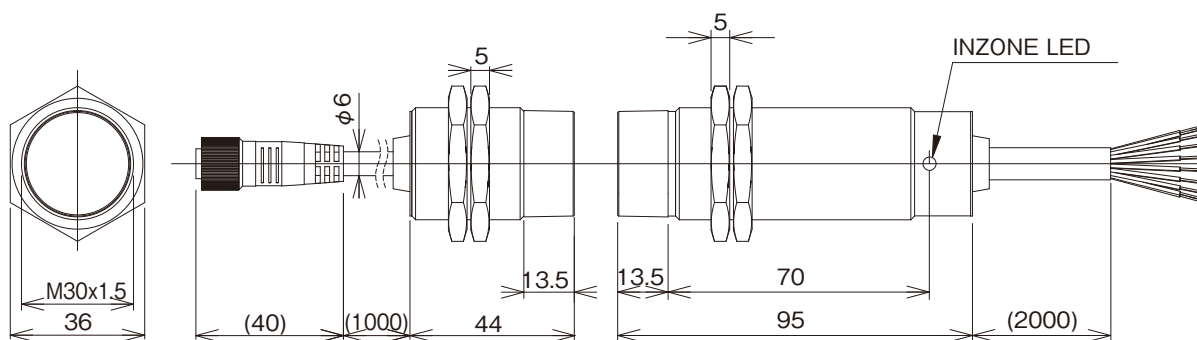
8  
signals

for max. 8 sensors Terminal unit type / Size : M30

Operating distance  
2...8mm

Transmitting head

Output sensor



A057

Wiring C025 / P.124

Transmitter / Transmitting head		
Type Code	connect to Remote Terminal	<b>RSH8T-030-PU-CP1.0</b>
Drive voltage	22V ± 1.5V DC	
Drive current	120mA	
Remote terminal	RS8TA-222_-S04, RS8T-222_-S04	
Operating distance	2...8mm	
Center offset	±3mm	
Drive current	120mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	M12 connector Cable (1m, 3m, 5m)	
Material Housing	Nickel plated brass	
Material Active face	Nylon 12	
Weight	Body 120 g + Cable 50 g × 1 m	
Anti-weld slag Type Code	connect to Remote Terminal	<b>RSH8T-TF030-PU-CP1.0</b>
Material	Housing: Fluorinated resin coated / Active face: Fluorinated resin	

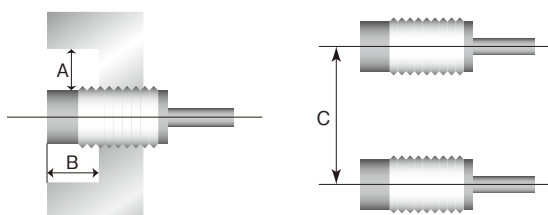
Output sensor		
Type Code	NPN / PNP	<b>RSH8E-030N-PU-02</b> <b>RSH8E-030P-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)	
Current consumption	≤ 500mA	
No. of Output signals	8 signals + 1 signal (Inzone)	
Load current	max. 50mA per output	
Frequency of operation	20Hz	
LED	Inzone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / φ 7.7, 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Material Active face	Nylon 12	
Weight	Body 160 g + Cable 75 g × 2 m	
Anti-weld slag Type Code	NPN / PNP	<b>RSH8E-TF030N-PU-02</b> <b>RSH8E-TF030P-PU-02</b>
Material	Housing: Fluorinated resin coated / Active face: Fluorinated resin	

## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

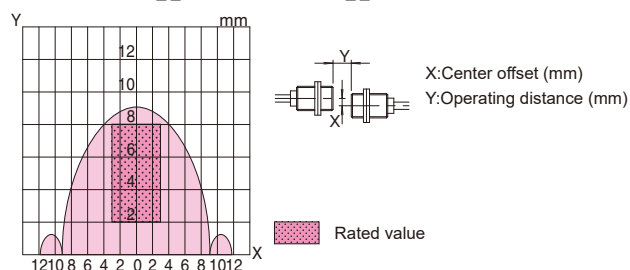
### Surrounding metal

### Parallel installation



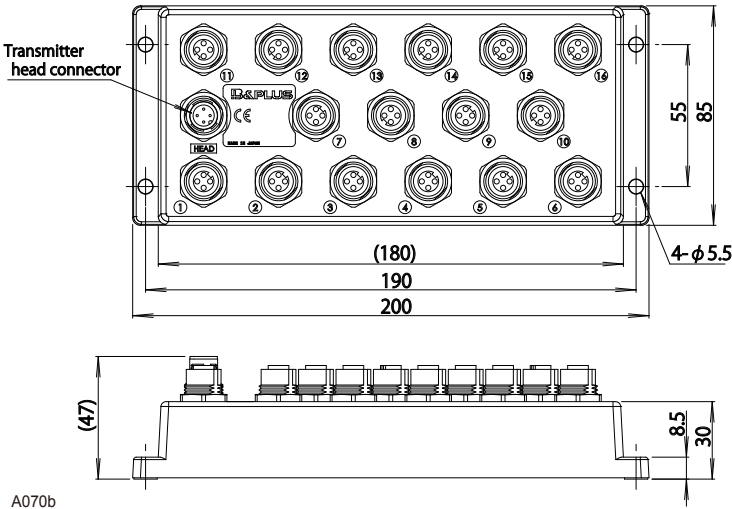
## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RS8T-030-PU-CP\_ / RSH8E-030 □ -PU-\_\_



Type Code	A(mm)	B(mm)	C(mm)
RS8T-030-PU-CP_	30	30	160
RSH8E-030 □ -PU-__			

for max. 16 sensors    Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.

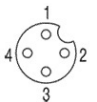
Wiring    C026 / P.124

Transmitter / Remote terminal	
Type Connector type 1	RS16TA-211P-S04
Code Connector type 2	RS16T-211P-S04
Sensor type	DC 3-wire PNP (M12 connector 4-pin : 1:+, 3:-, 4:SI)
Drive voltage	12V DC $\pm$ 10%
Drive current	150mA (depending on the operating distance and the center offset : See Typical Transmitting Diagram on next page)
Operating temperature	0...+50°C
Protection class	IP67
Connection sensor	Connector M12 (Female) x 16
Transmitting head	Connector M12 (Male) x 1
Material Housing	PPS(GF40%)
Weight	1000 g
Remark	The unused connectors should be protected by a protection cap. (option:Type Code XS2Z-12)

Applicable sensor

Supply voltage	12V DC
Total current consumption*	$\leq$ 150mA
Residual voltage	$\leq$ 3.5V
Leakage current	---

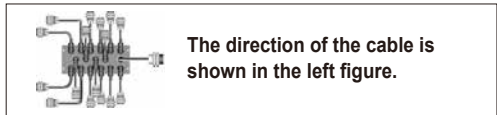
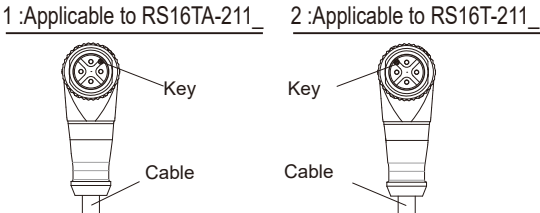
\*Total current consumption of all connected sensor.

Pin assigned of connector for sensors		1 : + 2 : 3 : - 4 : SI
---------------------------------------	-------------------------------------------------------------------------------------	---------------------------------

Please sure to use applicable detector switch according to the specification on left.

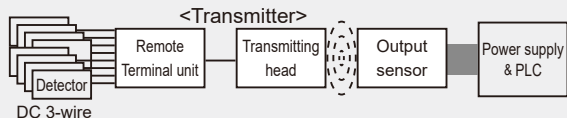
Applicable angle connector type (Detector's connector)

When using an angle connector, please use a connector of which key is positioned same as the following figure.



The direction of the cable is shown in the left figure.

The straight connector can be used to both type of Remote Terminal.



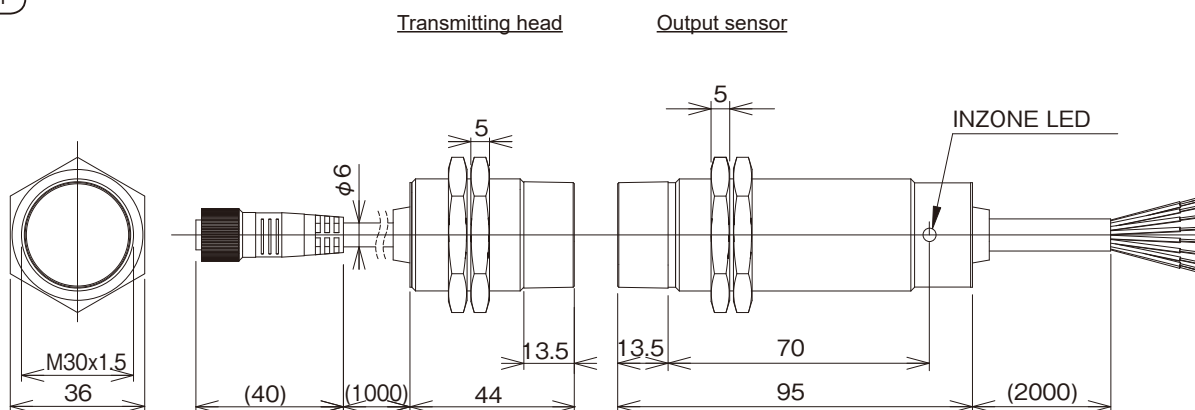
RS16TA-211  
RS16T-211

RSH16T-30  
RSH16E-30

16  
signals

for max. 16 sensors Terminal unit type / Size : M30

Operating distance  
2...8mm



A057

Wiring C026 / P.124

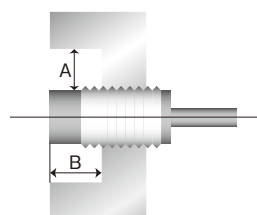
Transmitter / Transmitting head	
Type Code	connect to 12 V Remote Terminal <b>RSH16T-030-PU-CP1.0</b>
Drive voltage	22V ± 1.5V DC
Drive current	120mA
Remote terminal	RS16TA-211_-S04、RS16T-211_-S04
Operating distance	2...8mm
Center offset	±3mm
Drive current	120mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	M12 connector Cable (1m、3m、5m)
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 120 g + Cable 50 g × 1 m
Anti-weld slag Type Code	connect to Remote Terminal <b>RSH16T-TF030-PU-CP1.0</b>
Material	Housing: Fluorinated resin coated/Active face: Fluorinated resin

Output sensor	
Type Code	NPN <b>RSH16E-030N-PU-02</b> PNP <b>RSH16E-030P-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)
Current consumption	≤ 500mA
No. of Output signals	16 signals + 1 signal (Inzone)
Load current	max. 50mA per output
Frequency of operation	20Hz
LED	Inzone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR/ φ 8.5、2x0.5mm <sup>2</sup> +17x0.18mm <sup>2</sup> )
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable 110 g × 2 m
Anti-weld slag Type Code	NPN <b>RSH16E-TF030N-PU-02</b> PNP <b>RSH16E-TF030P-PU-02</b>
Material	Housing: Fluorinated resin coated/Active face: Fluorinated resin

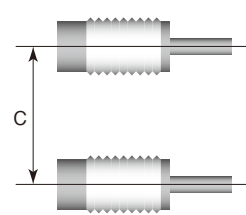
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal

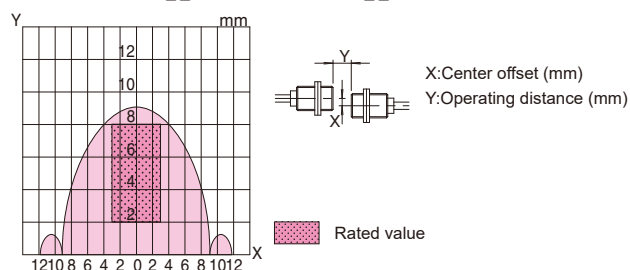


### Parallel installation



## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RSH16T-030-PU-CP\_\_ / RSH16E-030 □ -PU-\_\_



Signal type  
Switch signal

Sensor type  
DC 3-wire

Remote Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive  
sensor

Terminal box  
Other unit

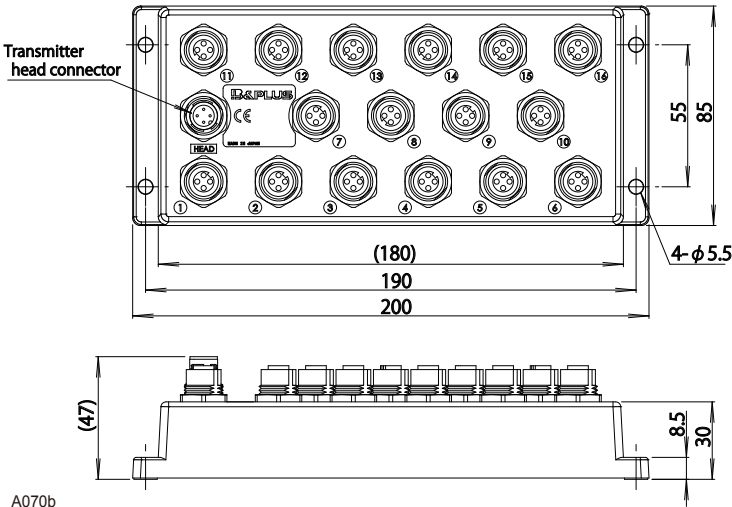
Wiring

Discontinued  
plans

Index

Type Code	A(mm)	B(mm)	C(mm)
RSH16T-030-PU-CP__	30	30	160
RSH16E-030 □ -PU-__			

for max. 16 sensors    Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.

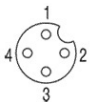
Wiring    C026 / P.124

Transmitter / Remote terminal	
Type    Connector type 1	<b>RS16TB-211P-S04</b>
Code    Connector type 2	
Sensor type	DC 3-wire PNP (M12 connector 4-pin : 1:+, 3:-, 4:SI)
Drive voltage	24V ± 1.5V DC
Drive current	150mA (depending on the operating distance and the center offset : See Typical Transmitting Diagram on next page)
Operating temperature	0...+50°C
Protection class	IP67
Connection sensor	Connector M12 (Female) x 16
Transmitting head	Connector M12 (Male) x 1
Material Housing	PPS(GF40%)
Weight	1000 g
Included	Ferrite core clamp
Remark	The unused connectors should be protected by a protection cap. (option:Type Code XS2Z-12)

Applicable sensor

Supply voltage	24V DC
Total current consumption*	≤ 550mA
Residual voltage	≤ 6V
Leakage current	---

\*Total current consumption of all connected sensor.

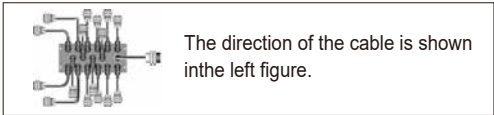
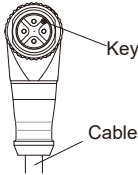
Pin assigned of connector for sensors		1 : + 2 : 3 : - 4 : SI
---------------------------------------	-------------------------------------------------------------------------------------	---------------------------------

Please sure to use applicable detector switch according to the specification on left.

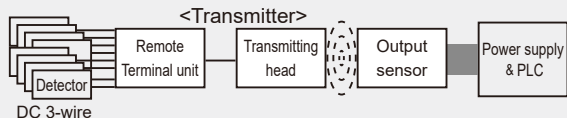
Applicable angle connector type (Detector's connector)

When using an angle connector, please use a connector of which key is positioned same as the following figure.

1 :Applicable to RS16TA-211\_



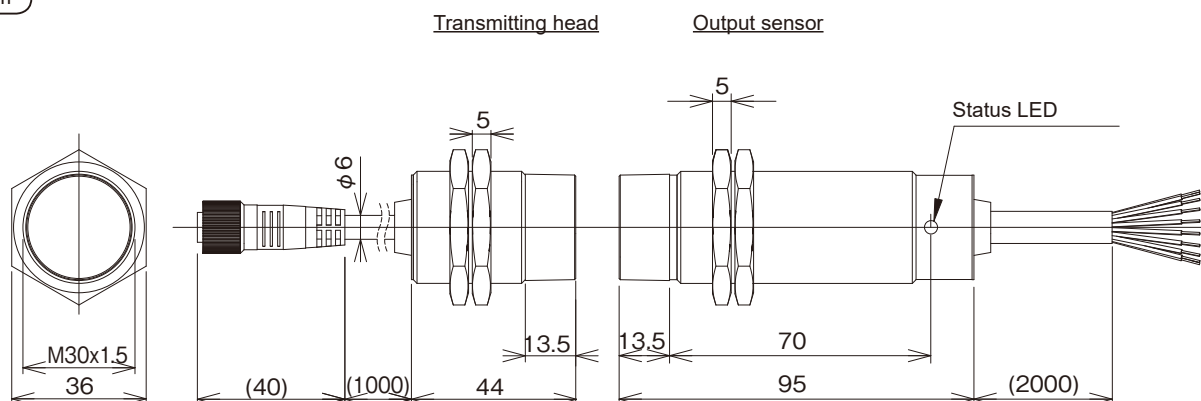




RS16TB-211

RSH16TB-30  
RSH16EB-3016  
signals

for max. 16 sensors Terminal unit type / Size : M30

Operating distance  
0...5mm

A057

Wiring C026 / P.124

Transmitter / Transmitting head			
Type Code	connect to 24V Remote Terminal	RSH16TB-030-PU-CP1.0	
Remote terminal		RS16TB-211P-S04	
Operating distance		0...5mm	2...5mm
Center offset		±2.5mm	±2.5mm
Drive current*		≤ 300mA	≤ 550mA
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		M12 connector Cable (1m, 3m, 5m)	
Material Housing		Nickel plated brass	
Active face		Nylon 12	
Weight		Body 120 g + Cable 50 g	
Remark			

\* The total amount of current supplied to sensors from Remote Terminal.

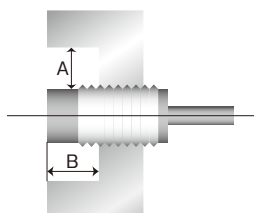
The drive current is affected by transmission distance and center offset.  
(Refer to the following figure)

Output sensor		
Type Code	PNP	RSH16EB-030P-PU-02
Supply voltage		24V DC ±10% (including ripple)
Current consumption		≤ 1A
No. of Output signals		16 signals + 1 signal (Inzone)
Load current		max.50mA per output
Frequency of operation		20Hz
Start-up time		≤ 2 sec.
LED		Inzone, Outzone, Over heat, Short
Operating temperature		0...+50°C
Protection class		IP67
Cable		PUR/ φ 8.6, 2x0.5mm <sup>2</sup> +17x0.18mm <sup>2</sup>
Material Housing		Nickel plated brass
Active face		Nylon 12
Weight		Body 160 g + Cable 110 g × 2 m
Remark		

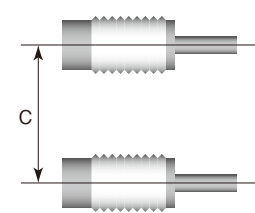
### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

#### Surrounding metal

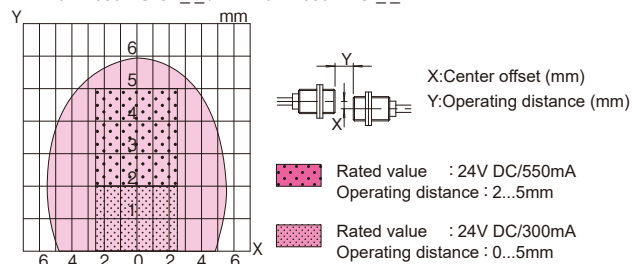


#### Parallel installation



### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RSH16TB-030-PU-CP\_ / RSH16EB-030P-PU-\_



Type Code	A(mm)	B(mm)	C(mm)
RSH16TB-030-PU-CP_	40	32	160
RSH16EB-030P-PU-_			

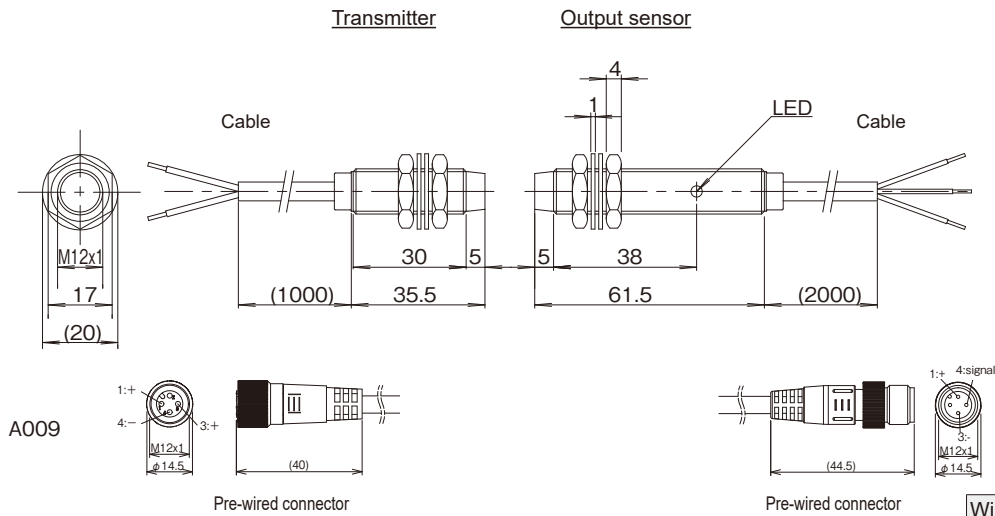
# Remote Sensor System Switch Signal

DC 2-wire Detector type / Regular type  
1 signal transmission

1  
signal

for 1 sensor / Size : M12

Operating distance  
0...2mm



Wiring C006 / P.121

Transmitter		
Type	Cable	Pre-wired connector
DC 2-wire	<b>RPT-1202D-PU-01</b>	<b>RPT-1202D-PU-CP0.3</b>
Code		
Drive voltage	12V ± 1.5V DC	
Drive current	5mA	
No. of Input signals	1 signal	
Operating distance	0...2mm	
Center offset	±1mm	
Drive current	5mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / φ 5 , 2x0.34mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 30 g + Cable 25 g x 1m / +Connector cable 30cm 30g	
Remark		

Output sensor		
Type	Cable	Pre-wired connector
NPN	<b>RPE-1202N-PU-02</b>	<b>RPE-1202N-PU-CP0.3</b>
PNP	<b>RPE-1202P-PU-02</b>	<b>RPE-1202P-PU-CP0.3</b>
Code		
Supply voltage	24V DC ±10% (including ripple)	
Current consumption	≤ 70mA	
No. of Output signal	1 signal	
Load current	≤ 50mA	
Frequency of operation	25Hz	
LED	Signal output indication	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / φ 5 , 3x0.34mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 40 g + Cable 35 g x 2m / +Connector cable 30cm 30g	
Remark		

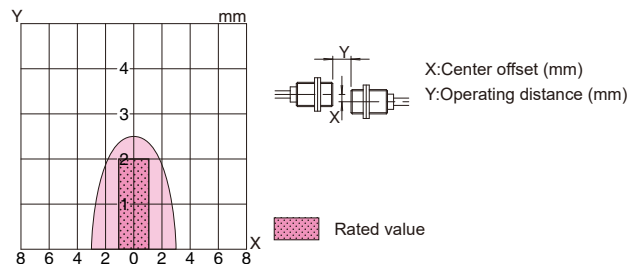
## Applicable sensor

Supply voltage	12V DC
Residual voltage	≤ 3.5V
Minimum load current	≤ 5mA
Leakage current	≤ 1mA

Please sure to use applicable detector switch according to the specification on left.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

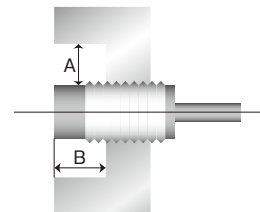
RPT-1202D-PU-\_\_ / RPE-1202 □ -PU-\_\_



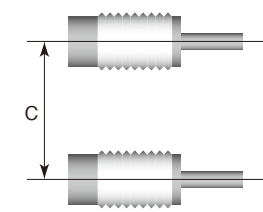
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

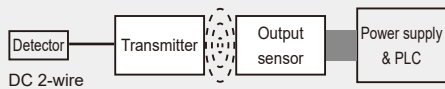
### Surrounding metal



### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RPT-1202D-PU-__	12	12	100
RPE-1202 □ -PU-__			



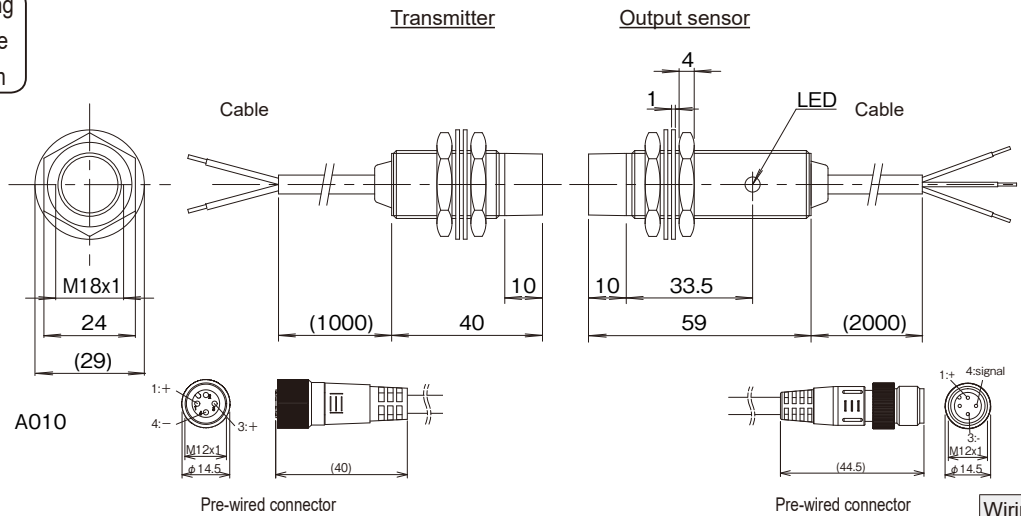
RPT-12  
RPE-12

RPT-18  
RPE-18

1  
signal

for 1 sensor / Size : M18

Operating distance  
0...4mm



Transmitter			
		Cable	Pre-wired connector
Type Code	DC 2-wire	RPT-1804D-PU-01	RPT-1804D-PU-CP0.3
Drive voltage		12V ± 1.5V DC	
Drive current		5mA	
No. of Input signals		1 signal	
Operating distance		0...4mm	
Center offset		±3mm	
Drive current		5mA	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / ϕ 5 , 2x0.34mm <sup>2</sup>	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 45g + Cable 35g x 1m / +Connector cable 30cm 30g	
Anti-weld slag type		Cable	Pre-wired connector
Type Code	DC2-wire	RPT-TF1804D-PU-01	RPT-TF1804D-PU-CP0.3
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

Output sensor			
		Cable	Pre-wired connector
Type	NPN	<b>RPE-1804N-PU-02</b>	<b>RPE-1804N-PU-CP0.3</b>
Code	PNP	<b>RPE-1804P-PU-02</b>	<b>RPE-1804P-PU-CP0.3</b>
Supply voltage		24V DC ±5% (including ripple)	
Current consumption		≤ 150mA	
No. of Output signal		1 signal	
Load current		≤ 50mA	
Frequency of operation		25Hz	
LED		Signal output indication	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / ϕ 5 , 3x0.34mm <sup>2</sup>	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 60g + Cable 35g x 2m / +Connector cable 30cm 30g	
Anti-weld slag type		Cable	Pre-wired connector
Type Code	NPN	<b>RPE-TF1804N-PU-02</b>	<b>RPE-TF1804N-PU-CP0.3</b>
	PNP	<b>RPE-TF1804P-PU-02</b>	<b>RPE-TF1804P-PU-CP0.3</b>
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Wiring C006 / P.121

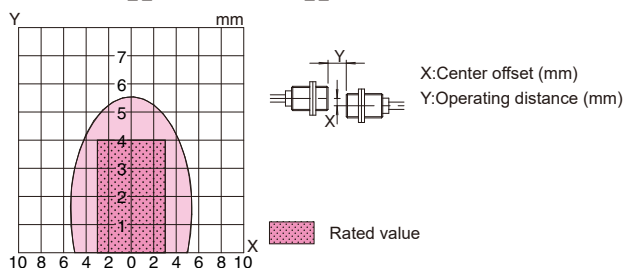
## Applicable sensor

Supply voltage	12V DC
Residual voltage	$\leq$ 3.5V
Minimum load current	$\leq$ 5mA
Leakage current	$\leq$ 1mA

Please sure to use applicable detector switch according to the specification on left.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPT-1804D-PU-\_\_ / RPE-1804 □ -PU-\_\_

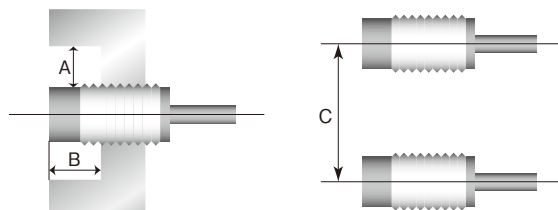


## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal

### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RPT-1804D-PU-__	20	15	110
RPE-1804 □ -PU-__			

Signal type  
Switch signal

Sensor type  
DC 2-wire

Remote Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive sensor

Terminal box  
Other unit

Wiring

Discontinued  
plans

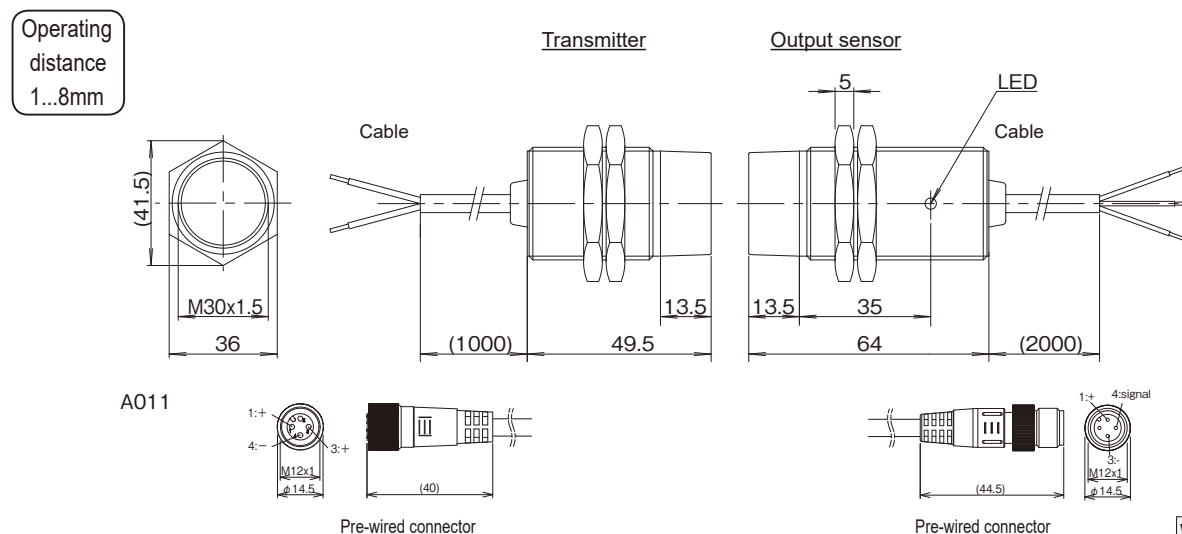
Index

# Remote Sensor System Switch Signal

DC 2-wire Detector type / Regular type  
1 signal transmission

1 signal

for 1 sensor / Size : M30



Transmitter			
Cable		Pre-wired connector	
Type Code	DC 2-wire	<b>RPT-3008D-PU-01</b>	<b>RPT-3008D-PU-CP0.3</b>
Drive voltage		12V ± 1.5V DC	
Drive current		5mA	
No. of Input signals		1 signal	
Operating distance		1...8mm	
Center offset		±5mm	
Drive current		5mA	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / ϕ 5 , 2x0.34mm <sup>2</sup>	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 110g + Cable 25g x 1m / +Connector cable 30cm 30g	
Anti-weld slag type			
Cable		Pre-wired connector	
Type Code	DC2-wire	<b>RPT-TF3008D-PU-01</b>	<b>RPT-TF3008D-PU-CP0.3</b>
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Output sensor			
		Cable	Pre-wired connector
Type	NPN	<b>RPE-3008N-PU-02</b>	<b>RPE-3008N-PU-CP0.3</b>
Code	PNP	<b>RPE-3008P-PU-02</b>	<b>RPE-3008P-PU-CP0.3</b>
Supply voltage		24V DC ±5% (including ripple)	
Current consumption		≤ 150mA	
No. of Output signal		1 signal	
Load current		≤ 50mA	
Frequency of operation		25Hz	
LED		Signal output indication	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / ϕ 5 , 3x0.34mm <sup>2</sup>	
Material		Housing Nickel plated brass	
Active face		Nylon 12	
Weight		Body 130g + Cable 35g x 2m / +Connector cable 30cm 30g	
Anti-weld slag type		Cable	Pre-wired connector
Type Code	NPN	<b>RPE-TF3008N-PU-02</b>	<b>RPE-TF3008N-PU-CP0.3</b>
	PNP	<b>RPE-TF3008P-PU-02</b>	<b>RPE-TF3008P-PU-CP0.3</b>
Material		Housing:Fluorinated resin coated/Active face:Fluorinated resin	

## Applicable sensor

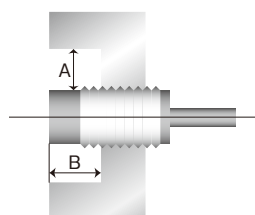
Supply voltage	12V DC
Residual voltage	≤ 3.5V
Minimum load current	≤ 5mA
Leakage current	≤ 1mA

Please sure to use applicable detector switch according to the specification on left.

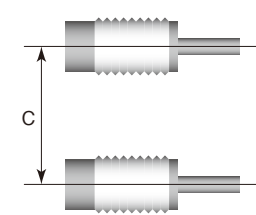
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal

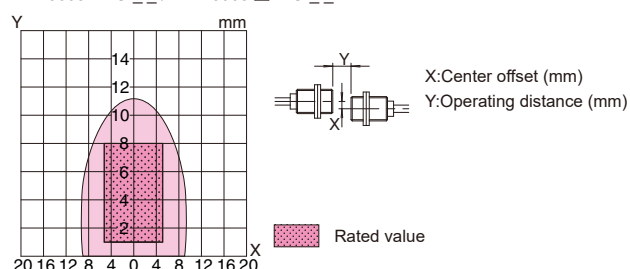


### Parallel installation

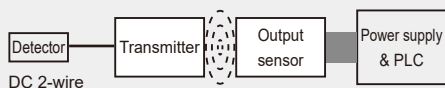


## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPT-3008D-PU-\_\_ / RPE-3008 □ -PU-\_\_



Type Code	A(mm)	B(mm)	C(mm)
RPT-3008D-PU-__	30	20	300
RPE-3008 □ -PU-__			



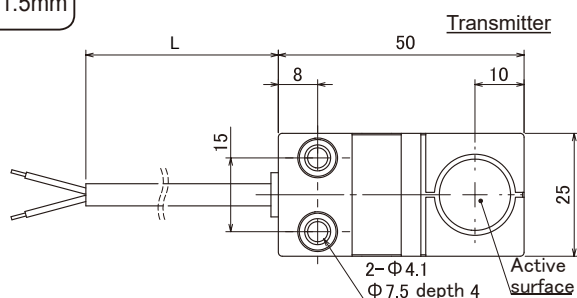
RPT-30  
RPE-30

RPT-F0  
RPE-F0

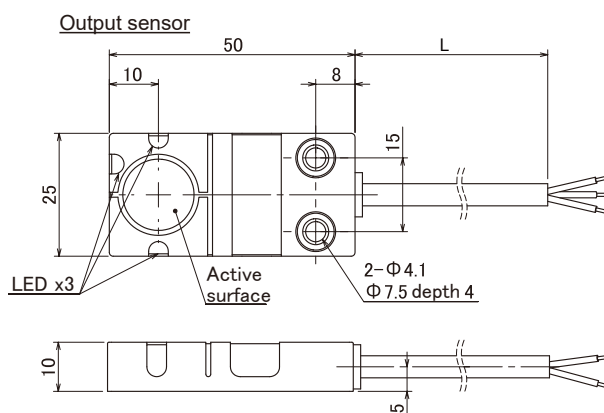
1  
signal

for 1 sensor / Size : 50 x 25 x 10

Operating distance  
0...1.5mm



A071



Wiring C006 / P.121

Transmitter	
Type Code	DC 2-wire RPT-F0D-PU-01
Drive voltage	12V $\pm$ 1.5V DC
Drive current	5mA
No. of Input signal	1 signal
Operating distance	0...1.5mm
Center offset	$\pm$ 1mm
Drive current	5mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 4.5 , 2x0.34mm <sup>2</sup>
Material Housing	ABS
Rear face	Aluminum
Weight	Body 20 g + Cable 30 g x 1m
Remark	

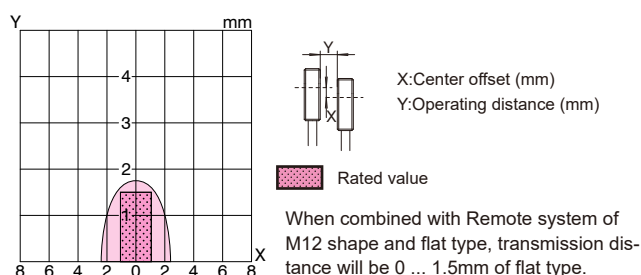
Output sensor	
Type Code	NPN RPE-F0N-PU-02 PNP RPE-F0P-PU-02
Supply voltage	24V DC $\pm$ 10% (including ripple)
Current consumption	$\leq$ 70mA
No. of Output signal	1 signal
Load current	$\leq$ 50mA
Frequency of operation	25Hz
LED	Signal output indication
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 4.5 , 3x0.34mm <sup>2</sup>
Material Housing	ABS
Rear face	Aluminum
Weight	Body 20 g + Cable 30 g x 2m
Remark	

## Applicable sensor

Supply voltage	12V DC	Please sure to use applicable detector switch according to the specification on left.
Residual voltage	$\leq$ 3.5V	
Minimum load current	$\leq$ 5mA	
Leakage current	$\leq$ 1mA	

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPT-F0D-PU-\_\_ / RPE-F0 □ -PU-\_\_

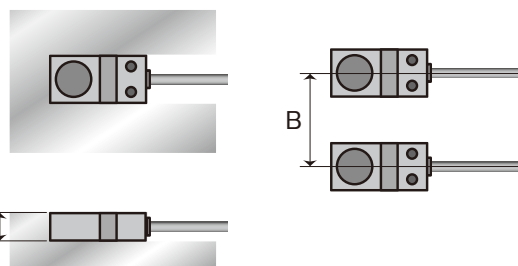


## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

■ Surrounding metal

■ Parallel installation



Type Code	A(mm)	B(mm)
RPT-F0D-PU-__	10	100
RPE-F0 □ -PU-__		

Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive sensor

Terminal box  
Other unit

Wiring

Discontinued  
plans

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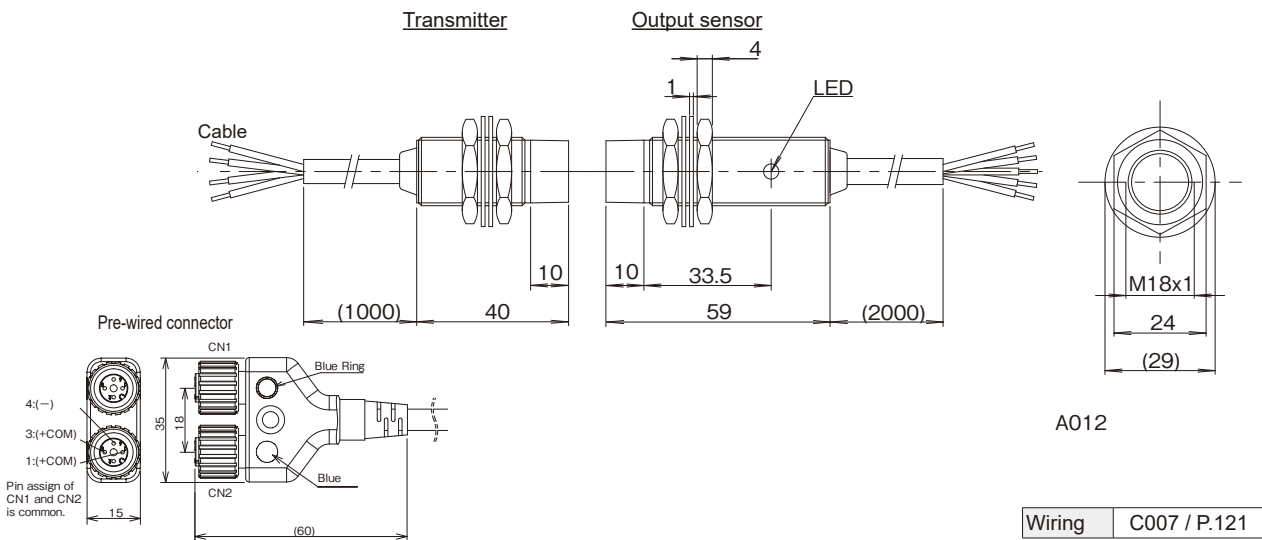
# Remote Sensor System Switch Signal

DC 2-wire Detector type / Regular type  
2 signals transmission

2 signals

for 2 sensors / Size : M18

Operating distance  
0.5...4mm



A012

Wiring C007 / P.121

Transmitter		
Type Code	DC 2-wire	
Cable	RPT2-1804D-PU-01	
Pre-wired connector	RPT2-1804D-CP0.3	
Drive voltage	12V ± 1.5V DC	
Drive current	5mA per sensor	
No. of Input signals	2 signals	
Operating distance	0.5...4mm	
Center offset	±2.5mm	
Drive current	5mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / φ 6 , 4x0.5mm <sup>2</sup>	PVC / φ 6
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 50g + Cable 50g x 1m / +Connector cable 30cm 80g	
Anti-weld slag	Cable	Pre-wired connector
Type Code	DC2-wire	
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	
	RPT2-TF1804D-PU-01	RPT2-TF1804D-CP0.3

Output sensor		
Type	NPN	RPE2-1804N-PU-02
Code	PNP	RPE2-1804P-PU-02
Supply voltage	24V DC ±10% (including ripple)	
Current consumption	≤ 150mA	
No. of Output signals	2 signals + 1 signal ( Inzone )	
Load current	max.50mA per output	
Frequency of operation	25Hz	
LED	Inzone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / φ 6.4 , 5x0.5mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 60 g + Cable60 g × 2 m	
Anti-weld slag	NPN	RPE2-TF1804N-PU-02
Type Code	PNP	RPE2-TF1804P-PU-02
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

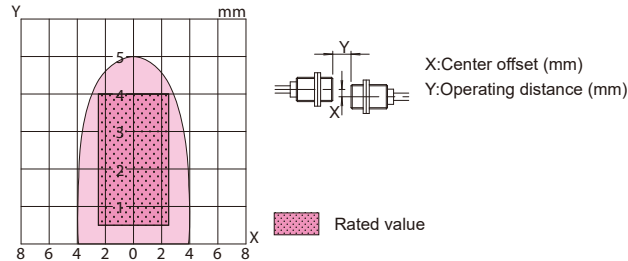
## Applicable sensor

Supply voltage	12V DC
Residual voltage	≤ 3.5V
Minimum load current	≤ 5mA
Leakage current	≤ 1mA

Please sure to use applicable detector switch according to the specification on left.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

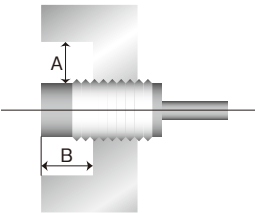
RPT2-1804D-PU-\_\_ / RPE2-1804 □ -PU-\_\_



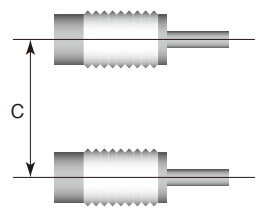
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

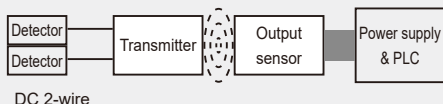
### Surrounding metal



### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RPT2-1804D-PU-__	20	15	110
RPE2-1804 □ -PU-__			

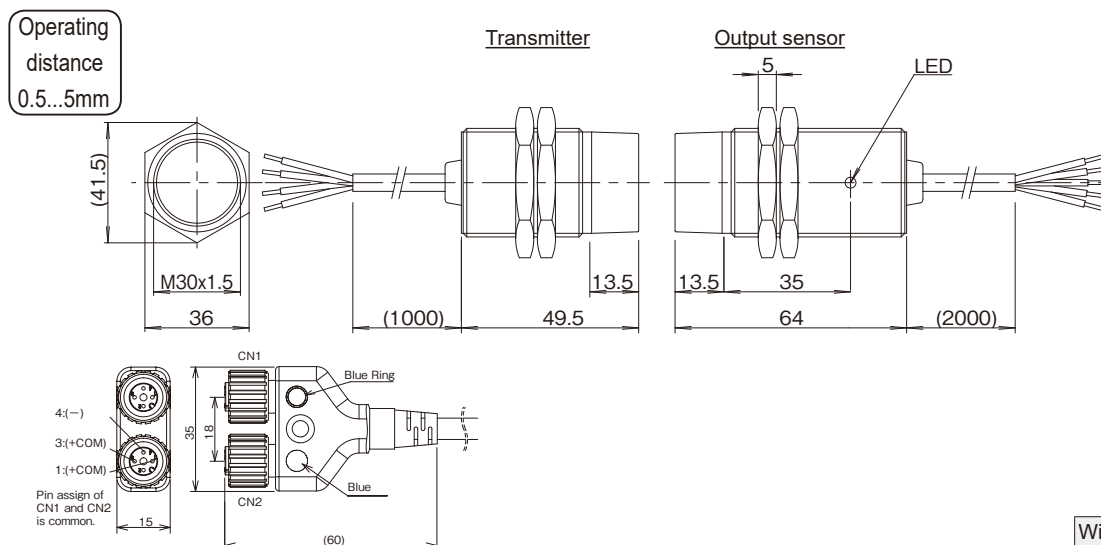


RPT2-18  
RPE2-18

RPT2-30  
RPE2-30

2  
signals

for 2 sensors / Size : M30



Transmitter			
Type Code	DC 2-wire	Cable	Pre-wired connector
		<b>RPT2-3005D-PU-01</b>	<b>RPT2-3005D-CP0.3</b>
Drive voltage	12V ± 1.5V DC		
Drive current	5mA per sensor		
No. of Input signals	2 signals		
Operating distance	0.5...5mm		
Center offset	±5mm		
Drive current	5mA		
Operating temperature	0...+50°C		
Protection class	IP67		
Cable	PUR / φ 6 , 4x0.5mm <sup>2</sup>   PVC / φ 6		
Material Housing	Nickel plated brass		
Active face	Nylon 12		
Weight	Body 110g + Cable 50g x 1m / +Connector cable 30cm 80g		
Anti-weld slag			
Type Code	DC2-wire	Cable	Pre-wired connector
		<b>RPT2-TF3005D-PU-01</b>	<b>RPT2-TF3005D-CP0.3</b>
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

Output sensor		
Type	NPN	<b>RPE2-3005N-PU-02</b>
Code	PNP	<b>RPE2-3005P-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)	
Current consumption	≤ 150mA	
No. of Output signals	2 signals + 1 signal ( Inzone )	
Load current	max.50mA per output	
Frequency of operation	25Hz	
LED	Inzone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / φ 6.4 , 5x0.5mm <sup>2</sup>	
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight	Body 130 g + Cable60 g × 2 m	
Anti-weld slag	NPN	<b>RPE2-TF3005N-PU-02</b>
Type Code	PNP	<b>RPE2-TF3005P-PU-02</b>
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Wiring C007 / P.121

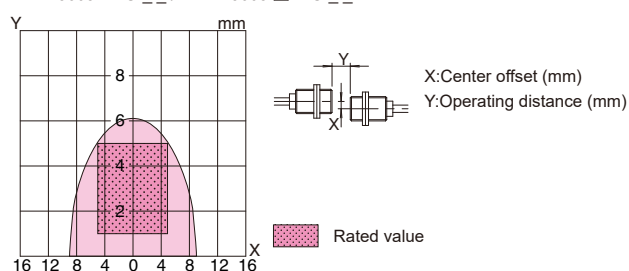
## Applicable sensor

Supply voltage	12V DC
Residual voltage	≤ 3.5V
Minimum load current	≤ 5mA
Leakage current	≤ 1mA

Please sure to use applicable detector switch according to the specification on left.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPT2-3005D-PU-\_\_ / RPE2-3005 □ -PU-\_\_

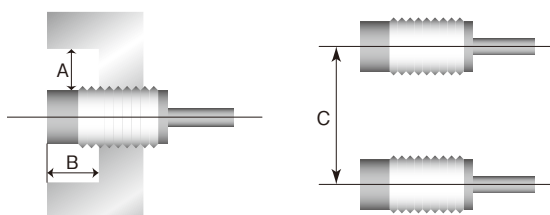


## Installation notes

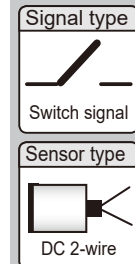
In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

■ Surrounding metal

■ Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RPT2-3005D-PU-__	30	20	300
RPE2-3005 □ -PU-__			



Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive sensor

Terminal box  
Other unit

Wiring

Discontinued  
plans

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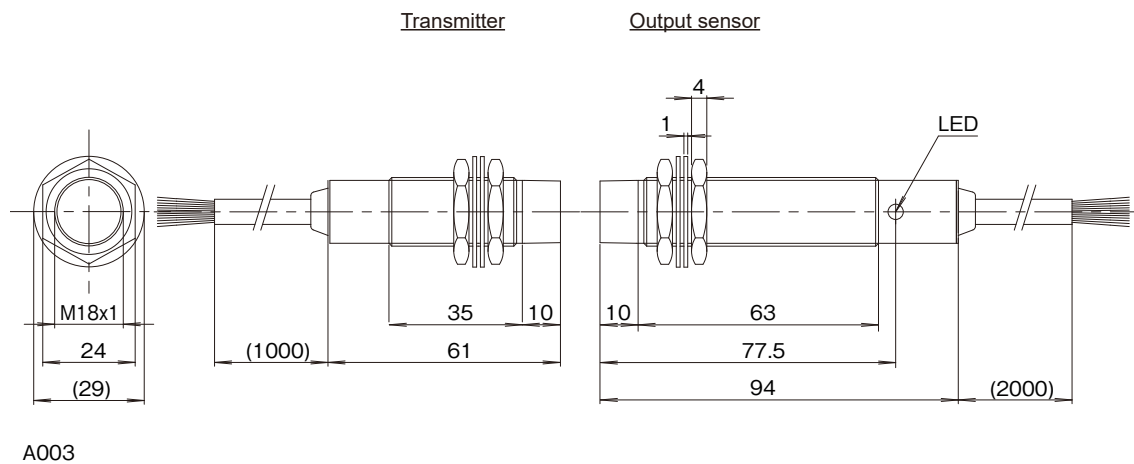
# Remote Sensor System Switch Signal

DC 2-wire Detector type / Regular type  
4 signals transmission

4  
signals

for max. 4 sensors / Size : M18

Operating  
distance  
0.5...3mm



Wiring C008 / P.121

Transmitter		
Type Code	DC 2-wire	<b>RPT4-1803D-PU-01</b>
Drive voltage	12V $\pm$ 1.5V DC	
Drive current	5mA per sensor	
No. of Input signals	4 signals	
Operating distance	0.5...3mm	
Center offset	$\pm$ 2mm	
Drive current	5mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / $\phi$ 6.3 , 7x0.3mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 60 g + Cable 60 g $\times$ 1 m	
Anti-weld slag Type Code	DC 2-wire	<b>RPT4-TF1803D-PU-01</b>
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Output sensor		
Type Code	NPN	<b>RPE4-1803N-PU-02</b>
	PNP	<b>RPE4-1803P-PU-02</b>
Supply voltage	24V DC $\pm$ 5% (including ripple)	
Current consumption	$\leq$ 170mA	
No. of Output signals	4 signals + 1 signal ( Inzone )	
Load current	max.50mA per output	
Frequency of operation	30Hz	
LED	Inzone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / $\phi$ 6.3 , 7x0.3mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 80 g + Cable 60 g $\times$ 2 m	
Anti-weld slag Type Code	NPN	<b>RPE4-TF1803N-PU-02</b>
	PNP	<b>RPE4-TF1803P-PU-02</b>
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

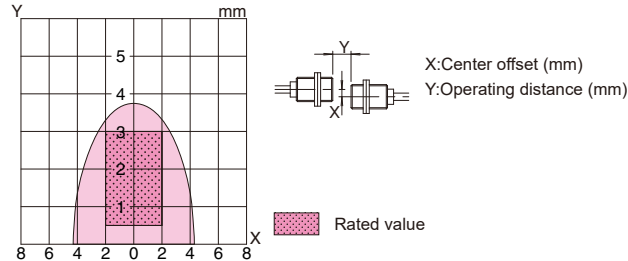
## Applicable sensor

Supply voltage	12V DC
Residual voltage	$\leq$ 3.5V
Minimum load current	$\leq$ 5mA
Leakage current	$\leq$ 1mA

Please sure to use applicable detector switch according to the specification on left.

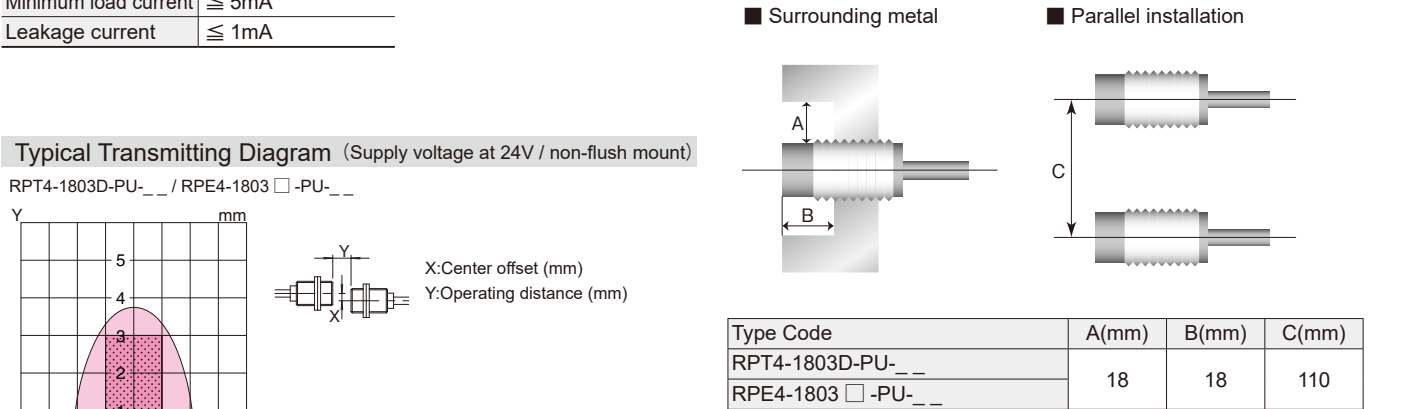
## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

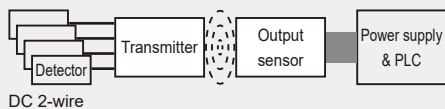
RPT4-1803D-PU-\_\_ / RPE4-1803 □ -PU-\_\_



## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.





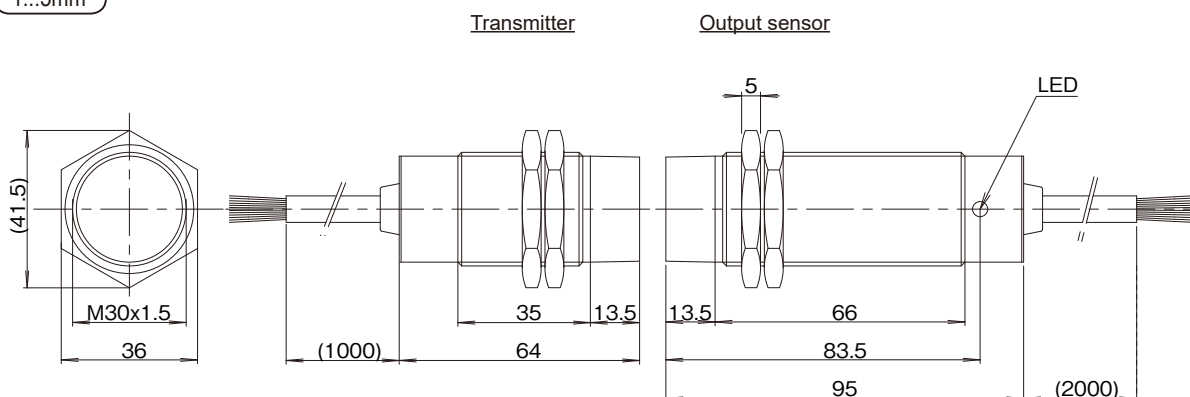
RPT4-18  
RPE4-18

RPT4-30  
RPE4-30

4  
signals

for maz. 4 sensors / Size : M30

Operating  
distance  
1...5mm



A004

Wiring C008 / P.121

Transmitter	
Type Code	DC 2-wire <b>RPT4-3005D-PU-01</b>
Drive voltage	12V $\pm$ 1.5V DC
Drive current	5 mA per sensor
No. of Input signals	4 signals
Operating distance	1...5mm
Center offset	$\pm$ 6mm
Drive current	5mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 6.3 , 7x0.3mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 130 g + Cable60 g $\times$ 1 m
Anti-weld slag	DC 2-wire <b>RPT4-TF3005D-PU-01</b>
Type Code	Material Housing:Fluorinated resin coated/Active face:Fluorinated resin

Output sensor	
Type Code	NPN <b>RPE4-3005N-PU-02</b> PNP <b>RPE4-3005P-PU-02</b>
Supply voltage	24V DC $\pm$ 5% (including ripple)
Current consumption	$\leq$ 150mA
No. of Output signals	4 signals + 1 signal ( Inzone )
Load current	max.50mA per output
Frequency of operation	30Hz
LED	Inzone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 6.3 , 7x0.3mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable60 g $\times$ 2 m
Anti-weld slag	NPN <b>RPE4-TF3005N-PU-02</b> PNP <b>RPE4-TF3005P-PU-02</b>
Type Code	Material Housing:Fluorinated resin coated/Active face:Fluorinated resin

## Applicable sensor

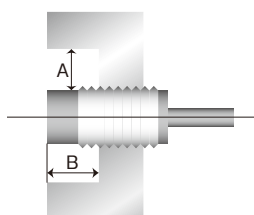
Supply voltage	12V DC
Residual voltage	$\leq$ 3.5V
Minimum load current	$\leq$ 5mA
Leakage current	$\leq$ 1mA

Please sure to use applicable detector switch according to the specification on left.

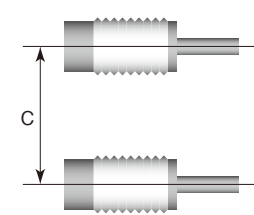
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal

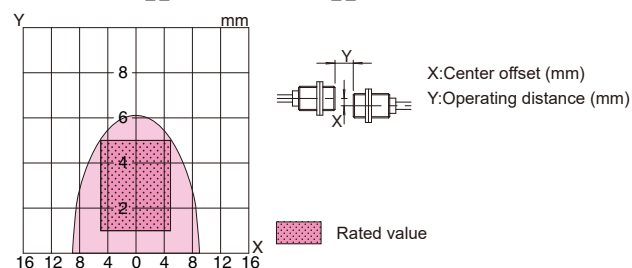


### Parallel installation



## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPT4-3005D-PU-\_\_ / RPE4-3005 □ -PU-\_\_



Type Code	A(mm)	B(mm)	C(mm)
RPT4-3005D-PU-__	40	32	300
RPE4-3005 □ -PU-__			

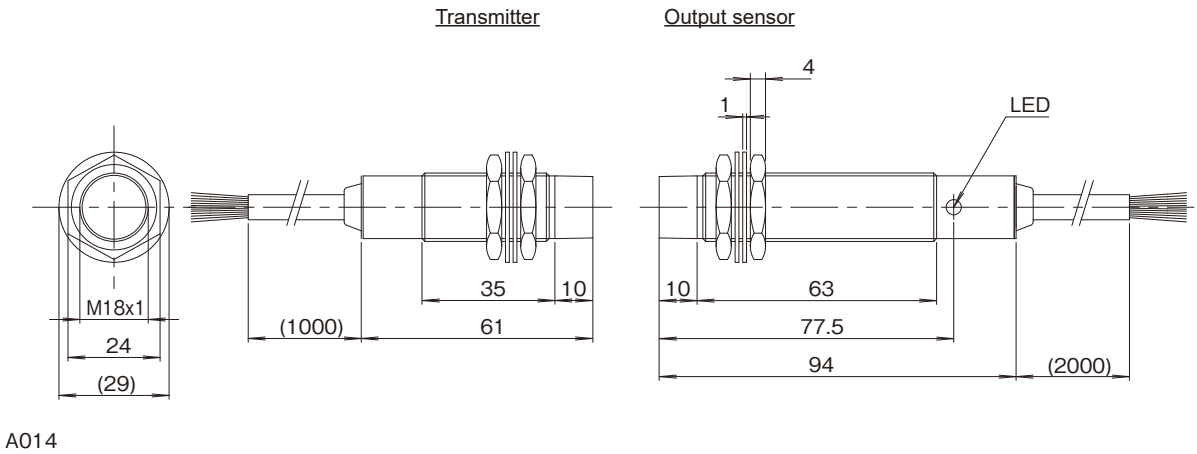
# Remote Sensor System Switch Signal

DC 2-wire Detector type / Regular type  
8 signals transmission

8 signals

for max. 8 sensors / Size : M18

Operating  
distance  
0.5...3mm



Wiring C009 / P.122

Transmitter	
Type Code	DC 2-wire <b>RPT8-1803D-PU-01</b>
Drive voltage	12V $\pm$ 1.5V DC
Drive current	5 mA per sensor
No. of Input signals	8 signals
Operating distance	0.5...3mm
Center offset	$\pm$ 2.5mm
Drive current	5mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 7.9 , 9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 60 g + Cable 75 g $\times$ 1 m
Anti-weld slag Type Code	DC2-wire <b>RPT8-TF1803D-PU-01</b>
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Output sensor	
Type Code	NPN <b>RPE8-1800N-PU-02</b> PNP <b>RPE8-1800P-PU-02</b>
Supply voltage	24V DC $\pm$ 10% (including ripple)
Current consumption	$\leq$ 400mA
No. of Output signals	8 signals + 1 signal ( Inzone )
Load current	max.50mA per output
Frequency of operation	60Hz
LED	Inzone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 7.7 , 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 90 g + Cable 75 g $\times$ 2 m
Anti-weld slag Type Code	NPN <b>RPE8-TF1800N-PU-02</b> PNP <b>RPE8-TF1800P-PU-02</b>
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

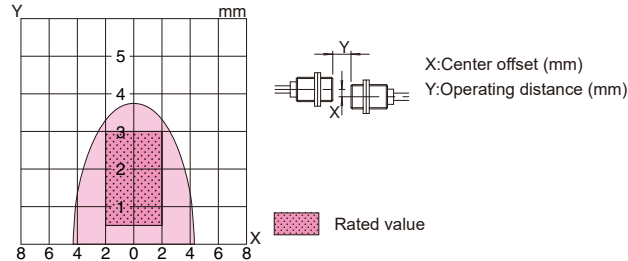
## Applicable sensor

Supply voltage	12V DC
Residual voltage	$\leq$ 3.5V
Minimum load current	$\leq$ 5mA
Leakage current	$\leq$ 1mA

Please sure to use applicable detector switch according to the specification on left.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

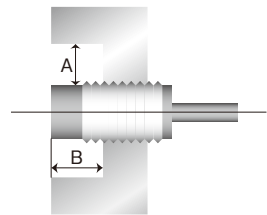
RPT8-1803D-PU-\_\_ / RPE8-1800 □ -PU-\_\_



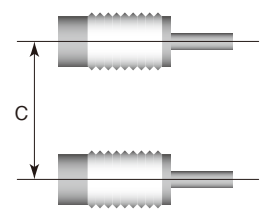
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

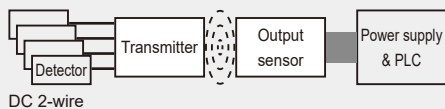
### Surrounding metal



### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RPT8-1803D-PU-__	18	18	110
RPE8-1800 □ -PU-__			



RPT8-18  
RPE8-18

RPT8-30  
RPE8-30

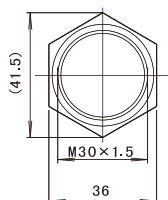
8  
signals

for maz. 8 sensors / Size : M30

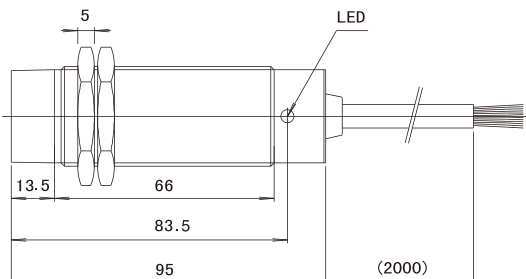
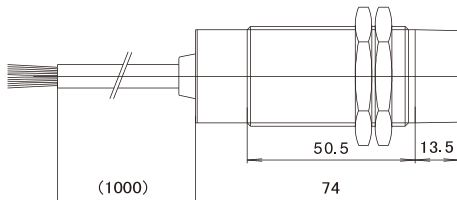
Operating  
distance  
2...7mm

Transmitter

Output sensor



A005



RPT8-3007D is — common.

The + common type is also available, please contact ud.

Wiring C010 / P.122

Transmitter	
Type Code	DC 2-wire
	<b>RPT8-3007D-PU-01</b>
Drive voltage	22V +4 -2V DC
Drive current	5 mA per sensor
No. of Input signals	8 signals
Operating distance	2...7mm
Center offset	±3mm
Drive current	5mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 7.7 , 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 150 g + Cable 75 g × 1 m
Anti-weld slag Type Code	DC2-wire
	<b>RPT8-TF3007D-PU-01</b>
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Output sensor	
Type Code	NPN
	<b>RPE8-3000N-PU-02</b>
Type Code	PNP
	<b>RPE8-3000P-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)
Current consumption	≤ 400mA
No. of Output signals	8 signals + 1 signal ( Inzone )
Load current	max.50mA per output
Frequency of operation	60Hz
LED	Inzone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 7.7 , 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 190 g + Cable 75 g × 2 m
Anti-weld slag Type Code	NPN
	<b>RPE8-TF3000N-PU-02</b>
	PNP
	<b>RPE8-TF3000P-PU-02</b>
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

## Applicable sensor

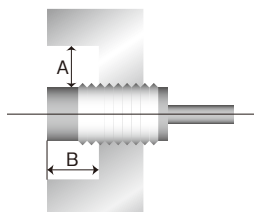
Supply voltage	22V DC
Residual voltage	≤ 6V
Minimum load current	≤ 5mA
Leakage current	≤ 1mA

Please sure to use applicable detector switch according to the specification on left.

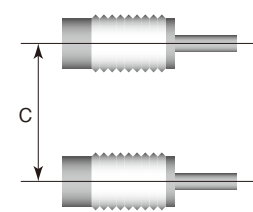
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal

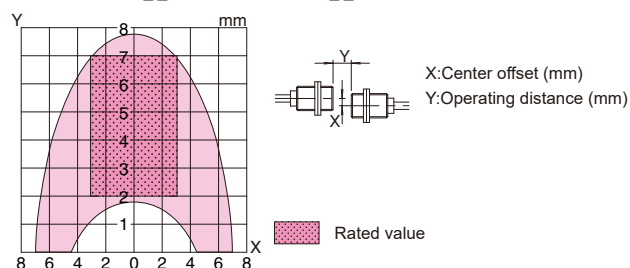


### Parallel installation



## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPT8-3007D-PU-\_\_ / RPE8-3000 □ -PU-\_\_



Type Code	A(mm)	B(mm)	C(mm)
RPT8-3007D-PU-__	30	20	200
RPE8-3000 □ -PU-__			



# Remote Sensor System Switch Signal

DC 2-wire Detector type / Regular type  
8 signals transmission

High Temperature

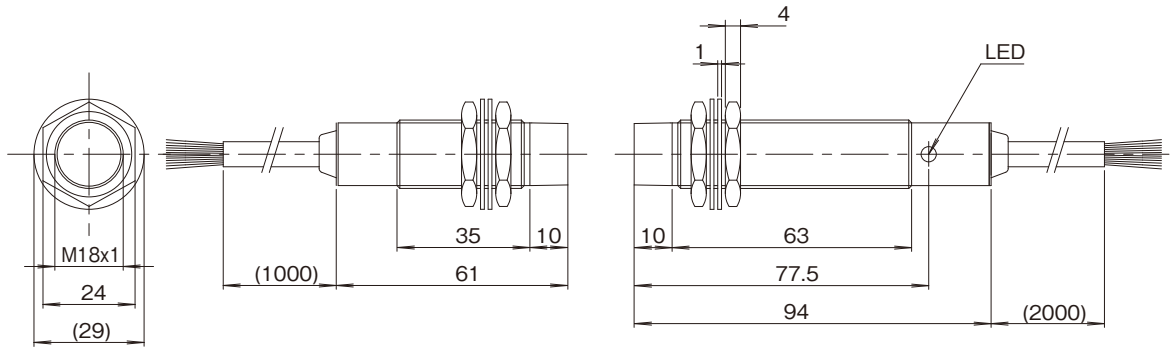
8  
signals

for max. 8 sensors / Size : M18

Operating  
distance  
0.5...3mm

Transmitter

Output sensor



A014

Wiring C009 / P.122

Transmitter	
Type Code	DC 2-wire <b>RS08TA-018D-PU-01</b>
Drive voltage	12V $\pm$ 1.5V DC
Drive current	5 mA per sensor
No. of Input signals	8 signals
Operating distance	0.5...3mm
Center offset	$\pm$ 2.5mm
Drive current	5mA
Operating temperature	0...+80°C
Protection class	IP67
Cable	PUR / $\phi$ 7.9 , 9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 65 g + Cable 75 g $\times$ 1 m

Output sensor	
Type Code	NPN <b>RS08EA-018N-PU-02</b> PNP <b>RS08EA-018P-PU-02</b>
Supply voltage	24V DC $\pm$ 10% (including ripple)
Current consumption	$\leq$ 150mA
No. of Output signals	8 signals + 1 signal ( Inzone )
Load current	max.50mA per output
Frequency of operation	60Hz
LED	Inzone
Operating temperature	0...+80°C
Protection class	IP67
Cable	PUR / $\phi$ 7.7 , 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 95 g + Cable 75 g $\times$ 2 m

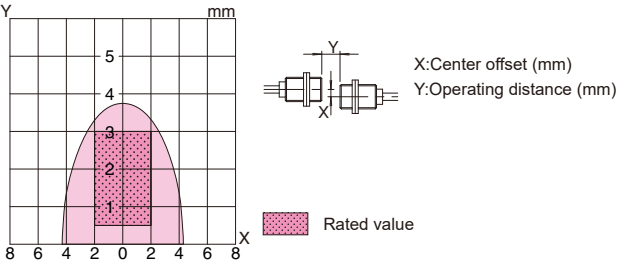
## Applicable sensor

Supply voltage	12V DC
Residual voltage	$\leq$ 3.5V
Minimum load current	$\leq$ 5mA
Leakage current	$\leq$ 1mA

Please sure to use applicable detector switch according to the specification on left.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

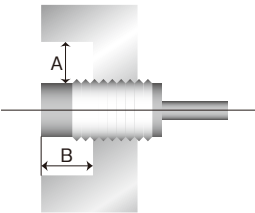
RS08TA-018D-PU-\_\_ / RS08EA-018\_\_-PU-\_\_



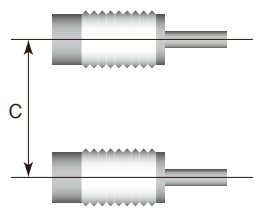
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

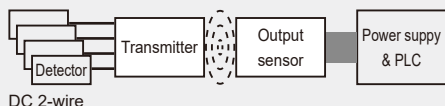
### Surrounding metal



### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RS08TA-018D-PU-__	18	18	110
RS08EA-018__-PU-__			



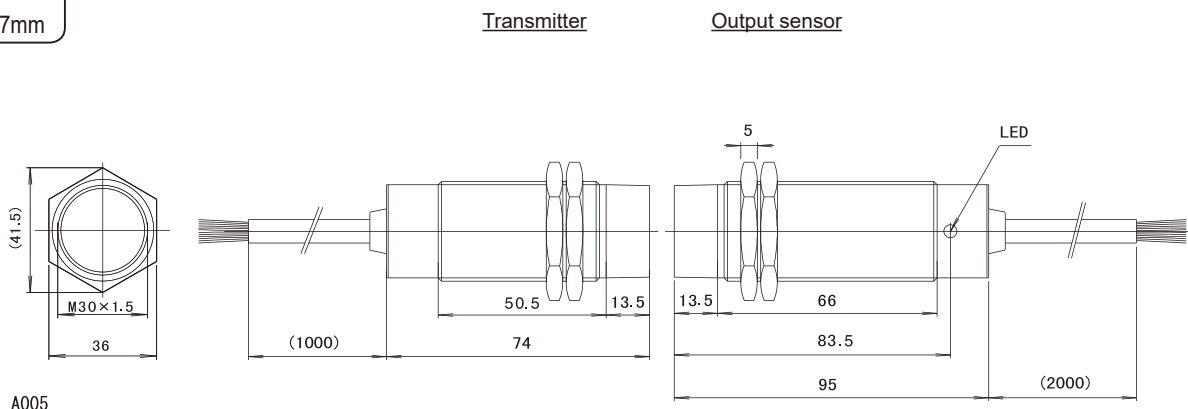
RS08TA-18  
RS08EA-18

RS08TA-30  
RS08EA-30

8  
signals

for maz. 8 sensors / Size : M30

Operating  
distance  
2...7mm



A005

Wiring C009 / P.122

Transmitter	
Type Code	DC 2-wire <b>RS08TA-030D-PU-01</b>
Drive voltage	12V $\pm$ 1.5V DC
Drive current	5 mA per sensor
No. of Input signals	8 signals
Operating distance	2...7mm
Center offset	$\pm$ 3mm
Drive current	5mA
Operating temperature	0...+80°C
Protection class	IP67
Cable	PUR / $\phi$ 7.9 , 9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 150 g + Cable 75 g $\times$ 1 m

Output sensor	
Type Code	NPN <b>RS08EA-030N-PU-02</b> PNP <b>RS08EA-030P-PU-02</b>
Supply voltage	24V DC $\pm$ 10% (including ripple)
Current consumption	$\leq$ 150mA
No. of Output signals	8 signals + 1 signal ( Inzone )
Load current	max.50mA per output
Frequency of operation	60Hz
LED	Inzone
Operating temperature	0...+80°C
Protection class	IP67
Cable	PUR / $\phi$ 7.7 , 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable 75 g $\times$ 2 m

### Applicable sensor

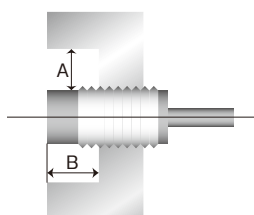
Supply voltage	12V DC
Residual voltage	$\leq$ 3.5V
Minimum load current	$\leq$ 5mA
Leakage current	$\leq$ 1mA

Please sure to use applicable detector switch according to the specification on left.

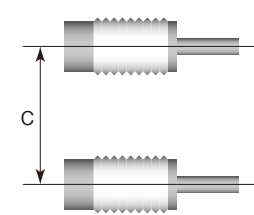
### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

#### Surrounding metal

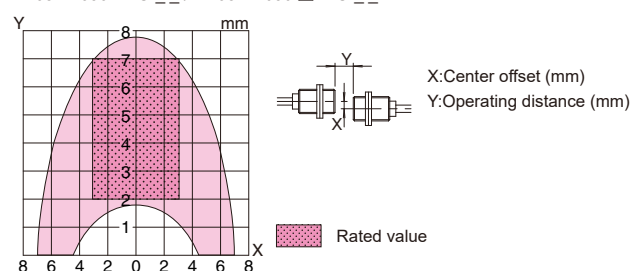


#### Parallel installation

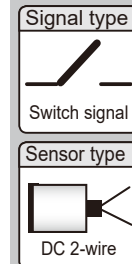


### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RS08TA-030D-PU-\_\_ / RS08EA-030 □ -PU-\_\_



Type Code	A(mm)	B(mm)	C(mm)
RS08TA-030D-PU-__	30	20	200
RS08EA-030 □ -PU-__			



Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive sensor

Terminal box  
Other unit

Wiring

Discontinued  
plans

Index

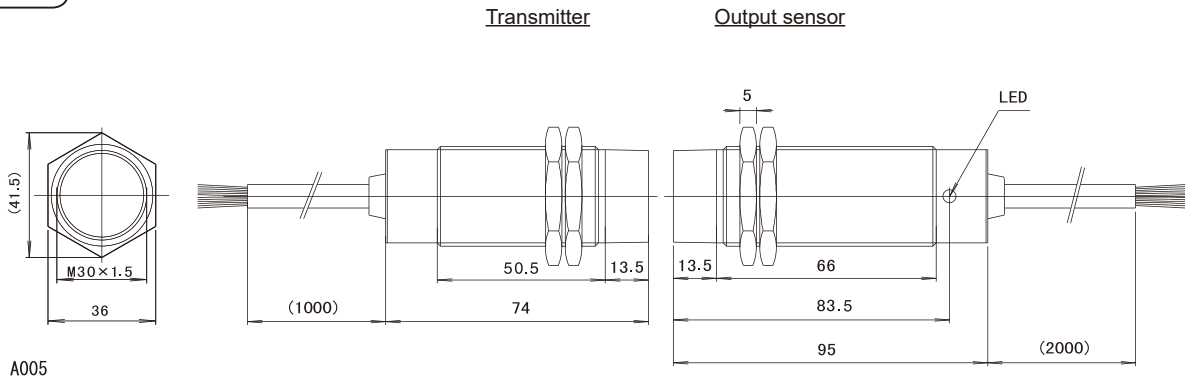
# Remote Sensor System Switch Signal

DC 2-wire Detector type / Regular type  
15 signals transmission

15 signals

for maz. 15 sensors / Size : M30

Operating  
distance  
1...5mm



Wiring C011 / P.123

Transmitter		
Type Code	DC 2-wire	<b>RPT15-3005D-PU-01</b>
Drive voltage	12V $\pm$ 1.5V DC	
Drive current	5 mA per sensor	
No. of Input signals	15 signals	
Operating distance	1...5mm	
Center offset	$\pm$ 2.5mm	
Drive current	5mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / $\phi$ 8.6 , 2x0.5mm <sup>2</sup> +16x0.18mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 170 g + Cable 105 g $\times$ 1 m	
Anti-weld slag Type Code	DC2-wire	<b>RPT15-TF3005D-PU-01</b>
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Output sensor		
Type Code	NPN	<b>RPE15-3000N-PU-02</b>
	PNP	<b>RPE15-3000P-PU-02</b>
Supply voltage	24V DC +10 -20% (including ripple)	
Current consumption	$\leq$ 500mA	
No. of Output signals	15 signals + 1 signal ( Inzone )	
Load current	max.50mA per output	
Frequency of operation	20Hz	
LED	Inzone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / $\phi$ 8.6 , 2x0.5mm <sup>2</sup> +16x0.18mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 200 g + Cable 105 g $\times$ 2 m	
Anti-weld slag Type Code	NPN	<b>RPE15-TF3000N-PU-02</b>
	PNP	<b>RPE15-TF3000P-PU-02</b>
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

## Applicable sensor

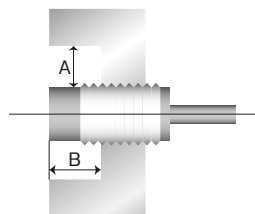
Supply voltage	12V DC
Residual voltage	$\leq$ 3.5V
Minimum load current	$\leq$ 5mA
Leakage current	$\leq$ 1mA

Please sure to use applicable detector switch according to the specification on left.

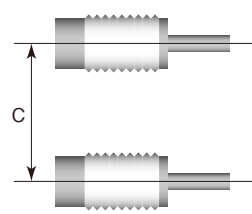
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal



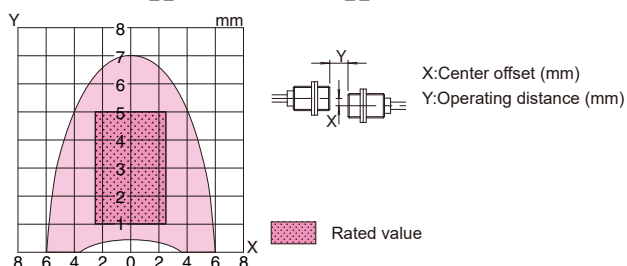
### Parallel installation

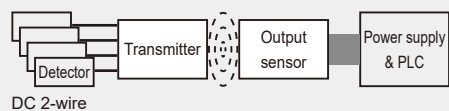


Type Code	A(mm)	B(mm)	C(mm)
RPT15-3005D-PU-__	30	20	200
RPE15-3000 □ -PU-__			

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RPT15-3005D-PU-\_\_ / RPE15-3000 □ -PU-\_\_





RPT15-30  
RPE15-30


# 15

## signals

Signal type

Switch signal

Sensor type

 DC 2-wire

## Remote Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

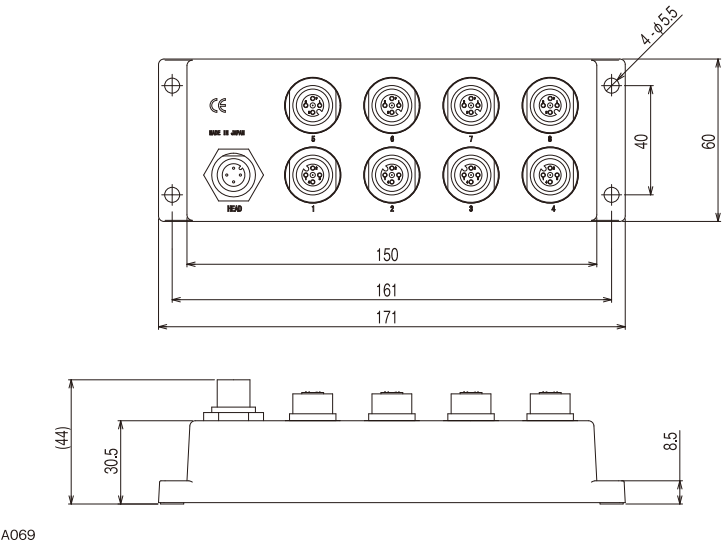
Exclusive detector typeThermocouple  
typeResistance thermometer typeLoad cell typeAnalog sensor typeExclusive sensor

Terminal box  
Other unit

## Wiring

Discontinued plansIndex

for max. 8 sensors    Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.

Wiring    C025 / P.124

Transmitter / Remote terminal	
Type	Connector type 1 <b>RS8TA-222D-S04</b>
Code	Connector type 2 <b>RS8T-222D-S04</b>
Sensor type	DC 2-wire type (M12 connector 4-pin : polarized / 1:+,4:-, non-polarized / 3:+,4:-)
Drive voltage	22V DC $\pm$ 10%
Drive current	5 mA per sensor
Operating temperature	0...+50°C
Protection class	IP67
Connection sensor	Connector M12 (Female) x 8
Transmitting head	Connector M12 (Male) x 1
Material Housing	PPS
Weight	600 g
Remark	The unused connectors should be protected by a protection cap. (option:Type Code XS2Z-12)

Applicable sensor

Supply voltage	22V DC
Residual voltage	$\leq$ 6V
Minimum load current	$\leq$ 5mA
Leakage current	$\leq$ 1mA

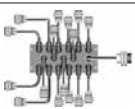
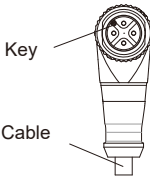
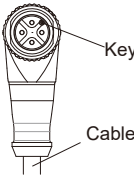
Please sure to use applicable detector switch according to the specification on left.

Applicable angle connector type (Detector's connector)

When using an angle connector, please use a connector of which key is positioned same as the following figure.

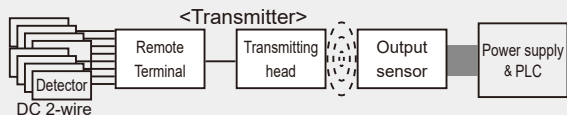
1 :Applicable to RS8TA-222

2 :Applicable to RS8T-222



The direction of the cable is shown in the left figure.

The straight connector can be used to both type of Remote Terminal.



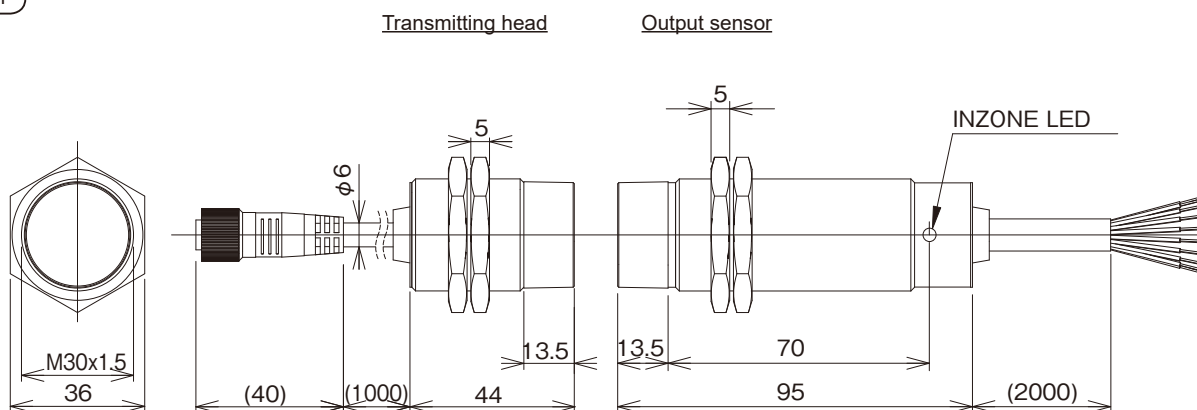
RS8TA-222  
RS8T-222

RSH8T-30  
RSH8E-30

8  
signals

for max. 8 sensors Terminal unit type / Size : M30

Operating distance  
2...8mm



A057

Wiring C025 / P.124

Transmitter / Transmitting head	
Type Code	connect to Remote Terminal <b>RSH8T-030-PU-CP1.0</b>
Drive voltage	22V ± 1.5V DC
Drive current	120mA
Remote terminal	RS8TA-222_-S04, RS8T-222_-S04
Operating distance	2...8mm
Center offset	±3mm
Operating temperature	0...+50°C
Protection class	IP67
Cable	M12 connector Cable (1m, 3m, 5m) connect to Remote Terminal
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 120 g + Cable 50 g × 1 m
Anti-weld slag Type Code	connect to Remote Terminal <b>RSH8T-TF030-PU-CP1.0</b>
Material	Housing: Fluorinated resin coated / Active face: Fluorinated resin

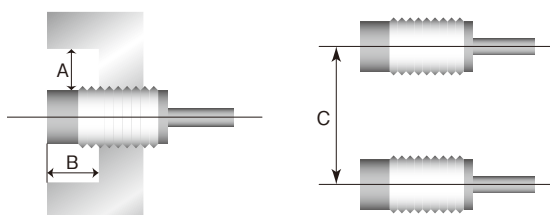
Output sensor	
Type Code	NPN <b>RSH8E-030N-PU-02</b> PNP <b>RSH8E-030P-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)
Current consumption	≤ 500mA
No. of Output signals	8 signals + 1 signal (Inzone)
Load current	max. 50mA per output
Frequency of operation	20Hz
LED	Inzone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR/ φ 7.7, 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable 75 g × 2 m
Anti-weld slag Type Code	NPN <b>RSH8E-TF030N-PU-02</b> PNP <b>RSH8E-TF030P-PU-02</b>
Material	Housing: Fluorinated resin coated / Active face: Fluorinated resin

### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

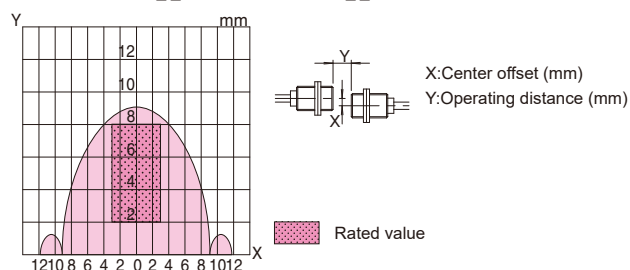
■ Surrounding metal

■ Parallel installation



### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RS8T-030-PU-CP-\_\_ / RSH8E-030 □ -PU-\_\_



Type Code	A(mm)	B(mm)	C(mm)
RS8T-030-PU-CP-__	30	30	160
RSH8E-030 □ -PU-__			

Signal type  
Switch signal

Sensor type  
DC 2-wire

Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive sensor

Terminal box  
Other unit

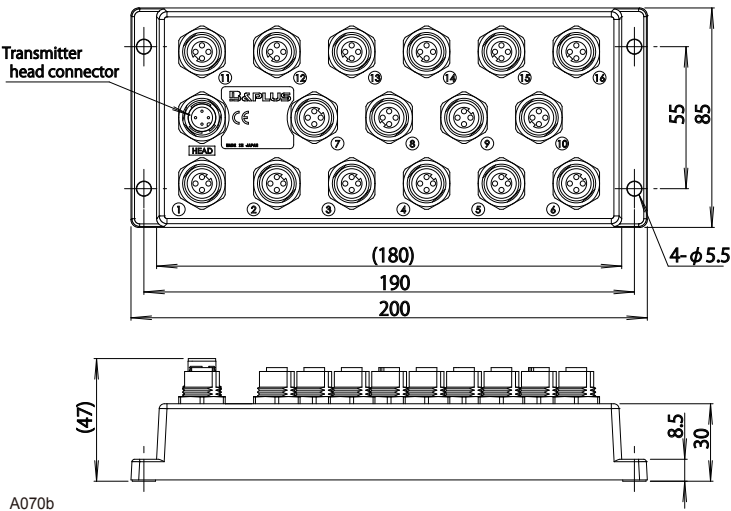
Wiring

Discontinued  
plans

Index



for max. 16 sensors    Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.

Wiring    C026 / P.124

Transmitter / Remote terminal	
Type Connector type 1	RS16TA-211D-S04
Code Connector type 2	RS16T-211D-S04
Sensor type	DC 2-wire type (M12 connector 4-pin : polarized / 1:+,4:-, non-polarized / 3:+,4:-)
Drive voltage	22V DC $\pm$ 10%
Drive current	5 mA per sensor
Operating temperature	0...+50°C
Protection class	IP67
Connection sensor	Connector M12 (Female) x 16
Transmitting head	Connector M12 (Male) x 1
Material Housing	PPS(GF40%)
Weight	1000 g
Remark	The unused connectors should be protected by a protection cap. (option:Type Code XS2Z-12)

Applicable sensor

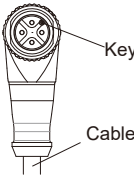
Supply voltage	22V DC
Residual voltage	$\leq$ 6V
Minimum load current	$\leq$ 5mA
Leakage current	$\leq$ 1mA

Please sure to use applicable detector switch according to the specification on left.

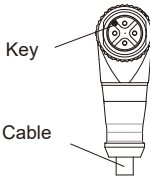
Applicable angle connector type (Detector's connector)

When using an angle connector, please use a connector of which key is positioned same as the following figure.

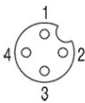
1 :Applicable to RS16TA-211\_



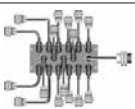
2 :Applicable to RS16T-211\_



Pin assigned of  
connector for  
sensors

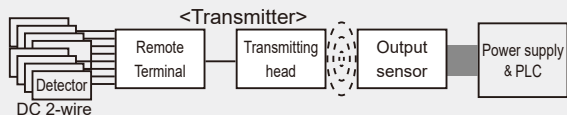


1 : +  
2 :  
3 : +  
4 : -



The direction of the cable is shown in the left figure.

The straight connector can be used to both type of Remote Terminal.



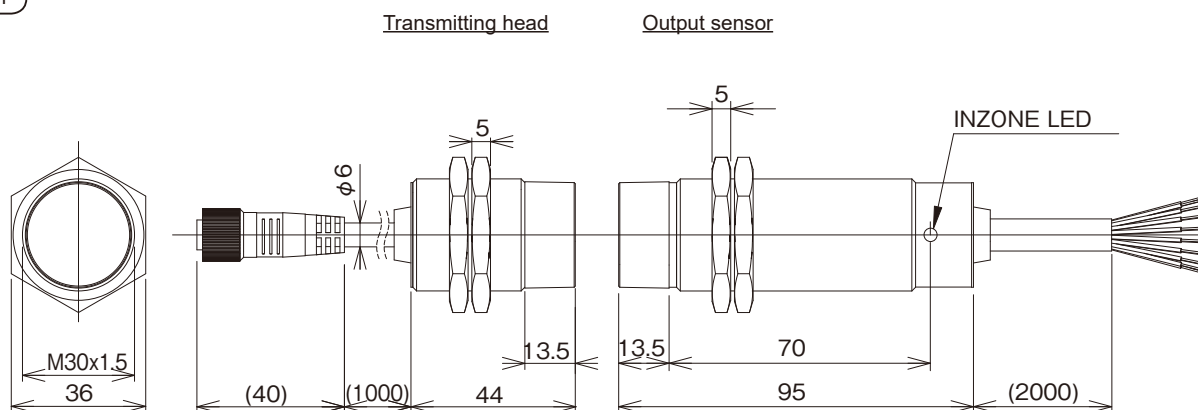
RS16TA-211  
RS16T-211

RSH16T-30  
RSH16E-30

**16**  
signals

for max. 16 sensors Terminal unit type / Size : M30

Operating distance  
2...8mm



A057

Wiring C026 / P.124

Transmitter / Transmitting head		
Type Code	connect to Remote Terminal	<b>RSH16T-030-PU-CP1.0</b>
Drive voltage	22V ± 1.5V DC	
Drive current	120mA	
Remote terminal	RS16TA-211_-S04、RS16T-211_-S04	
Operating distance	2...8mm	
Center offset	±3mm	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	M12 connector Cable (1m、3m、5m) connect to Remote Terminal type	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 120 g + Cable 50 g × 1 m	
Anti-weld slag Type Code	connect to Remote Terminal	<b>RSH16T-TF030-PU-CP1.0</b>
Material	Housing: Fluorinated resin coated/Active face: Fluorinated resin	

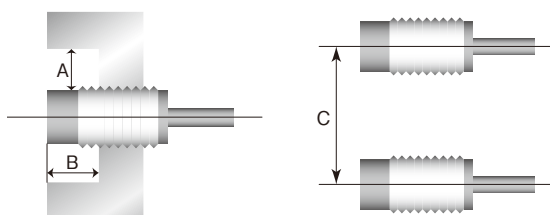
Output sensor		
Type Code	NPN / PNP	<b>RSH16E-030N-PU-02</b> <b>RSH16E-030P-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)	
Current consumption	≤ 500mA	
No. of Output signals	16 signals + 1 signal ( Inzone )	
Load current	max. 50mA per output	
Frequency of operation	20Hz	
LED	Inzone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR/ φ 8.5、2x0.5mm <sup>2</sup> +17x0.18mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 160 g + Cable 110 g × 2 m	
Anti-weld slag Type Code	NPN / PNP	<b>RSH16E-TF030N-PU-02</b> <b>RSH16E-TF030P-PU-02</b>
Material	Housing: Fluorinated resin coated/Active face: Fluorinated resin	

### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

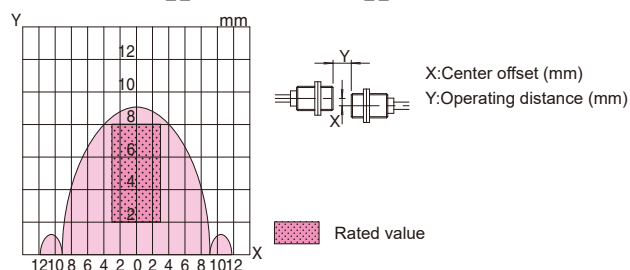
■ Surrounding metal

■ Parallel installation



### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RSH16T-030-PU-CP-\_\_ / RSH16E-030 □ -PU-\_\_



Type Code	A(mm)	B(mm)	C(mm)
RSH16T-030-PU-CP-__	30	30	160
RSH16E-030 □ -PU-__			

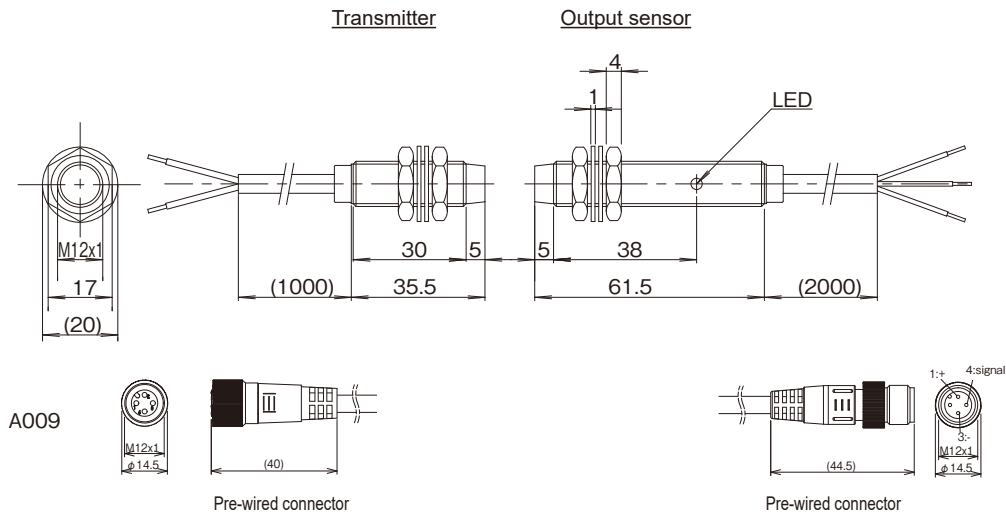
# Remote Sensor System Switch Signal

Exclusive detector type / Regular type  
1 signal transmission

1  
signal

for 1 sensor / Size : M12

Operating distance  
0...2mm



Wiring C012 / P.125

		Transmitter	
Type Code	RXD	Cable	Pre-wired connector
	Mechanical	<b>RXT-1202-PU-01</b>	<b>RXT-1202-PU-CP0.3</b>
		<b>RST-1202-PU-01</b>	-
Drive voltage		---	
Drive current		---	
No. of Input signal		1 signal	
Operating distance		0...2mm (0...1.6mm)	
Center offset		±1.5mm	
Drive current		---	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / ϕ 5 , 2x0.34mm <sup>2</sup>	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 30g + Cable 25g x 1m / +Connector cable 30cm 30g	
Remark		( ) : Operating distance when flush-mounted	

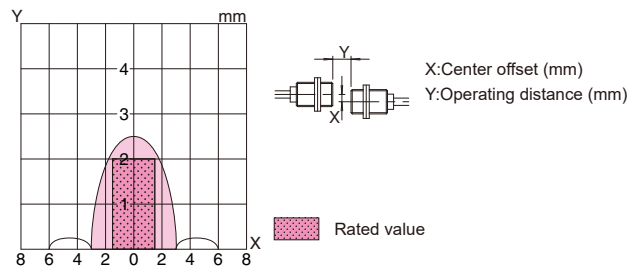
		Output sensor	
Type Code	NPN	Cable	Pre-wired connector
	PNP	<b>RXE-1202N-PU-02</b>	<b>RXE-1202N-PU-CP0.3</b>
		<b>RXE-1202P-PU-02</b>	<b>RXE-1202P-PU-CP0.3</b>
Supply voltage		24V DC ±10% (including ripple)	
Current consumption		≤ 25mA	
No. of Output signal		1 signal	
Load current		≤ 100mA	
Frequency of operation		25Hz	
LED		Signal output indication	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / ϕ 5 , 3x0.34mm <sup>2</sup>	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 40g + Cable 35g x 2m / +Connector cable 30cm 30g	
Remark			

## Applicable sensor

- The applicable sensor for RXT is an exclusive sensor RXD series. (see P.107)
- It is no problem even if the outer diameter of RXD and RXT is different.
- The applicable sensor of RST is a mechanical switch which is the micro-load type without LED.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

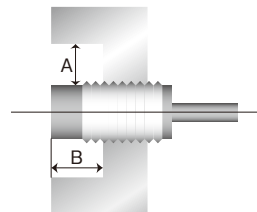
RXT-1202-PU-\_\_ / RXE-1202 □ -PU-\_\_



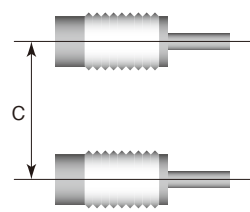
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal

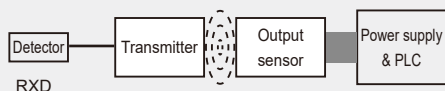


### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RXT-1202-PU-__	12 (6)	12 (0)	100 (20)
RXE-1202 □ -PU-__			

( ) : Flush-mounted in metal



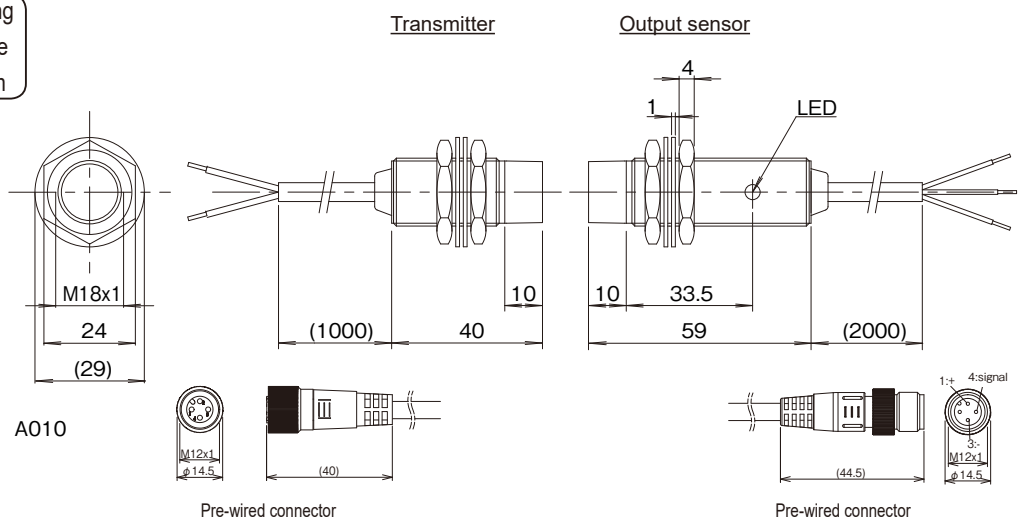
RXT-12  
RXE-12

RXT-18  
RXE-18

1  
signal

for 1 sensor / Size : M18

Operating distance  
0...5mm



Wiring C012 / P.125

		Transmitter	
		Cable	Pre-wired connector
Type Code	RXD	<b>RXT-1805-PU-01</b>	<b>RXT-1805-PU-CP0.3</b>
Drive voltage	---	---	---
Drive current	---	---	---
No. of Input signals	1 signal	---	---
Operating distance	0...5mm (0...4mm)	---	---
Center offset	±2.5mm	---	---
Drive current	---	---	---
Operating temperature	0...+50°C	---	---
Protection class	IP67	---	---
Cable	PUR / φ 5 , 2x0.34mm <sup>2</sup>	---	---
Material Housing	Nickel plated brass	---	---
Active face	Nylon 12	---	---
Weight	Body 40g + Cable 25g x 1m / +Connector cable 30cm 30g	---	---
Remark	( ) : Operating distance when flush-mounted		

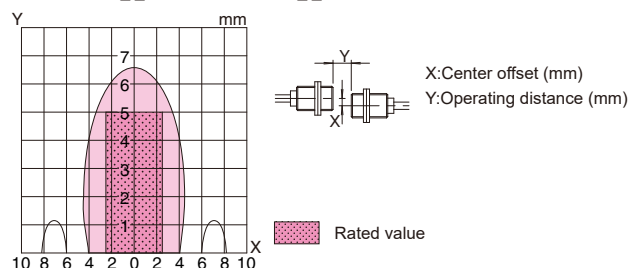
		Output sensor	
		Cable	Pre-wired connector
Type Code	NPN PNP	<b>RXE-1805N-PU-02</b> <b>RXE-1805P-PU-02</b>	<b>RXE-1805N-PU-CP0.3</b> <b>RXE-1805P-PU-CP0.3</b>
Supply voltage	---	24V DC ±10% (including ripple)	---
Current consumption	---	≤ 25mA	---
No. of Output signal	---	1 signal	---
Load current	---	≤ 100mA	---
Frequency of operation	---	25Hz	---
LED	---	Signal output indication	---
Operating temperature	---	0...+50°C	---
Protection class	---	IP67	---
Cable	---	PUR / φ 5 , 3x0.34mm <sup>2</sup>	---
Material Housing	---	Nickel plated brass	---
Active face	---	Nylon 12	---
Weight	---	Body 60g + Cable 35g x 2m / +Connector cable 30cm 30g	---
Remark			

## Applicable sensor

- The applicable sensor for RXT is an exclusive sensor RXD series.  
(see P.107)
- It is no problem even if the outer diameter of RXD and RXT is different.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

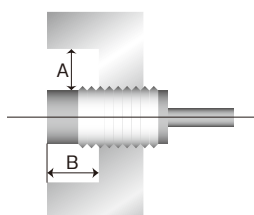
RXT-1805-PU-\_\_ / RXE-1805 □ -PU-\_\_



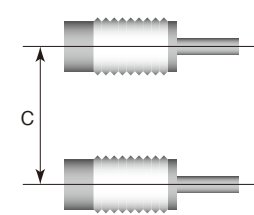
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal



### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RXT-1805-PU-__	18 (9)	18 (0)	110 (35)
RXE-1805 □ -PU-__			

( ) : Flush-mounted in metal

Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive sensor

Terminal box  
Other unit

Wiring

Discontinued  
plans

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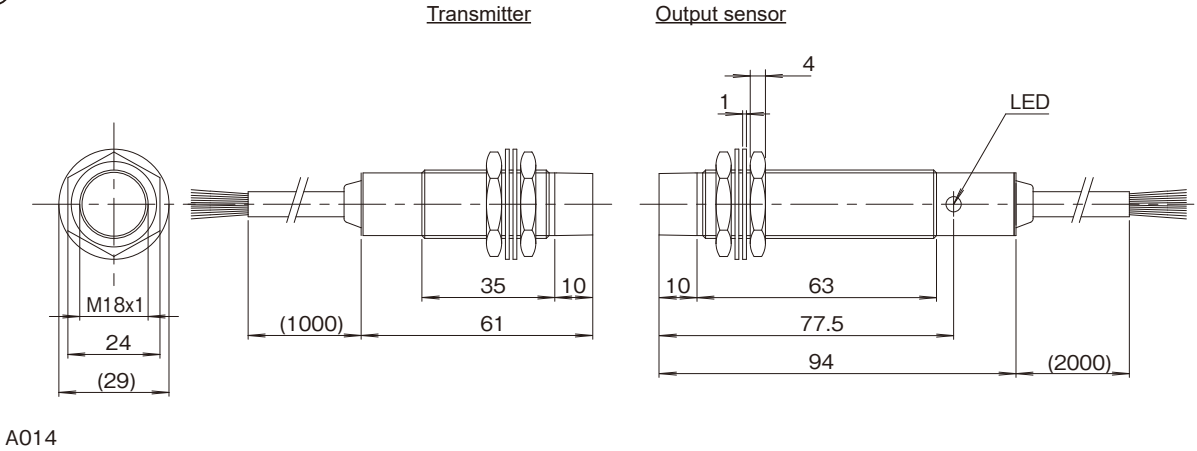
# Remote Sensor System Switch Signal

Exclusive detector type / Regular type  
8 signals transmission

8  
signals

for max. 8 sensors / Size : M18

Operating  
distance  
1...5mm



Wiring C027 / P.125

Transmitter		
Type Code	RXD / Mechanical	RXT8-1805-PU-01
Drive voltage	---	
Drive current	---	
No. of Input signals	8 signals	
Operating distance	1...5mm	
Center offset	±2.5mm	
Drive current	---	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / $\phi$ 7.9 , 9x0.18mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 65 g + Cable 75 g × 1 m	
Remark		

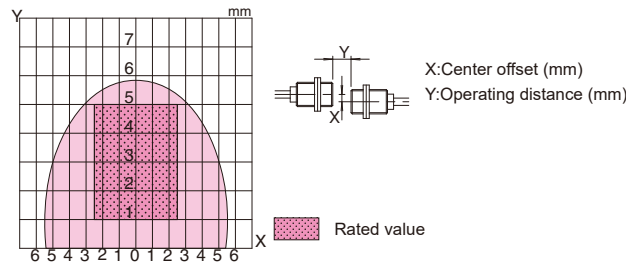
Output sensor		
Type Code	NPN PNP	RXE8-1800N-PU-02 RXE8-1800P-PU-02
Supply voltage		24V DC ±10% (including ripple)
Current consumption		≤ 150mA
No. of Output signals		8 signals + 1 signal ( Inzone )
Load current		max.50mA per output
Frequency of operation		100Hz
LED		Inzone
Operating temperature		0...+50°C
Protection class		IP67
Cable		PUR / $\phi$ 7.7 , 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing		Nickel plated brass
Active face		Nylon 12
Weight		Body 95 g + Cable 75 g × 2 m
Remark		

## Applicable sensor

- The applicable sensor is an exclusive sensor RXD series (see P.107) and a mechanical switch. The standard sensors can not be used.
- It is no problem even if the outer diameter of RXD and RXT is different.
- When using a mechanical switch, it should be the micro-load type without LED.

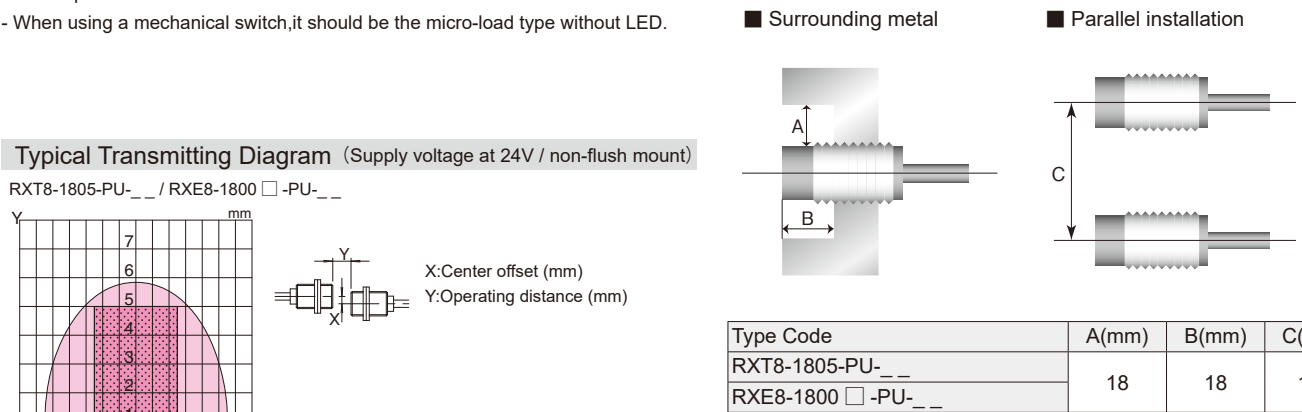
## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

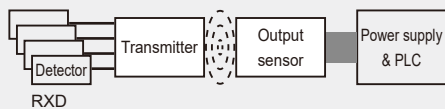
RXT8-1805-PU-\_\_ / RXE8-1800 □ -PU-\_\_



## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.





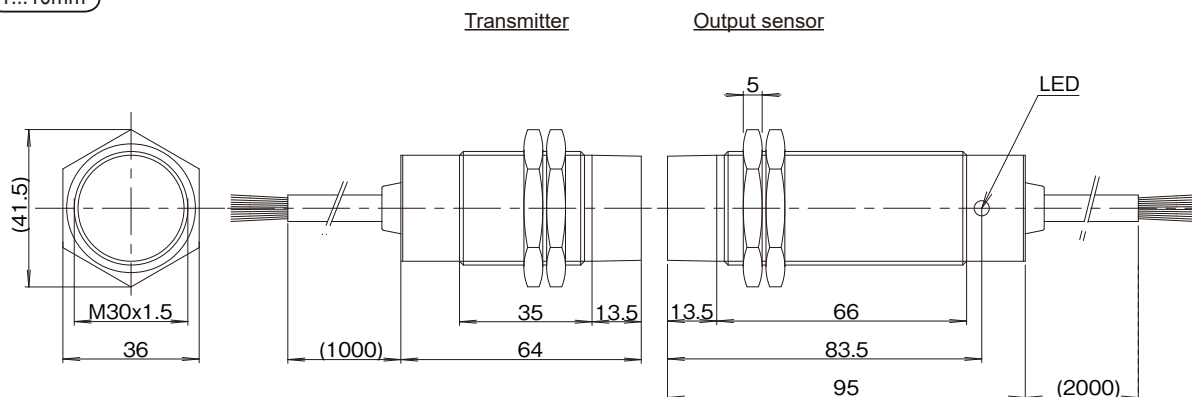
RXT8-18  
RXE8-18

RXT8-30  
RXE8-30

8  
signals

for max. 8 sensors / Size : M30

Operating  
distance  
1...10mm



A004

Wiring C027 / P.125

Transmitter	
Type	RXD / Mechanical
Code	<b>RXT8-3010-PU-01</b>
Drive voltage	---
Drive current	---
No. of Input signals	8 signals
Operating distance	1...10mm
Center offset	±3mm
Drive current	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 7.9 , 9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 110 g + Cable 75 g × 1 m
Remark	

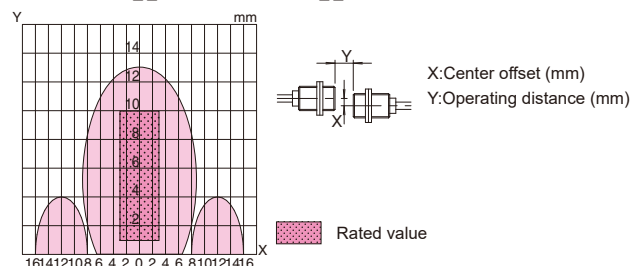
Output sensor	
Type	NPN
Code	<b>RXE8-3000N-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)
Current consumption	≤ 150mA
No. of Output signals	8 signals + 1 signal ( Inzone )
Load current	max.50mA per output
Frequency of operation	100Hz
LED	Inzone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 7.7 , 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable 75 g × 2 m
Remark	

## Applicable sensor

- The applicable sensor is an exclusive sensor RXD series (see P.107) and a mechanical switch. The standard sensors can not be used.
- It is no problem even if the outer diameter of RXD and RXT is different.
- When using a mechanical switch, it should be the micro-load type without LED.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

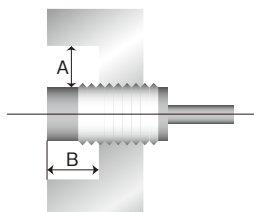
RXT8-3010-PU-\_\_ / RXE8-3000 □ -PU-\_\_



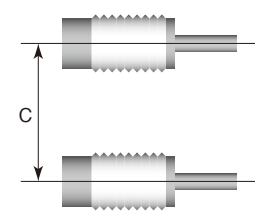
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

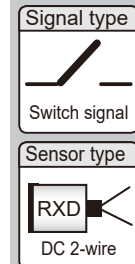
### Surrounding metal



### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RXT8-3010-PU-__	30	20	200
RXE8-3000 □ -PU-__			



Remote  
Sensor

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive sensor

Terminal box  
Other unit

Wiring

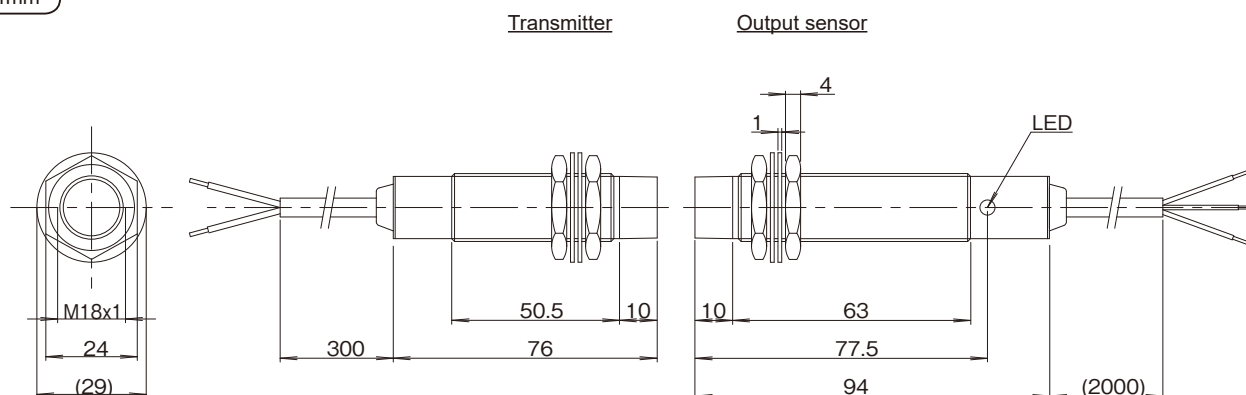
Discontinued  
plans

Index



for 1 thermocouple K type / Size : M18

Operating distance  
1...4mm



A035

Wiring C014 / P.126

Transmitter	
Type Code	Thermocouple K 0...1000°C
Type	<b>RTT-1804-K100</b>
Sensor type	Thermocouple K type
No. of Input signal	1 signal
Measuring range	0...1000°C
Operating distance	1...4mm
Center offset	±2.5mm
Operating temperature	0...+60°C
Protection class	IP67
Cable	Compensating lead wire 2x0.34mm <sup>2</sup> , ellipse 5x3.5mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 75 g + Cable 40 g × 0.3 m
Remark	

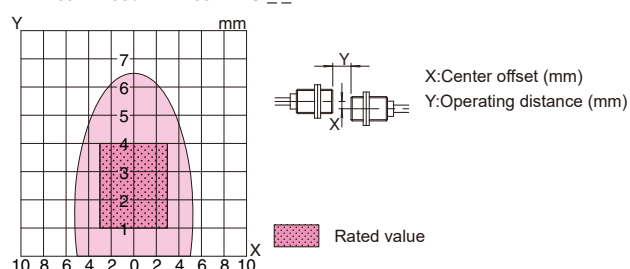
Output sensor	
Type Code	Current output
Type	<b>RTE-1804E-PU-02</b>
Supply voltage	24V DC ±5% (including ripple)
Current consumption	≤ 150mA
No. of Output signal	1 signal
Output	4...20mA
Resolution	0.1%
Response delay	≤ 0.5 sec.
LED	Inzone
Operating temperature	0...+60°C
Protection class	IP67
Cable	PUR / φ 5 , 3x0.34mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 95 g + Cable 35 g × 2 m
Remark	

### Notes

- Please use thermocouple K type complying to JIS.
- The temperature range is allowed 0...1000 degree C.
- Transmitter compensates the thermal voltage at the standard base temperature and converts to digital databased on this temperature range.
- Output is current source, therefore please connect the load between output and negative.

### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

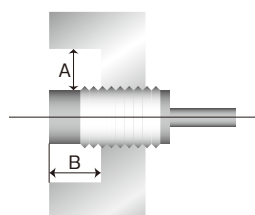
RTT-1804-K100 / RTE-1804E-PU-\_\_



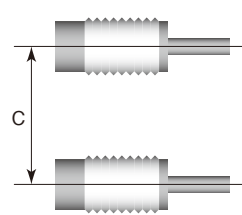
### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

#### Surrounding metal



#### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RTT-1804-K100	20	15	110
RTE-1804E-PU-__			

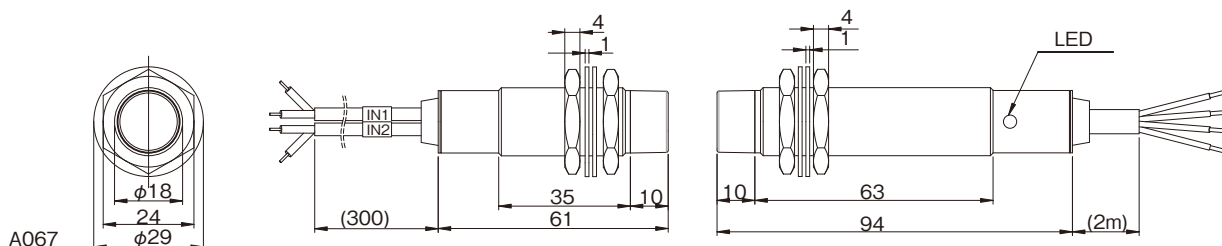


for 2 thermocouple K type / Size : M18

Operating distance  
1...4mm

Transmitter

Output sensor



2 compensating lead wires Outer diameter : 3.2x5.1mm  
color of outer sheath : Blue, VX-G:7/0.3x2

Wiring C015 / P.126

Transmitter	
Type	0...1000°C
Code	0...300°C
Applicable sensor	JIS Thermocouple K
No. of Input signals	2 signals ( 1CH, 2CH)
Measuring range	0...1000°C or 0...300°C
Compensated cold junction	$\leq \pm 0.5^\circ\text{C}$
Operating distance	1...4mm
Center offset	$\pm 2.5\text{mm}$
Operating temperature	0...+80°C
Protection class	IP67
Cable	Compensating lead wire(JIS) 0.9mm x 2 All heat-resistant vinyl (90°C )
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	120 g (incl. cable)
Remark	

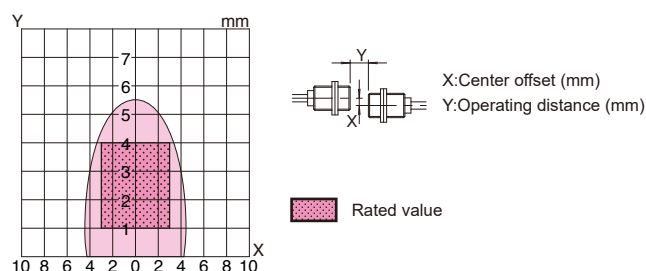
Output sensor	
Type	
Code	
Supply voltage	24V DC $\pm 5\%$ (including ripple)
Current consumption	$\leq 150\text{mA}$
No. of Output signals	4 ... 20 mA $\times$ 2
Load current	$\leq 400\Omega$
Resolution	= 0.04% Full-scale range
Response delay	$\leq 0.5$ sec.
Linearity	$\leq \pm 0.8\%$ Full-scale range
LED	Inzone (data valid)
Operating temperature	0...+80°C
Protection class	IP67
Cable	PUR、 $\phi$ 5mm/4x0.25mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 95g + Cable 30g x 2m
Remark	

### Notes

- Please use thermocouple K type complying to JIS.
- The measurement temperature range is within the specifications mentioned above.
- Output is current source, therefore please connect the load between output and negative.

### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

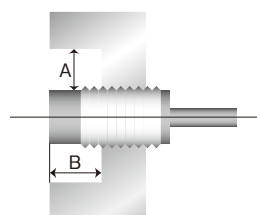
RS02T-018-K-\_\_\_ / RS02E-018E-PU-\_\_



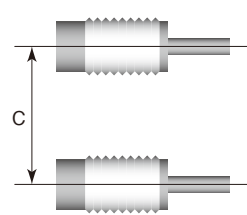
### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

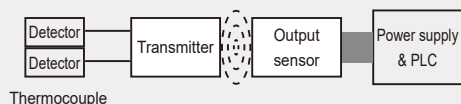
#### Surrounding metal



#### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RS02T-018-K1000	20	15	110
RS02T-018-K300			
RS02E-018E-PU-__			



RS02T-018K  
RS02E-018

RS02T-018J  
RS02E-018

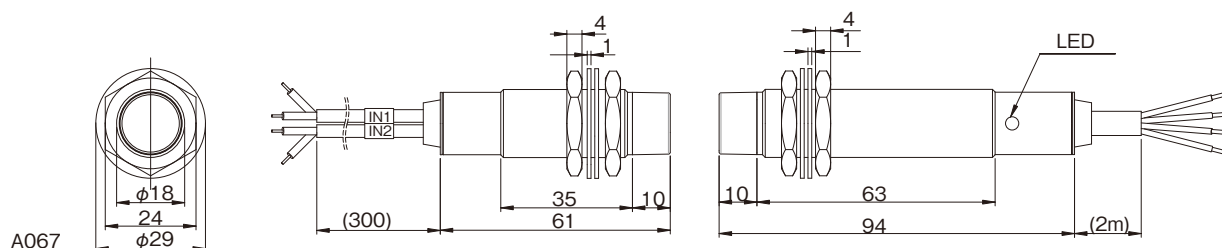
2  
signals

for 2 thermocouple J type / Size : M18

Operating distance  
1...4mm

Transmitter

Output sensor



2 compensating lead wires Outer diameter : 3.2x5.1mm  
color of outer sheath : Yellow, JX-G:7/0.3x2

Wiring C015 / P.126

Transmitter	
Type Code	0...300°C <b>RS02T-018-J300</b>
Applicable sensor	JIS Thermocouple J
No. of Input signals	2 signals (1CH, 2CH)
Measuring range	0...300°C
Compensated cold junction	≤ ±0.5°C
Operating distance	1...4mm
Center offset	±2.5mm
Operating temperature	0...+80°C
Protection class	IP67
Cable	Compensating lead wire(JIS) 0.9mm x 2 All heat-resistant vinyl (90°C)
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	120 g (incl. cable)
Remark	

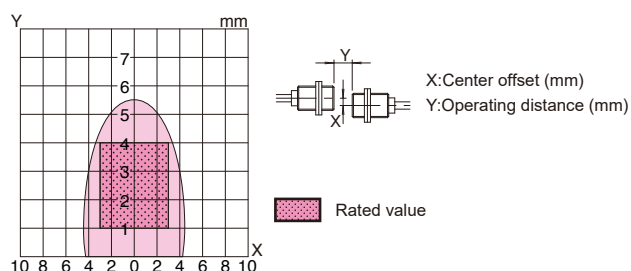
Output sensor	
Type Code	<b>RS02E-018E-PU-02</b>
Supply voltage	24V DC ±5% (including ripple)
Current consumption	≤ 150mA
No. of Output signals	4...20 mA×2
Load current	≤ 400Ω
Resolution	= 0.04% Full-scale range
Response delay	≤ 0.5 sec.
Linearity	≤ 0.8% Full-scale range
LED	Inzone (data valid)
Operating temperature	0...+80°C
Protection class	IP67
Cable	PUR、φ 5mm/4x0.25mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 95 g + Cable 30 g x 2m
Remark	

## Notes

- Please use thermocouple K type complying to JIS.
- The measurement temperature range is within the specifications mentioned above.
- Output is current source, therefore please connect the load between output and negative.

## Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

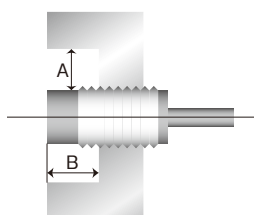
RS02T-018-J300 / RS02E-018E-PU-\_\_



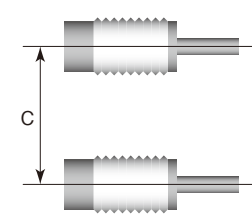
## Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

### Surrounding metal



### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RS02T-018-J300	20	15	110
RS02E-018E-PU-__			

Remote  
Sensor

Signal type  
Analog

Sensor type  
Thermocouple K · J

DC 3-wire  
Detector type

DC 3-wire  
Terminal unit

DC 2-wire  
Detector type

DC 2-wire  
Terminal unit

Exclusive  
detector type

Thermocouple  
K / J type

Resistance  
thermometer type

Load cell type

Analog sensor  
type

Exclusive  
sensor

Terminal box  
Other unit

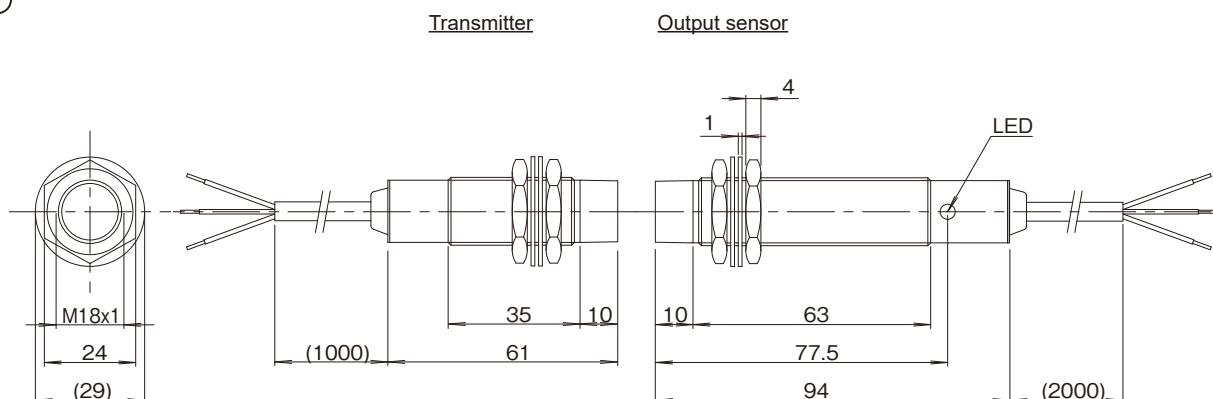
Wiring

Discontinued  
plans

Index

for 1 resistance thermometer / Size : M18

Operating distance  
1...4mm



A039

Wiring C016 / P.126

Transmitter	
Type	0...100°C <b>RTT-1804-PT1B10-PU-01</b>
Code	0...200°C <b>RTT-1804-PT1B20-PU-01</b>
	0...300°C <b>RTT-1804-PT1B30-PU-01</b>
Sensor type	Resistance thermometer type Pt100 3-wire
No. of Input signal	1 signal
Measuring range	0...100°C , 0...200°C , 0...300°C
Operating distance	1...4mm
Center offset	±2.5mm
Operating temperature	0...+60°C
Protection class	IP67
Cable	PUR / $\phi$ 5 , 3x0.34mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 75 g + Cable 35 g × 1 m
Remark	

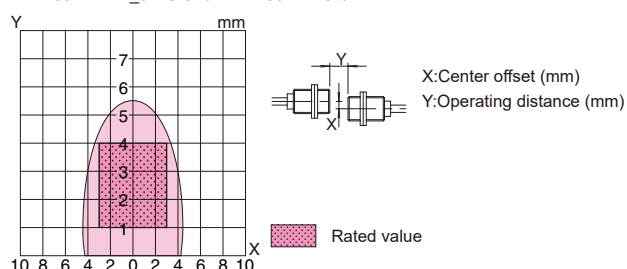
Output sensor	
Type	Current output <b>RTE-1804E-PU-02</b>
Code	
Supply voltage	24V DC ±5% (including ripple)
Current consumption	≤ 150mA
No. of Output signal	1 signal
Output	4...20mA
Resolution	≤ 0.5°C
Response delay	≤ 0.5 sec.
LED	Inzone
Operating temperature	0...+60°C
Protection class	IP67
Cable	PUR / $\phi$ 5 , 3x0.34mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 95 g + Cable 35 g × 2 m
Remark	

### Notes

- For detector, please use Resistance thermometer type Pt100 (3-wire) that meets the JIS C1602.
- The temperature range is allowed as ;  
RTT-1804-PT1B10-PU-\_\_ : 0...100°C  
RTT-1804-PT1B20-PU-\_\_ : 0...200°C  
RTT-1804-PT1B30-PU-\_\_ : 0...300°C
- Output is current source, therefore please connect the load between output and negative.

### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

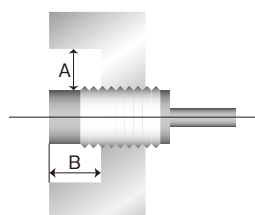
RTT-1804-PT1B\_0-PU-01 / RTE-1804E-PU-02



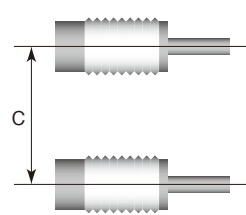
### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

#### Surrounding metal



#### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RTT-1804-PT1B_0-PU-__	20	15	110
RTE-1804E-PU-__			



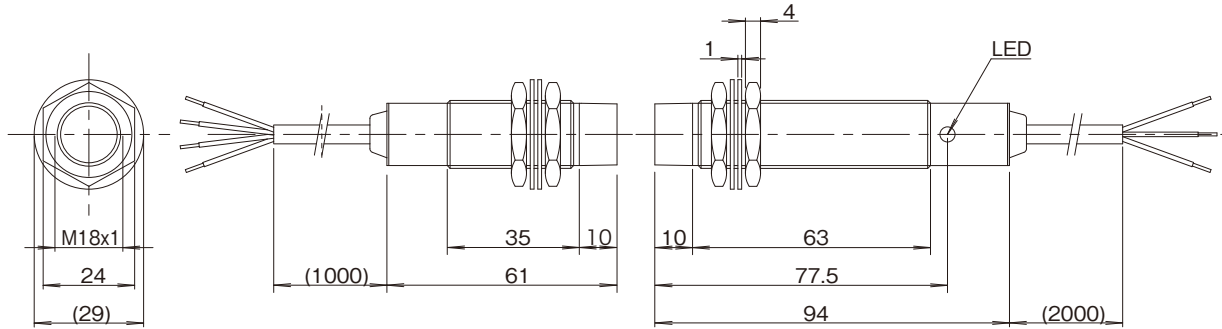


for 1 load cell / Size : M18

Operating  
distance  
1...4mm

Transmitter

Output sensor



A040

Wiring C017 / P.126

Transmitter			
Type	1mV/V	<b>RNT-1804-LC10-PU-01</b>	
Code	1.5mV/V		
	2mV/V		
		<b>RNT-1804-LC15-PU-01</b>	
		<b>RNT-1804-LC20-PU-01</b>	
Sensor type	Compression load cell 350 Ω± 10%		
No. of Input signal	1 signal		
Operating distance	1...4mm		
Center offset	±2.5mm		
Input sensitivity	1mV/V	1.5mV/V	2mV/V
Resolution	≤ 1%	≤ 0.75%	≤ 0.5%
Operating temperature	0...+60°C		
Protection class	IP67		
Cable	PUR / Ø5.5 , 4x0.25mm <sup>2</sup> with shield		
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight	Body 80 g + Cable50 g × 1 m		
Remark			

Output sensor		
Type	Current output	<b>RTE-1804E-PU-02</b>
Code		
Supply voltage	24V DC ±5% (including ripple)	
Current consumption	≤ 150mA	
No. of Output signal	1 signal	
Output	4...20mA	
Resolution	≤ 0.5...1% (depending on input sensitivity)	
Response delay	≤ 0.5 sec.	
LED	Inzone	
Operating temperature	0...+60°C	
Protection class	IP67	
Cable	PUR / Ø 5 , 3x0.34mm <sup>2</sup>	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 95 g + Cable 35 g × 2 m	
Remark		

### Notes

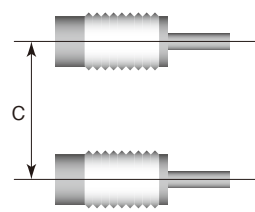
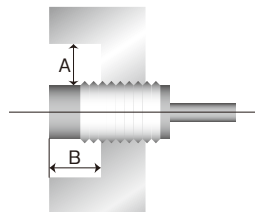
- Use a compression load cell (350 ohm +/- 10%) as a detector.
- Output is current source, therefore please connect the load between output and negative.

### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

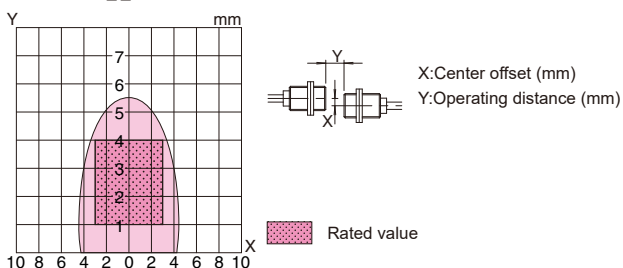
#### Surrounding metal

#### Parallel installation



### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RNT-1804-LC\_\_-PU-01 / RTE-1804E-PU-02



Type Code	A(mm)	B(mm)	C(mm)
RNT-1804-LC__-PU-__	20	15	110
RTE-1804E-PU-__			



# Remote Sensor System

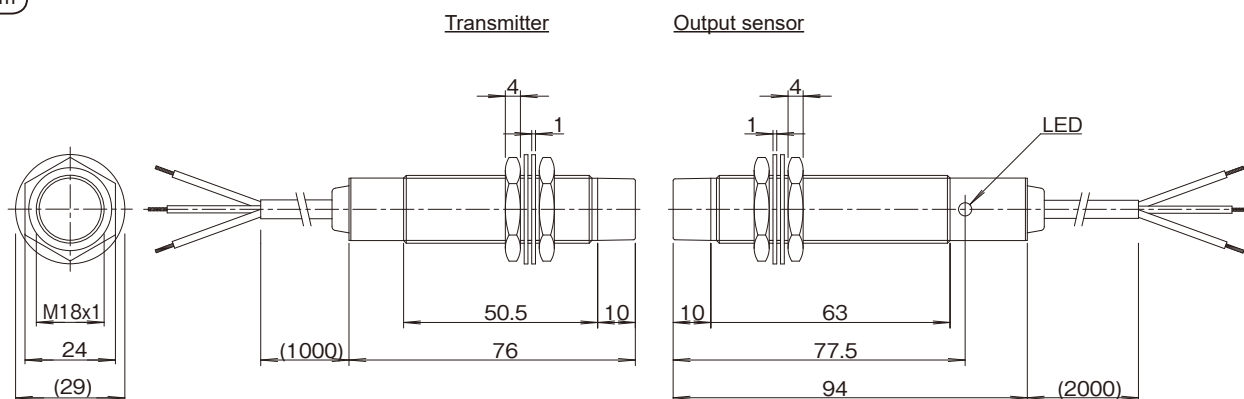
## Analog Signal

Analog sensor type  
1 signal transmission

1signal

for 1 analog sensor / Size : M18

Operating distance  
0...2.5mm



A041

Wiring C018 / P.126

Transmitter	
Type Code	0...10V <b>RNT-1803-VS10-PU-01</b>
Sensor type	Analog sensor output 0...10V
No. of Input signal	1 signal
Drive voltage	20 ± 4V DC
Drive current	≤ 10mA
Operating distance	0...2.5mm
Center offset	±2mm
Operating temperature	0...+60°C
Protection class	IP67
Cable	PUR / φ 5 , 3x0.34mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 80 g + Cable 35 g × 1 m
Remark	

Output sensor	
Type Code	Analog sensor <b>RNE-1803A-PU-02</b>
Supply voltage	24V DC ±5% (including ripple)
Voltage output	≤ 150mA
No. of Output signal	1 signal
Output	0...10V
Resolution	0.1%
Response delay	≤ 0.2 sec.
LED	Inzone
Operating temperature	0...+60°C
Protection class	IP67
Cable	PUR / φ 5 , 3x0.34mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 90 g + Cable 35 g × 2 m
Remark	

### Notes

- Use the analog sensors which fulfill the specifications below:

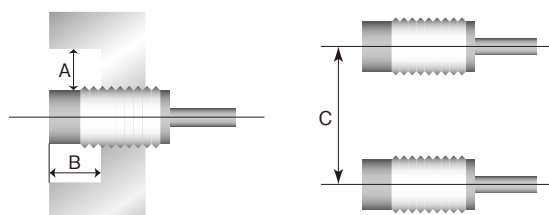
Operating voltage	16...24V
Output voltage	0...10V
Current consumption	≤ 10mA

### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

■ Surrounding metal

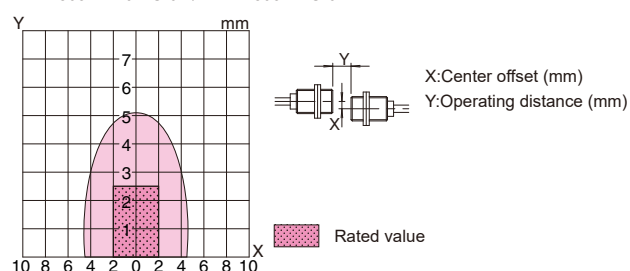
■ Parallel installation

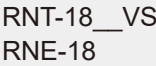


Type Code	A(mm)	B(mm)	C(mm)
RNT-1803-VS10-PU-__	20	15	110
RNE-1803A-PU-__			

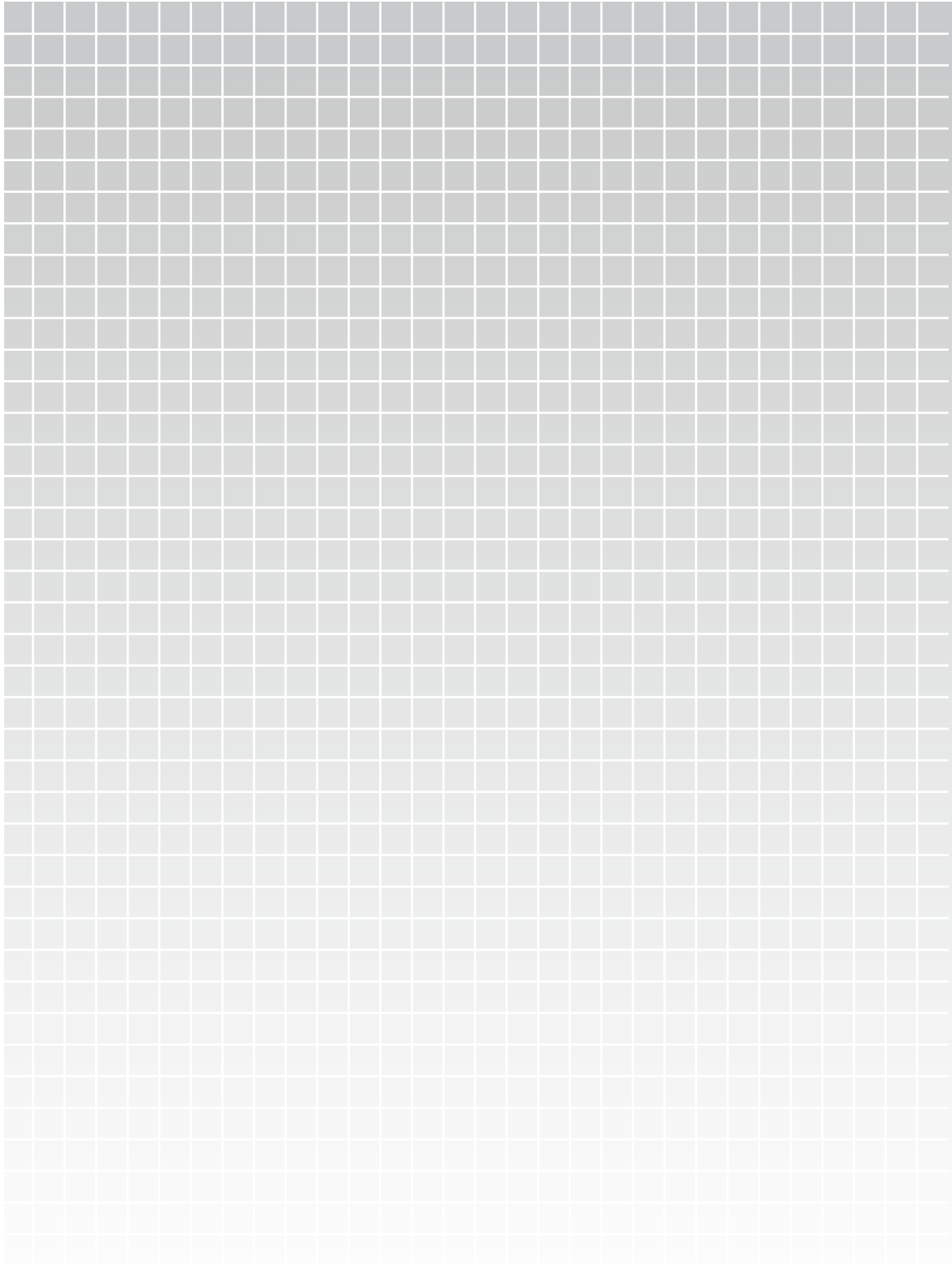
### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RNT-1803-VS10-PU-01 / RNE-1803A-PU-02



[illegible]

Signal type	Analog
Sensor type	0...10V
<b>Remote Sensor</b>	
DC 3-wire	Detector type
DC 3-wire	Terminal unit
DC 2-wire	Detector type
DC 2-wire	Terminal unit
Exclusive detector type	
Thermocouple type	
Resistance thermometer type	
Load cell type	
<b>Analog sensor type</b>	
Exclusive sensor	
Terminal box	
Other unit	
<b>Wiring</b>	
Discontinued plans	
Index	



Remote Coupler System	Switch Signal Transmission	4+4 transmission	82
		8+8 transmission	84
		64+32 transmission	86
	Data Signal Transmission	RS-232C type	90
		CC-Link type	92
		DeviceNet type	94

Remote  
Coupler

4+4  
Switch Signals

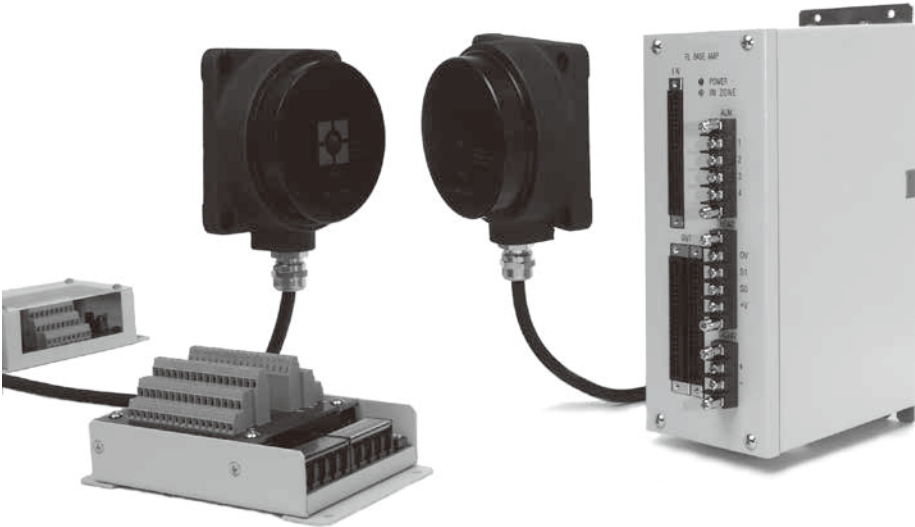
8+8  
Switch Signals

64+32  
Switch Signals

RS-232C

CC-Link

DeviceNet

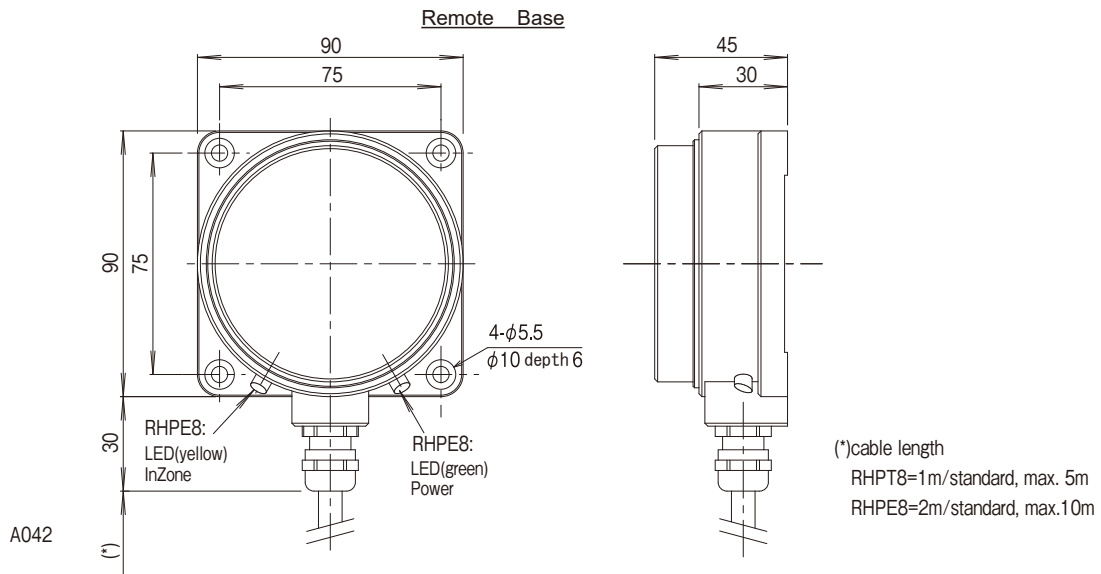




4 + 4 switch signals/ Size : 90 x 90

Operating  
distance  
3...10mm

Remote / Base  
shared dimension



Wiring C019 / P.127

Remote	
Type NPN	<b>RHPT8-8010N-C3-PU-01</b>
Code PNP	<b>RHPT8-8010P-C3-PU-01</b>
Drive voltage	24V ± 1.5V DC
Drive current	≤ 300mA
Input spec 1)	Signal / Type 4 (S11...4) / NPN or PNP
Load current	7 mA / per input
Output spec 2)	Signal / Type 4 (SO1...4) + 1 (Inzone) / NPN or PNP
Load current	max.50mA per output
Operating distance	3...10mm
Center offset	±7mm
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 7.7 , 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS+PBT (resin part)
Weight	Body 620 g + Cable75 g × 1 m
Remark	

- 1) Input from the sensor to RHPT8  
2) Output to the actuator from RHPT8

Base	
Type NPN	<b>RHPE8-8010N-C3-PU-02</b>
Code PNP	<b>RHPE8-8010P-C3-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)
Current consumption	≤ 1.5A
Input spec 3)	Signal / Type 4 (S11...4) / NPN or PNP
Load current	7 mA / per input
Output spec 4)	Signal / Type 4 (SO1...4) + 1 (Inzone) / NPN or PNP
Load current	max.50mA per output
Frequency of operation	40Hz
LED	InZone / Power
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 7.7 , 2x0.5mm <sup>2</sup> +9x0.18mm <sup>2</sup>
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS+PBT (resin part)
Weight	Body 620 g + Cable75 g × 2 m
Remark	

- 3) Input to the RHPE8 from the host device  
4) Output to the host device from RHPE8

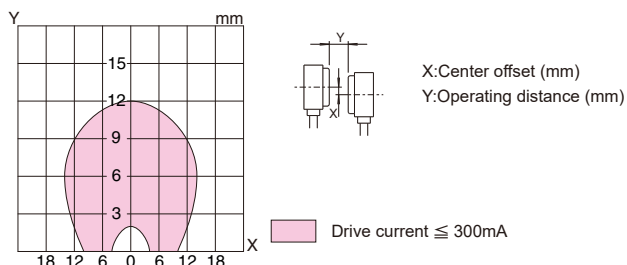
### Applicable sensor and actuator

Remote can be connected up to 4 sensors and 4 actuators.

Supply voltage	24V DC	-Sensors and actuators should have 24V DC rating.
Total current consumption	≤ 300mA	-The total current consumption of detectors and driving units must not exceed the rated drive current.
Residual voltage	---	
Leakage current	---	

### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RHPT8-8010 □ -C3-PU-\_\_ / RHPE8-8010 □ -C3-PU-\_\_

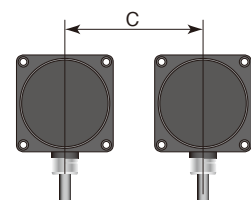


### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

■ Surrounding metal

■ Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RHPT8-8010 □ -C3-PU-__	50	45	300
RHPE8-8010 □ -C3-PU-__			



Remote Coupler System  
Switch Signal

8+8 Signals Transmission / Remote • Base  
64+32 Signals Transmission / Remote head • Base head

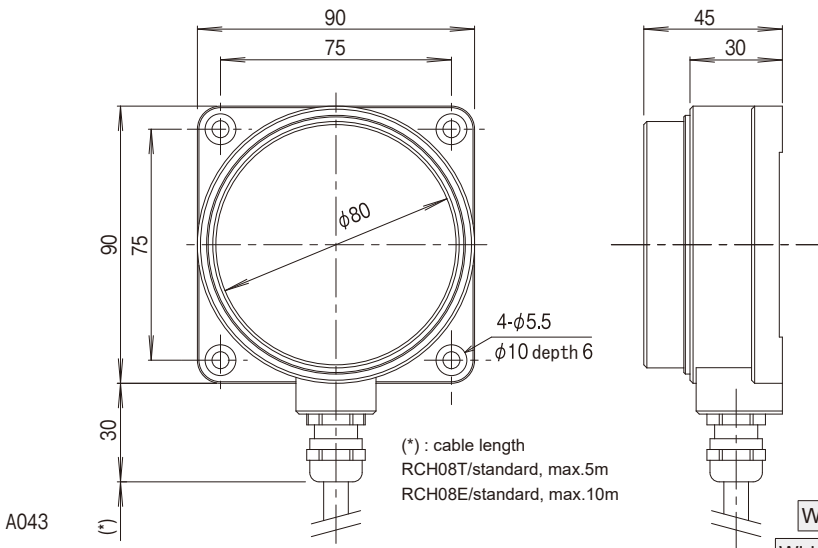
8+8  
64+32 signals

8+8 switch signals and 64+32 switch signals / Size : 90 x 90

Operating distance  
4...9mm

Remote head / Base head

Remote head  
Base head  
shared dimension



Remote head:RCH08T-211 and  
Base head:RCH08E-211 are  
used for both 8+8 and 64+32  
transmission system as a head.

Wiring 8+8	C020 / P.127
Wiring 64+32	Please refer to the User's Guide.

Remote / Remote head	
Type Code	RCH08T-211-PU-01
Applicable	8+8 RC08T-011_-000
Remote amplifier	64+32 RL64T-344_-000, RL64T-345_-000
Drive voltage	24V ± 1.5V DC
Drive current	≤ 2A
Operating distance	4...9mm 6...8mm
Center offset	±5mm ±3mm
Drive current	≤ 1A ≤ 2A
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.8, 2x1.25mm <sup>2</sup> +2x0.2mm <sup>2</sup> with shield
Material	Housing Aluminum + alumite processing (metal part)
	Active face ABS+PBT (resin part)
Weight	Body 600 g + Cable120 g × 1 m
Remark	

BaseBase head	
Type Code	RCH08E-211-PU-02
Applicable	8+8 RC08E-011_-000
Base amplifier	64+32 RL64E-333_-000, RL64EA-355DN-000, RL64E-366CL-000, RL64E-366EI-000
Supply voltage	24V DC ±5% (including ripple)
Current consumption	≤ 4A
Load current	---
Frequency of operation	---
LED	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.8, 2x1.25mm <sup>2</sup> +2x0.2mm <sup>2</sup> with shield
Material	Housing Aluminum + alumite processing (metal part)
	Active face ABS+PBT (resin part)
Weight	Body 620 g + Cable120 g × 2 m
Remark	

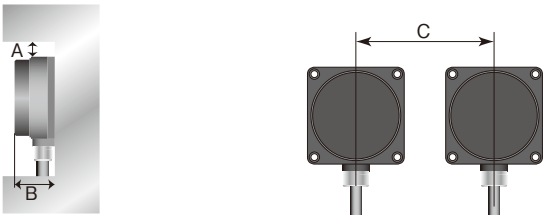
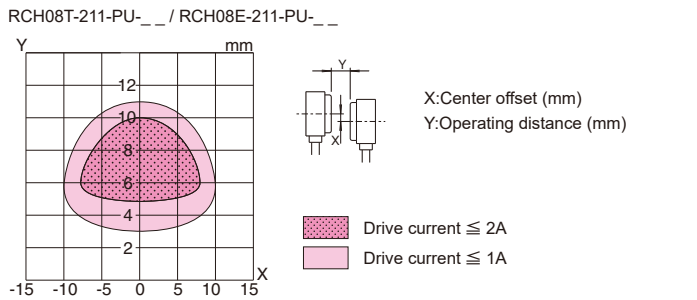
The same Remote Head or Base Head can be used both to 8 +8 or 64+32 signals transmission type. But the Remote part of 8+8 transmission type can not be used with the Base part of 64+32 transmission type. The opposite is true.

Installation notes

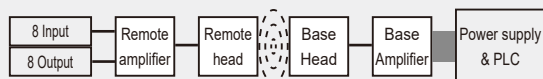
In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

- Surrounding metal
- Parallel installation

Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)



Type Code	A(mm)	B(mm)	C(mm)
RCH08T-211-PU-__	50	45	300
RCH08E-211-PU-__			



RCH08T  
RCH08E

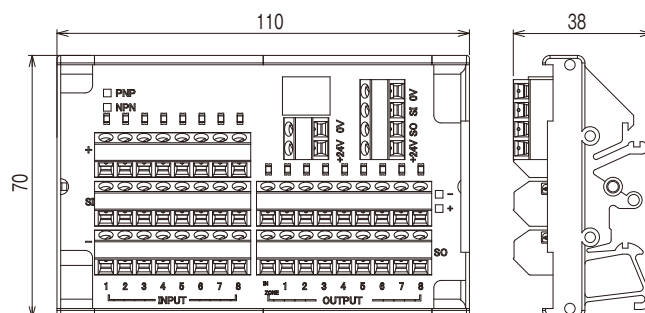
RC08T  
RC08E

8+8  
signals

8+8 switch signals / Size : 110x70

#### Remote amplifier / Base amplifier

Remote amplifier  
Base amplifier  
shared dimension



A044a

Wiring C020 / P.127

Remote amplifier		
Type	NPN	<b>RC08T-011N-000</b>
Code	PNP	<b>RC08T-011P-000</b>
Applicable Remote head	RCH08T-211-PU	
Supply voltage	24V DC $\pm$ 10% (from Remote head)	
Current consumption	$\leq$ 150mA	
Input <sup>1)</sup>	No. of signals	8 signals (SI1...8)
	Input logic	NPN or PNP
	Load current	7 mA / per input
Output <sup>2)</sup>	No. of signals	8 (SO1...8) + 1 (InZone)
	Output logic	NPN or PNP
	Load current	$\leq$ 300mA/1 output
	Frequency of operation	100Hz
LED	input and output signal, Inzone	
Operating temperature	0...+50°C	
Protection class	IP67	
Mounting	DIN rail 32/35mm	
Material	Body	Nylon
Weight	130 g	
Remark		

#### Applicable sensor and actuator

- Remote amplifier can connect up to 8 sensors and 8 actuators.
- The total current consumption of Remote amplifier, sensors and actuators must not exceed 2A the drive current which is supplied by the Remote head.

Supply voltage	24V DC
Total current consumption	$\leq$ 2A
Residual voltage	---
Leakage current	---

Base amplifier		
Type	NPN	<b>RC08E-011N-000</b>
Code	PNP	<b>RC08E-011P-000</b>
Applicable Base head	RCH08E-211-PU	
Supply voltage	24V DC $\pm$ 10% (including ripple)	
Current consumption	$\leq$ 150mA	
Input <sup>3)</sup>	No. of signals	8 signals (SI1...8)
	Input logic	NPN or PNP
	Load current	7 mA / per input
Output <sup>4)</sup>	No. of signals	8 (SO1...8) + 1 (InZone)
	Output logic	NPN or PNP
	Load current	$\leq$ 300mA/1 output
	Frequency of operation	100Hz
LED	input and output signal, Inzone	
Operating temperature	0...+50°C	
Protection class	IP67	
Mounting	DIN rail 32/35mm	
Material	Body	Nylon
Weight	130 g	
Remark		

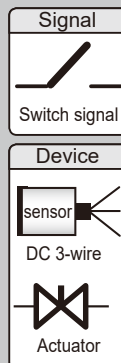
#### Base amplifier with Enable signal

The Base amplifier with an enable signal is also available. It stops the output of detection signals from Base amplifier to controller and control signals from Remote amplifier to actuators.

Enable signal type : RC08EA-011N-000  
RC08EA-011P-000

Since the input signal No. 8 is assigned for Enable signal, the usable control signal from the controller is up to 7.

- 1) Input from sensor to Remote amplifier
- 2) Output from Remote amplifier to actuators
- 3) Input from the controller to Base amplifier
- 4) Output from Base amplifier to the controller



Remote  
Coupler

4+4  
Switch Signals

8+8  
Switch Signals

64+ 32  
Switch Signals

RS-232C

CC-Link

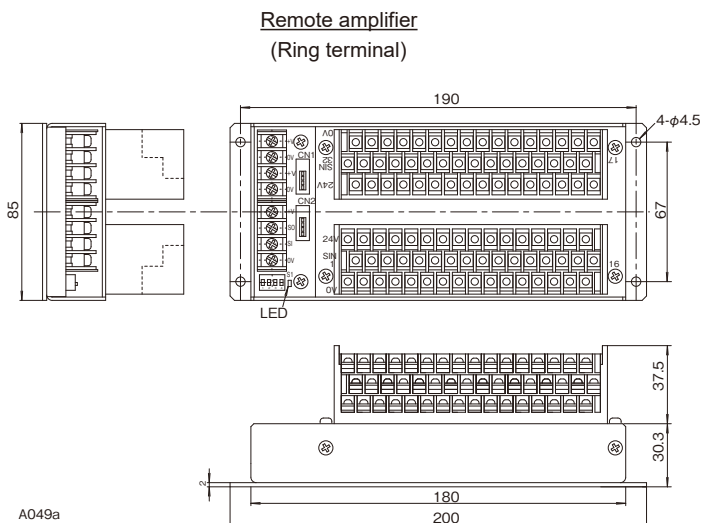
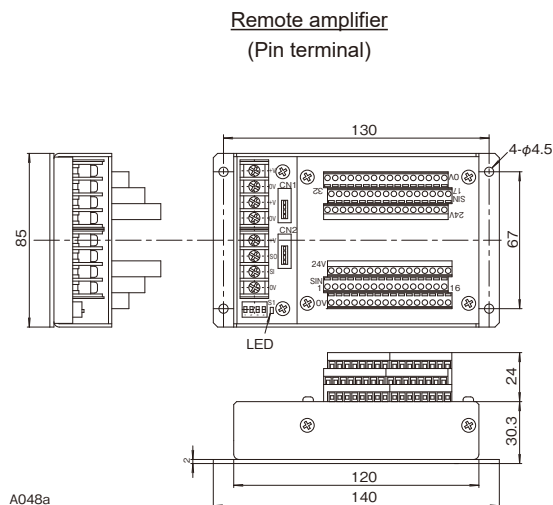
DeviceNet

Exclusive sensor

Terminal box  
Other unit

Wiring

## 64+32 switch signals



Wiring Please refer to the User's Guide.

		Remote amplifier (Pin terminal)	Remote amplifier (Ring terminal)
Type Code	NPN	<b>RL64T-344N-000</b>	<b>RL64T-345N-000</b>
	PNP	<b>RL64T-344P-000</b>	<b>RL64T-345P-000</b>
Applicable Remote head		RCH08T-211-PU	RCH08T-211-PU
Applicable Base amplifier		RL64E-333_-000、RL64EA-355DN-000、 RL64E-366CL-000、RL64E-366EI-000	RL64E-333_-000、RL64EA-355DN-000、 RL64E-366CL-000、RL64E-366EI-000
Input logic		NPN or PNP	NPN or PNP
No. of Input signals		32 signals	32 signals
Load current		7mA / per input	7mA / per input
Frequency of operation		20Hz	20Hz
Current consumption		≤ 70mA	≤ 70mA
LED		Ready	Ready
Material	Housing	SPCC-SD, Glass-epoxy	SPCC-SD, Glass-epoxy
	Cover plate	---	---
Connection	sensor	Terminal block : 3 pole x 32	Terminal block : 3 pole x 32
	Remote head	Terminal block : 4 pole x 1	Terminal block : 4 pole x 1
	Input/Output unit	Connector : e-con , 4P x 2	Connector : e-con , 4P x 2
Operating temperature		0...+50°C	0...+50°C
Weight		620 g	1,040 g
Remark			

### Applicable sensor and actuator

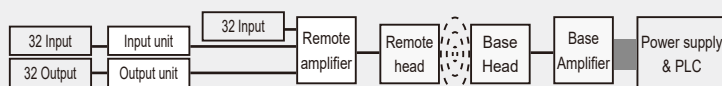
- Remote amplifier RL64T-344/345 can connect up to 32 detectors directly without Input unit.
- Please use a sensor which works definitely in the condition described below.

Supply voltage	24V DC
Total current consumption	≤ 2A
Residual voltage	≤ 6V
Leakage current	≤ 1mA

- The total of the current consumption of all units being connected to Remote head - Remote amplifier, an input and output unit, sensors and actuators - must not exceed 2A the drive current which is supplied by the Remote head.

### Notes

- Prepare the cable, 4 conductors and outer diameter phi 1.35 ... 1.6 mm to connect an input unit and an output unit. An insulation displacement connector is attached to each unit.



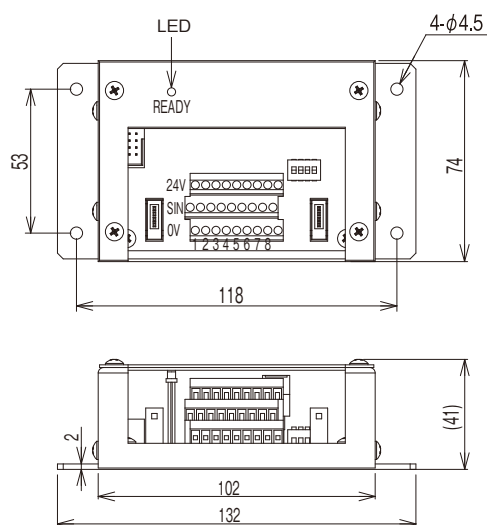
RL64T

RLX08  
RLY04

**64+32**  
signals

## 64+32 switch signals

Input unit

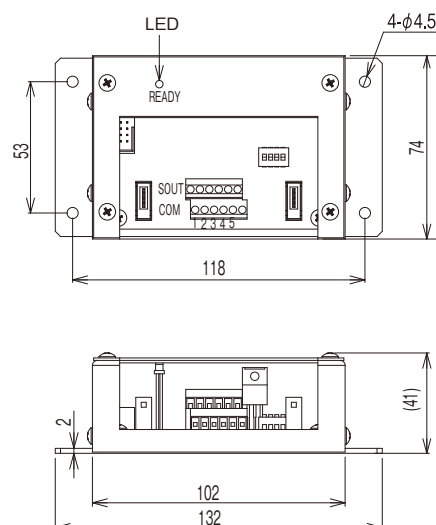


A052

Wiring

Please refer to the User's Guide.

Output unit



A053

Wiring

Please refer to the User's Guide.

Input unit	
Type Code	NPN <b>RLX08-322N</b> PNP <b>RLX08-322P</b>
Input logic	NPN or PNP
No. of Input signals	8 signals
Load current	7mA / per input
Current consumption	≤ 40mA
Frequency of operation	20Hz
LED	Ready
Material Housing	SPCC-SD
Cover plate	Acrylic resin
Connect sensor	Terminal block : 3 x 8 pole
Actuator	---
Input/Output unit	Connector : e-con, 4-pin x 2
Operating temperature	0...+50°C
Weight	350 g
Remark	

Output unit	
Type Code	NPN <b>RLY04-322N</b> PNP <b>RLY04-322P</b>
Output logic	NPN or PNP
No. of Output signals	5 signals (data : 4, Data valid : 1)
Load current	max. 200mA per output
Current consumption	≤ 40mA
Frequency of operation	20Hz
LED	Ready
Material Housing	SPCC-SD
Cover plate	Acrylic resin
Connect sensor	---
Actuator	Terminal block : 3 x 4 pole
Input/Output unit	Connector : e-con, 4-pin x 2
Operating temperature	0...+50°C
Weight	350 g
Remark	

### Applicable sensor and actuator

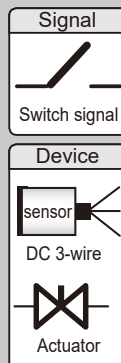
- The input unit connects up to 8 sensors. It can connect up to 4. (Max 64 sensors can be connected to the amplifier and input units.)
- The output unit connects up to 4 actuators. It can connect up to 8
- Please use a sensor which works definitely in the condition described below.

Supply voltage	24V DC
Total current consumption	≤ 2A
Residual voltage	≤ 6V
Leakage current	≤ 1mA

- The total of the current consumption of all units being connected to Remote head - Remote amplifier, an input and output unit, sensors and actuators - must not exceed 2A the drive current which is supplied by the Remote head.

### Notes

- Prepare the cable, 4 conductors and outer diameter phi 1.35 ... 1.6 mm to connect an input unit and an output unit.  
An insulation displacement connector is attached to each unit.



**Remote  
Coupler**

4+4  
Switch Signals

8+8  
Switch Signals

64+32 Switch  
Signals

RS-232C

CC-Link

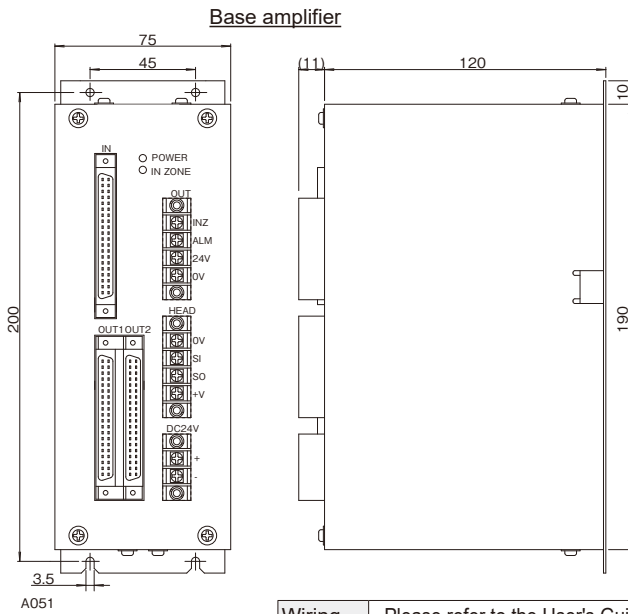
DeviceNet

Exclusive sensor

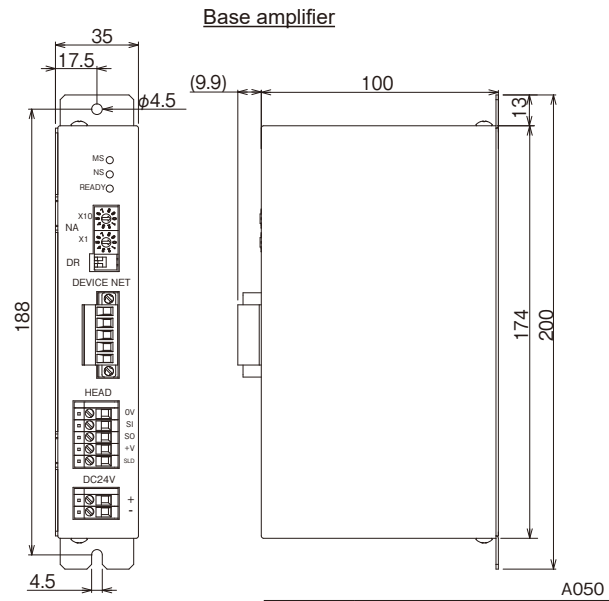
Terminal box  
Other unit

Wiring

### 64+32 switch signals



Wiring Please refer to the User's Guide.



Wiring Please refer to the User's Guide.

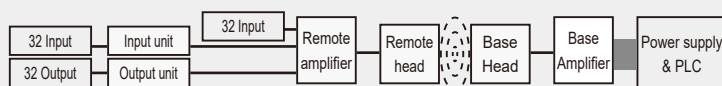
Base amplifier (Parallel I/O)		
Type	NPN	<b>RL64E-333N-000</b>
Code	PNP	<b>RL64E-333P-000</b>
Applicable Base head	RCH08E-211-PU	
Applicable Remote amplifier	RL64T-344_-000 RL64T-345_-000	
Input logic	NPN (current sink), PNP (current source)	
No. of Input signals 2)	32	
Load current	7mA / per input	
Output logic	NPN (current sink), PNP (current source)	
No. of Output signals 1)	67 (sensor: 64, InZone: 2, Short detection:1)	
Load current	max. 20mA per output	
Supply voltage	24VDC $\pm$ 5%	
Current consumption	$\leq$ 150mA	
Frequency of operation	20Hz	
LED	Power(Green), Ready(Yellow)	
Material	Housing: SPCC-SD (steel plate)	
Connection	Power	Terminal block : 2 pole x 1
	Head	Terminal block : 4 pole x 1
	Input	Square connector : 40-pin x 1
	Output	Square connector : 40-pin x 2
Operating temperature	0...+50°C	
Weight	1,300 g	
Remark	Connectors are supplied with Base amplifier	

Base amplifier (DeviceNet)		
Type	DeviceNet	<b>RL64EA-355DN-000</b>
Code		
Applicable Base head	RCH08E-211-PU	
Applicable Remote amplifier	RL64T-344_-000 RL64T-345_-000	
Communicating Function	Remote I/O (Poll)	
Baud rate	500k/250k/125k Baud Set up by DIP switch	
Node address	0 ~ 63 Set up by rotary switch	
No. of Input signals 1)	64+1 Ready (9 byte)	
No. of Output signals 2)	32 (4 byte)	
Supply voltage	24VDC $\pm$ 5%	
Current consumption	$\leq$ 150mA	
LED	MS:Red/Green,NS:Red/Green,Ready : Yellow	
Material	Housing : SPCC-SD (steel plate)	
Connection	Power	Terminal block : 2 pole x 1
	Head	Terminal block : 5 pole x 1
	DeviceNet	Open Connector
Operating temperature	0...+50°C	
Weight	550 g	
Remark		

- 1) No. of output signal from Remote system  
2) No. of input signal to Remote system

Please refer to the manual for more information.  
The setting and the like more information of a base amplifier,  
please refer to the instruction manual.



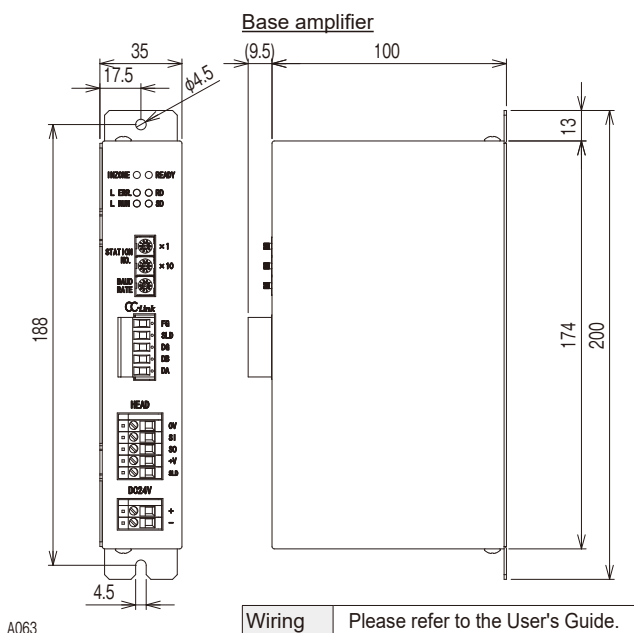


RL64E-333  
RL64EA-355

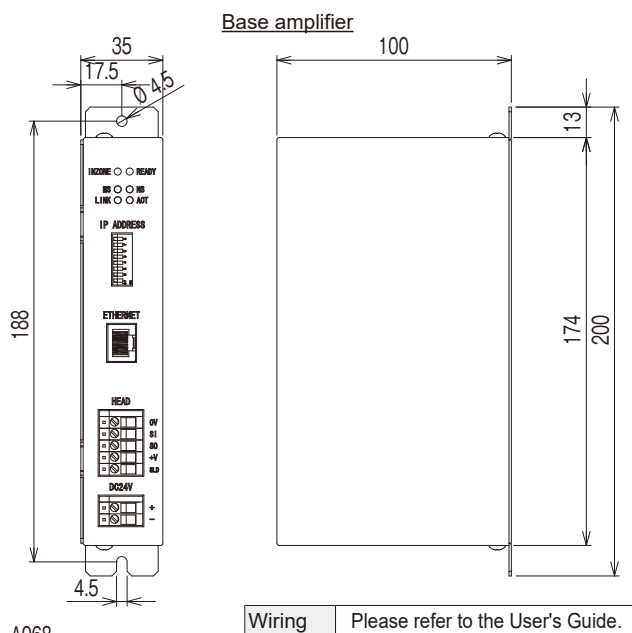
RL64E-366

**64+32**  
signals

## 64+32 switch signals



Wiring Please refer to the User's Guide.

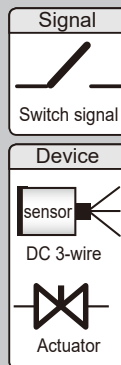


Wiring Please refer to the User's Guide.

Base amplifier (CC-Link)	
Type CC-Link Code	<b>RL64E-366CL-000</b>
Applicable Base head	RCH08E-211-PU
Applicable Remote amplifier	RL64T-344_-000 RL64T-345_-000
Protocol	CC-Link (Ver. 1.10)
Station type	Remote device station
Occupied station	3 stations (RX/RX 96 each bits, RWw/RWw each 12 words)
Baud rate	156k/625k/2.5M/5M/10M bps (Set up by rotary switch)
Station No.	1...62(Set up by rotary switch)
No. of Input signals <sup>1)</sup>	64 (RXn0 ... RX(n+3)F) + 1 INZONE
No. of Output signals <sup>2)</sup>	32 signals (RYn0 ... RX(n+1)F) *1
Supply voltage	24VDC ± 5% (Ripple less than 1V)
Current consumption	≤ 150 mA
Material	Housing : SPCC-SD (steel plate)
Connection Power	Terminal block : 2 pole x 1
Head	Terminal block : 5 pole x 1
CC-Link	2 piece terminal block : 5 pole x 1
Operating temperature	0...+50°C
Weight	570 g
Remark	

\*1 n : Address that was allocated to the master station with setting station number.

Base amplifier (EtherNet/IP)	
Type EtherNet/IP Code	<b>RL64E-366EI-000</b>
Applicable Base head	RCH08E-211-PU
Applicable Remote amplifier	RL64T-344_-000 RL64T-345_-000
Protocol	EtherNet/IP
Communicating Function	Remote I/O function (Cyclic)
Communication method	Full duplex / half duplex (Automatic negotiation)
Baud rate	100Mbps/10Mbps (Automatic negotiation)
IP Address	Set by DIP switch, DHCP and other
No. of Input signals <sup>1)</sup>	64 + 1 Inzone (9 byte)
No. of Output signals <sup>2)</sup>	32 (4 byte)
Supply voltage	24VDC ± 5% (Ripple less than 1V)
Current consumption	≤ 150 mA
Material	Housing : SPCC-SD (steel plate)
Connection Power	Terminal block : 2 pole x 1
Head	Terminal block : 5 pole x 1
Ethernet	RJ 45 female Connector x 1
Operating temperature	0...+50°C
Weight	560 g
Remark	



## Remote Coupler

4+4  
Switch Signals

8+8  
Switch Signals

64+32Switch  
Signals

RS-232C

CC-Link

DeviceNet

Exclusive sensor

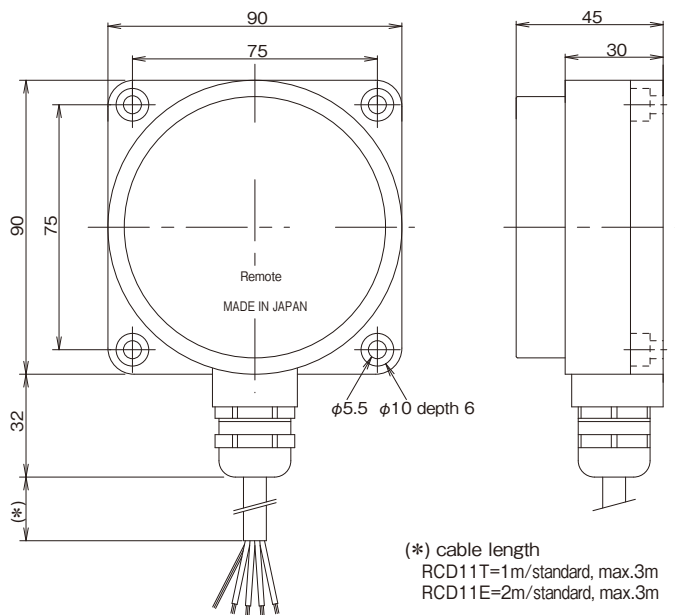
Terminal box  
Other unit

Wiring

RS-232C / Size : 90 x 90

Operating distance  
3...10mm

Remote Base  
shared dimension



(\*) cable length  
RCD11T=1m/standard, max.3m  
RCD11E=2m/standard, max.3m

Wiring	
+24V	Red
0 V	Black
TXD	White
RXD	Green
GND	Shield

A045

Remote	
Type RS-232C Code	<b>RCD11T-211-PU-01</b>
Drive voltage	24V ± 1.5V DC
Drive current	≤ 1A
Operating distance	3...10mm 4...6mm
Center offset	±5mm ±5mm
Drive current	≤ 500mA ≤ 1A
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.6 , 4x0.75mm <sup>2</sup> with shield
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS+PBT (resin part)
Weight	Body 600 g + Cable90 g × 1 m
Remark	

Base	
Type RS-232C Code	<b>RCD11E-211-PU-02</b>
Supply voltage	24V DC ±5% (including ripple)
Current consumption	≤ 3A
Communication Signal	RS-232C, Full duplex, asynchronous
Speed	4800...38400 bps, without data checking
Delay	≤ 20μsec
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.6 , 4x0.75mm <sup>2</sup> with shield
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS+PBT (resin part)
Weight	Body 620 g + Cable90 g × 2 m
Remark	

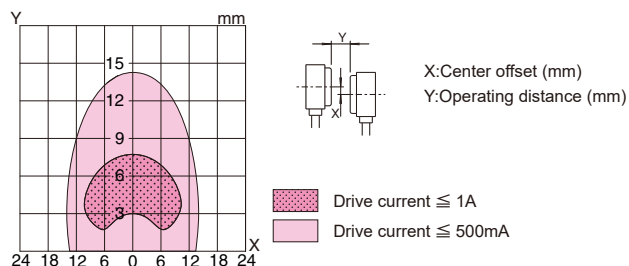
#### Applicable sensor and actuator

Supply voltage	24V DC
Total current consumption*	≤ 1A
Residual voltage	---
Leakage current	---

\*The total of current consumption of all devices connected to Remote must not exceed 2A the drive current.

#### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RCD11T-211-PU-\_\_ / RCD11E-211-PU-\_\_

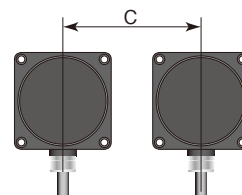
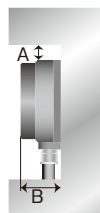


#### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

■ Surrounding metal

■ Parallel installation

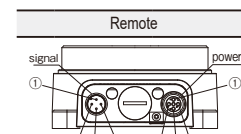
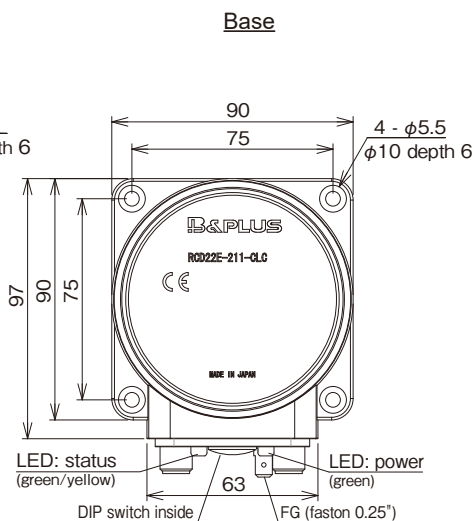
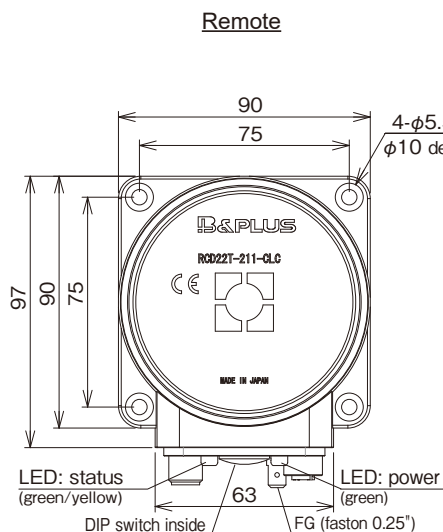
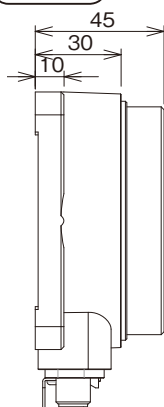


Type Code	A(mm)	B(mm)	C(mm)
RCD11T-211-PU-__	50	45	300
RCD11E-211-PU-__			

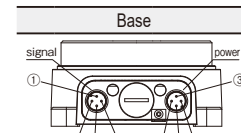


CC-Link / Size : 97 x 90

Operating distance  
3...5mm



Pin	Signal	Power
1	SLD	+24V
2	DB	unused
3	DG	24G
4	DA	unused



Pin	Signal	Power
1	SLD	+24V
2	DB	unused
3	DG	24G
4	DA	unused

Remote		
Type Code	CC-Link	RCD22T-211-CLC
Drive voltage	24V ± 1.5V DC	
Drive current	≤ 2A	
Operating distance	3...5mm	
Center offset	±4mm	
Operating temperature	0...+50°C	
Protection class	IP 67	
Connector 1)	Signal	M12 / 4-pin male (Option cable :VA-4DSX5CCG4[5m])
	Power	M12 / 4-pin female (Option cable :TM-4DBX5HG2-1/3[5m])
Material	Housing	Aluminum + alumite processing (metal part)
	Active face	ABS+PBT (resin part)
Weight	800g	
Included	Ferrite core clamp 2) (Gray x 2 · White x 1)	

1) For connector cable to be used, please choose from the CC-Link Association recommended products.

2) For CE marking, be sure to attach the ferrite core clamp.

Base		
Type Code	CC-Link	RCD22E-211-CLC
Supply voltage	24V DC ±5% (including ripple)	
Current consumption	≤ 3A	
Signal transmission	Speed	CC-Link
	Start-up time	156K...10M bps ( set up by DIP switch) ≤ 2 sec. <sup>3)</sup>
Operating temperature	0...+50°C	
Protection class	IP 67	
Connector 1)	Signal	M12 / 4-pin male (Option cable :VA-4DSX5CCG4[5m])
	Power	M12 / 4-pin male (Option cable :TM-4DSX5HG2-1/3[5m])
Material	Housing	Aluminum + alumite processing (metal part)
	Active face	ABS+PBT (resin part)
Weight	800g	
Included	Ferrite core clamp 2) (Gray x 2 · White x 1)	

3) It is the start up time of Remote system.  
The start up time of CC-Link is varied by the system.

### Baudrate

bps	SW1	SW2	SW3
156K	OFF	OFF	OFF
625K	ON	OFF	OFF
2.5M	OFF	ON	OFF
5M	ON	ON	OFF
10M	OFF	OFF	ON

- For this unit, there is no need to set the station type or the number of occupied station. It can be used just setting the baudrate and the built-in terminator by the DIP-switch.

### Notes

- It is recommended to install RCD22 in metal in order to reduce the influence of self-heating.
- Be sure to connect "Terminal resistor" between DA and DB onh te unit on both ends on CC-Link.Two termination resistors are required for each side, remote sdie and Base side.
- Please prepare your cable and connectors.

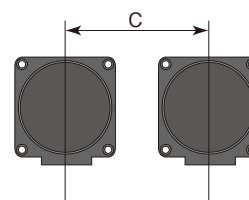
### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

#### Surrounding metal



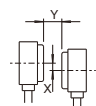
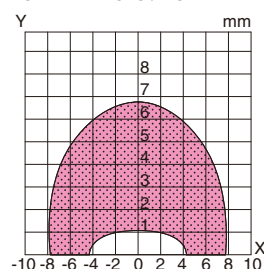
#### Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RCD22T-211-CLC	50	45	300
RCD22E-211-CLC			

### Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RCD22T-211-CLC / RCD22E-211-CLC



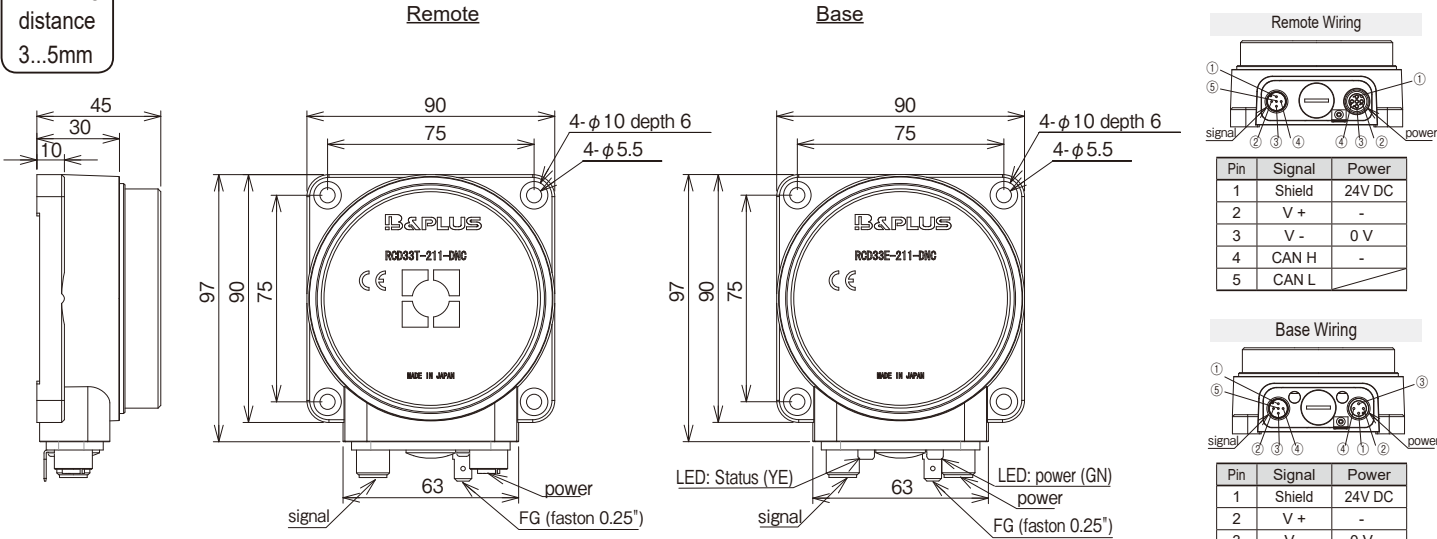
X:Center offset (mm)  
Y:Operating distance (mm)

Drive current ≤ 2A



DeviceNet / Size : 97 x 90

Operating distance  
3...5mm

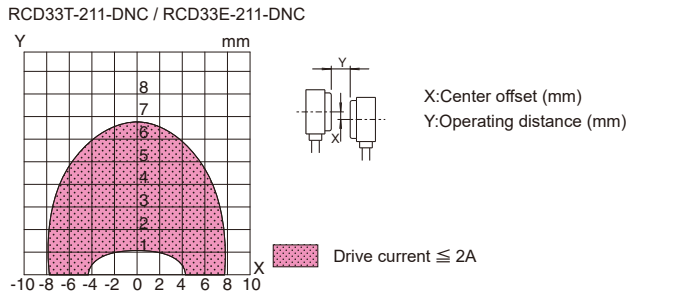


Remote	
Type Code DeviceNet	<b>RCD33T-211-DNC</b>
Drive voltage	24V ± 1.5V DC
Drive current	≤ 2A
Operating distance	3...5mm
Center offset	±4mm
Drive current	≤ 2A
Operating temperature	0...+50°C
Protection class	IP 67
Connector 1)	Signal: M12 / 5 pin male (Option cable : VA-5DSX5DVG5-BL[5m]) Power: M12 / 4 pin female (Option cable : TM-4DBX5HG2-1/3[5m])
Material	Housing: Aluminum + alumite processing (metal part) Active face: ABS+PBT (resin part)
Weight	800 g
Included	Ferrite core clamp 2)

1) Please use the connector cable that conforms to the specification of DeviceNet.  
2) For CE marking, be sure to attach the ferrite core clamp.

- Notes**
- Communication speed is 125K...500K bps.
  - Be sure to connect the terminal resistor on both ends of DeviceNet.  
Each two terminal resistors are required on Remote side and Base side.  
Termination resistor should be prepared by a user.
  - Please prepare your cable and connectors.
  - It is recommended to install RCD33 in metal in order to reduce the influence of self-heating.

Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)



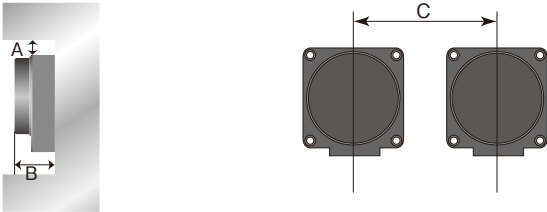
Base	
Type Code DeviceNet	<b>RCD33E-211-DNC</b>
Supply voltage	24V DC ±5% (including ripple)
Current consumption	≤ 3A
Signal transmission	DeviceNet (CAN Bus)
Delay	≤ 0.5μsec.
Start-up time	≤ 2 sec. <sup>3)</sup>
Operating temperature	0...+50°C
Protection class	IP 67
Connector 1)	Signal: M12 / 5 pin male (Option cable : VA-5DSX5DVG5-BL[5m]) Power: M12 / 4 pin male (Option cable : TM-4DSX5HG2-1/3[5m])
Material	Housing: Aluminum + alumite processing (metal part) Active face: ABS+PBT (resin part)
Weight	800 g
Included	Ferrite core clamp 2)

3) It is the start up time of Remote system.  
The start up time of DeviceNet is varied by the system.

**Installation notes**

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

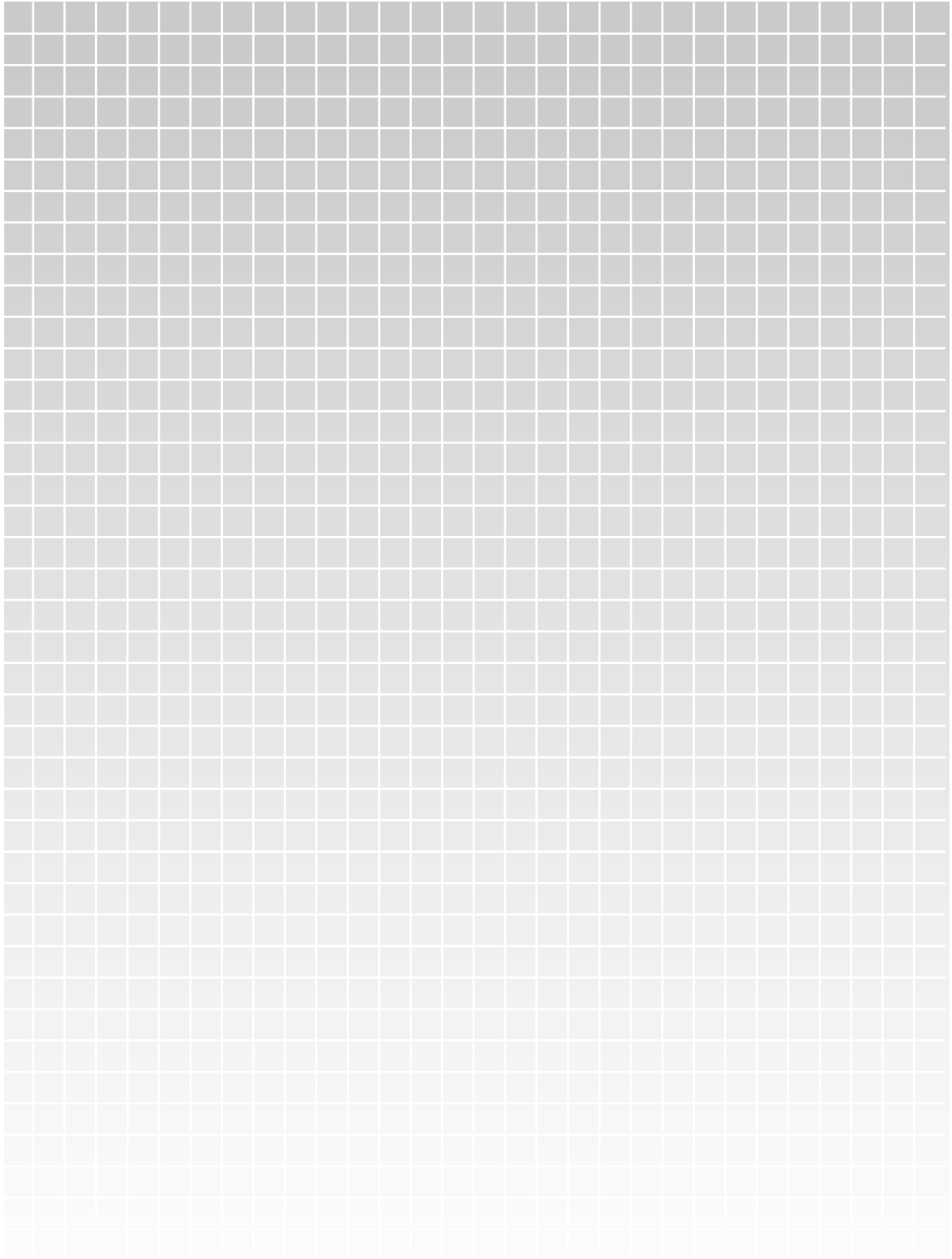
- Surrounding metal
- Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
<b>RCD33T-211-DNC</b>	50	45	300
<b>RCD33E-211-DNC</b>			







Remote Power Supply System	Power Supply	Parallel	98
		Overlap	100
	Charging	Parallel	102

Remote  
Power  
Supply

Power Supply  
Parallel

Power Supply  
Overlap

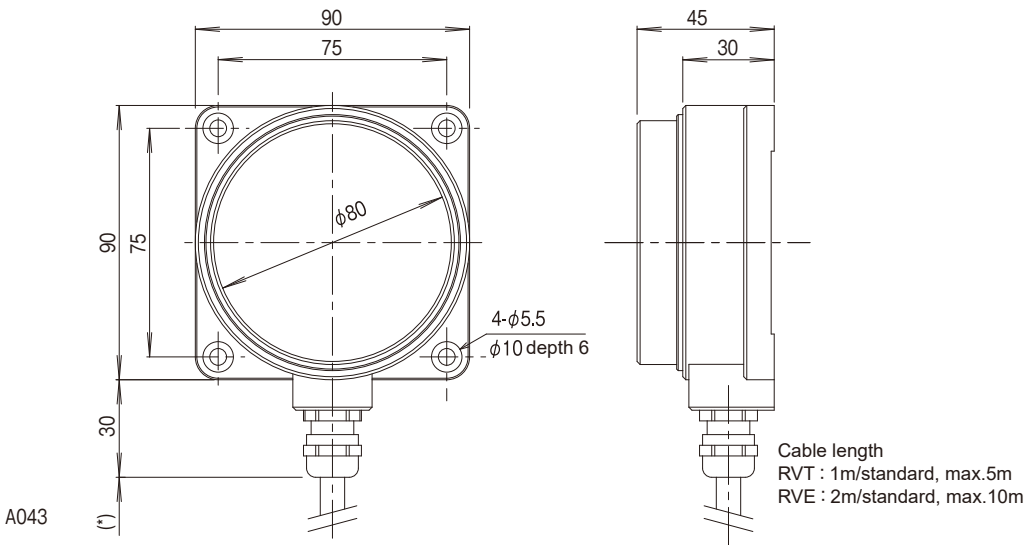
Charging  
Parallel



Parallel coupling / Size : 90 x 90

Operating distance  
4...9mm

Remote Base  
shared dimension



Wiring Brown:+ / Blue:-

Remote			
Type Code	RVT-211-22-PU-01		
Drive voltage	24V ± 1.5V DC		
Drive current	≤ 2A		
Operating distance	4...9mm	6...8mm	
Center offset	±5mm	±3mm	
Drive current	≤ 1A	≤ 2A	
Operating temperature	0...+50°C		
Protection class	IP67		
Cable	PUR / Ø7.8, 2x1.25mm²+2x0.2mm² with shield		
Material Housing	Aluminum + alumite processing (metal part)		
Active face	ABS+PBT (resin part)		
Weight	Body 600 g + Cable 120 g × 1 m		
Remark	2 (Black, White: 0.2mm²) of the 4 conductor is not used.		

Base	
Type Code	RVE-211-2-PU-02
Supply voltage	24V DC ±5% (including ripple)
Current consumption	≤ 4A
Load current	---
Frequency of operation	---
LED	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.8, 2x1.25mm²+2x0.2mm² with shield
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS+PBT (resin part)
Weight	Body 620 g + Cable 120 g × 2 m
Remark	2 (Black, White: 0.2mm²) of the 4 conductor is not used.

Applicable sensor and actuator

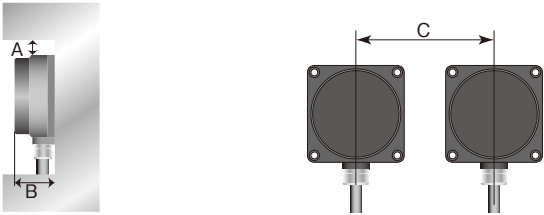
Supply voltage	24V DC
Total current consumption	≤ 2A
Residual voltage	---
Leakage current	---

The total of current consumption of all devices connected to Remote must not exceed 2A the drive current.

Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

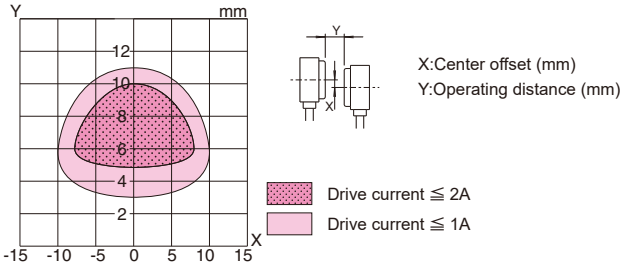
- Surrounding metal ■ Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RVT-211-22-PU-__	50	45	300
RVE-211-2-PU-__			

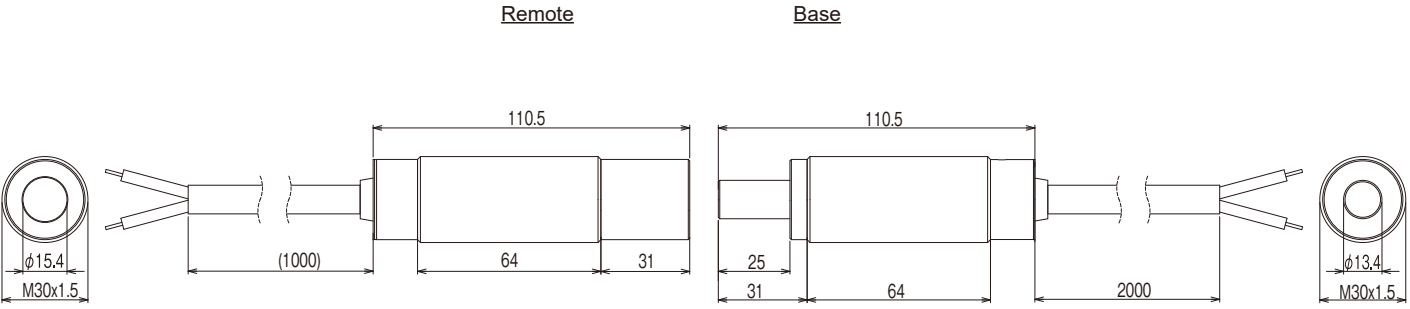
Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)

RVT-211-22-PU-\_\_ / RVE-211-2-PU-\_\_





Overlap coupling / Size : M30



A054

Wiring Brown: + / Blue: -

Remote	
Type Code	<b>RVTI-030-21-PU-01</b>
Drive voltage	24V ± 1.5V DC
Drive current	≤ 1A
Operating distance	3...10mm
Center offset	---
Drive current	≤ 1A
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 6.2 , 2x0.75mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	ABS + PBT
Weight	Body 200 g + Cable 50 g × 1 m
Remark	

Base	
Type Code	<b>RVEI-030-2-PU-02</b>
Supply voltage	24V DC ±10% (including ripple)
Current consumption	≤ 3A
Load current	---
Frequency of operation	---
LED	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / φ 6.2 , 2x0.75mm <sup>2</sup>
Material Housing	Nickel plated brass
Active face	ABS + PBT
Weight	Body 180 g + Cable 50 g × 2 m
Remark	

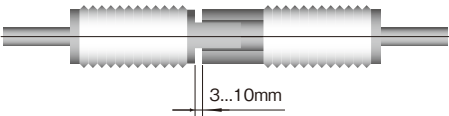
Applicable sensor and actuator

Supply voltage	24V DC
Total current consumption	≤ 1A
Residual voltage	---
Leakage current	---

The total of current consumption of all devices connected to Remote must not exceed 1A the drive current.

Operating distance

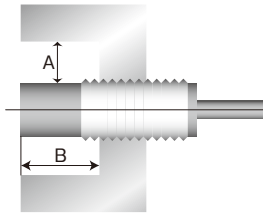
Operating distance of the overlap coupling product is as shown below.



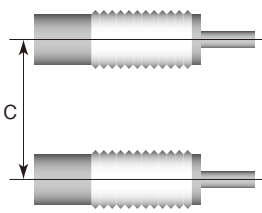
Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

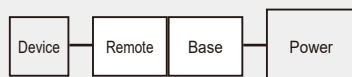
Surrounding metal



Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RVTI-030-21-PU-__	30	45	35
RVEI-030-2-PU-__			



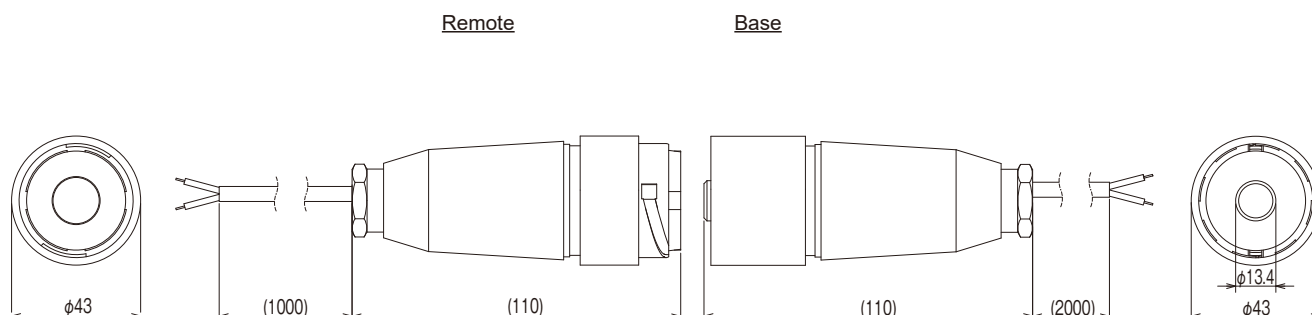
RVTI-030  
RVEI-030

RVTI-C01  
RVEI-C01

Wireless  
Power Supply

Overlap coupling / Size :  $\phi 40$

Power supply  
**24V**  
**/1A**



A055

Wiring Brown: + / Blue: -

Remote	
Type Code	<b>RVTI-C01-21-PU-01</b>
Drive voltage	24V $\pm$ 1.5V DC
Drive current	$\leq$ 1A
Operating distance	0 mm (when over lapped)
Center offset	---
Drive current	$\leq$ 1A
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 6.2, 2x0.75mm <sup>2</sup>
Material Housing	Polyamide 6.6
Active face	Polyamide 6.6
Weight	Body 210 g + Cable 50 g $\times$ 1 m
Remark	

Base	
Type Code	<b>RVEI-C01-2-PU-02</b>
Supply voltage	24V DC $\pm$ 10% (including ripple)
Current consumption	$\leq$ 3A
Load current	---
Frequency of operation	---
LED	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / $\phi$ 6.2, 2x0.75mm <sup>2</sup>
Material Housing	Polyamide 6.6
Active face	Polyamide 6.6
Weight	Body 200 g + Cable 50 g $\times$ 2 m
Remark	

**Remote  
Power  
Supply**

Power Supply  
Parallel

Power Supply  
Overlap

Charging  
Parallel

#### Applicable sensor and actuator

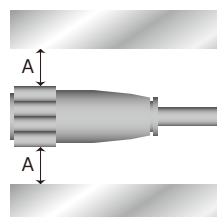
Supply voltage	24V DC
Total current consumption	$\leq$ 1A
Residual voltage	---
Leakage current	---

The total of current consumption of all devices connected to Remote must not exceed 1A the drive current.

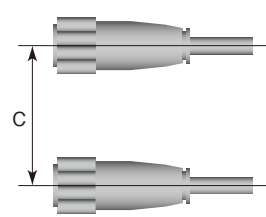
#### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

■ Surrounding metal



■ Parallel installation

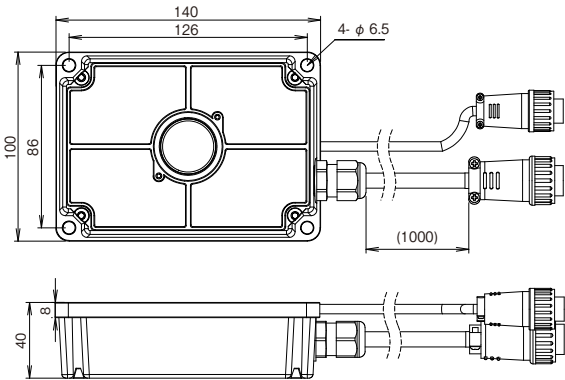


Type Code	A(mm)	B(mm)	C(mm)
RVTI-C01-21-PU-__	20	---	43
RVEI-C01-2-PU-__			

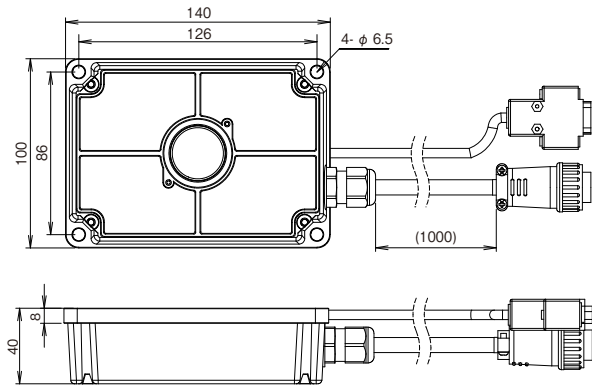
Parallel coupling / Size : 140 x 100 x 40

Operating distance  
0...10mm

Passive Head



Active Head



Wiring Please refer to the User's Guide.

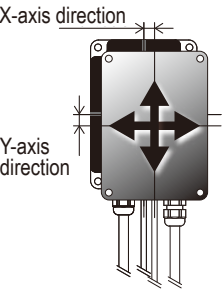
Passive Head	
Type Code	RCS240PH
Passive head	RCS210-PB24
Output voltage	Charging unit reference
Output current	Charging unit reference
Operating distance	0...10mm
Center offset	≤ 10mm (Refer to following)
Output current	Charging unit reference
Operating temperature	0...+50°C
Protection class	IP65
Connection	Active : Round 3-pin, Signal : Round 5-pin Each connector cable included (1m)
Material Active face	PPS
Back	Aluminum
Weight	1.2Kg
Remark	

Active Head	
Type Code	RCS240AH
Active Head	RCS240-AC1
Power supply	Power Supply unit reference
Current consumption	Power Supply unit reference
Load current	---
Frequency of operation	---
LED	---
Operating temperature	0...+50°C
Protection class	IP65
Connection	Active : Round 3-pin, Signal : D-sub 9-pin Each connector cable included (1m)
Material Active face	PPS
Back	Aluminum
Weight	1.2Kg
Remark	

About laws

■High frequency utilization equipment  
You will have to apply in accordance with high frequency utilization equipment authorization procedure by the Ministry of Internal Affairs and Communications.  
For more information, please refer to the website of the Telecommunications Ministry of Internal Affairs and Communications.  
■Please this product is used in Japan  
Because it is Japan specification, it can not be used outside of Japan.  
When used outside of Japan, I guess we assume any liability You.  
■CE not acquired

Center off-set of Passive head and Active head



The permissible center off-set of the feed head and charging head, please be installed so that the total (X + Y) axis deviation of the width of the X-axis · Y-axis is the following table.  
For example, X-axis equals a 10mm, Y-axis 0mm.  
If X-axis is 5mm, Y-axis is less than 5mm.

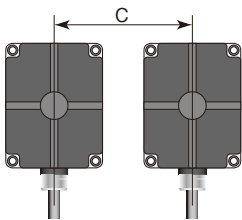
Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

Surrounding metal



Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RCS240PH	100	40	300
RCS240AH			





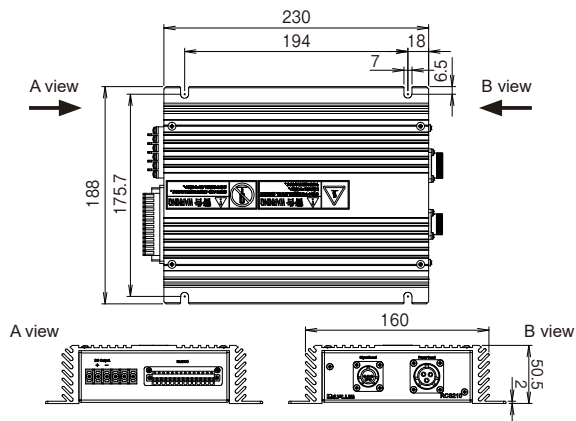
RCS240PH  
RCS240AH

RCS210-PB24  
RCS240-AC1

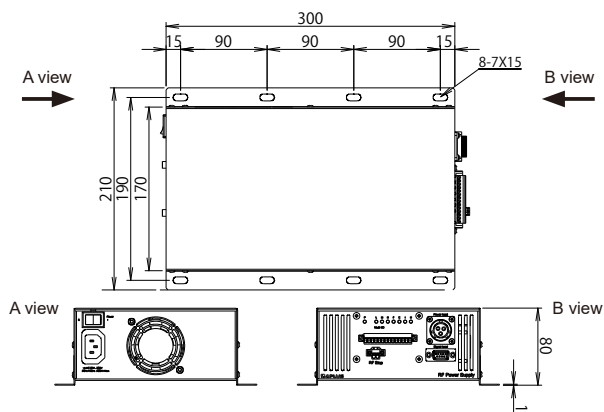
Wireless  
Power charging

Power supply  
**30V**  
**7A**

Charging unit



Power Supply unit



Wiring Please refer to the User's Guide.

Charging unit	
Type Code	<b>RCS210-PB24</b>
Charging unit	RCS240PH
Output voltage	$\leq 30V$ (It varies depending on battery Temperature)
Output current	$\leq 7A$ (It varies depending on battery voltage)
Input	Voltage monitor request
Output	Voltage monitor signal, charging signal, intermittent charging signal, Battery error signal
Cooling method	Natural air cooling
Protection circuit	Input : Overvoltage protection Battery : High temperature / low temperature protection, not connected, reverse connection protection
Operating temperature	0...+40°C
Protection class	IP20
Connection	Passive Round 3-pin connector
	Signal Round 5-pin connector
Terminal block	Battery connection(2-pole), Thermistor connection(2-pole), Terminal width 6.2mm or less, Terminal screw size M3
Material Housing	Aluminum
Weight	1.6Kg
Remark	

Power Supply unit	
Type Code	<b>RCS240-AC1</b>
Power Supply unit	RCS240AH
Supply voltage	100V AC / 200V AC
Current consumption	4A
Input	Start-up signal
Output	Voltage monitor signal, Inzone signal, charging signal, Intermittent charging signal, Battery error signal
Cooling method	Forced air cooling
LED	Status display of input and output signal
Operating temperature	0...+50°C
Protection class	IP20
Connection	Supply Round 3-pin connector
	Signal D-Sub 9-pin connector
	Power 3P inlet
Material Housing	SECC
Weight	2.6Kg
Remark	

Remote  
Power  
Supply

Power Supply  
Parallel

Power Supply  
Overlap

Charging  
Parallel

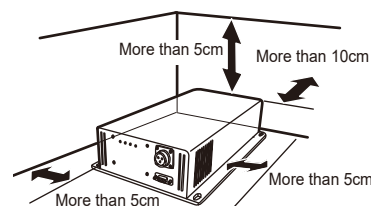
#### Available battery

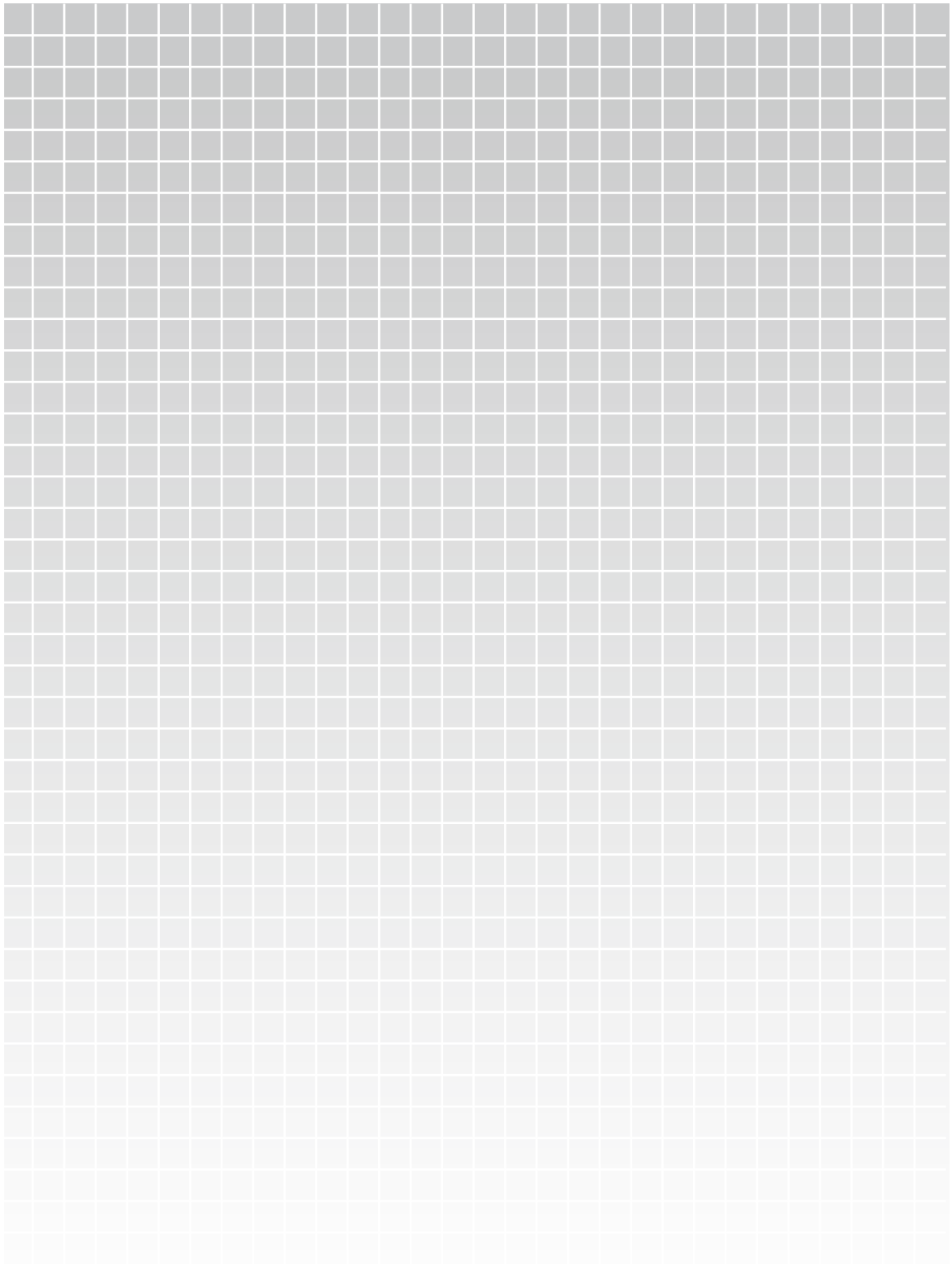
This product is a wireless charging system designed for battery charging only.

Application battery	lead battery
Battery voltage	24V DC
Battery charging current	$\geq 7A$

#### Installation notes

In order to obtain a good cooling effect, please keep as on the right ,below the separation distance between the surrounding body so as not to block the air flow.





Accessories	Exclusive sensor	RFD (DC 2-wire Detector type)	106
		RXD (Exclusive Detector type)	107
	Terminal Box	Standard type	108
		Waterproof type	110
		Connector type	112
	AC Conversion Amplifier		114

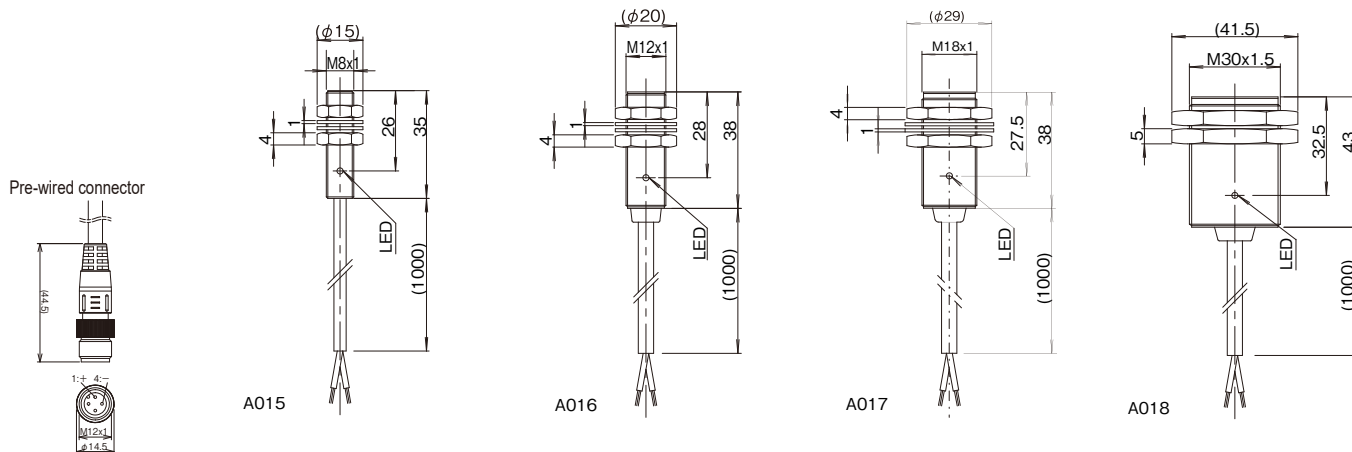
# Accessories

## Exclusive Sensor

### Exclusive Proximity Sensor for Remote System

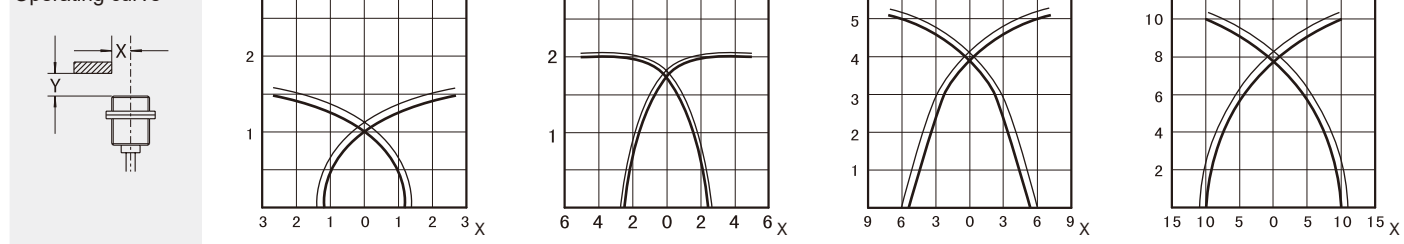
#### Exclusive proximity sensor with LED / RFD series

Applicable Transmitter	Transmitter of DC 2-wire detector type (Ref. P.48...65)			
Rated operating distance	1.5mm	2mm	5mm	10mm
Assured operating distance	0...1.2mm	0...1.6mm	0...4mm	0...8mm
Size of Detector	M8	M12	M18	M30



Type Code	RFD-0801-PU-01	RFD-1202-PU-01	RFD-1805-PU-01	RFD-3010-PU-01
Applicable Transmitter	RPT_-xxxxD	RPT_-xxxxD RS_T-2xxD-S04	RPT_-xxxxD RS_T-2xxD-S04	RPT_-xxxxD RS_T-2xxD-S04
Frequency of operation	30Hz	30Hz	30Hz	30Hz
LED	Function indication	Function indication	Function indication	Function indication
Operating temperature	0...+50°C	0...+50°C	0...+50°C	0...+50°C
Protection class	IP67	IP67	IP67	IP67
Material Housing	Stainless steel	Nickel plated brass	Nickel plated brass	Nickel plated brass
Active face	Nylon 12	Nylon 12	Nylon 12	Nylon 12
Cable	PUR / $\phi$ 3.3 , 2x0.14mm <sup>2</sup>	PUR / $\phi$ 5 , 2x0.34mm <sup>2</sup>	PUR / $\phi$ 5 , 2x0.34mm <sup>2</sup>	PUR / $\phi$ 5 , 2x0.34mm <sup>2</sup>
Weight	25 g +15 g x 1 m	30 g +25 g x 1 m	50 g +25 g x 1 m	110 g +25 g x 1 m
Pre-wired connector type	---	RFD-1202-PU-CP1.0	RFD-1805-PU-CP1.0	RFD-3010-PU-CP1.0

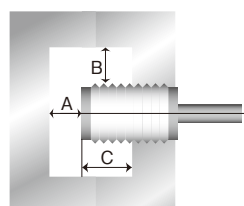
#### Operating curve



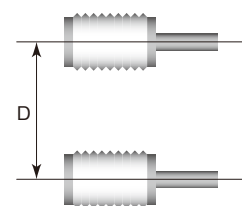
#### Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

##### ■ Surrounding metal



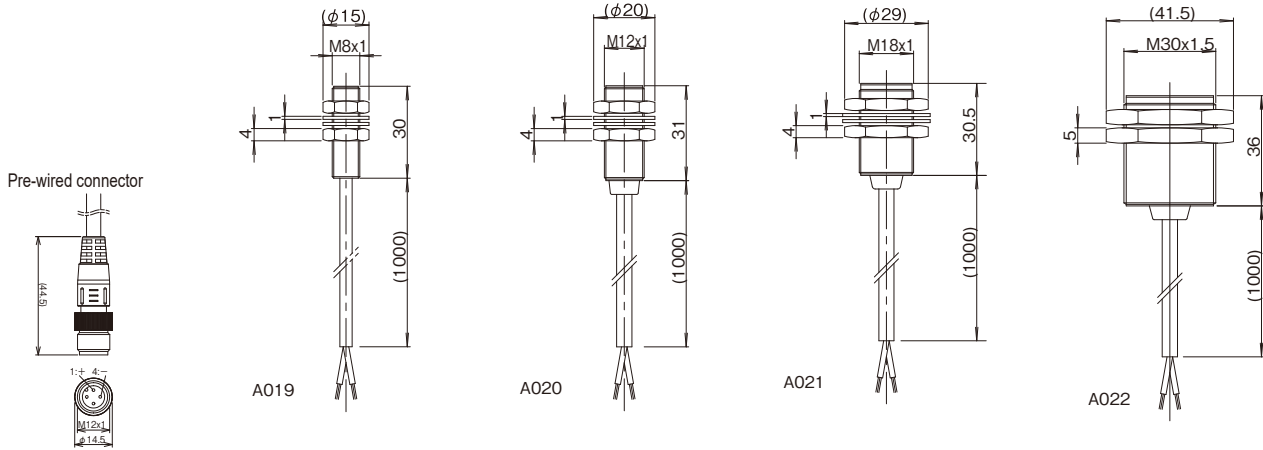
##### ■ Parallel installation



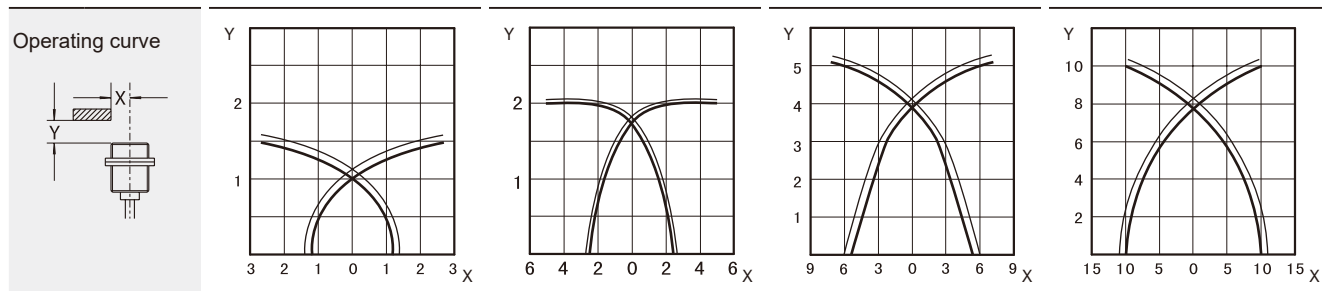
RFD (with LED)	RXD (without LED)	A(mm)	B(mm)	C(mm)	D(mm)
RFD-0801-PU	RXD-0801-PU	5	4	0	15
RFD-1202-PU	RXD-1202-PU	8	6	0	20
RFD-1805-PU	RXD-1805-PU	20	9	0	35
RFD-3010-PU	RXD-3010-PU	40	15	0	70

## Exclusive proximity sensor without LED / RXD series

Applicable Transmitter	Transmitter of Exclusive detector type (Ref. P.66...69)			
Rated operating distance	1.5mm	2mm	5mm	10mm
Assured operating distance	0...1.2mm	0...1.6mm	0...4mm	0...8mm
Size of Detector	M8	M12	M18	M30



Type Code	RXD-0801-PU-01	RXD-1202-PU-01	RXD-1805-PU-01	RXD-3010-PU-01
Applicable Transmitter	RXT-xxxx RXT8-xxxx	RXT-xxxx RXT8-xxxx	RXT-xxxx RXT8-xxxx	RXT-xxxx RXT8-xxxx
Frequency of operation	25Hz	25Hz	25Hz	25Hz
LED	No	No	No	No
Operating temperature	0...+50°C	0...+50°C	0...+50°C	0...+50°C
Protection class	IP67	IP67	IP67	IP67
Material Housing	Stainless steel	Nickel plated brass	Nickel plated brass	Nickel plated brass
Active face	Nylon 12	Nylon 12	Nylon 12	Nylon 12
Cable	PUR / $\phi$ 3.3, 2x0.14mm <sup>2</sup>	PUR / $\phi$ 5, 2x0.34mm <sup>2</sup>	PUR / $\phi$ 5, 2x0.34mm <sup>2</sup>	PUR / $\phi$ 5, 2x0.34mm <sup>2</sup>
Weight	15 g +15 g x 1 m	15 g +25 g x 1 m	35 g +25 g x 1 m	90 g +25 g x 1 m
Pre-wired connector	---	RXD-1202-PU-CP1.0	RXD-1805-PU-CP1.0	RXD-3010-PU-CP1.0



See P.106 for installation notes.

## How to order detector/transmitter cable molded type

An exclusive sensor RXD and a transmitter RXT can be supplied as a product which is pre-wired by one cable.



Specify size and cable length of Detector and Transmitter to order.

RXD18 / RXT12 - PU-1.0

Size of Detector	Size of Transmitter	Cable length
08 = M8	12 = M12	0.5 = 50cm
12 = M12	18 = M18	1.0 = 1m (standard)
18 = M18		1.5 = 1.5m
30 = M30		2.0 = 2m

## Accessories

Exclusive  
sensor

Terminal box  
Other unit

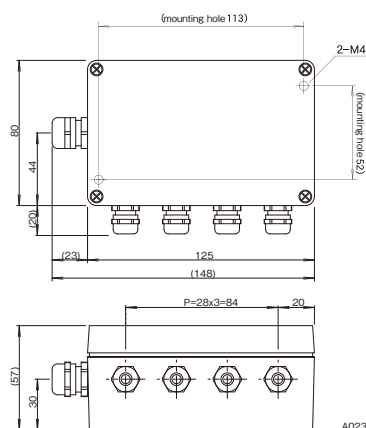
# Accessories

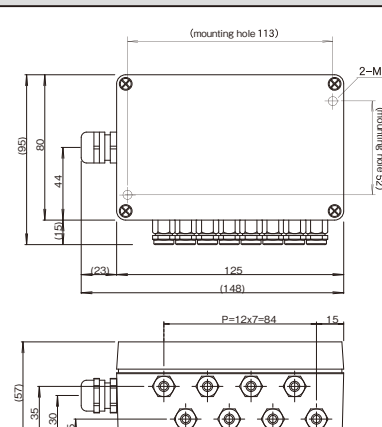
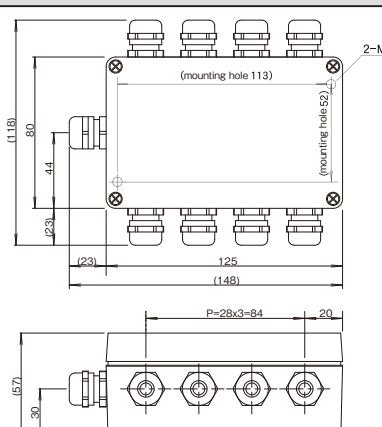
## Terminal Box

### Standard type

#### Wiring Transmitter and Detectors

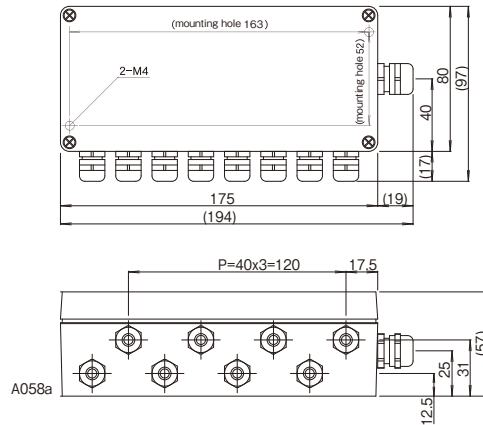
Terminal Box / Standard type for DC 3-wire and DC 2-wire Detector type

Number of Detector	4 detectors
	
Type Code	RPK-2102
Material Body	Aluminum die casting
Gasket	Neoprene rubber
Protection class	IP65
Terminal block	for Transmitter 6 pole x 2, for Detector 8 pole x 3
Cable gland	for Transmitter PG9 x 1, for Detector PG7 x 4
Changeover SW1	Changeover NPN/PNP
Switch SW2	Changeover 3-wire/2-wire
Applicable cable outer diameter	φ 2...6.5mm
Mounting	M4 allen screw x 2
Weight	600 g

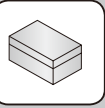
Number of Detector	8 detectors	8 detectors
		
Type Code	RPK-2101	RPK-2103
Material Body	Aluminum die casting	Aluminum die casting
Gasket	Neoprene rubber	Neoprene rubber
Protection class	IP65	IP65
Terminal block	for Transmitter 6 pole x 2, for Detector 8 pole x 3	for Transmitter 6 pole x 2, for Detector 8 pole x 3
Cable gland	for Transmitter PG9 x 1, for Detector M8 x 8	for Transmitter PG9 x 1, for Detector PG9 x 8
Changeover SW1	Changeover NPN/PNP	Changeover NPN/PNP
Switch SW2	Changeover 3-wire/2-wire	Changeover 3-wire/2-wire
Applicable cable outer diameter	φ 3...5.5mm	φ 4...8mm
Mounting	M4 allen screw x 2	M4 allen screw x 2
Weight	600 g	600 g

## Terminal Box / Standard type for DC 2-wire and Exclusive Detector type

Number of Detector	8 detectors
--------------------	-------------



Type Code	<b>RFB-3101</b>
Material Body	Aluminum die casting
Gasket	Neoprene rubber
Protection class	IP65
Terminal block	for Transmitter 12 pole x 1, for Detector 12 pole x 1
Cable gland	for Transmitter PG9 x 1, for Detector PG7 x 8
Changeover SW1	---
Switch SW2	---
Applicable cable outer diameter	φ 2...6.5mm
Mounting	M4 allen screw x 2
Weight	800 g



## Accessories

Exclusive  
sensorTerminal box  
Other unit

- These products are the terminal box for connecting Transmitter and Detector.
- The blank plugs are supplied with the terminal box to seal unused cable entries.
- Before use, please read the instructions in user's guide attached to products.



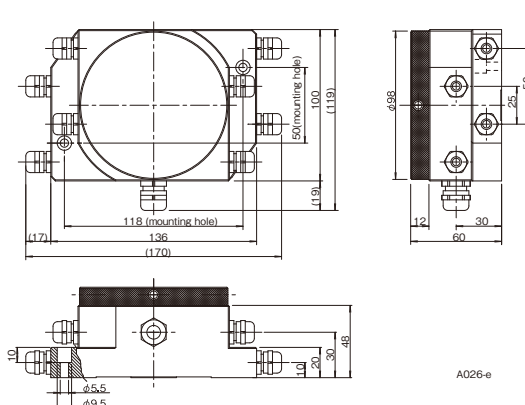
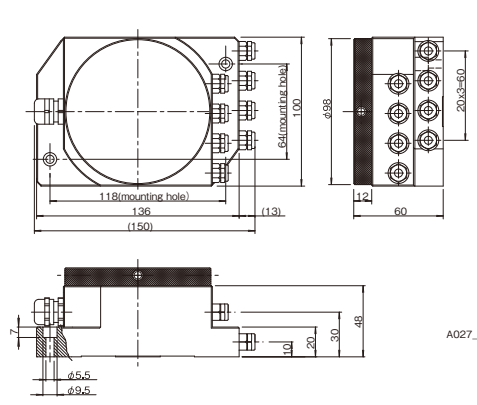
# Accessories

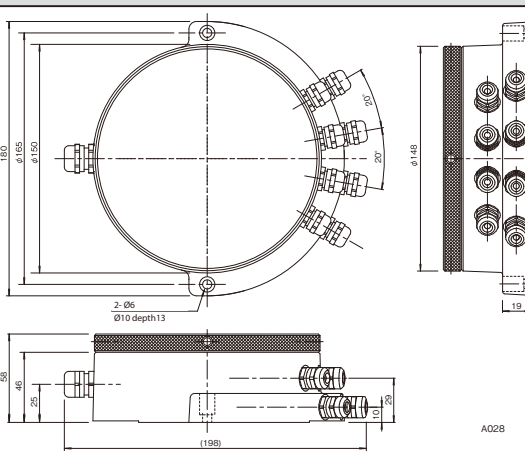
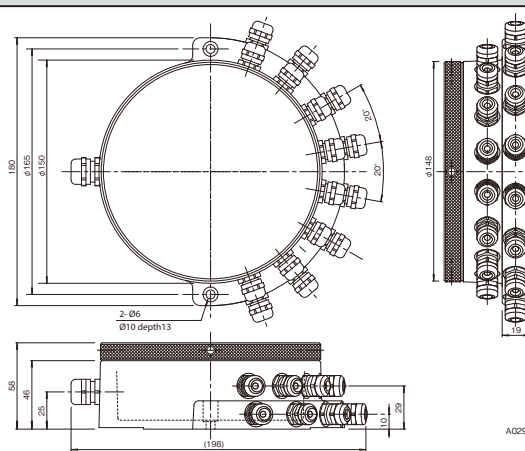
## Terminal Box

### Waterproof type

#### Wiring Transmitter and Detectors

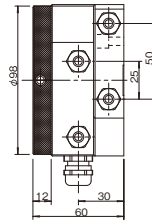
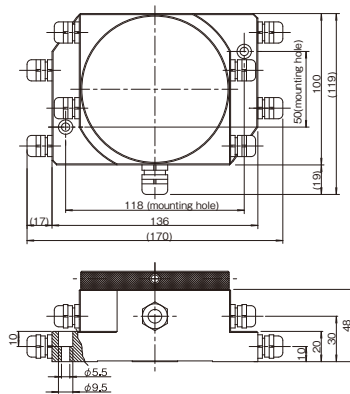
Terminal Box / Waterproof type for DC 3-wire and DC 2-wire Detector type

Number of Detector	8 detectors	8 detectors
	 <p>A026-e</p>	 <p>A027-e</p>
Type Code	RPK-A098-02	RPK-A098-03
Material Body	Aluminum casting/Machined aluminum	Aluminum casting/Machined aluminum
Gasket	Viton	Viton
Protection class	IP67	IP67
Terminal block	for Transmitter 12 pole x 1, for Detector 12 pole x 2	for Transmitter 12 pole x 1, for Detector 12 pole x 2
Cable gland	for Transmitter PG9 x 1, for Detector PG7 x 8	for Transmitter PG9 x 1, for Detector M8 x 8
Changeover SW1	Changeover NPN/PNP	Changeover NPN/PNP
Switch SW2	Changeover 3-wire/2-wire	Changeover 3-wire/2-wire
Applicable cable outer diameter	φ 4...6.5mm	φ 3...5mm
Mounting	M5 allen screw x 2	M5 allen screw x 2
Weight	1,200 g	1,200 g

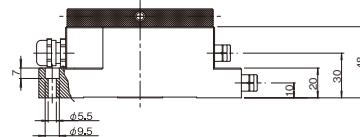
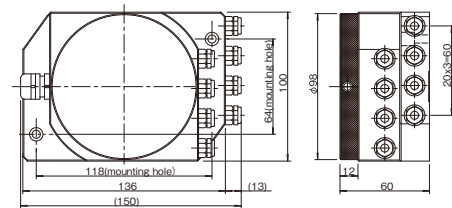
Number of Detector	8 detectors	15 detectors
	 <p>A028</p>	 <p>A029</p>
Type Code	RPK-B148-02	RPK-B148-03
Material Body	Aluminum casting/Machined aluminum	Aluminum casting/Machined aluminum
Gasket	Viton	Viton
Protection class	IP67	IP67
Terminal block	for Transmitter 6 pole x 2, for Detector 8 pole x 3	for Transmitter 18 pole x 1, for Detector 15 pole x 2
Cable gland	for Transmitter PG9 x 1, for Detector PG7 x 8	for Transmitter PG9 x 1, for Detector PG7 x 16
Changeover SW1	Changeover NPN/PNP	---
Switch SW2	Changeover 3-wire/2-wire	---
Applicable cable outer diameter	φ 4...6.5mm	φ 4...6.5mm
Mounting	M5 allen screw x 2	M5 allen screw x 2
Weight	1,800 g	1,800 g

Terminal Box / Waterproof type for DC 2-wire and Exclusive Detector type

Number of Detector	8 detectors	8 detectors
--------------------	-------------	-------------

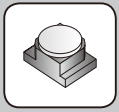


A026-e



A027-e

Type Code	<b>RFK-A098-02</b>	<b>RFK-A098-03</b>
Material Body	Aluminum casting/Machined aluminum	Aluminum casting/Machined aluminum
Gasket	Viton	Viton
Protection class	IP67	IP67
Terminal block	for Transmitter 12 pole x 1, for Detector 12 pole x 1	for Transmitter 12 pole x 1, for Detector 12 pole x 1
Cable gland	for Transmitter PG9 x 1, for Detector PG7 x 8	for Transmitter PG9 x 1, for Detector M8 x 8
Changeover SW1	---	---
Switch SW2	---	---
Applicable cable outer diameter	φ 4...6.5mm	φ 3...5mm
Mounting	M5 allen screw x 2	M5 allen screw x 2
Weight	1,200 g	1,200 g



Accessories

Exclusive sensor

Terminal box  
Other unit

- These products are the terminal box for connecting Transmitter and Detector.
- The blank plugs are supplied with the terminal box to seal unused cable entries.
- Before use, please read the instructions in user's guide attached to products.

# Accessories

## Terminal Box

### Connector type

### Wiring Transmitter and Detectors

#### Terminal Box/Connector type for DC 3-wire and DC 2-wire Detector type

Number of Detector	4 detectors	8 detectors

Type	DC3W/NPN	<b>RPK-4C01-N</b>	<b>RPK-8C01-N</b>
Code	DC3W/PNP	<b>RPK-4C01-P</b>	<b>RPK-8C01-P</b>
LED		---	---
Material	Body	Aluminum casting	Aluminum casting
	Cap	Machined aluminum	Machined aluminum
	Gasket	Viton	Viton
Protection class		IP67	IP67
Connection	Transmitter	7 pole screwless terminal block	12 pole screwless terminal block
	Detector	4 pole connector ( M12 x 4 )	4 pole connector ( M12 x 8 )
Cable gland	Transmitter	PG9 x 1	PG9 x 1
Changeover switch		4-pole DIP switch for changeover of 2-wire and 3-wire detector	8 pole DIP switch for changeover of 2-wire and 3-wire detector
Mounting		M5 allen screw x 3	M5 allen screw x 3
Weight		300 g	500 g

Number of Detector	8 Detectors
Applicable Transmitter	

Type	DC3W/NPN	<b>RPK-8C01L-N</b>
Code	DC3W/PNP	<b>RPK-8C01L-P</b>
LED		Function indication/Power
Material	Body	Aluminum casting
	Cap	Machined aluminum
	Gasket	Viton
Protection class		IP67
Connection	Transmitter	11 pole screwless terminal block
	Detector	4 pole connector ( M12 x 8 )
Cable gland	Transmitter	PG9 x 1
Changeover switch		Only for DC 3-wire sensors
Mounting		M5 allen screw x 3
Weight		500 g

#### Using DC 2-wire sensors

- DC 2-wire sensor can be used with RPK-4C01- N/P and RPK-8C01- N/P by switching the 3-wire/2-wire changeover switch.

RPK-4C01- ☐

Use transmitter : RPTA-1803-PU、RPTA-3005-PU

Detection sensor to be used		Applicable Terminal box	3-wire/2-wire changeover switch
DC 3-wire	NPN	RPK-4C01-N	OFF
	PNP	RPK-4C01-P	OFF
DC 2-wire	Non-polar	RPK-4C01-N	ON
	Polar	RPK-4C01-P	ON

RPK-8C01- ☐

Use transmitter : RPTA-8010-PU、RGPT series

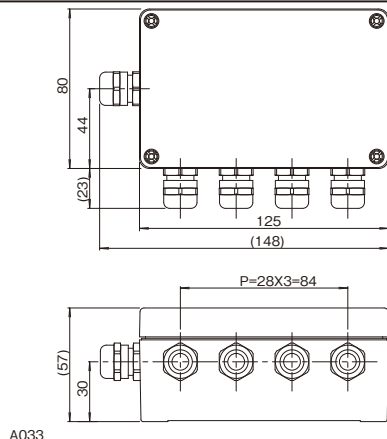
Detection sensor to be used		Applicable Terminal box	3-wire/2-wire Changeover Switch
DC 3-wire	NPN	RPK-8C01-N	OFF
	PNP	RPK-8C01-P	OFF
DC 2-wire	Non-polar	RPK-8C01-N	ON
	Polar	RPK-8C01-P	ON



#### AC Conversion Amplifier

Unit for AC 2-wire sensor connection

RGPT4T converts the drive voltage from 24V DC of the transmitter (RGPT-9012) to 100V AC and supplies power to the connected AC 2-wire switches and also it outputs the detected signals to the transmitter.



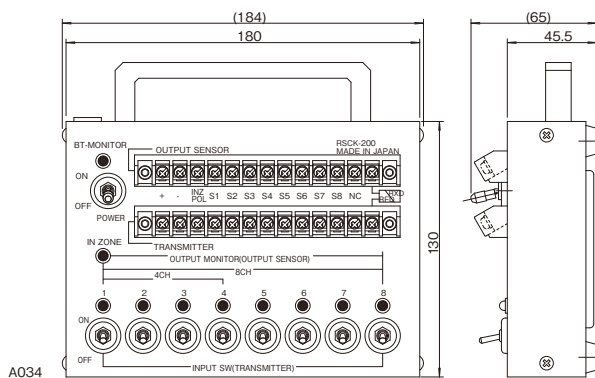
Type Code	<b>RGPT4T-AC100-KB02A</b>
Applicable Transmitter	RGPT-9012-V2430-PU-__
Number of Detector	4*
Drive current	5...6mA per sensor
Drive voltage	100V AC (Pseudo sine wave)
Frequency of operation	20Hz
Material Body /Gasket	Aluminum die casting/Neoprene rubber
Operating temperature	0...+50°C
Protection class	IP65
Cable gland for Detector	PG9X4 (φ 4...8mm)
mounting	M4 allen screw x 2
Weight	600g

\*Corresponds to the input signals 1...4 of the transmitter.

#### Handy Checker

For checking the operating status of Transmitter or Output sensor

Note:  
Not all Remote Sensors work with this checker.  
So please ask to salesperson before placing an order .



Type Code	<b>RSCK-200</b>
LED	Battery/InZone/Signal x 8
Material Housing/Battery box	Aluminum/ABS
Terminal block	13 pole x 2
Switch	Power / 8 Input signals
Applicable Output sensor	Current consumption ≤ 400 mA
Applicable Transmitter	Using with above mentioned Output sensor as well as be able to use a mechanical sensor.
Supply voltage	24V DC±5%
Power supply Battery	Dry cell battery size AA 4x2=8 (for 30 minutes )
External	Required supply capacity ≥ 10 ... 24V DC 20 W
Operating temperature	0...+40°C

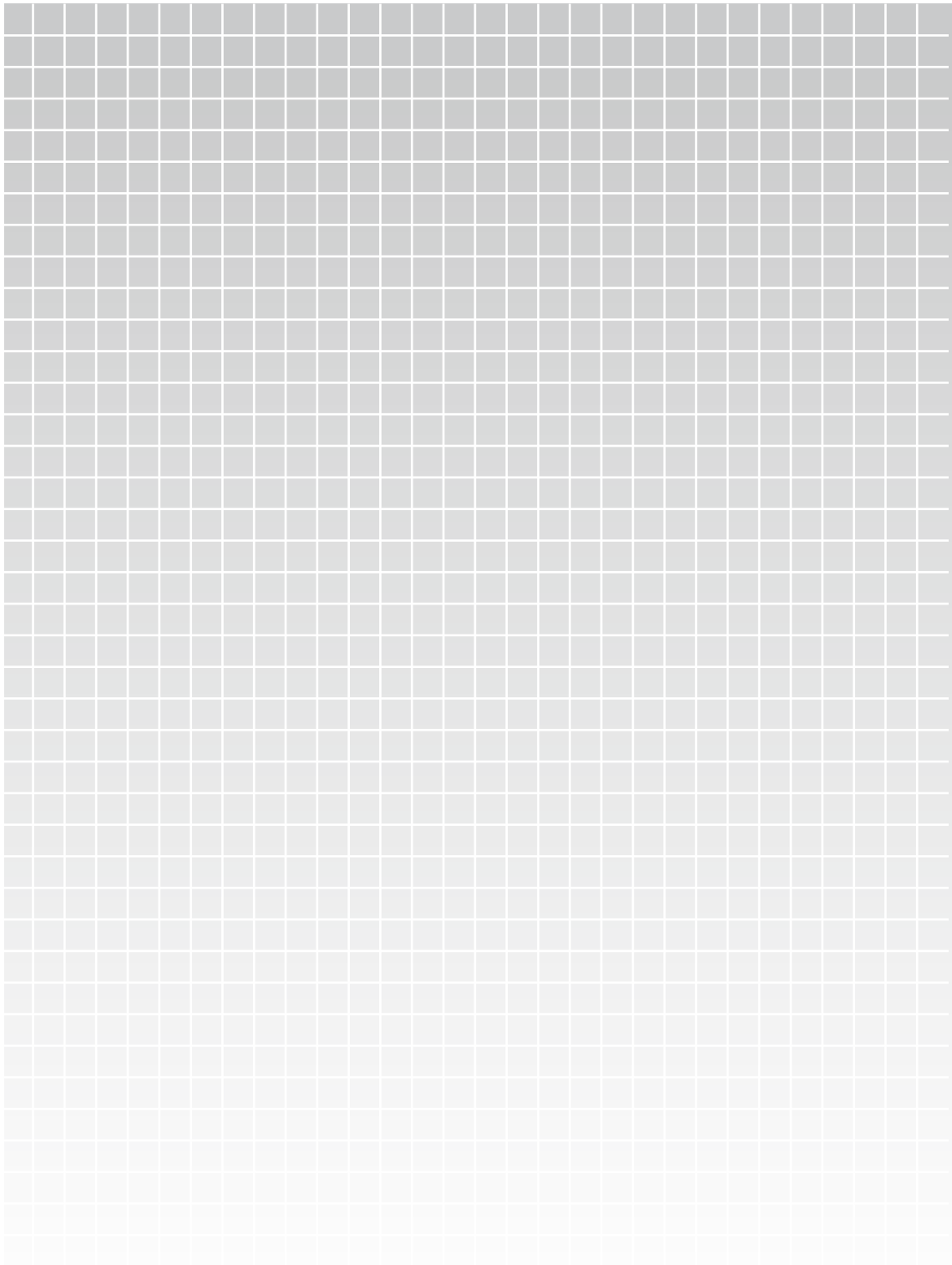




Accessories

Exclusive  
sensor

Amplifier  
Checker



Wiring	118
Discontinued plans	129
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Remote  
Sensor

Remote  
Coupler

Remote  
Power  
Supply

Wiring

Discontinued  
plans

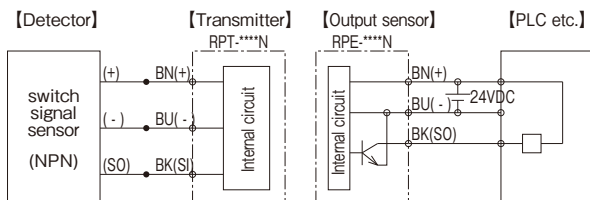
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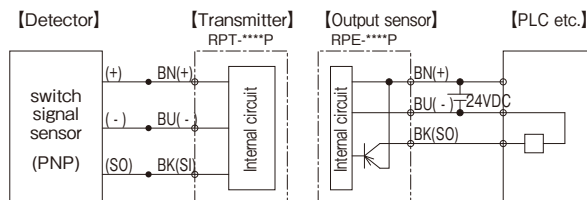
### Remote Sensor System

#### C001 DC 3-wire Detector type No. of signal : 1

RPT-1804\_ / RPE-1804\_  
RPT-3008\_ / RPE-3008\_



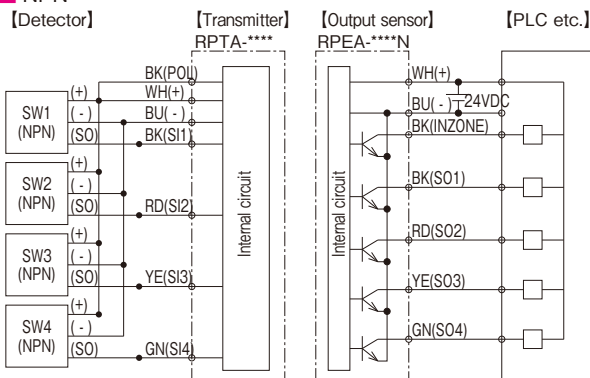
#### PNP



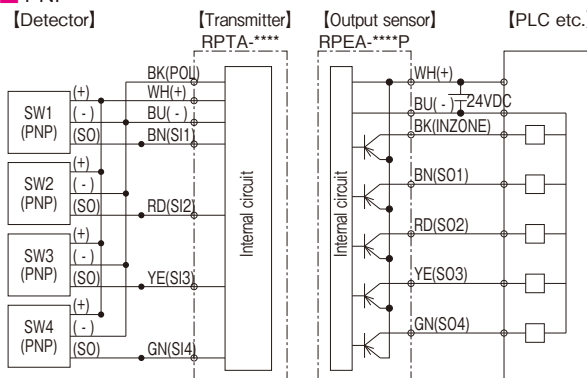
#### C002 DC 3-wire Detector type No. of signal : 4

RPTA-1803 / RPEA-1803\_  
RPTA-3005 / RPEA-3005\_

#### NPN



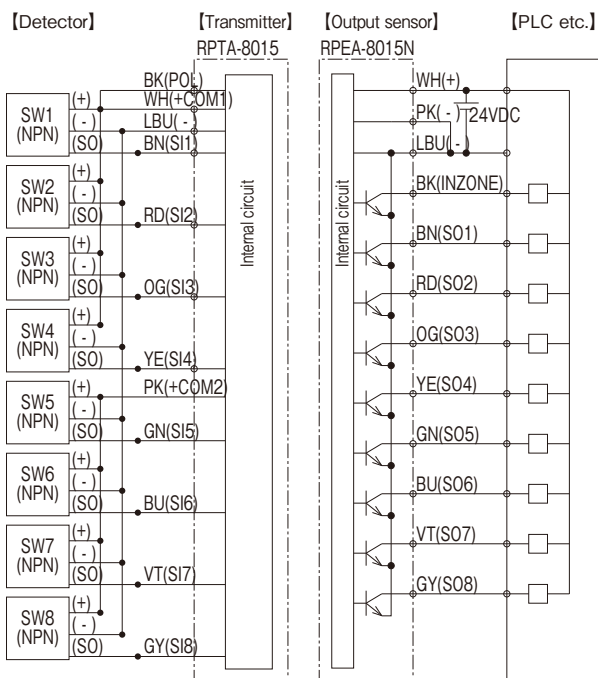
#### PNP



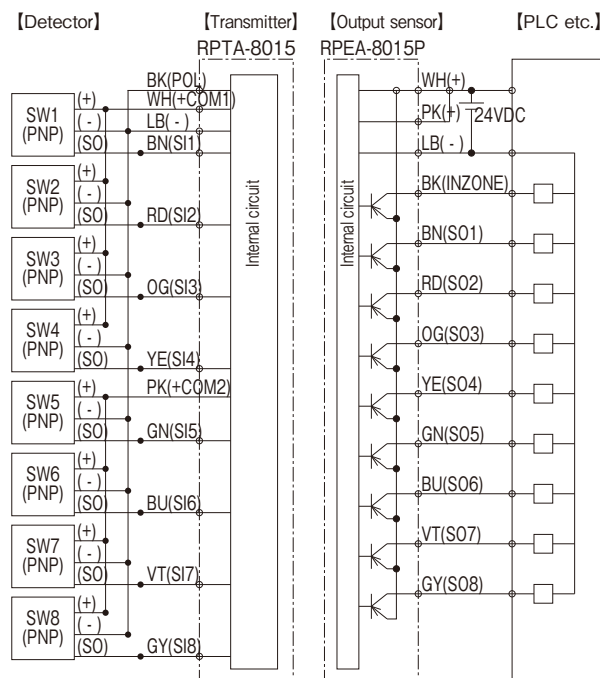
#### C003 DC 3-wire Detector type No. of signal : 8

RPTA-8015 / RPEA-8015\_

#### NPN



#### PNP type



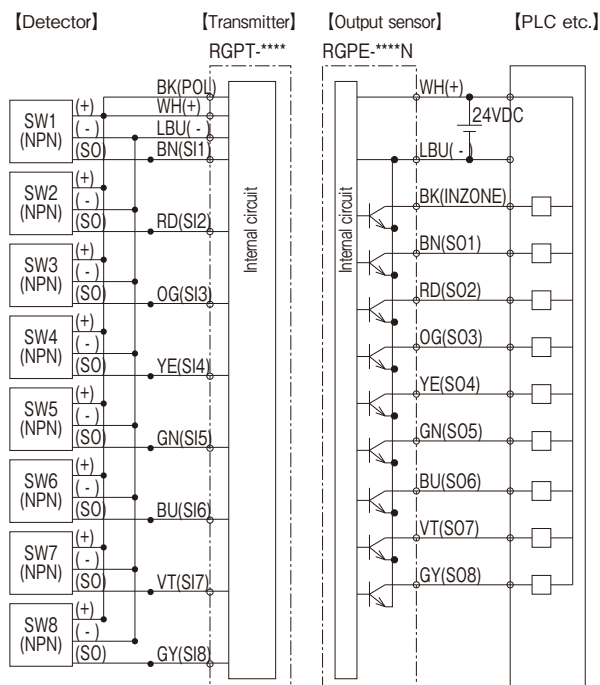
# Remote Sensor System

## Switch Signal / DC 3-wire Detector type

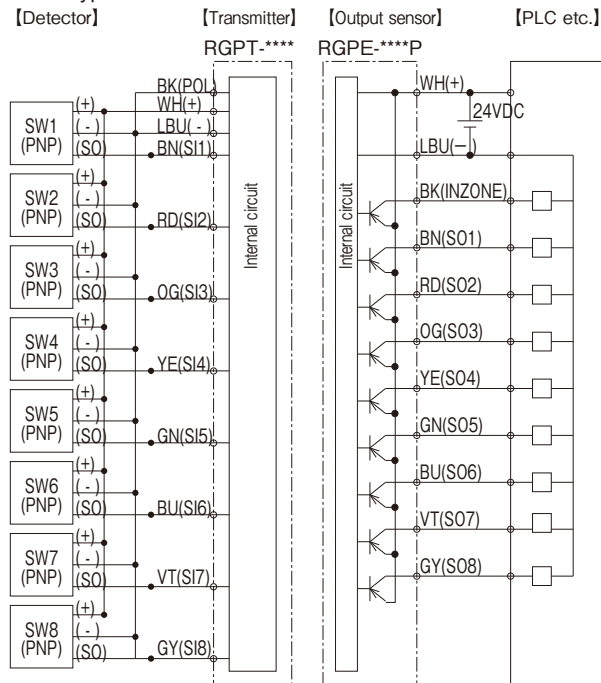
### C004 DC 3-wire Detector type No. of signal : 8

RGPT-3005 / RGPE-3005-  
RGPT-4008 / RGPE-4008-  
RGPT-9012 / RGPE-9012-

#### ■ NPN type

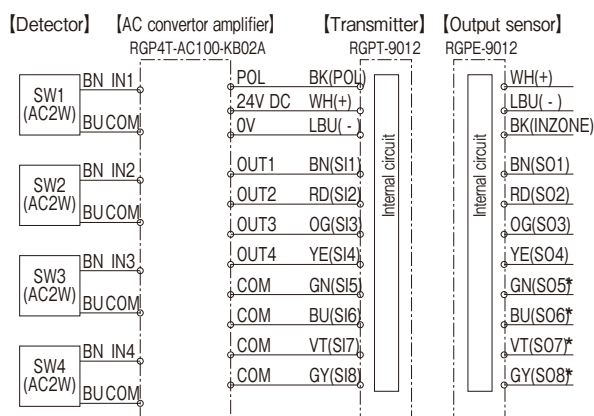


#### ■ PNP type



### C005 AC conversion amplifier No. of signal : 4

RGPT-AC100-KB02A

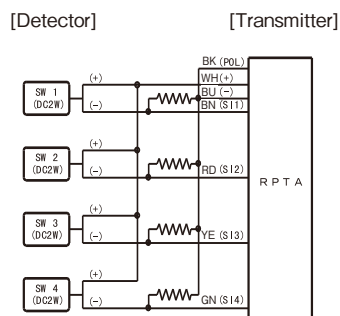


\* SO5...SO8 will be ON when Transmitter and Output sensor are operating in Inzone.

### Connecting DC2-wire sensor to DC 3-wire Detector type Transmitter

When connecting a DC 2-wire sensor (incl. a mechanical limit switch) to the DC 3-wire type transmitter, be sure to put a resistor to wiring. The recommended resistor is 1...2k ohm.

Example : + common wiring by RPTA-1803



Wiring methods for each product, refer to the User's Guide.

-Please refer to the instruction of User's guide supplied with the products for installation and operation.

-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. If the cable length of the output section will be used in the wiring of more than 10m, Please take care that the surge of excess is not applied.

Remote  
Sensor

Remote  
Coupler

Remote  
Power  
Supply

Wiring

Discontinued  
plans

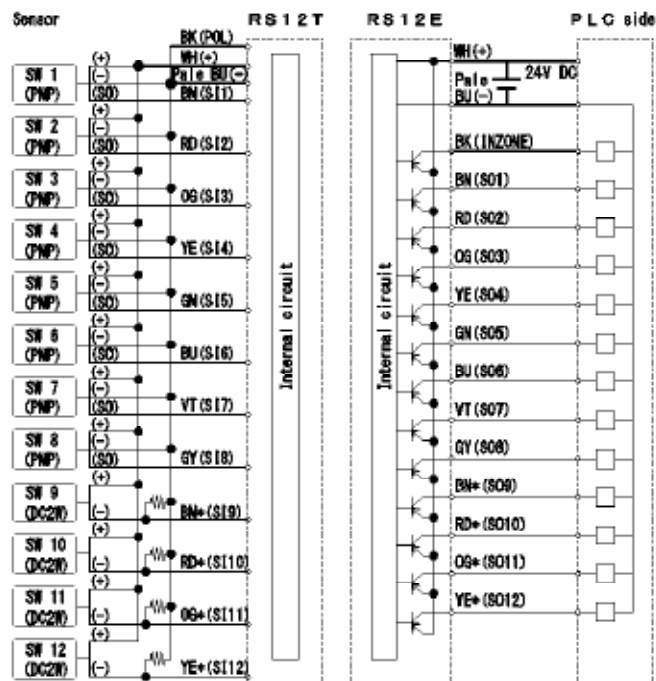
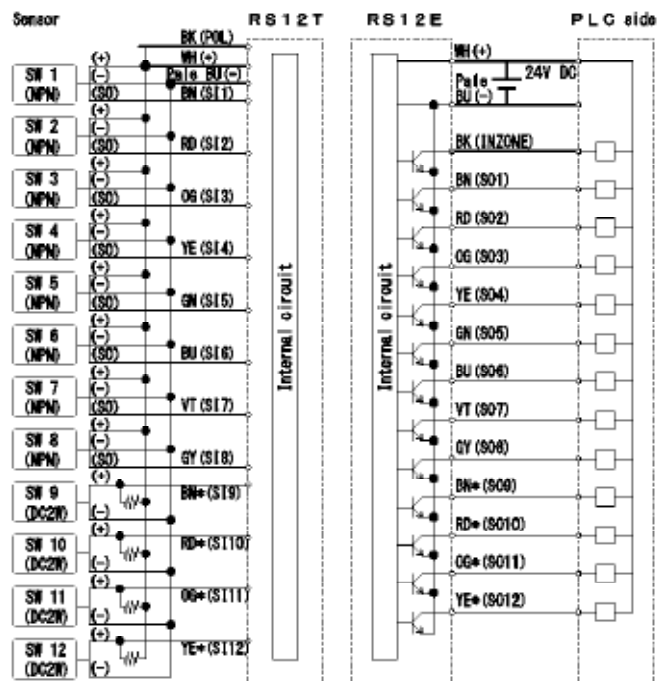
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**C028** DC 3-wire Detector type No. of signal : 12

RS12T-422 / RS12E-422\_

■ NPN type

■ PNP type



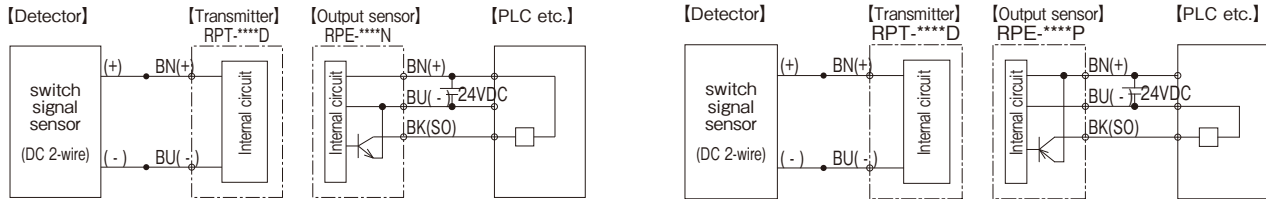
# Remote Sensor System

## Switch Signal / DC 2-wire Detector type

### C006 DC 2-wire Detector type No. of signal : 1

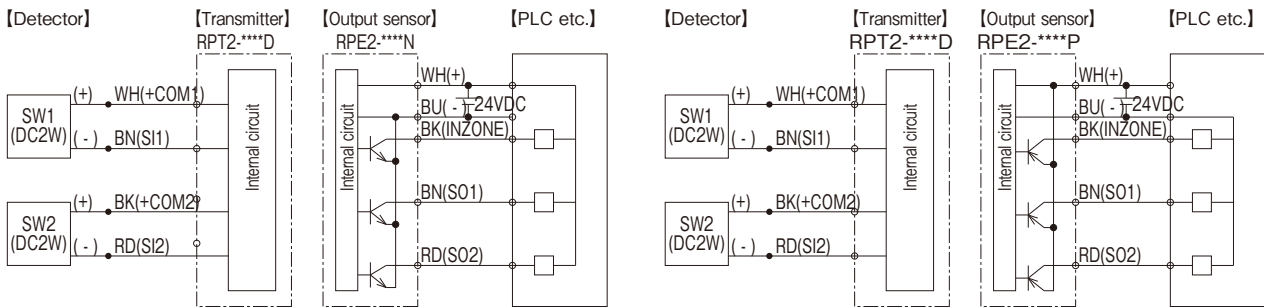
RPT-1202D / RPE-1202\_  
RPT-1804D / RPE-1804\_  
RPT-3008D / RPE-3008\_  
RPT-F0D / RPE-F0\_

■ NPN



### C007 DC 2-wire Detector type No. of signal : 2

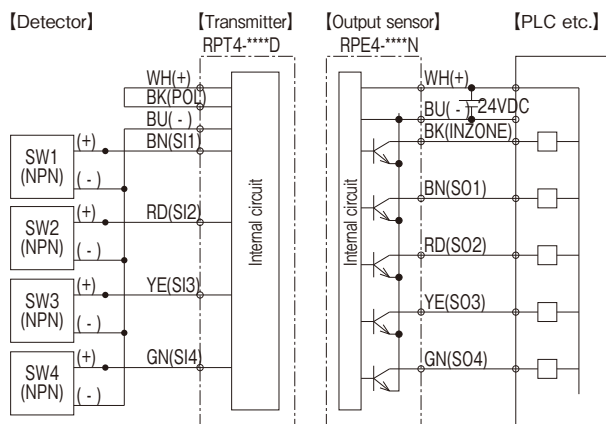
RPT2-1804D-PU / RPE2-1804\_  
RPT2-3005D-PU / RPE2-3005\_



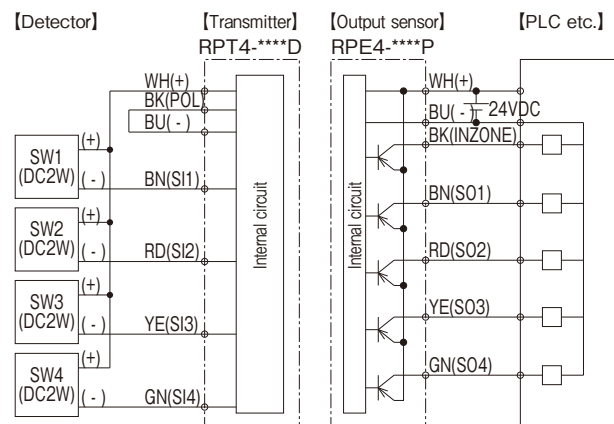
### C008 DC 2-wire Detector type No. of signal : 4

RPT4-1803D / RPE4-1803\_  
RPT4-3005D / RPE4-3005\_

■ NPN



■ PNP



RPT4-xxxxD can be connected with both of "+common" and "-common".

-Please refer to the instruction of User's guide supplied with the products for installation and operation.

-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. If the cable length of the output section will be used in the wiring of more than 10m, Please take care that the surge of excess is not applied.

Remote  
Sensor

Remote  
Coupler

Remote  
Power  
Supply

Wiring

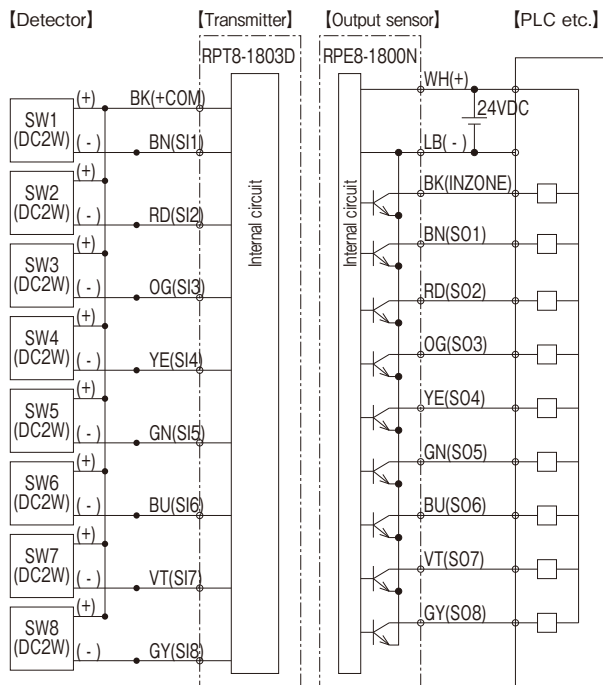
Discontinued  
plans

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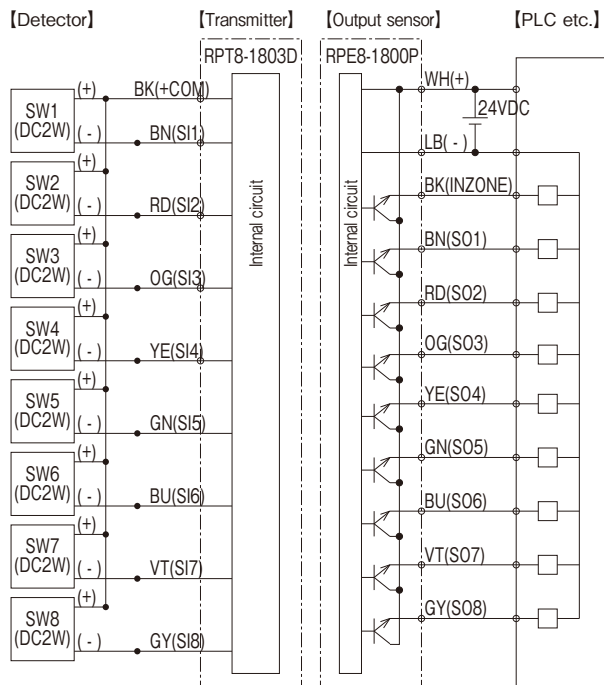
### C009 DC 2-wire Detector type No. of signal : 8

RPT8-1803D / RPE8-1800\_  
RS08TA-018D / RS08EA-018\_  
RS08TA-030D / RS08EA-030\_

#### ■ NPN



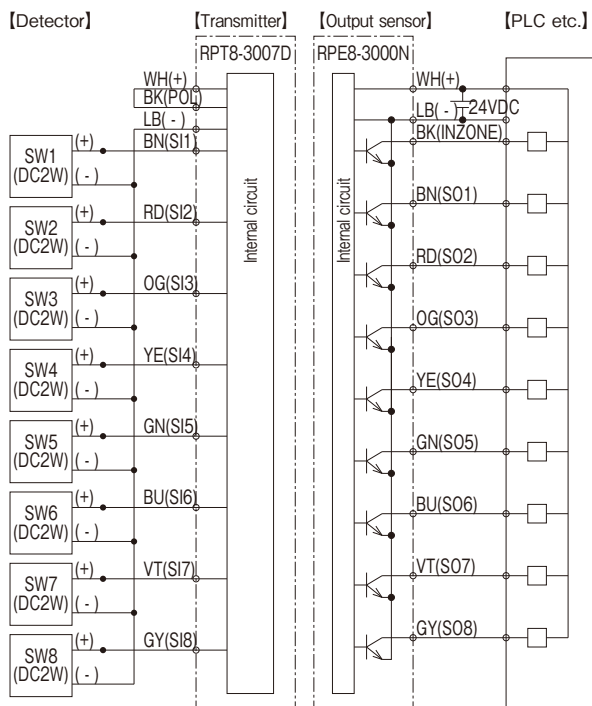
#### ■ PNP



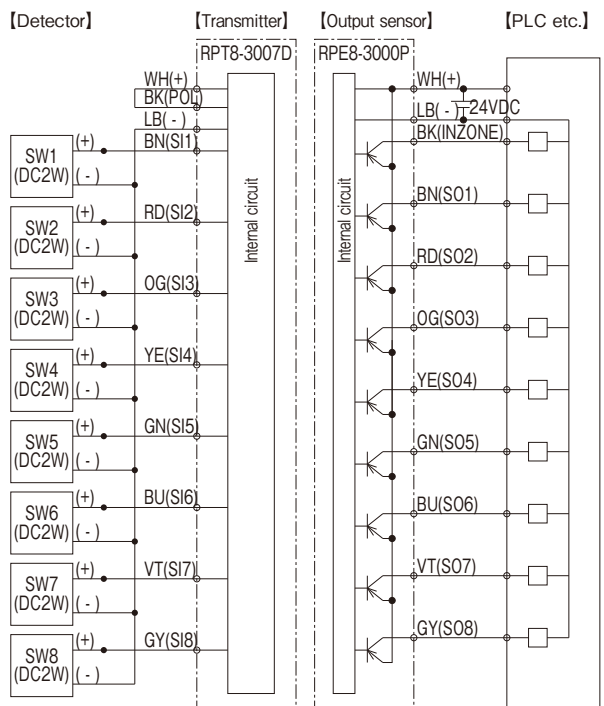
### C010 DC 2-wire Detector type No. of signal : 8

RPT8-3007D / RPE8-3000\_

#### ■ NPN



#### ■ PNP



RPT8-3007D is - common.  
Please contact us for + common type.

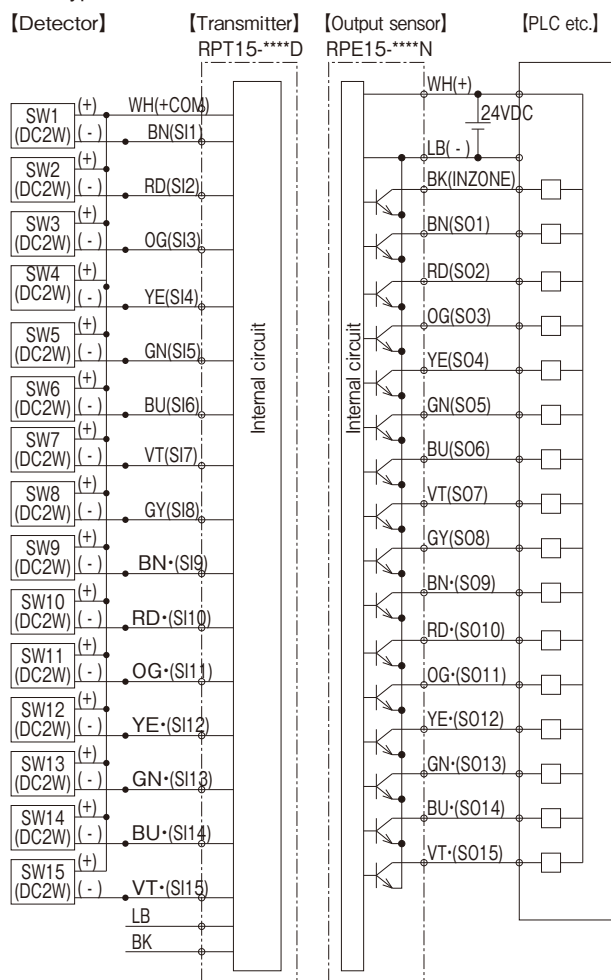
# Remote Sensor System

## Switch Signal / DC 2-wire Detector type

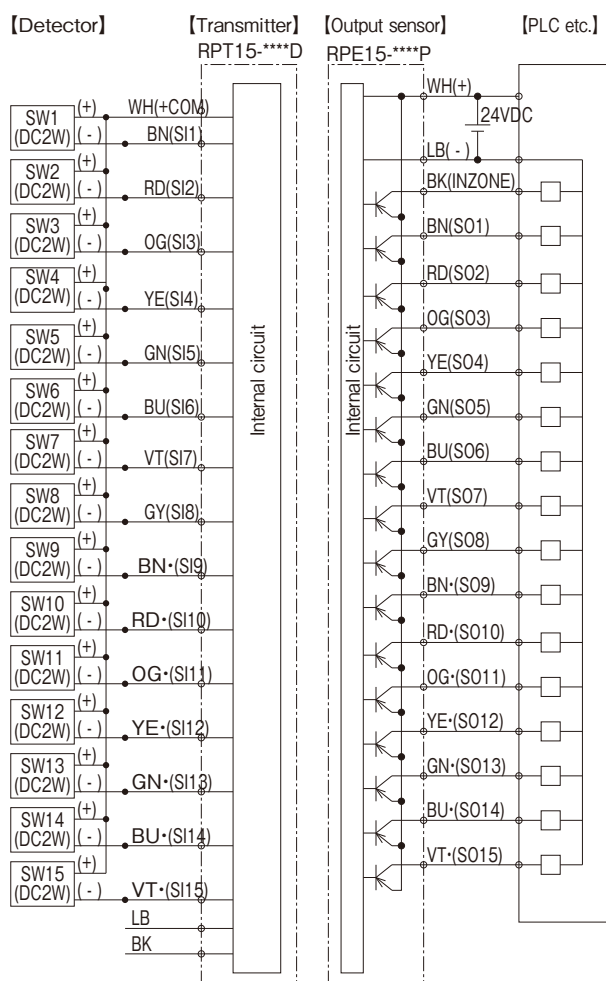
**C011** DC 2-wire Detector type No. of signal : 15

RPT15-3005D / RPE15-3000\_

### ■ NPN type



### ■ PNP type



-As "not connected" because you do not need to use the black cable and pale blue, do not come into contact with other wires.

Remote  
Sensor

Remote  
Coupler

Remote  
Power  
Supply

Wiring

Discontinued  
plans

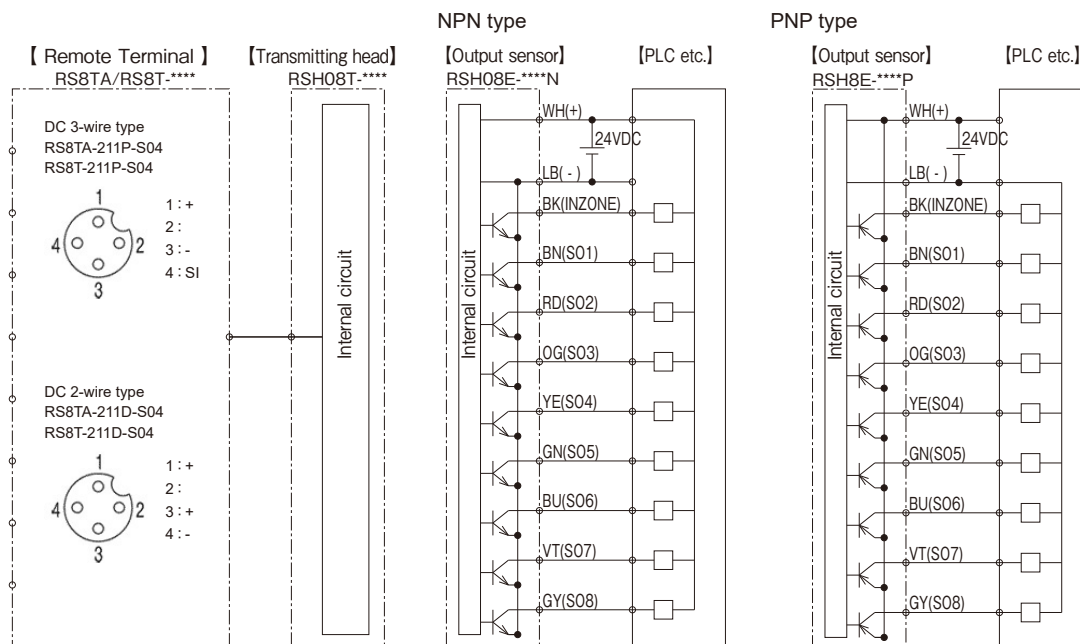
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-Please refer to the instruction of User's guide supplied with the products for installation and operation.

-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. If the cable length of the output section will be used in the wiring of more than 10m, Please take care that the surge of excess is not applied.

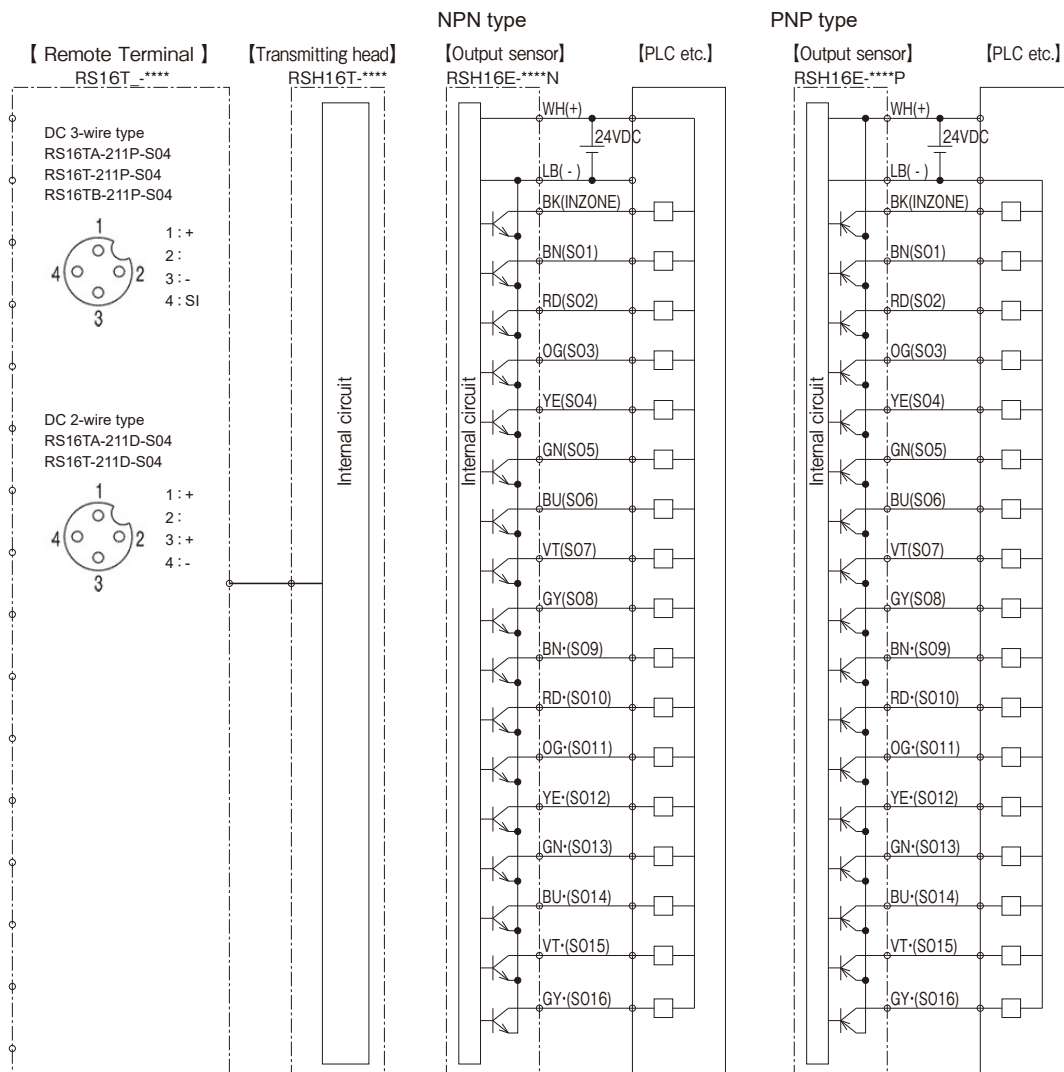
### C025 DC 2-wire Detector type / DC 3-wire Detector type No. of signal : 8

RS8T/RS8TA-211\_-S04 / RSH8T-030-PU / RSH8E-030 □ -PU



### C026 DC 2-wire Detector type / DC 3-wire Detector type No. of signal : 16

RS16TA/RS16T-211\_-S04 / RSH16T-030-PU / RSH16E-030 □ -PU  
RS16TB-211P-S04 / RSH16TB-030-PU / RSH16EB-030P-PU



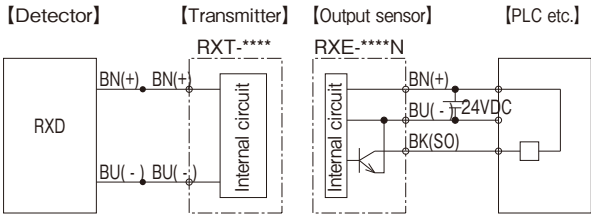
# Remote Sensor System

## Exclusive Proximity sensor type

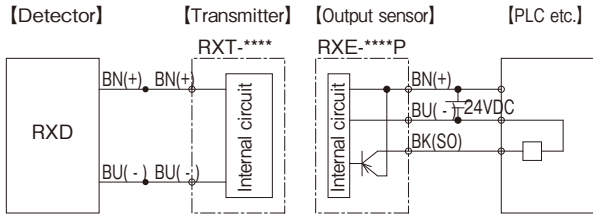
**C012** Exclusive sensor type No. of signal : 1

RST-1202-PU / RXE-1202\_  
RXT-1202-PU / RXE-1202\_  
RXT-1805-PU / RXE-1805\_

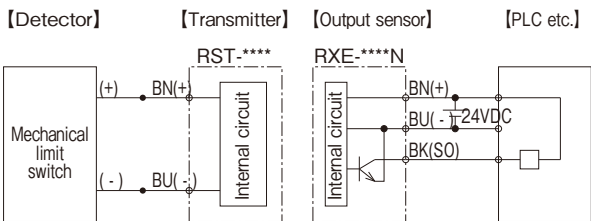
Exclusive proximity sensor RXD (NPN)



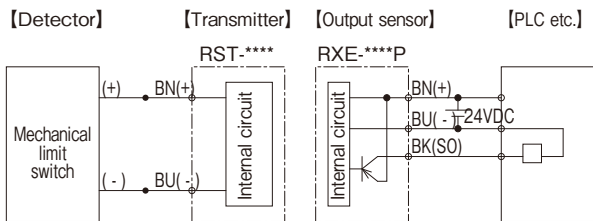
Exclusive proximity sensor RXD (PNP)



Mechanical limit switch (NPN)



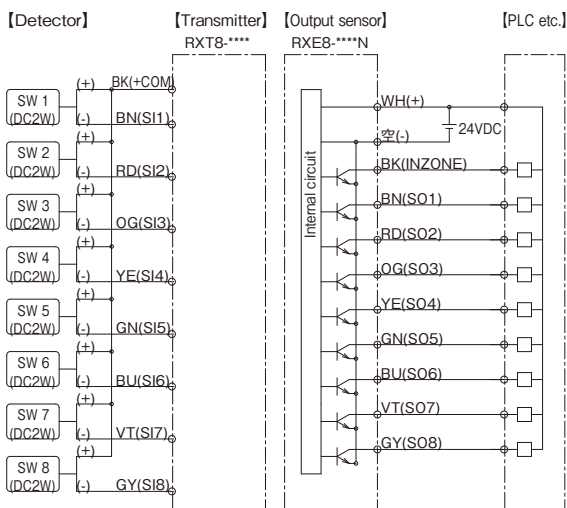
Mechanical limit switch (PNP)



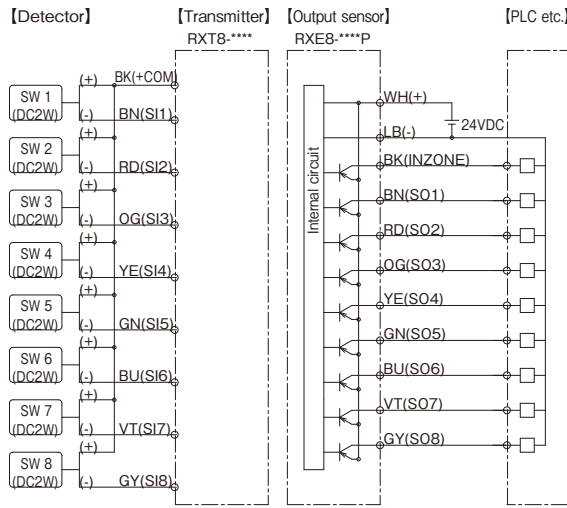
**C027** Exclusive sensor type No. of signal : 8

RXT8-1805 / RXE8-1800\_  
RXT8-3010 / RXE8-3000\_

NPN type



PNP type

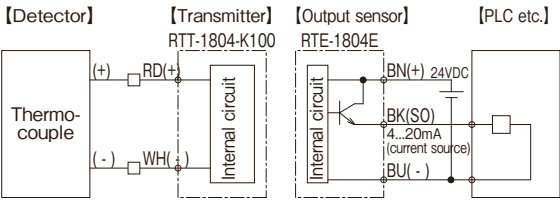


-Please refer to the instruction of User's guide supplied with the products for installation and operation.

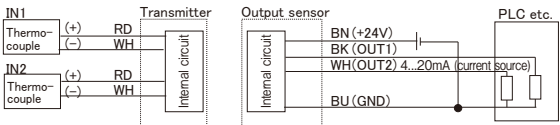
-Please note that the cable length of an output sensor may not longer than 10m. The CE marking verifies that our products comply with the requirements of EMC directive. The surge test to an output sensor is not carried out. If the cable length of the output section will be used in the wiring of more than 10m, Please take care that the surge of excess is not applied.



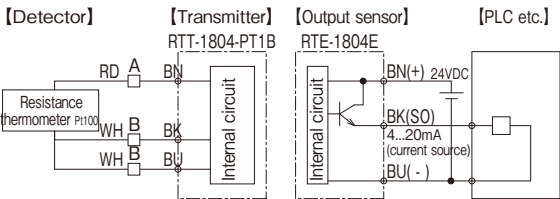
C014 Thermocouple type No. of signal : 1  
RTT-1804-K100 / RTE-1804E



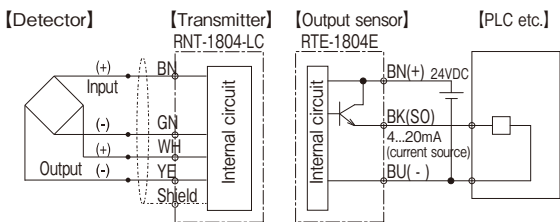
C015 Thermocouple type No. of signal : 2  
RS02T-018-K\*\*\* / RS02E-018E-PU  
RS02T-018-J300 / RS02E-018E-PU



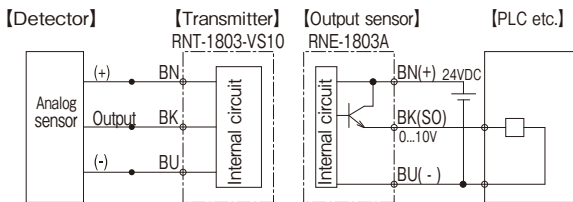
C016 Resistance thermometer type No. of signal : 1  
RTT-1804-PT1B / RTE-1804E



C017 Load cell type No. of signal : 1  
RNT-1804-LC\_\_ / RTE-1804E



C018 Analog sensor type No. of signal : 1  
RNT-1803-VS10 / RNE-1803A

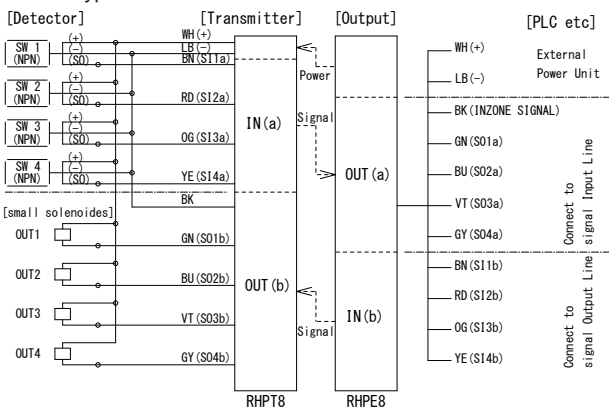


## Remote Coupler System

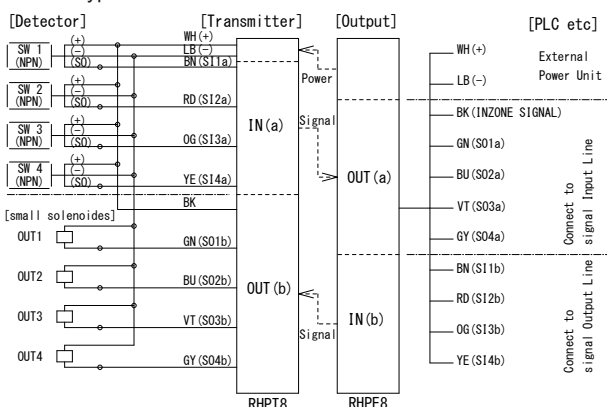
### C019 Bi-directional switch signal : 4+4

RHPT8-8010\_ / RHPE8-8010\_

#### ■ NPN type



#### ■ PNP type



### C020 Bi-directional switch signal : 8 + 8

Remote head RCH08T-211

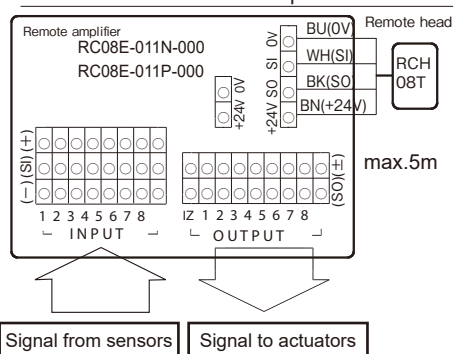
Base head RCH08E\_-211

Remote amplifier RC08T-011\_-000 Base amplifier RC08E-011\_-000

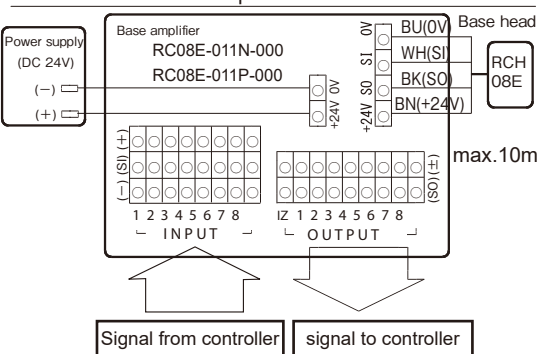
64 +32 Signal transmission type do the wiring with referring to the user's guide or manual.

#### ■ Wiring Head and Amplifier

##### Remote head and Remote amplifier



##### Base head and Base amplifier

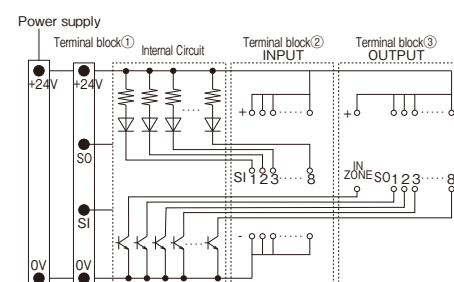
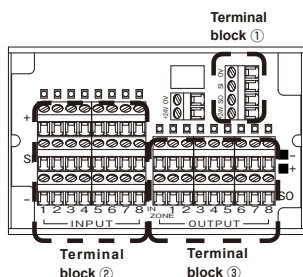


#### ■ Amplifier internal circuit

##### NPN type

Base amplifier RC08E-011N-000

Remote amplifier RC08T-011N-000

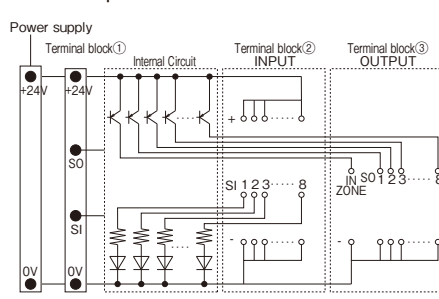


- +1...+8 and -1... -8 of terminal 2 and +1...+8 of terminal 3 are internally connected each other.
- "Power" means "power input" for base amplifier and "power output" for remote amplifier.

##### PNP type

Base amplifier RC08E-011P-000

Remote amplifier RC08T-011P-000



- +1...+8 and -1... -8 of terminal 2 and +1...+8 of terminal 3 are internally connected each other.
- "Power" means "power input" for base amplifier and "power output" for remote amplifier.

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### Parallel connection of Transmitter

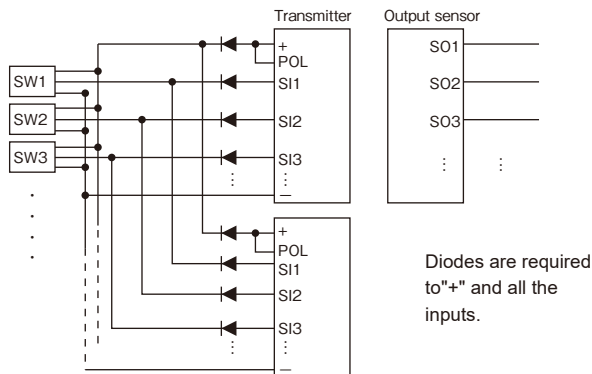
When Remote Sensor System transmitter (switch signal transmission) is parallel-connected with detector sensor, put a diode to avoid sneak current.

#### DC 3-wire Detector type / NPN

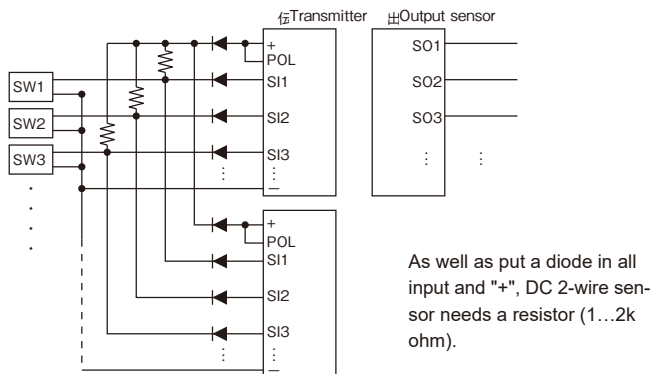
When DC 3-wire type transmitter is parallel-connected with DC 3-wire NPN type sensor, please put a diode in all inputs and "+".

When connecting to DC 2-wire type sensor, put the resistor (1...2k ohm) to signal line.

Example of DC 3-wire sensor



Example of DC 2-wire sensor

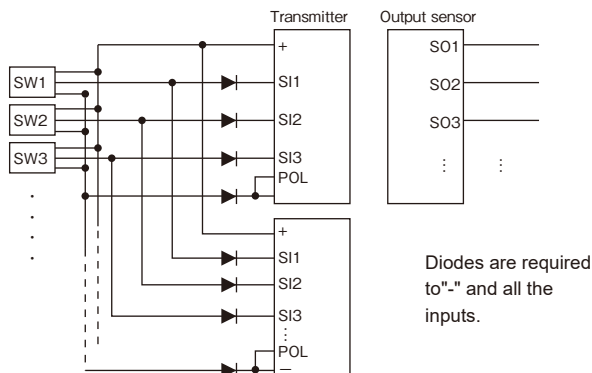


#### DC 3-wire Detector type / PNP

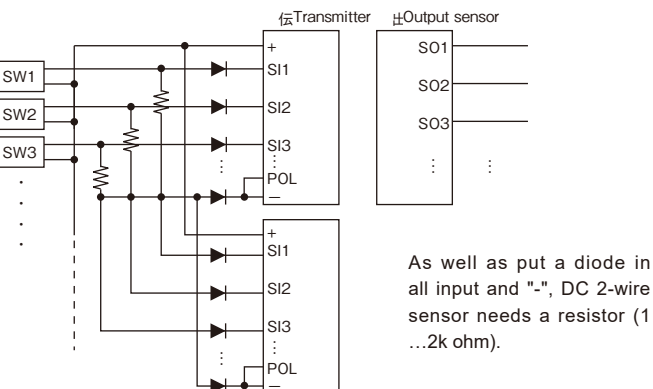
When DC 3-wire type transmitter is parallel-connected with DC 3-wire PNP type sensor, please put a diode in all inputs and "-".

When connecting to DC 2-wire type sensor, put the resistor (1...2k ohm) to signal line.

Example of DC 3-wire sensor



Example of DC 2-wire sensor



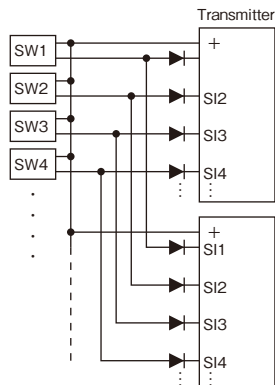
#### DC 2-wire Detector type

When DC 2 wire Remote system transmitter is parallel-connected, put a diode in all inputs.

+ common

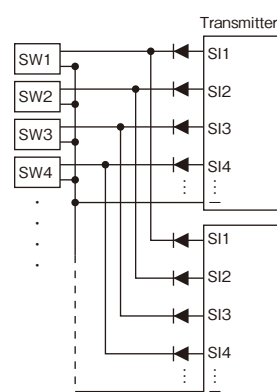
Appropriate Transmitter

RPT2-1804D  
RPT2-3005D  
RPT4-1803D (+ common)  
RPT4-3005D (+ common)  
RPT8-1803D  
RS08TA-018D  
RS08TA-030D  
RPT15-3005D  
RPT8-3007D-TYT19



- common

Appropriate Transmitter  
RPT4-1803D (- common)  
RPT4-3005D (- common)  
RPT8-3007D



## Discontinued plans

The following products are expected to be by the hard-to-find of the parts used, to stop production until the appropriate date. There is the case that is subject to parts availability, it is aborted at any previous date. Please understand. Please contact your sales representative for replacements.

### Remote Sensor System

Transmission signal type	Product range	Type code	Discontinued plans
Switch signal specification	1 signal transmission : For exclusive proximity sensor RXD or Reed Sensor	RAT-1805-PU	The end of April, 2014
		RAT-3010-PU	
		RQE-1804 □ -PU	
		RQT-1804 □ -PU	
		RST-1805-PU	
		RST-3010-PU	
		RWT-E3000-PU	
		RWT-E1800-PU	
		RWT-R3000-PU	
		RWT-R1800-PU	
		RXT-3010-PU	
		RXE-3010 □ -PU	
	4 signal transmission : Marketing DC 3-wire sensor	RPEA-FX406 □ -PU	
		RPTA-FX406-PU	
		RPEA-3005 □ -GM-PU	
	8 signal transmission : For exclusive proximity sensor RXD or Reed Sensor	RFTA-1805-PU	
		RFEA-1805 □ -PU	
		RFTA-3010-PU	
		RFEA-3010 □ -PU	
		RFTA-3018-PU	
	8 signal transmission : For exclusive proximity sensor RXD or Reed Sensor	RFEA-3018 □ -PU	
		RFTB-1803-PU	
		RFEB-1803 □ -PU	
		RFTB-3005-PU	
		RFEB-3005 □ -PU	
	16 signal transmission : For exclusive proximity sensor RXD or Reed Sensor	RPTA-8010-PU	
		RPEA-8010 □ -PU	
		RHT-3005PU	
		RHE-3005PU	
	Exclusive sensor	RFT16-BB01	
		RFE16-RS01- □	
		RFD-1804AL-PU	
		RFD-1804NM-PU	
		RFD-3008NM-PU	
Analog signal transmission	1 signal transmission : Thermocouple K	RXD-3010M-PU	The end of April, 2014
		RTE-9012E-PU	
	6 signal transmission Thermocouple K or J	RTT-9012-PT1B □ 0-PU	
		RHT-3005Y-PU	
		RHE-3005CY-PU	
		RTT06-KB01-K100	
		RTT06-KB01-J30	
		RTE06-KB01-E	

### Remote Coupler System

Transmission signal type	Product range	Type code	Discontinued plans
Bi-directional switch signal specification	8+8 signal transmission	RHPT-8010-V2410-PU	The end of April, 2014
		RHP16TN-RS01	
		RHP16P-RS01	
		RHPE-8010-V2410-PU	
		RHP16EN-RS01	
		RHP16P-RS01	
	64+32 signal transmission	RLH64T-211-PU	
		RLH00T-211-PU	
		RL64T-322-000	
		RLH64E-211-PU	
Data Signal transmission	CC-Link	RLH00E-211-PU	The end of December, 2013
		RL64E-311 □ -000	
		RCD22T-922	
		RCD22E-922	

### Remote Power Supply System

Transmission signal type	Product range	Type code	Discontinued plans
Power supply only	24V/1A	RHVT-MX90-D2410	The end of December, 2013
		RHVE-MX90-D24	
	24V/5A	RHVT-QA15-D2450	
		RHVE-QA15-A10	

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RCD22E-211-CLC	92
RCD22T-211-CLC	92
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RCD33T-211-DNC	94
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