

Wireless Power Supply & Signal Transmission

Remote System



Application

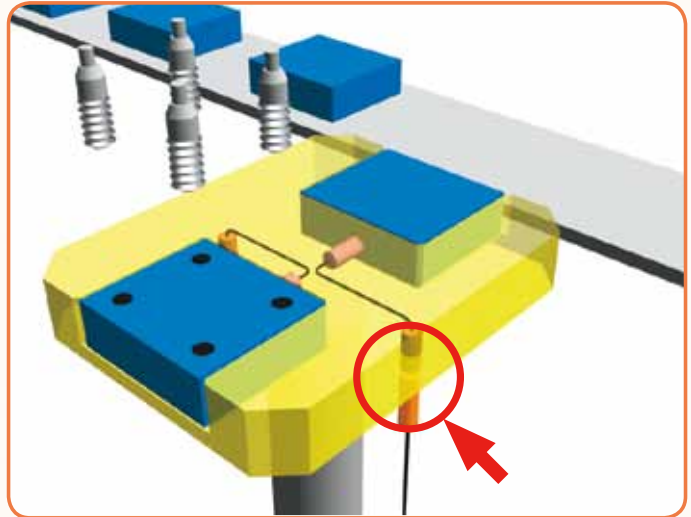
At the rotating part

Before - - - - -

- Cable breakage by cable tangling.

After - - - - -

- No cable tangling solves cable breakage trouble.
- No limitation of the cable, no inversion of the jig.



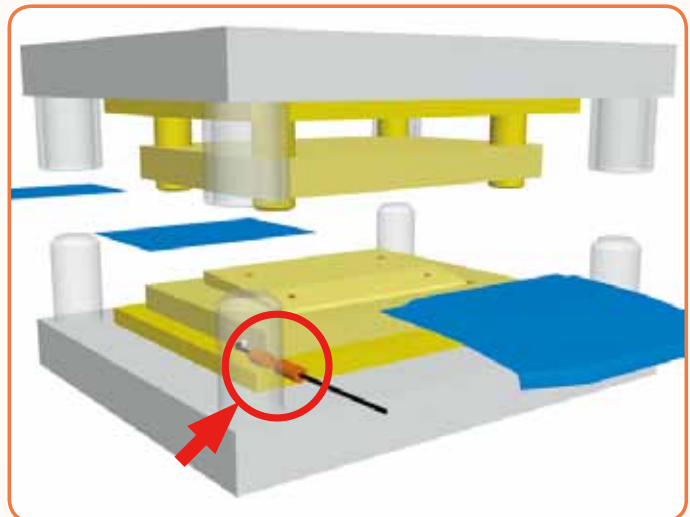
At the removable part

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

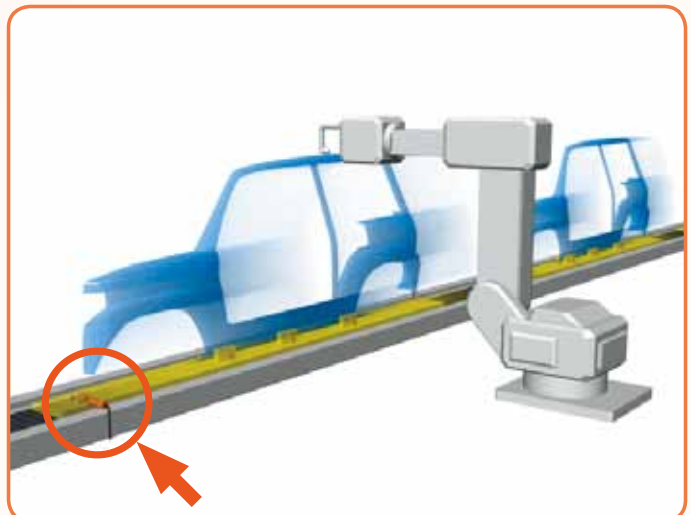
Before - - - - -

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

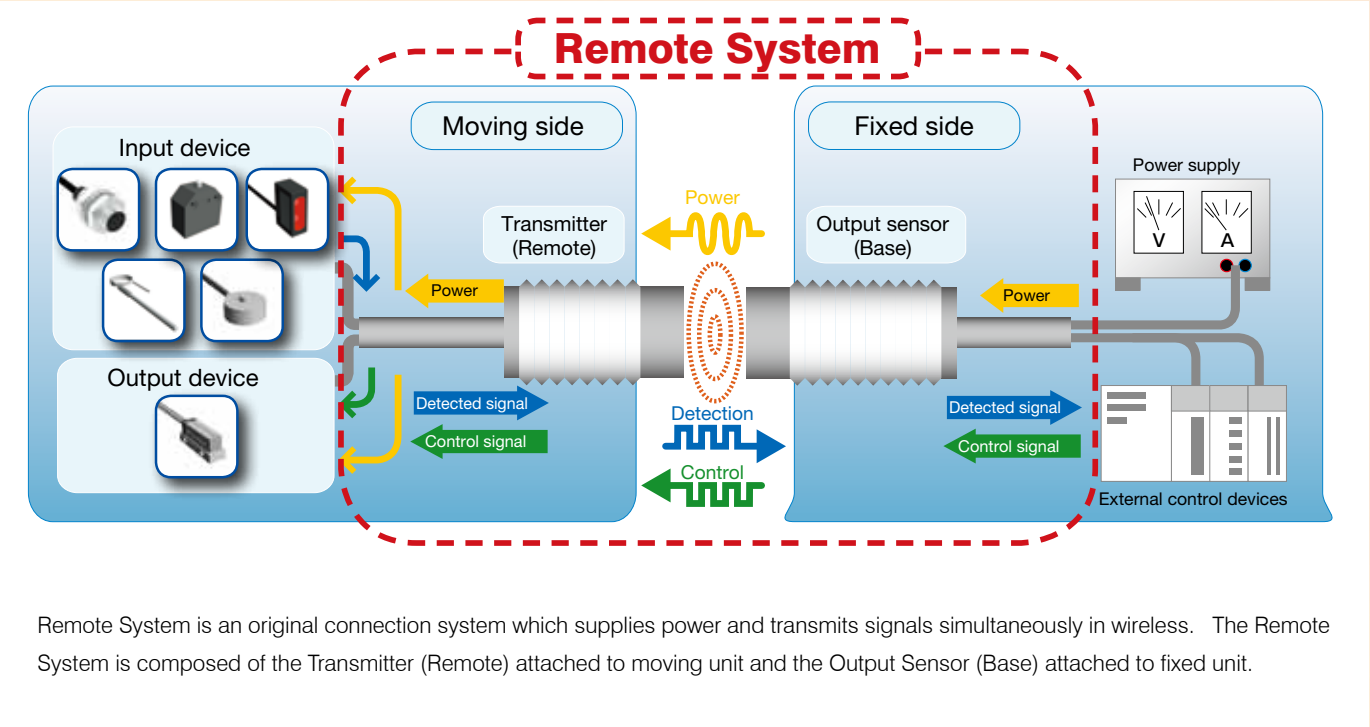
After - - - - -

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

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



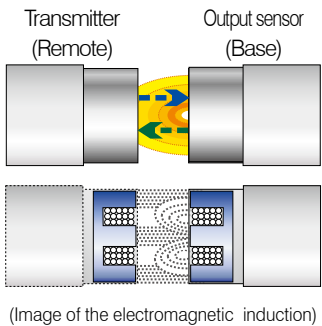
Function of Remote system



Remote System is an original connection system which supplies power and transmits signals simultaneously in wireless. The 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, inductively power is supplied as well as signal is transmitted to the Transmitter.



Comparison with other methods

	condition			Distance	Power efficiency	Commu-nication
	Partition	Noise	Dirt			
Remote system (Electromagnetic induction)	○	⊙	⊙	△	⊙	⊙
Radio	○	△	⊙	⊙	△	△
Light	×	○	×	○	△	△

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.

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.

Product overview

Functions & Features

Application

Product range

Description of terms

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

Solution

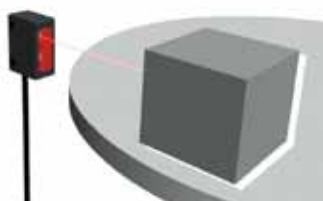
Since B & Plus Remote system realize wireless feeding and signal transmission, it can solve the various problems caused by the wiring of a cable / connector.

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



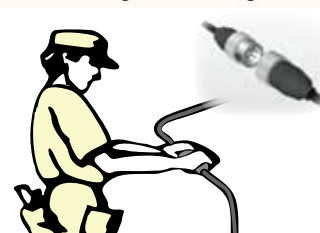
Solution of poor contact with broken or pin contact degradation

Cost saving



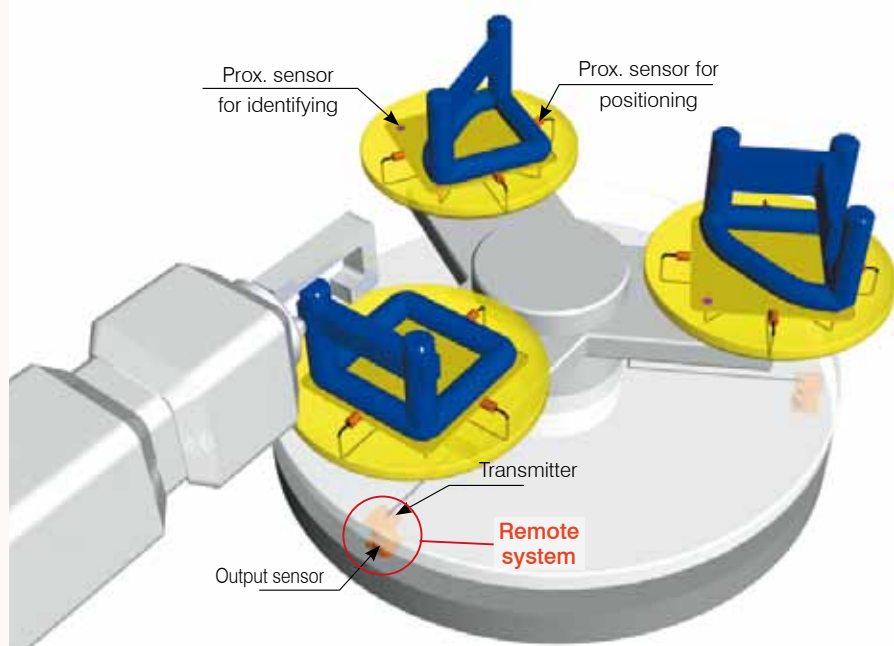
reduce the maintenance cost occurred in the case of troubles

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 switches and transmits their switching state.

Previous problems

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

Solution!

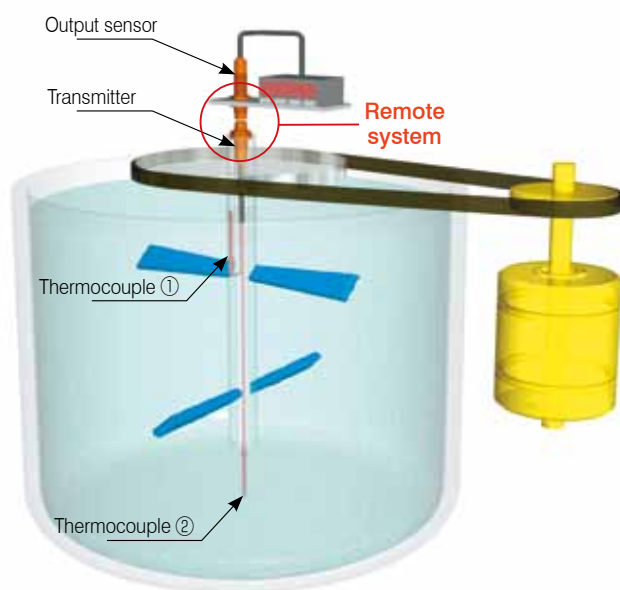


Remote system

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!



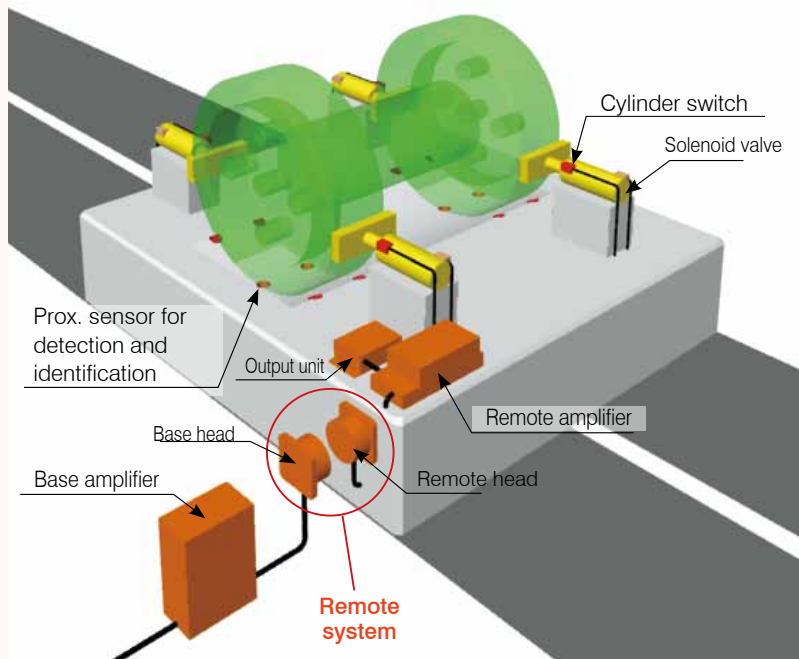
Remote system

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



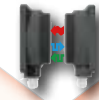
Automatically identify and mount the workpiece from its shape.

Remote System sends power to 32 proximity switches 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.

Product overview

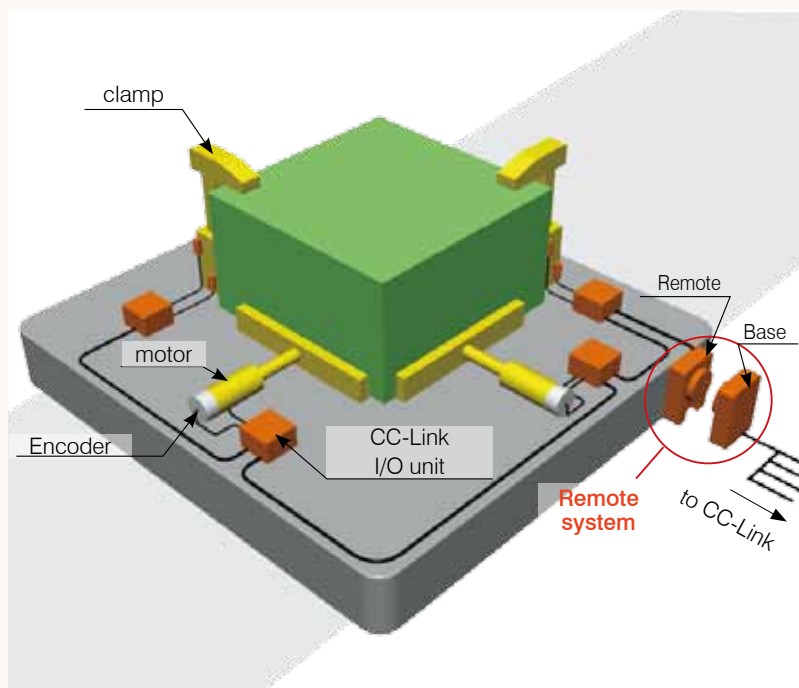
Function & Features

Application

Product range

Description of terms

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!

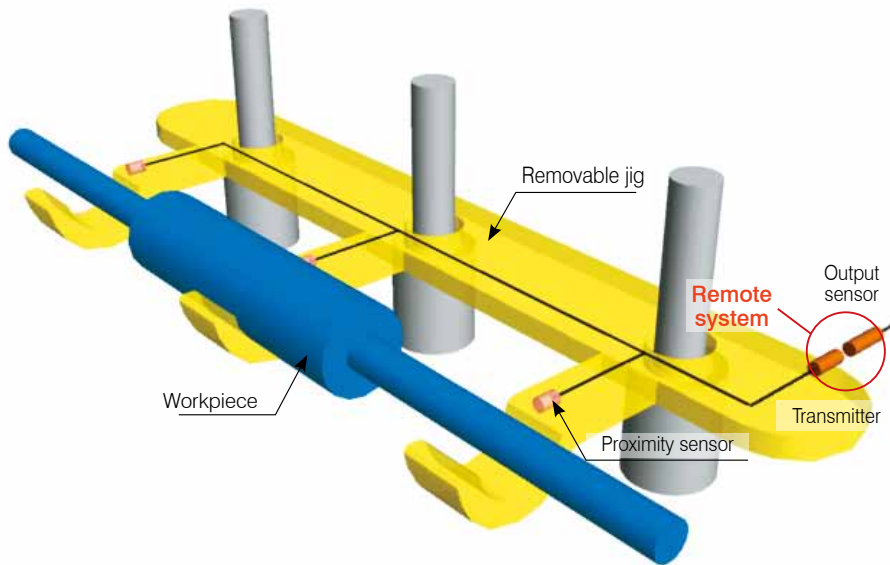


Remote system

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!



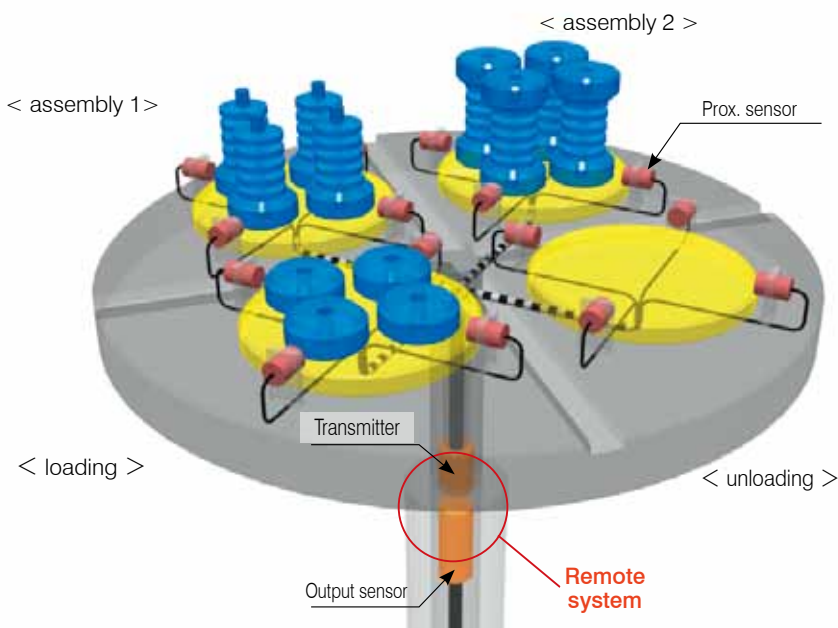
Remote system

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 switches 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!



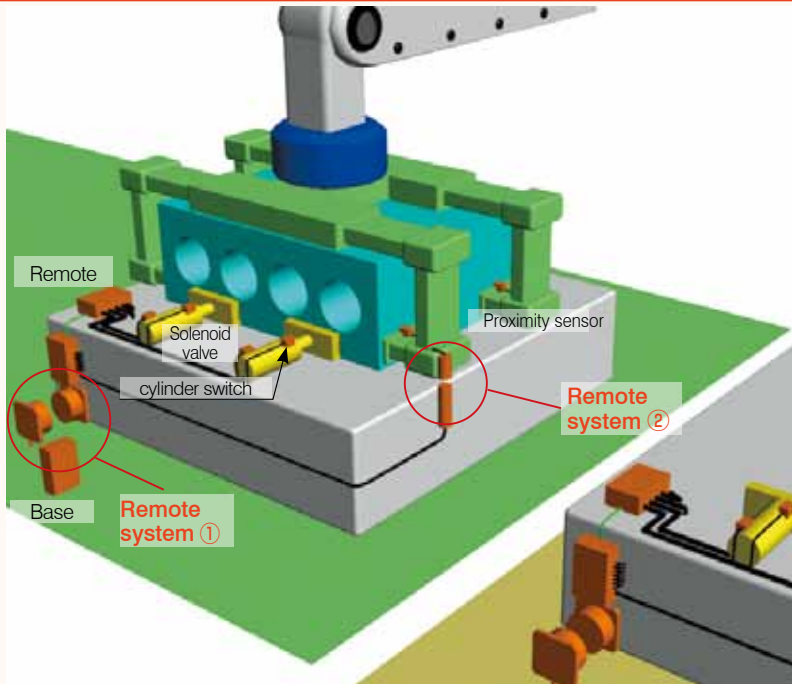
Remote system

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 vales on the pallet.
- Also have desire to eliminate connection time for robot hand change-outs.

Solution!



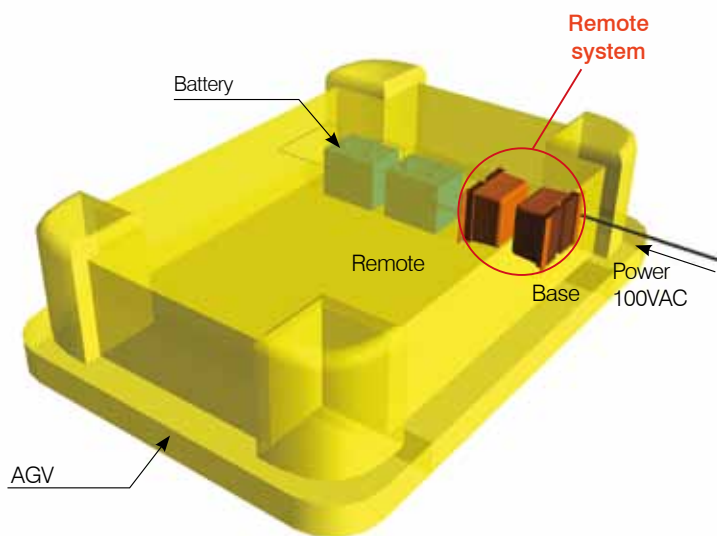
Remote system

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.

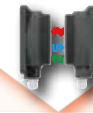
Battery charging of automatic guided vehicle (AGV)



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.

In this application, special products not listed in this catalog has been used.

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	Voltage	12V DC or 24V DC
	Current	5 mA ... 300 mA
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

For DC 3 wire sensor

Regular type

Number of signal : 1, 4, 8

Terminal unit type

Number of signal : 8, 16

Regular type



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 : 1, 2



Thermocouple



Resistance thermometer

For Resistance thermometer

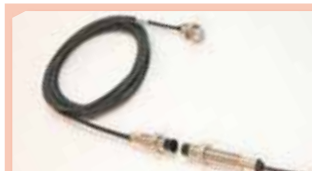
Number of signal : 1

For Load cell

Number of signal : 1



Load cell



Analog Sensor

For Analog Sensor

Number of signal : 1

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.

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	Voltage	24V DC
	Current	300mA, 1A, 2A
Signal transmission	Switch signal	4+4, 8+8, 64+32
	Data signal	RS-232C, CC-Link, DeviceNet, EtherNet/IP

Switch signal transmission

4+4 transmission

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



8+8 transmission

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



64+32 transmission

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

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



Data signal transmission



RS-232C



DeviceNet



CC-Link



Exclusive for wireless power supply

Remote Power Supply system



< applications >

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

Wireless power supply	Voltage	24V DC
	Current	1A, 2A
Signal transmission		—

Power supply only

Parallel Coupling type

Power supply:
24V DC/2A



Overlap Coupling type

Power supply:
24V DC/1A



Product overview

Function & Features

Application

Product range

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

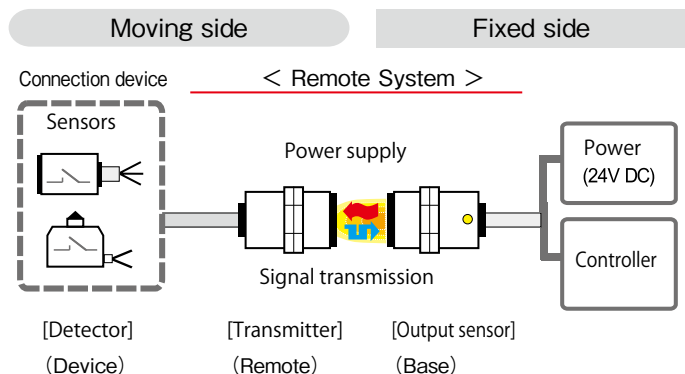
Transmitter (Remote)

Transmitter is mounted to the moving side such as pallet and connect devices such as switches, which 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

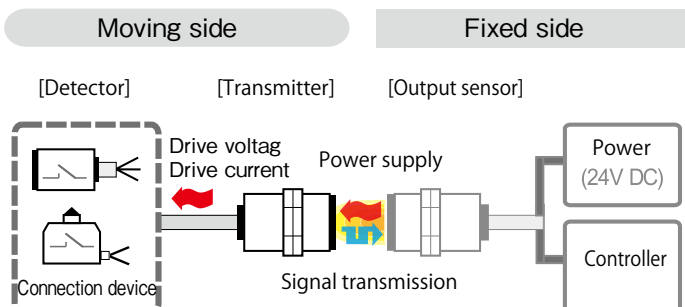
Power supplied from transmitter to those connected devices such as sensors and actuators are described as "Drive voltage " and "Drive current".

Drive voltage

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

Drive current

The current, which supplied from transmitter to connected devices. Varies depending on the transmission distance or center offset. Please design the system that the total current consumption of connecting devices not to exceed the value of drive current.



3) Operating voltage and Current Consumption

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

Operating voltage

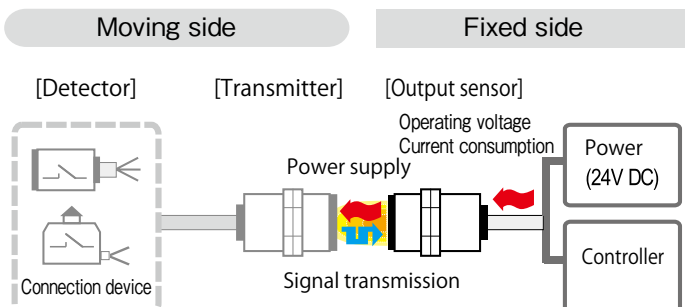
The voltage to operate the output sensor and supplying power to transmitter.

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 output sensor, transmitter and devices which connected to transmitter.

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



4) Operating distance and Center off set

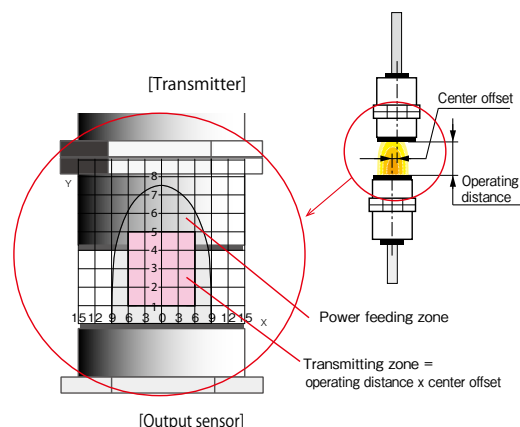
Operating distance and center offset indicates the area where the rated power supply and the signal transmission between transmitter and output sensor can be performed stable.

Operating distance

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

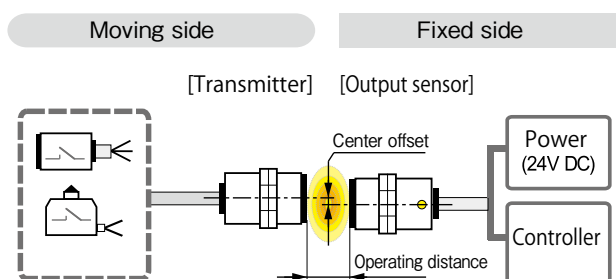
Center offset

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.

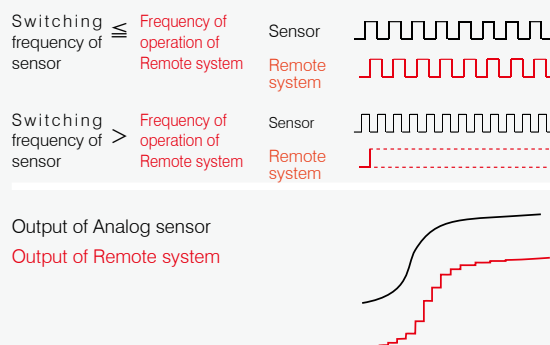
Frequency of operation

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 the Remote system / switch signal transmission type transmitter, the value of "residual voltage" and "load capacity" are defined.

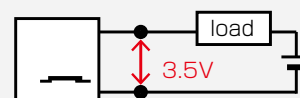
Residual voltage

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.

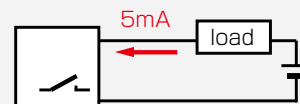
Load capacity

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.

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

Remote
Sensor

DC 3-wire
detector type

DC 3-wire type
Terminal Unit

DC 2-wire
detector type

DC 2-wire type
Terminal Unit

Exclusive
detector type

Thermocouple
type

Resistance
thermometer type

Load Cell type

Analog Sensor
type

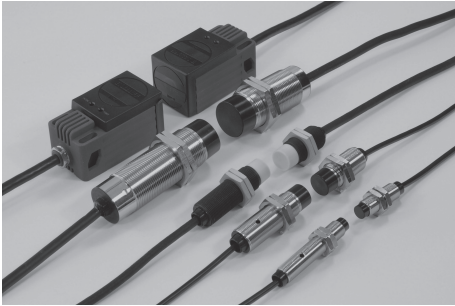
Exclusive
proximity sensor

Terminal Box
and other

Customized
Products

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.

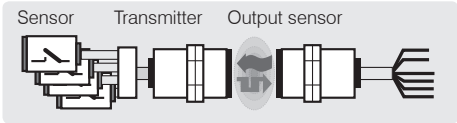
DC 2 wire sensor can be connected via resistor.

Wide square transmission surface type is available.

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		Remarks	Page
No. of Signals	Size	Max. 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
	90 x 90	12 mm	24V DC 300 mA	RGPT-9012-V2430-PU-01	RGPE-9012-V2430 □ -PU-02		39

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

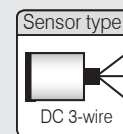
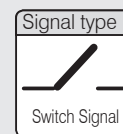
The pre-molded M12 connector reduces the wiring procedures. (Transmitter:female, Output sensor:male). The standard cable length is 30 cm.



Anti-weld slag

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

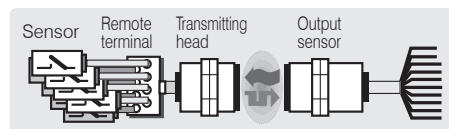




Terminal unit type



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



Transmission Specifications				Type Code			Remarks	Page
No. of Signals	Size	Max. Distance	Drive voltage Drive current	Transmitter		Output sensor		
				Remote terminal	Transmitting head			
8	M30	8mm	12V DC 150 mA	RS8TA-222P-S04	RSH8T-030-PU-CP1.0	RSH8E-030 □ -PU-02	Anti-weld slag	40
				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	42
				RS16T-211P-S04	RSH16T-TF030-PU-CP1.0	RSH16E-TF030 □ -PU-02		
		5mm	24V DC 550 mA	RS16TB-211P-S04	RSH16TB-030-PU-CP1.0	RSH16EB-030P-PU-02		44

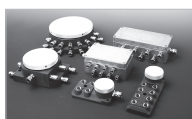
Product List

Remote Sensor

Remote Coupler

Remote Power Supply

Terminal Box and AC Conversion Amplifier (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.

		Type Code	Remarks	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 sides
Waterproof type		8 detectors	RPK-A098-02	DC 3-wire and 2-wire sensor 4x2 sides
			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 amplifier		4 detectors	RGPT-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.

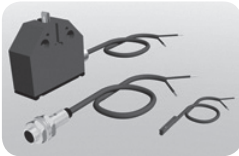
Accessories

Type code Example	<p>□ in type code means N → NPN or P → PNP.</p> <p>__ at the end means cable length. The standard cable length has been described in meter.</p> <p>Examples are showed below.</p> <p>Transmitter</p> <p>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</p> <p>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)</p> <p>Basic Code - CP0.3</p> <p>cable length(m) 0.3=30cm (standard) 0.5=50cm</p> <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</p>
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DC 2-wire Detector type



■ General 2-wire sensors can be used on a moving side.



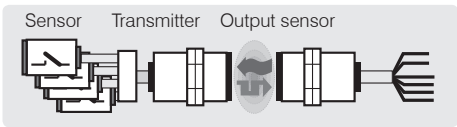
Supply the power as well as transmit the signals to general sensors such as proximity switches, auto switches and limit switches.

■ 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		Remarks	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 <input type="checkbox"/> -PU-02		46	
				RPT-1202D-PU-CP0.3	RPE-1202 <input type="checkbox"/> -PU-CP0.3	Pre-wired connector		
	M18	4 mm		RPT-1804D-PU-01	RPE-1804 <input type="checkbox"/> -PU-02		47	
				RPT-1804D-PU-CP0.3	RPE-1804 <input type="checkbox"/> -PU-CP0.3	Pre-wired connector		
				RPT-TF1804D-PU-01	RPE-TF1804 <input type="checkbox"/> -PU-02	Anti-weld slag		
				RPT-TF1804D-PU-CP0.3	RPE-TF1804 <input type="checkbox"/> -PU-CP0.3	Anti-splatter, Pre-wired		
	M30	8 mm		RPT-3008D-PU-01	RPE-3008 <input type="checkbox"/> -PU-02		48	
				RPT-3008D-PU-CP0.3	RPE-3008 <input type="checkbox"/> -PU-CP0.3	Pre-wired connector		
				RPT-TF3008D-PU-01	RPE-TF3008 <input type="checkbox"/> -PU-02	Anti-weld slag		
				RPT-TF3008D-PU-CP0.3	RPE-TF3008 <input type="checkbox"/> -PU-CP0.3	Anti-splatter, Pre-wired		
	2	M18		12V DC 5 mA×2	RPT2-1804D-PU-01	RPE2-1804 <input type="checkbox"/> -PU-02		50
					RPT2-1804D-CP0.3		Transmitter:Pre-wired connector	
RPT2-TF1804D-PU-01			RPE2-TF1804 <input type="checkbox"/> -PU-02		Anti-weld slag			
RPT2-TF1804D-CP0.3					Transmitter:Pre-wired connector			
M30		5 mm	RPT2-3005D-PU-01		RPE2-3005 <input type="checkbox"/> -PU-02		51	
			RPT2-3005D-CP0.3			Transmitter:Pre-wired connector		
			RPT2-TF3005D-PU-01		RPE2-TF3005 <input type="checkbox"/> -PU-02	Anti-weld slag		
			RPT2-TF3005D-CP0.3			Transmitter:Pre-wired connector		
4	M18	12V DC 5 mA×4	RPT4-1803D-PU-01	RPE4-1803 <input type="checkbox"/> -PU-02		52		
			RPT4-TF1803D-PU-01		RPE4-TF1803 <input type="checkbox"/> -PU-02		Anti-weld slag	
	M30		5 mm	RPT4-3005D-PU-01	RPE4-3005 <input type="checkbox"/> -PU-02		53	
				RPT4-TF3005D-PU-01		RPE4-TF3005 <input type="checkbox"/> -PU-02		Anti-weld slag
8	M18	3 mm	12V DC 5 mA×8	RPT8-1803D-PU-01	RPE8-1800 <input type="checkbox"/> -PU-02		54	
				RPT8-TF1803D-PU-01		RPE8-TF1800 <input type="checkbox"/> -PU-02		Anti-weld slag
	M30	7 mm	22V DC 5 mA×8	RPT8-3007D-PU-01	RPE8-3000 <input type="checkbox"/> -PU-02		55	
				RPT8-TF3007D-PU-01		RPE8-TF3000 <input type="checkbox"/> -PU-02		Anti-weld slag
	M18	3 mm	12V DC 5 mA×8	RS08TA-018D-PU-01	RS08EA-018 <input type="checkbox"/> -PU-02	80 degree C	56	
				RS08TA-030D-PU-01		RS08EA-030 <input type="checkbox"/> -PU-02		80 degree C
	M30	7 mm					57	
15	M30	5 mm	12V DC 5 mA×15	RPT15-3005D-PU-01	RPE15-3000 <input type="checkbox"/> -PU-02		58	
				RPT15-TF3005D-PU-01	RPE15-TF3000 <input type="checkbox"/> -PU-02	Anti-weld slag		

■ 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.

Pre-wired connector

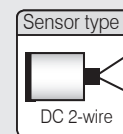
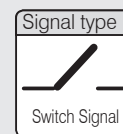
The pre-molded M12 connector reduces the wiring procedures. (Transmitter:female, Output sensor:male). The standard cable length is 30 cm.



Anti-weld slag

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

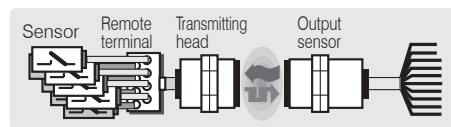




Terminal unit type



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			Remarks	Page
No. of Signals	Size	Max. Distance	Drive voltage Drive current	Remote terminal	Transmitter	Output sensor		
8	M30	8mm	22V DC 5 mA x 8	RS8TA-222D-S04	RSH8T-030-PU-CP1.0	RSH8E-030 □ -PU-02	Anti-weld slag	60
				RS8T-222D-S04	RSH8T-TF030-PU-CP1.0	RSH8E-TF030 □ -PU-02		
16	M30	8mm	22V DC 5 mA x 16	RS16TA-211D-S04	RSH16T-030-PU-CP1.0	RSH16E-030 □ -PU-02	Anti-weld slag	62
				RS16T-211D-S04	RSH16T-TF030-PU-CP1.0	RSH16E-TF030 □ -PU-02		

Product List

Remote Sensor

Remote Coupler

Remote Power Supply

Accessories

Exclusive proximity sensor : RFD (Accessories)

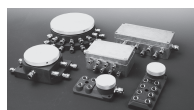


Exclusive proximity switch RFD series can be used as detector for DC2 wire remote sensor just like the general 2 wire.


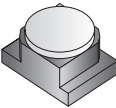



Applicable Remote Sensor	Rated sensing distance	Size	Type Code		Remarks	Page
			Cable	Pre-wired connector		
DC 2-wire detector type Transmitter or Remote terminal	1.5 mm	M8	RFD-0801-PU-01	—		102
	2 mm	M12	RFD-1202-PU-01	RFD-1202-PU-CP1.0		
	5 mm	M18	RFD-1805-PU-01	RFD-1805-PU-CP1.0		
	10 mm	M30	RFD-3010-PU-01	RFD-3010-PU-CP1.0		

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"

		Type Code		Remarks	Page
Standard type 	- A box for factory automation system is used as the housing. - Protection class; IP 65	4 detectors	RPK-2102	DC 3-wire and DC 2-wire	104
		8 detectors	RPK-2101	DC 3-wire and DC 2-wire 8 x 1 side	
			RPK-2103	DC 3-wire and DC 2-wire 4 x 2 sides	
			RFK-3101	DC 2-wire	105
Waterproof type 	- Original "α -box" which has a round screw lid. - Protection class; IP 67.	8 detectors	RPK-A098-02	DC 3-wire and DC 2-wire 4 x 2 sides	106
			RPK-A098-03	DC 3-wire and DC 2-wire 8 x 1 side	
			RPK-B148-02	DC 3-wire and DC 2-wire	
		15 detectors	RPK-B148-03	DC 2-wire	106
		8 detectors	RFK-A098-02	DC 2-wire 4 x 2 sides	107
			RFK-A098-03	DC 2-wire 8 x 1 side	
Connector type 	- Detectors can be connected to Terminal Box with connectors. - Protection class; IP 67.	4 detectors	RPK-4C01- □	DC 3-wire and DC 2-wire	108
		8 detectors	RPK-8C01- □	DC 3-wire and DC 2-wire	

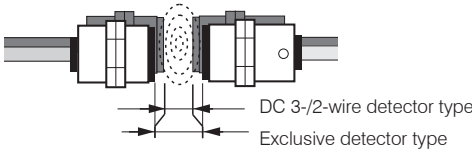
The handy checker for operational check of the Transmitter or Output sensor is also available.

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.	
Transmitter RPT-1804N-PU-01	Output sensor RPE-1804N-PU-02
N=NPN P=PNP D=DC2W	N=NPN P=PNP
cable length(m) 01=1m (standard) 02=2m 03=3m	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, 2m for the Output sensor and 0.3 m for the Transmitter and the Output sensor of pre-wired connector type	

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.

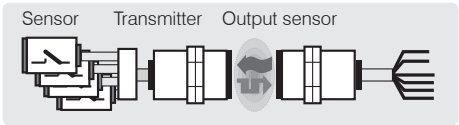


For 1 signal transmission type, there is a "Detector/Transmitter cable molded " type is available.

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		Remarks	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	64
			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	65
			RXT-1805-PU-CP0.3	RXE-1805 □ -PU-CP0.3		
8	M18	5 mm	RXT8-1805-PU-01	RXE8-1800 □ -PU-02		66
	M30	10 mm	RXT8-3010-PU-01	RXE8-3000 □ -PU-02		67

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. Standard cable length is 30 cm.

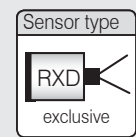
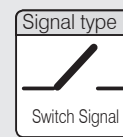


Type code
Example

□ in type code means N → NPN or P → PNP.
_ _ at the end means cable length. The standard cable length has been described in meter.

Transmitter	Output sensor	(Pre-wired connector)
RXT-18005-PU-01	RXE-1805N-PU-02	Basic Code - CP0.3
└ cable length(m) 01=1m (standard) 02=2m 03=3m	└ N=NPN P=PNP └ cable length(m) 02=2m (standard) 03=3m 05=5m	└ 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. Shielded type, flush mountable and no LED indication.



Applicable Remote Sensor	Rated sensing distance	Size	Type Code Cable	Pre-wired connector	Remarks	Page
Transmitter RXT-xxxx RXT8-xxxx	1.5 mm	M8	RXD-0801-PU-01	---		103
	2 mm	M12	RXD-1202-PU-01	RXD-1202-PU-CP1.0		
	5 mm	M18	RXD-1805-PU-01	RXD-1805-PU-CP1.0		
	10 mm	M30	RXD-3010-PU-01	RXD-3010-PU-CP1.0		

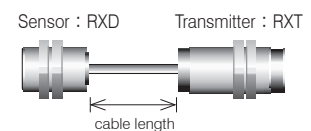
Product List

Remote Sensor

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.

Remote Coupler

Remote Power Supply

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

How to order detector/transmitter cable molded type

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

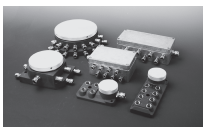
RXD / RXT -PU-
Size Size cable length
08 = M8 12 = M12 1.0=1m (standard)
12 = M12 18 = M18
18 = M18
30 = M30

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

[RXD12/RXT18-PU-0.5](#)

Accessories

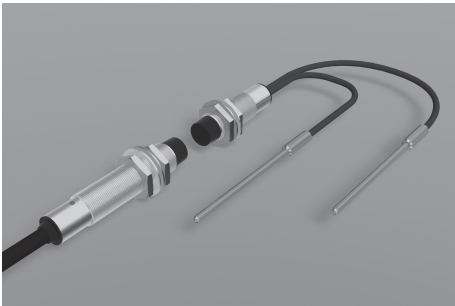
Terminal Box (Accessories)



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

			Type Code	Remarks	Page
Standard type	Waterproof type	Connector type	8 detectors	RFK-3101	Standard type
				RFK-A098-02	Waterproof type
				RFK-A098-03	Waterproof type
				RFK-8C01	Connector type

Analog Signal Transmission

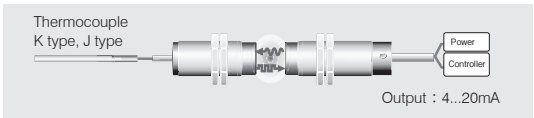



Transmits the displacement output of thermocouple or load cell.
Output the corresponding analog value.

Thermocouple type



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

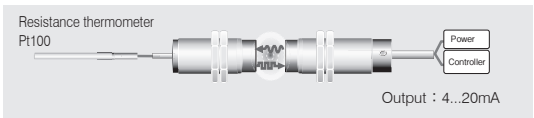



Sensor type		Measuring range	No. of Signals	Max. Distance	Size	Type Code		Page
						Transmitter	Output sensor	
	K type	0...1000°C	1	4 mm	M18	RTT-1804-K100	RTE-1804E-PU-02	68
	K type	0...1000°C	2	4 mm	M18	RS02T-018-K1000	RS02E-018E-PU-02	70
		0...300°C	2	4 mm	M18	RS02T-018-K300		
	Thermocouple	J type	0...300°C	2	4 mm	M18		RS02T-018-J300

Resistance thermometer type



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

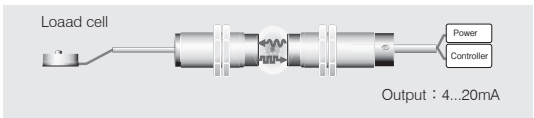


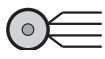
Sensor type	Measuring range	No. of Signals	Max. Distance	Size	Type Code Transmitter	Output sensor	Page
 Resistance thermometer Pt100	0...100°C	1	4 mm	M18	RTT-1804-PT1B10-PU-01	RTE-1804E-PU-02	72
	0...200°C				RTT-1804-PT1B20-PU-01		
	0...300°C				RTT-1804-PT1B30-PU-01		

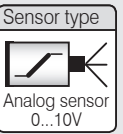
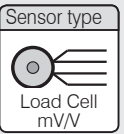
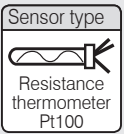
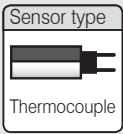
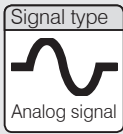
Loaad Cell type



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



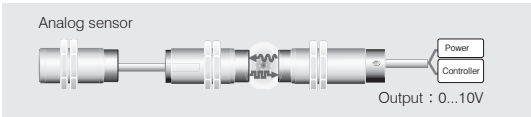
Sensor type	Input sensitivity	No. of Signals	Max. Distance	Size	Type Code Transmitter	Output sensor	Page
 compression type Load cell	1mV/V	1	4 mm	M18	RNT-1804-LC10-PU-01	RTE-1804E-PU-02	74
	1.5mV/V				RNT-1804-LC15-PU-01		
	2mV/V				RNT-1804-LC20-PU-01		



Analog sensor type



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




Product List

Remote Sensor

Remote Coupler

Remote Power Supply

Accessories

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	RNT-1803-VS10-PU-01	RNE-1803A-PU-02	76

Type code Example	_ _ at the end means cable length. The standard cable length has been described in meter.	
	Transmitter RTT-1804-PT1B10-PU-01	Output sensor RTE-1804E-PU-02
	└ cable length (m) 01=1m 02=2m 03=3m	└ cable length (m) 02=2m 03=3m 05=5m
	The standard cable length is 1m.	The standard cable length is 2m.

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

Switch Signal Transmission

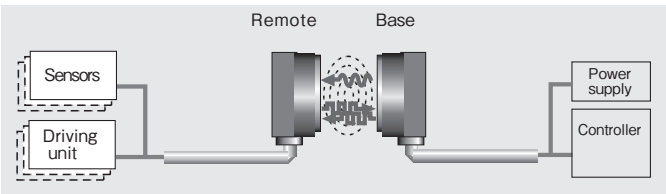


- Possible to bi-directionally transmit detector signal and control signal of moving part.
- 8 + 8 signal transmission type transmit bi-directional signal and simultaneously supply 24DC/2A.
- For 64+32 transmission type, various types of Base Amplifiers corresponding to various fieldbus are provided.

4+4 signal 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 □ -C3-PU-01	RHPE8-8010 □ -C3-PU-02	80

4+4
Switch Signal

8+8
Switch Signal

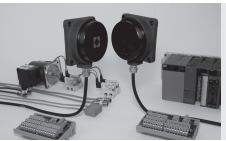
64+32
Switch Signal

RS-232C

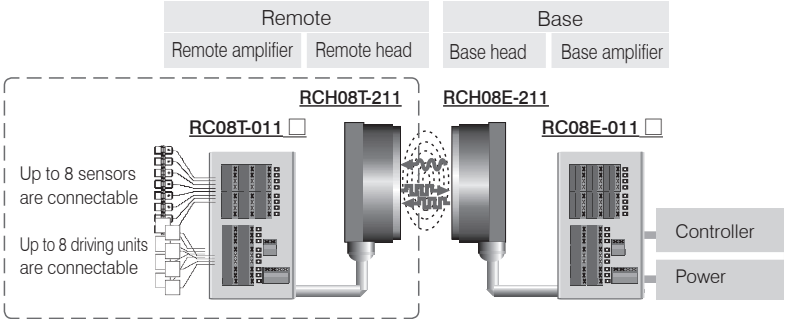
CC-Link

DeviceNet

8+8 signal 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 □ -000	RCH08T-211-PU-01	RCH08E-211-PU-02	RC08E-011 □ -000	82

Exclusive
proximity sensor

Terminal Box
and other

Customized
Products

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.</p> <div><div>Remote</div><div>RHPT8-8010N-C3-PU-01</div><div><div>N=NPN</div><div>P=PNP</div><div>cable length (m)</div><div>01=1m</div><div>02=2m</div><div>03=3m</div></div><div>The standard cable length is 1 m.</div></div> <div><div>Base</div><div>RHPE8-8010N-C3-PU-02</div><div><div>N=NPN</div><div>P=PNP</div><div>cable length (m)</div><div>02=2m</div><div>03=3m</div><div>05=5m</div></div><div>The standard cable length is 2m.</div></div>
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Data Signal Transmission

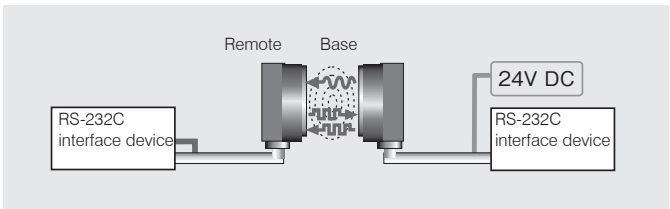


- The supply of 24VDC and bi-directional signal transmission are possible with 1 unit.
- Install units of CC-Link or DeviceNet and build a fieldbus network around equipments with rotating or moving motion.

RS-232C data transmission



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



4+4
Switch Signal

8+8
Switch Signal

64+32
Switch Signal

Drive voltage / current	Size	Max. Distance	Type Code		Page
			Remote	Base	
24V DC / 1A	90x90	10 mm	RCD11T-211-PU-01	RCD11E-211-PU-02	88

RS-232C

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

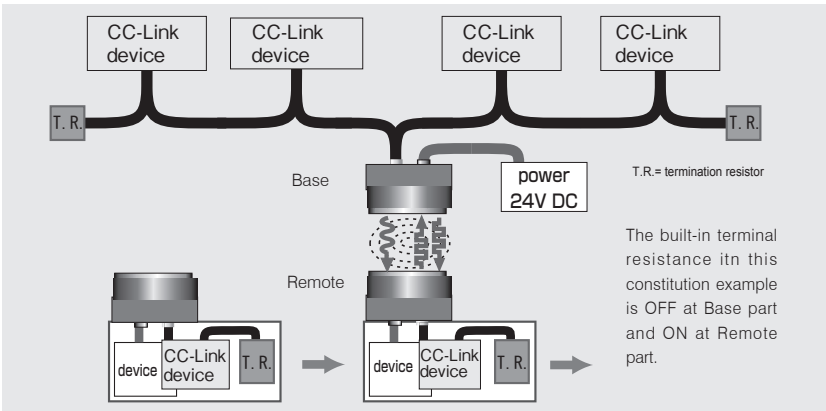
CC-Link

DeviceNet

CC-Link data transmission



Relay the CC-Link data transmission and simultaneously supply 24VDC/1A or 2A in wireless.

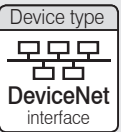
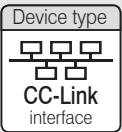
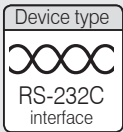
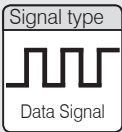


Drive voltage / current	Size	Max. Distance	Type Code		Remarks	Page
			Remote	Base		
24V DC / 2A	97x90	5 mm	RCD22T-211-CLC	RCD22E-211-CLC		90
24V DC / 1A	150x110	6 mm	RCD22T-922	RCD22E-922	Optical data transmission	91

Exclusive proximity sensor

Terminal Box and other

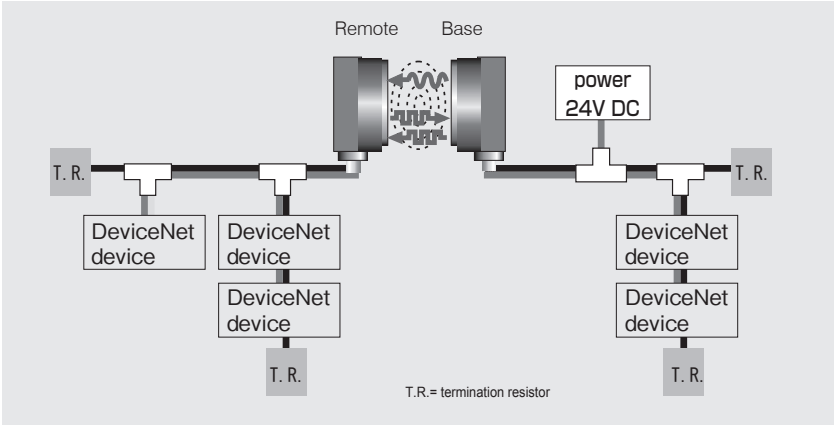
Customized Products



DeviceNet data transmission



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	RCD33T-211-DNC	RCD33E-211-DNC	92

Product List

Remote Sensor

Remote Coupler

Remote Power Supply

Accessories

Power Supply Specialized

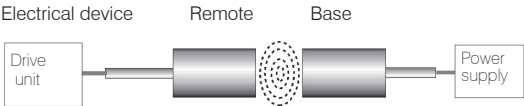


- Remote system for exclusive use of power supply.
- Possible to attach or detach the power line in the water-splashing condition.

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	RVT-211-22-PU-01	RVE-211-2-PU-02	96

Remote Power Supply

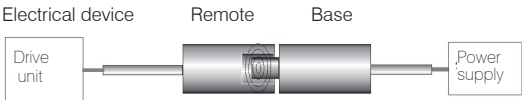
Parallel Coupling

Overlap Coupling

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	RVTI-030-21-PU-01	RVEI-030-2-PU-02	98
	ϕ 43	RVTI-C01-21-PU-01	RVEI-C01-2-PU-02	99

Exclusive proximity sensor

Terminal Box and other

Customized Products

Type code Example	_ _ at the end means cable length. The standard cable length has been described in meter.	
	Remote	Base
	RVT-211-22-PU-01	RVE-211-2-PU-02
	└ cable length(m) 01 = 1m 02 = 2m 03 = 3m	└ cable length(m) 02 = 2m 03 = 3m 05 = 5m
	The standard cable length is 1m.	The standard cable length is 2m.

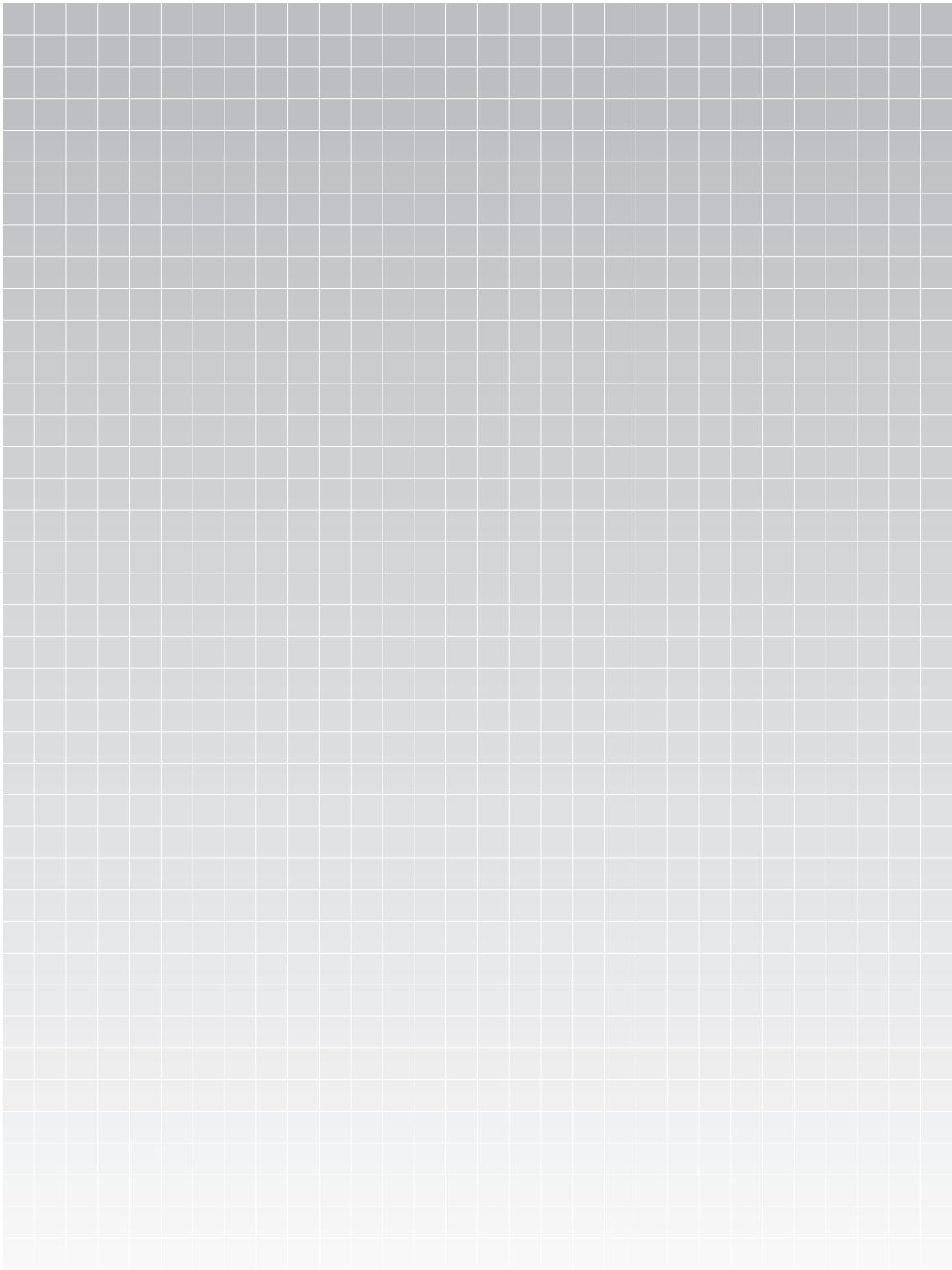
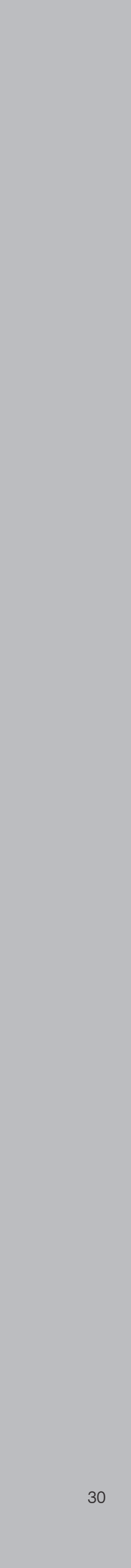
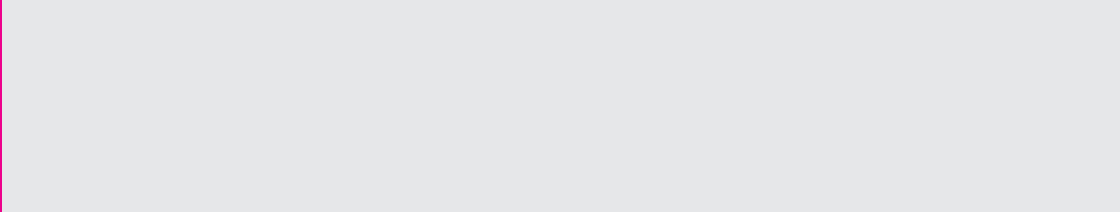
Product
List

Remote
Sensor

Remote
Coupler

Remote
Power
Supply

Accessories



Remote Sensor System	Switch Signal Transmission	DC 3-wire Detector	Regular type	32	
			Terminal unit type	40	
		DC 2-wire Detector	Regular type	46	
			Terminal unit type	60	
		Exclusive Detector type			64
	Analog Signal Transmission	Thermocouple type			68
		Resistance Thermometer type			72
		Load Cell type			74
		Analog detector type			76

Remote
Sensor

DC 3-wire
detector type

DC 3-wire type
Terminal unit

DC 2-wire
detector type

DC 2-wire type
Terminal unit

Exclusive
detector type

Thermocouple
type

Resistance
thermometer type

Load cell type

Analog sensor
type

Exclusive sensor

Terminal box
other unit

Wiring

Products for
maintenance

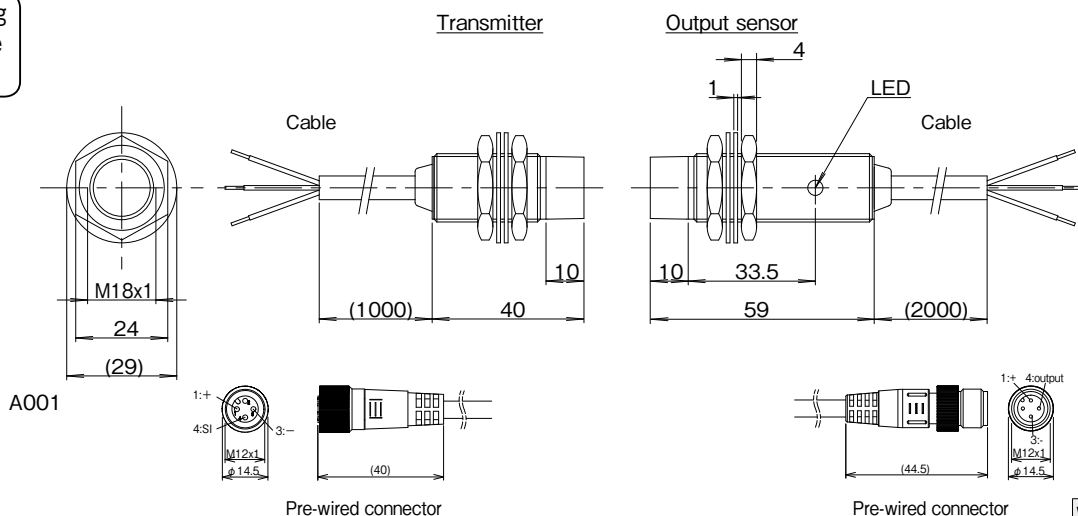
Special spec.

Alphanumeric
product list



for 1 sensor / Size : M18

Operating distance
0...4mm



Wiring C001/P.114

Transmitter				
		Cable	Pre-wired connector	
Type	NPN	RPT-1804N-PU-01	RPT-1804N-PU-CP0.3	
Code	PNP	RPT-1804P-PU-01	RPT-1804P-PU-CP0.3	
Drive voltage		12V ± 1.5V DC		
Drive current		max.30mA		
No. of input signal		1		
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 / Ø5 , 3x0.34mm ²		
Material		Housing: Nickel plated brass		
		Active face: Nylon 12		
Weight		Body 45g + Cable35g × 1m /+Connector cable 30cm 40g		
Anti-weld slag type		Cable	Pre-wired connector	
Type	Code	NPN	RPT-TF1804N-PU-01	RPT-TF1804N-PU-CP0.3
		PNP	RPT-TF1804P-PU-01	RPT-TF1804P-PU-CP0.3
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

		Output sensor		
		Cable	Pre-wired connector	
Type	NPN	RPE-1804N-PU-02	RPE-1804N-PU-CP0.3	
Code	PNP	RPE-1804P-PU-02	RPE-1804P-PU-CP0.3	
Operational voltage		24V DC ± 5% (incl. ripple)		
Current consumption		≤ 150mA		
No. of output signal		1		
Load current		max.50mA		
Frequency of operation		25Hz		
LED		Signal output indication		
Operating temperature		0...+50°C		
Protection class		IP67		
Cable		PUR / Ø5 , 3x0.34mm ²		
Material	Housing	Nickel plated brass		
	Active face	Nylon 12		
Weight		Body 60g + Cable35g × 2m /+Connector cable 30cm 30g		
Anti-weld slag type		Cable	Pre-wired connector	
Type	Code	NPN	RPE-TF1804N-PU-02	RPE-TF1804N-PU-CP0.3
		PNP	RPE-TF1804P-PU-02	RPE-TF1804P-PU-CP0.3
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

Applicable sensor

Supply voltage	12V DC
Current consumption	\leq 30mA
Residual voltage	\leq 3.5V
Load current	---

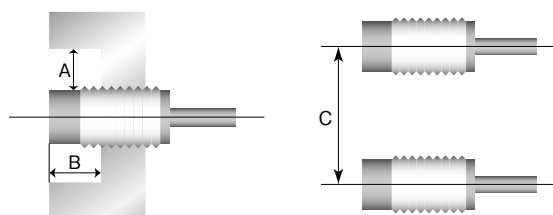
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

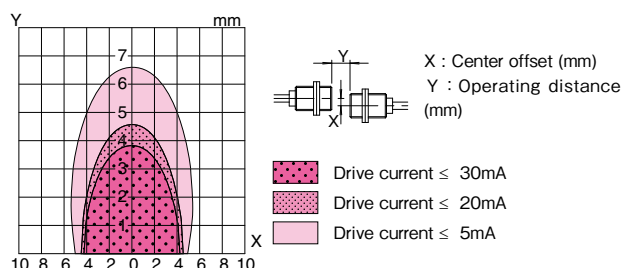
Parallel installation

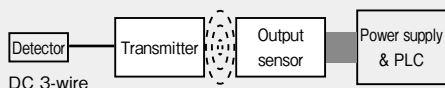


Type Code	A(mm)	B(mm)	C(mm)
RPT-1804 □ -PU- _ _	20	15	110
RPE-1804 □ -PU- _ _			

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

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



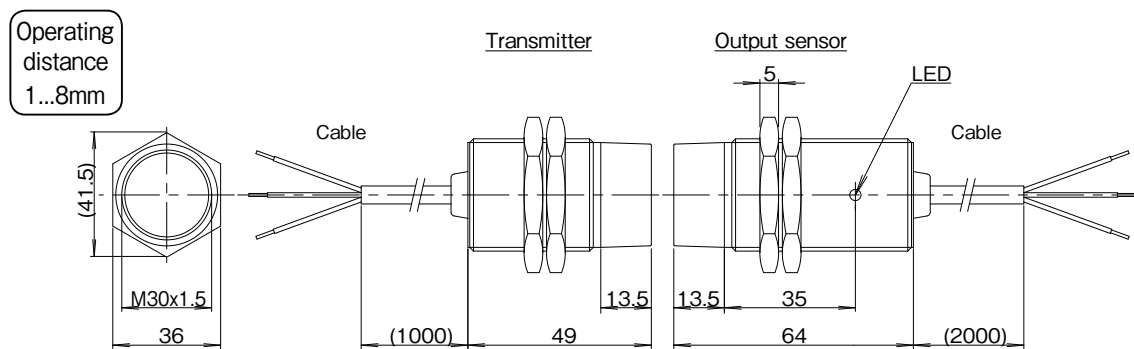


RPT-18
RPE-18

RPT-30
RPE-30

1
signal

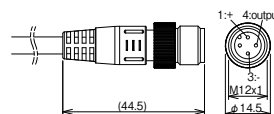
for 1 sensor / Size : M30



A002



Pre-wired connector



Pre-wired connector

Wiring C001/P.114

		Transmitter		
		Cable	Pre-wired connector	
Type	NPN	RPT-3008N-PU-01	RPT-3008N-PU-CP0.3	
Code	PNP	RPT-3008P-PU-01	RPT-3008P-PU-CP0.3	
Drive voltage		12V ± 1.5V DC		
Drive current		max.30mA		
No. of input signal		1		
Operating distance		1...8mm	1...6mm 1...4.5mm	
Center offset		± 5mm	± 4mm ± 3mm	
Drive current		≤ 5mA	≤ 20mA ≤ 30mA	
Operating temperature		0...+50°C		
Protection class		IP67		
Cable		PUR / Ø5 , 3x0.34mm ²		
Material	Housing	Nickel plated brass		
	Active face	Nylon 12		
Weight		Body 110g + Cable35g × 1m/+Connector cable 30cm 40g		
Anti-weld slag type		Cable	Pre-wired connector	
Type	Code	NPN	RPT-TF3008N-PU-01	RPT-TF3008N-PU-CP0.3
		PNP	RPT-TF3008P-PU-01	RPT-TF3008P-PU-CP0.3
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

		Output sensor		
		Cable	Pre-wired connector	
Type	NPN	RPE-3008N-PU-02	RPE-3008N-PU-CP0.3	
Code	PNP	RPE-3008P-PU-02	RPE-3008P-PU-CP0.3	
Operational voltage		24V DC ± 5% (incl. ripple)		
Current consumption		≤ 150mA		
No. of output signal		1		
Load current		max.50mA		
Frequency of operation		25Hz		
LED		Signal output indication		
Operating temperature		0...+50°C		
Protection class		IP67		
Cable		PUR / Ø5 , 3x0.34mm ²		
Material	Housing	Nickel plated brass		
	Active face	Nylon 12		
Weight		Body 130g + Cable35g × 2m/+Connector cable 30cm 30g		
Anti-weld slag type		Cable	Pre-wired connector	
Type	Code	NPN	RPE-TF3008N-PU-02	RPE-TF3008N-PU-CP0.3
		PNP	RPE-TF3008P-PU-02	RPE-TF3008P-PU-CP0.3
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

Applicable sensor

Supply voltage	12V DC
Current consumption	\leq 30mA
Residual voltage	\leq 3.5V
Load current	---

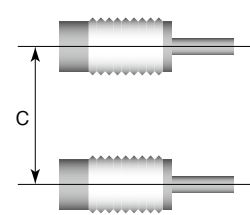
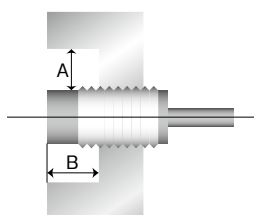
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

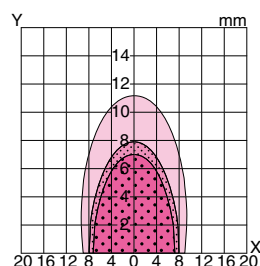
Surrounding metal

Parallel installation



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

RPT-3008 □ -PU-__ / RPE-3008 □ -PU-__



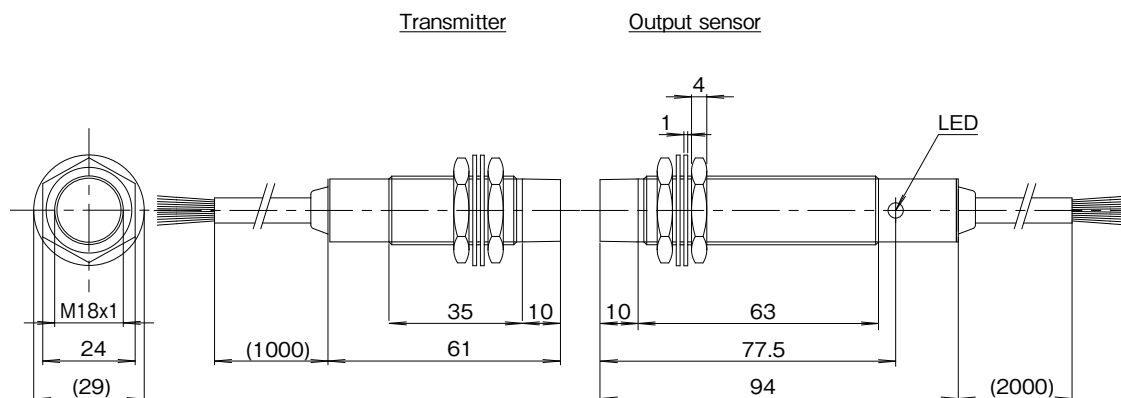
X : Center offset (mm)
Y : Operating distance (mm)

Drive current \leq 30mA
Drive current \leq 20mA
Drive current \leq 5mA

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

for max. 4 sensors / Size : M18

Operating
distance
0.5...3mm



A003

Wiring C002/P.114

		Transmitter		
Type	NPN	RPTA-1803-PU-01		
Code	PNP			
Drive voltage		12V ± 1.5V DC		
Drive current		max.30mA		
No. of input signal		4		
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 / Ø6.3 , 7x0.3mm ²		
Material		Housing		
		Nickel plated brass		
		Active face		
		Nylon 12		
Weight		Body 60g + Cable60g × 1m		
Anti-weld slag	NPN	RPTA-TF1803-PU-01		
Type Code	PNP			
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

Output sensor		
Type	NPN	RPEA-1803N-PU-02
Code	PNP	RPEA-1803P-PU-02
Operational voltage	24V DC ± 5% (incl. ripple)	
Current consumption	≤ 170mA	
No. of (In)Zone	4 +1 (InZone)	
Load current	max.50mA per output	
Frequency of operation	30Hz	
LED	InZone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø6.3 , 7x0.3mm ²	
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight	Body 90g + Cable60g × 2m	
Anti-weld slag	NPN	RPEA-TF1803N-PU-02
Type	Code	PNP
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Applicable sensor

Supply voltage	12V DC
Total current consumption*	\leq 30mA
Residual voltage	\leq 3.5V
Load current	---

*Total current consumption of all connected sensor.

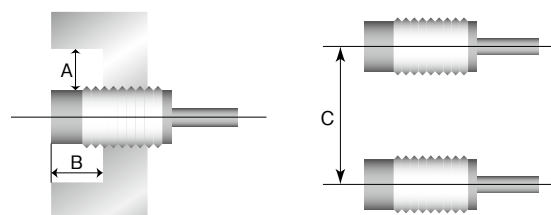
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

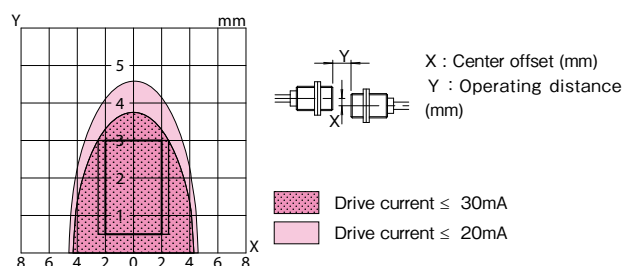
Parallel installation

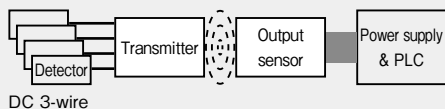


Type Code	A(mm)	B(mm)	C(mm)
RPTA-1803-PU-__	18	18	110
RPEA-1803 □ -PU-__			

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

RPTA-1803-PU-__ / RPEA-1803 □ -PU-__





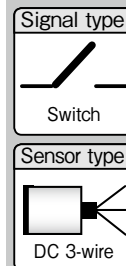
RPTA-18
RPEA-18

RPTA-30
RPEA-30

4
signal

for max. 4 sensors / Size : M30

Operating distance
1...5mm



Remote
Sensor

DC 3-wire
detector type

DC 3-wire type
Terminal unit

DC 2-wire
detector type

DC 2-wire type
Terminal unit

Exclusive
detector type

Thermocouple
type

Resistance
thermometer type

Load cell type

Analog sensor
type

Exclusive sensor

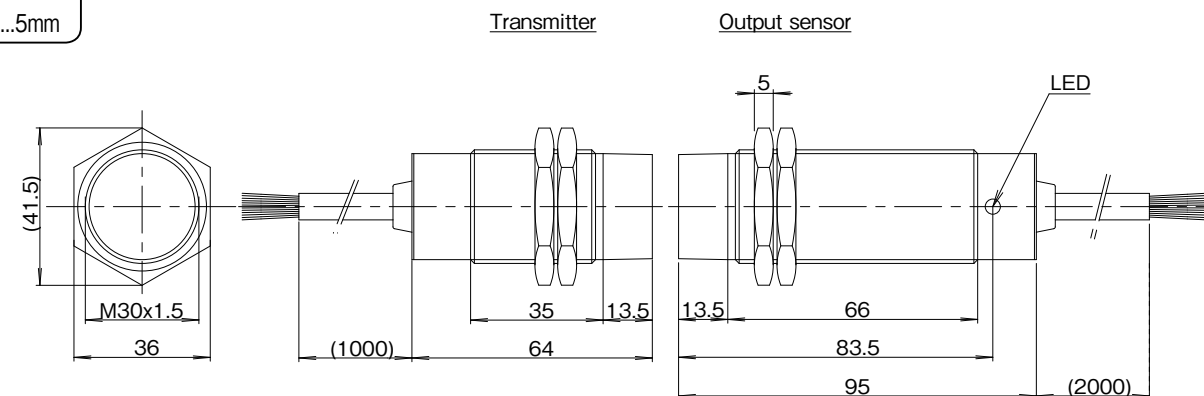
Terminal box
other unit

Wiring

Products for
maintenance

Special spec.

Alphanumeric
product list



A004

Wiring C002/P.114

Transmitter			
Type Code	NPN	PNP	RPTA-3005-PU-01
Drive voltage	12V \pm 1.5V DC		
Drive current	max.40mA		
No. of input signal	4		
Operating distance	1...5mm	1...5mm	
Center offset	\pm 6mm	\pm 3mm	
Drive current	\leq 30mA	\leq 40mA	
Operating temperature	0...+50°C		
Protection class	IP67		
Cable	PUR / \varnothing 6.3 , 7x0.3mm ²		
Material Housing	Nickel plated brass		
Material Active face	Nylon 12		
Weight	Body 130g + Cable60g \times 1m		
Anti-weld slag	NPN		
Type Code	PNP		RPTA-TF3005-PU-01
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

Output sensor			
Type Code	NPN	PNP	RPEA-3005N-PU-02 RPEA-3005P-PU-02
Operational voltage	24V DC \pm 5% (incl. ripple)		
Current consumption	\leq 150mA		
No. of output signal	4 +1(InZone)		
Load current	max.50mA per output		
Frequency of operation	30Hz		
LED	InZone		
Operating temperature	0...+50°C		
Protection class	IP67		
Cable	PUR / \varnothing 6.3 , 7x0.3mm ²		
Material Housing	Nickel plated brass		
Material Active face	Nylon 12		
Weight	Body 160g + Cable60g \times 2m		
Anti-weld slag	NPN		
Type Code	PNP		RPEA-TF3005N-PU-02 RPEA-TF3005P-PU-02
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

Applicable sensor

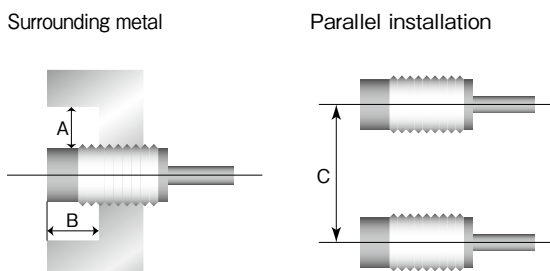
Supply voltage	12V DC
Total current consumption*	\leq 40mA
Residual voltage	\leq 3.5V
Load current	---

*Total current consumption of all connected sensor.

Please use a sensor which works definitely in the condition described on left.

Installation notes

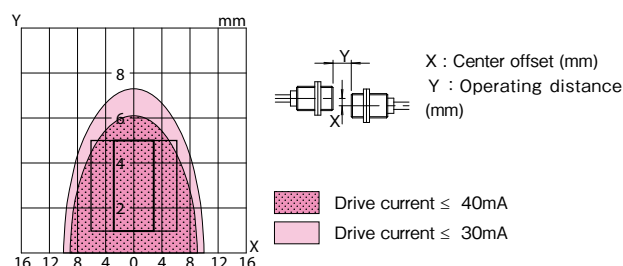
In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Transmitters or Output sensors, keep the minimum distances as described below.



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

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

RPTA-3005-PU-__ / RPEA-3005 □ -PU-__

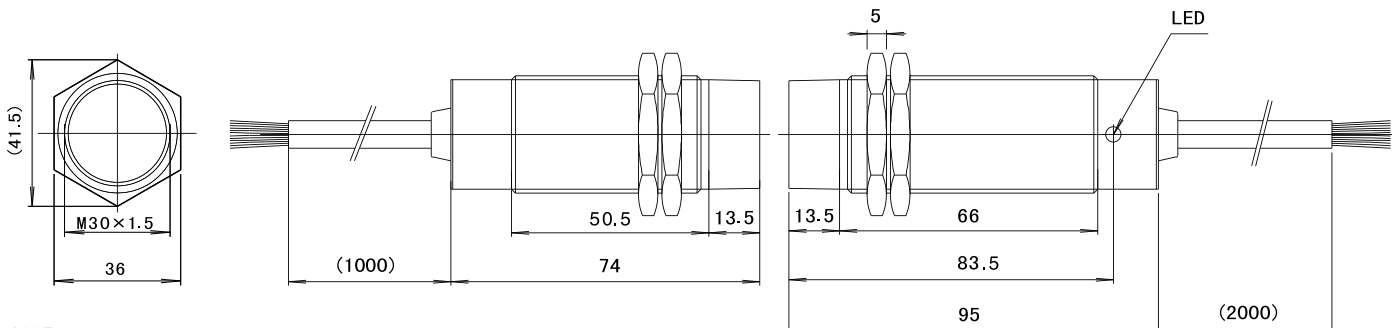


for max. 8 sensors / Size : M30

Operating distance
2...5mm

Transmitter

Output sensor



A005

Wiring C004/P.115

Transmitter	
Type Code	NPN PNP
	RGPT-3005-V1215-PU-01
Drive voltage	12V \pm 1.5V DC
Drive current	max.150mA
No. of input signal	8
Operating distance	2...5mm
Center offset	\pm 3mm
Drive current	\leq 150mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / \varnothing 7.7, 2x0.5mm ² + 9x0.18mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 150g + Cable 75 g \times 1 m
Remarks	

Output sensor	
Type Code	NPN PNP
	RGPE-3005-V1215N-PU-02 RGPE-3005-V1215P-PU-02
Operational voltage	24V DC \pm 10% (incl. ripple)
Current consumption	\leq 400mA
No. of output signal	8 + 1(InZone)
Load current	max.50mA per output
Frequency of operation	60Hz
LED	InZone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / \varnothing 7.7, 2x0.5mm ² + 9x0.18mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 180g + Cable 75g \times 2 m
Remarks	

Applicable sensor

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

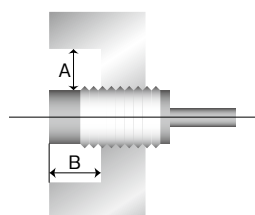
*Total current consumption of all connected sensor.

Please use a sensor which works definitely in the condition described on left.

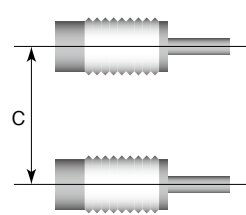
Installation notes

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

Surrounding metal



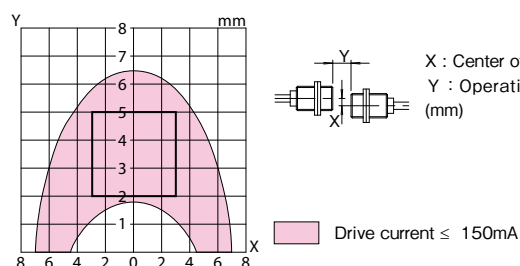
Parallel installation

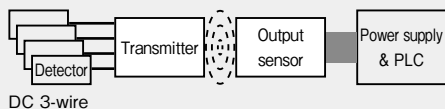


Type Code	A(mm)	B(mm)	C(mm)
RGPT-3005-V1215-PU-__	30	20	200
RGPE-3005-V1215 □ -PU-__			

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

RGPT-3005-V1215-PU-__ / RGPE-3005 □ -V1215-PU-__



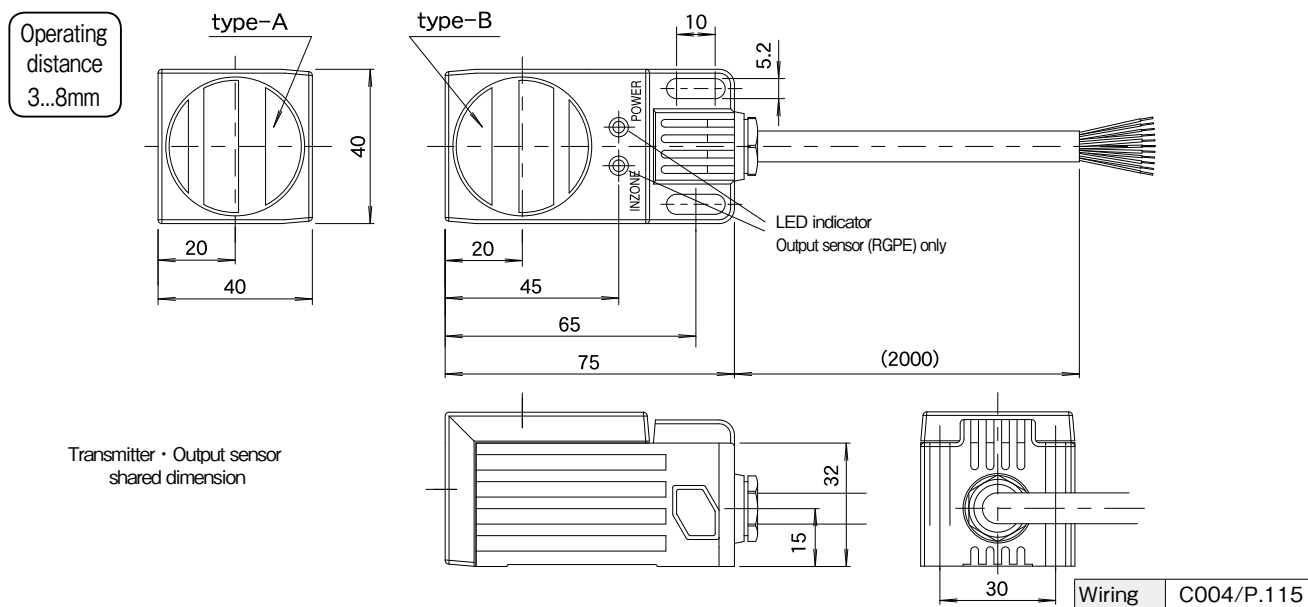


RGPT-30
RGPE-30

RGPT-40
RGPE-40

8
signal

for max. 8 sensors / Size : 40X40



Transmitter	
Type Code	NPN PNP
	RGPT-4008-V1220A/B*-PU-01
Drive voltage	12V \pm 1.5V DC
Drive current	max.200mA
No. of input signal	8
Operating distance	3...8mm
Center offset	\pm 3mm
Drive current	\leq 200mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / \varnothing 7.7, 2x0.5mm ² + 9x0.18mm ²
Material Housing	Aluminum (metal part)
Active face	ABS+PBT (resin part)
Weight	Body 220g + Cable75 g \times 1 m
Remarks	*Selectable active face A (front) or B (top).

Output sensor	
Type Code	NPN PNP
	RGPE-4008-V1220NA/B*-PU-02
	RGPE-4008-V1220PA/B*-PU-02
Operational voltage	24V DC \pm 10% (incl. ripple)
Current consumption	\leq 500mA
No. of output signal	8 +1 (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 / \varnothing 7.7, 2x0.5mm ² + 9x0.18mm ²
Material Housing	Aluminum (metal part)
Active face	ABS+PBT (resin part)
Weight	Body 220g + Cable75g \times 2 m
Remarks	*Selectable active face A (front) or B (top).

Applicable sensor

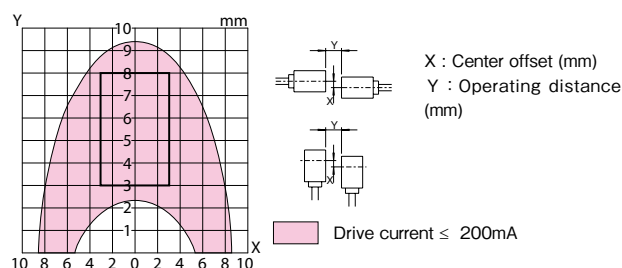
Supply voltage	12V DC
Total current consumption*	\leq 200mA
Residual voltage	\leq 3.5V
Load current	---

*Total current consumption of all connected sensor.

Please use a sensor which works definitely in the condition described 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

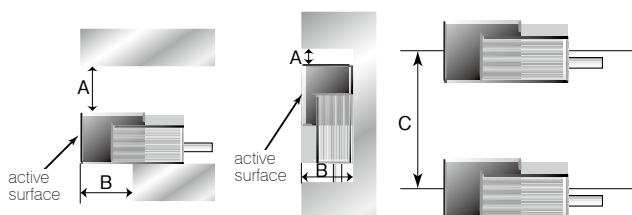


Installation notes

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

Surrounding metal

Parallel installation



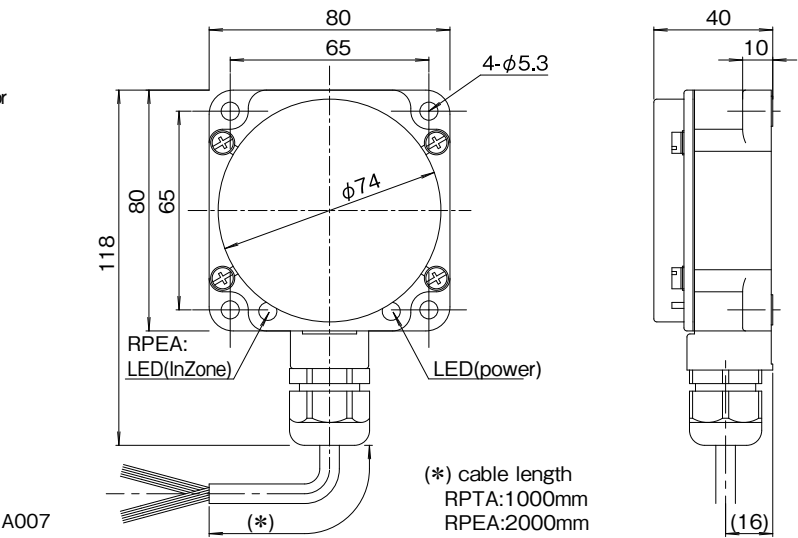
Type Code	A(mm)	B(mm)	C(mm)
RGPT-4008-V1220A/B-PU-__	40	40	300
RGPE-4008-V1220 □ A/B-PU-__			

for max. 8 sensors / Size : 80 x 80

Operating distance
2...15mm

Transmitter • Output sensor
shared dimension

LED indicator :
Output sensor (RPEA) only



Wiring C003/P.114

Transmitter			
Type	NPN	RPTA-8015-PU-01	
Code	PNP		
Drive voltage		12V ± 1.5V DC	
Drive current		max.100mA	
No. of input signal		8	
Operating distance		2...22mm	4...15mm
Center offset		± 12mm	± 10mm
Drive current		≤ 50mA	≤ 100mA
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / Ø7.9 , 12x0.18mm ²	
Material	Housing	Nylon	
	Active face	Nylon	
Weight		Body 440g + Cable80 g × 1 m	
Remarks			

Output sensor		
Type	NPN	RPEA-8015N-PU-02
Code	PNP	
		RPEA-8015P-PU-02
Operational voltage	24V DC ± 5% (incl. ripple)	
Current consumption	≤ 300mA	
No. of output signal	8 +1(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 / Ø7.9 , 12x0.18mm ²	
Material	Housing	Nylon
	Active face	Nylon
Weight	Body 440g + Cable80g × 2 m	
Remarks		

Applicable sensor

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

*Total current consumption of all connected sensor.

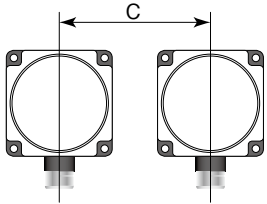
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

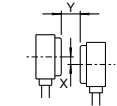
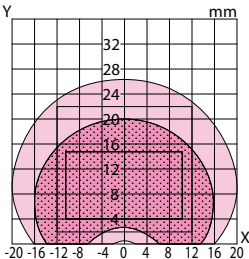
Parallel installation



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

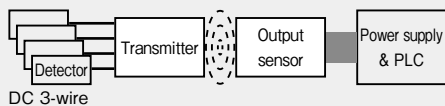
Typical Transmitting Diagram (Supply voltage at 24V/non-flush mount)

RPTA-8015-PU-__ / RPEA-8015 □ -PU-__



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

Drive current ≤ 100mA
Drive current ≤ 50mA

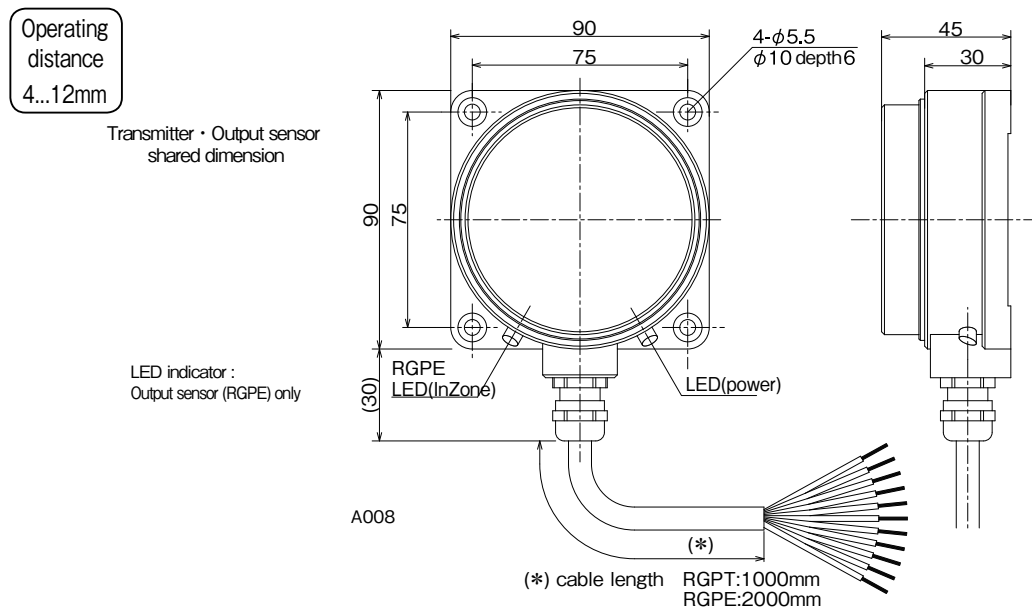


RPTA-80
RPEA-80

RGPT-90
RGPE-90

8
signal

for max. 8 sensors / Size : 90 x 90



Wiring C004/P.115

Transmitter		
Type Code	NPN PNP	RGPT-9012-V2430-PU-01
Drive voltage	24V \pm 1.5V DC	
Drive current	max.300mA	
No. of input signal	8	
Operating distance	4...12mm	
Center offset	\pm 7mm	
Drive current	\leq 300mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / \varnothing 7.7, 2x0.5mm ² + 9x0.18mm ²	
Material Housing	Aluminum + alumite processing (metal part)	
Active face	ABS+PBT (resin part)	
Weight	Body 650 g + Cable 75g \times 1 m	
Remarks	The AC 2-wire sensor can be connected by the interchange conversion amplifier unit (P.110).	

Output sensor		
Type Code	NPN PNP	RGPE-9012-V2430N-PU-02 RGPE-9012-V2430P-PU-02
Operational voltage	24V DC \pm 10% (incl. ripple)	
Current consumption	\leq 1A	
No. of output signal	8 +1(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 / \varnothing 7.7, 2x0.5mm ² + 9x0.18mm ²	
Material Housing	Aluminum + alumite processing (metal part)	
Active face	ABS+PBT (resin part)	
Weight	Body 650g + Cable 75g \times 2 m	
Remarks		

Applicable sensor

Supply voltage	24V DC
Total current consumption*	\leq 300mA
Residual voltage	\leq 6V
Load current	---

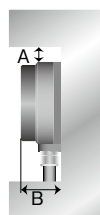
*Total current consumption of all connected sensor.

Please use a sensor which works definitely in the condition described on left.

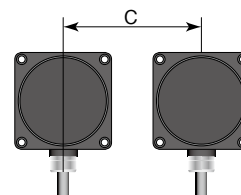
Installation notes

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

Surrounding metal

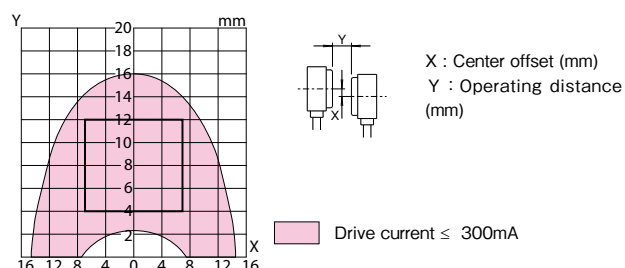


Parallel installation



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-__			

Signal type
Switch

Sensor type
DC 3-wire

Remote
Sensor

DC 3-wire
detector type

DC 3-wire type
Terminal unit

DC 2-wire
detector type

DC 2-wire type
Terminal unit

Exclusive
detector type

Thermocouple
type

Resistance
thermometer type

Load cell type

Analog sensor
type

Exclusive sensor

Terminal box
other unit

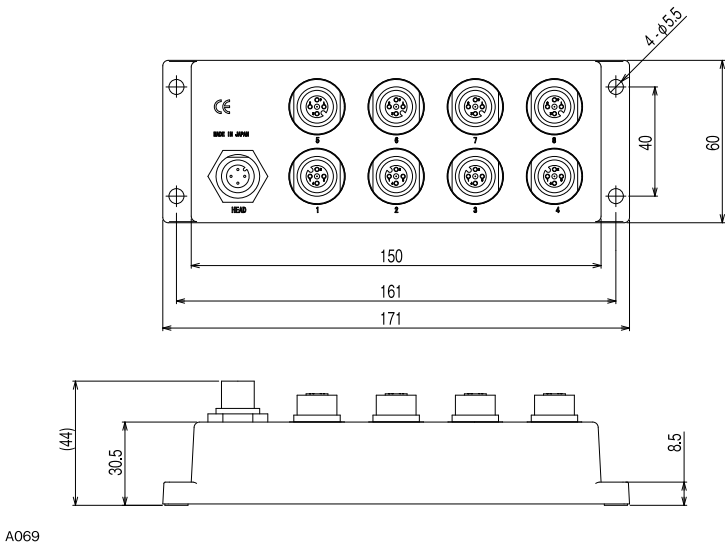
Wiring

Products for
maintenance

Special spec.

Alphanumeric
product list

for max. 8 sensors Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.

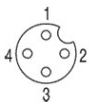
Wiring C025/P.119

Transmitter / Remote terminal	
Type	Connector type 1 RS8TA-222P-S04
Code	Connector type 2 RS8T-222P-S04
Applicable sensor	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
Remarks	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
Load current	---

*Total current consumption of all connected sensor.

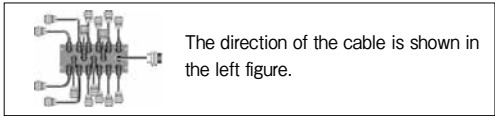
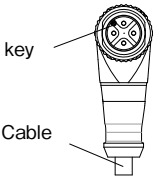
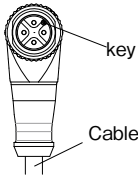
Pin assigned of connector for sensors	
	1 : + 2 : - 3 : - 4 : SI

Please use a sensor which works definitely in the condition described on left.

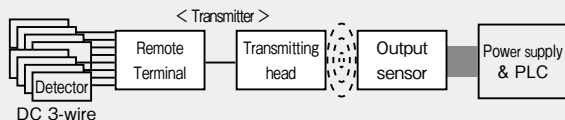
Applicable angle connector type (Detector's connector)

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



RS8TA-222
RS8T-222

RSH8T-30
RSH8E-30

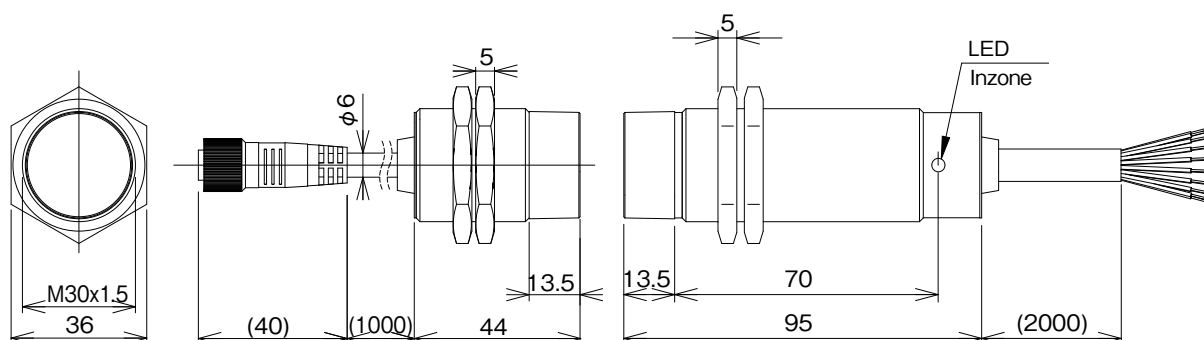
8
signal

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

Operating distance
2...8mm

Transmitting head

Output sensor



A057

Wiring C025/P.119

Transmitter / Transmitting head	
Type Code	connect to Remote Terminal RSH8T-030-PU-CP1.0
Drive voltage	22V \pm 1.5V DC
Drive current	120mA
Remote terminal	RS8TA-222_-S04、RS8T-222_-S04
Operating distance	2...8mm
Center offset	\pm 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 x 1 m
Anti-weld slag Type Code	connect to Remote Terminal RSH8T-TF030-PU-CP1.0
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

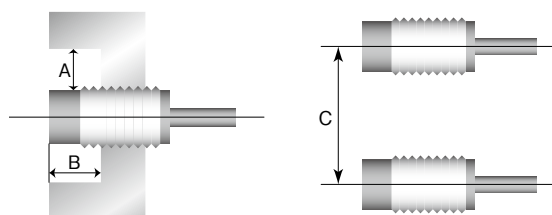
Output sensor	
Type Code	NPN PNP RSH8E-030N-PU-02 RSH8E-030P-PU-02
Operational voltage	24V DC \pm 10% (incl. ripple)
Current consumption	\leq 500mA
No. of output signal	8 +1 (InZone)
Load current	max.50mA per output
Frequency of operation	20Hz
LED	InZone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR/ \varnothing 7.7、2x0.5mm ² +9x0.18mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable 75 g x 2 m
Anti-weld slag Type Code	NPN PNP RSH8E-TF030N-PU-02 RSH8E-TF030P-PU-02
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 Transmitters or Output sensors, keep the minimum distances as described below.

Surrounding metal

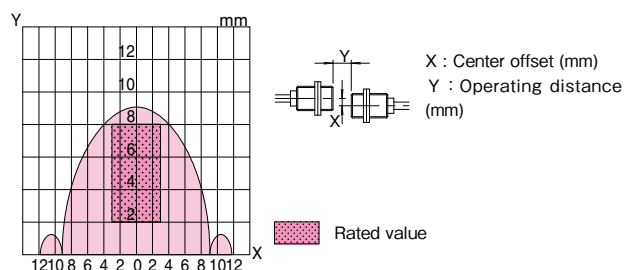
Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RSH8T-030-PU-CP__	30	30	160
RSH8E-030 □ -PU-__			

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

RSH8T-030-PU-CP__ / RSH8E-030 □ -PU-__



Signal type
Switch

Sensor type
DC 3-wire

Remote Sensor

DC 3-wire detector type

DC 3-wire type Terminal unit

DC 2-wire detector type

DC 2-wire type Terminal unit

Exclusive detector type

Thermocouple type

Resistance thermometer type

Load cell type

Analog sensor type

Exclusive sensor

Terminal box other unit

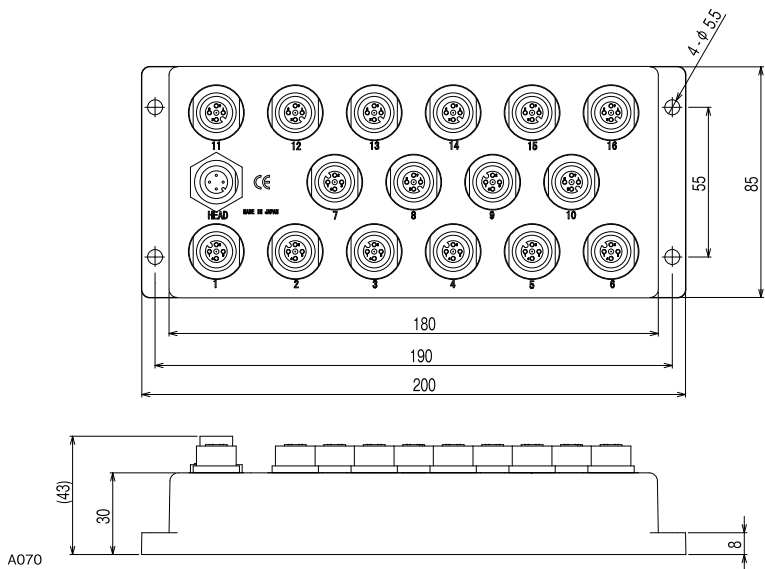
Wiring

Products for maintenance

Special spec.

Alphanumeric product list

for max. 16 sensors Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.


Wiring C026/P.119

Transmitter / Remote terminal	
Type Connector type 1	RS16TA-211P-S04
Code Connector type 2	RS16T-211P-S04
Applicable sensor	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
Weight	1000 g
Remarks	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
Load current	---

*Total current consumption of all connected sensor.

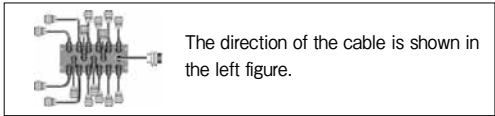
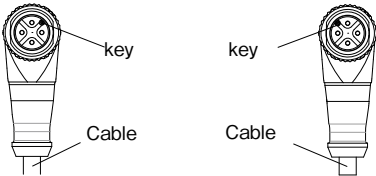
Pin assigned of connector for sensors		1 : + 2 : 3 : - 4 : SI
---------------------------------------	---	---------------------------------

Please use a sensor which works definitely in the condition described on left.

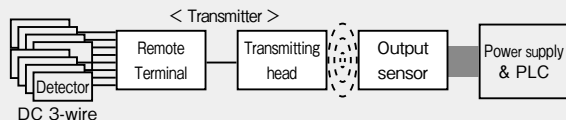
Applicable angle connector type (Detector's connector)

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_



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



RS16TA-211
RS16T-211

RSH16T-30
RSH16E-30

16

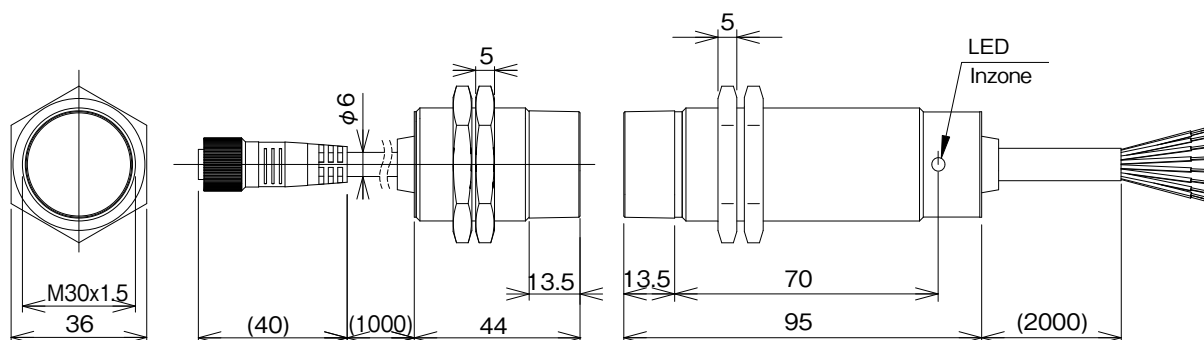
signal

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

Operating distance
2...8mm

Transmitting head

Output sensor



A057

Wiring C026/P.119

Transmitter / Transmitting head	
Type Code	connect to 12 V Remote Terminal RSH16T-030-PU-CP1.0
Drive voltage	22V \pm 1.5V DC
Drive current	120mA
Remote terminal	RS16TA-211_-S04, RS16T-211_-S04
Operating distance	2...8mm
Center offset	\pm 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 x 1 m
Anti-weld slag Type Code	connect to Remote Terminal RSH16T-TF030-PU-CP1.0
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

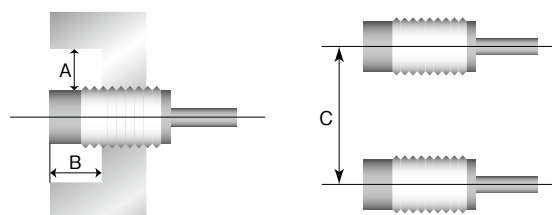
Output sensor	
Type Code	NPN PNP RSH16E-030N-PU-02 RSH16E-030P-PU-02
Operational voltage	24V DC \pm 10% (incl. ripple)
Current consumption	\leq 500mA
No. of output signal	16 +1 (InZone)
Load current	max.50mA per output
Frequency of operation	20Hz
LED	InZone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR/ \varnothing 8.5, 2x0.5mm ² +17x0.18mm ²)
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable 110 g x 2 m
Anti-weld slag Type Code	NPN PNP RSH16E-TF030N-PU-02 RSH16E-TF030P-PU-02
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 Transmitters or Output sensors, keep the minimum distances as described below.

Surrounding metal

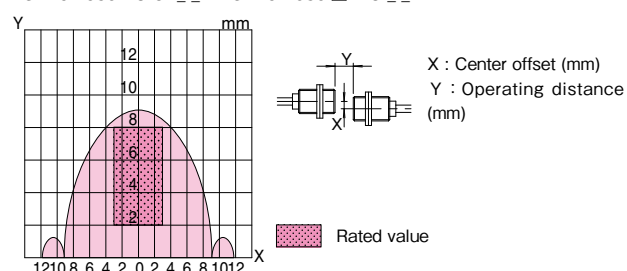
Parallel installation



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

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

RSH16T-030-PU-CP_ _ / RSH16E-030 □ -PU- _ _



Signal type
Switch

Sensor type
DC 3-wire

Remote Sensor

DC 3-wire detector type

DC 3-wire type Terminal unit

DC 2-wire detector type

DC 2-wire type Terminal unit

Exclusive detector type

Thermocouple type

Resistance thermometer type

Load cell type

Analog sensor type

Exclusive sensor

Terminal box other unit

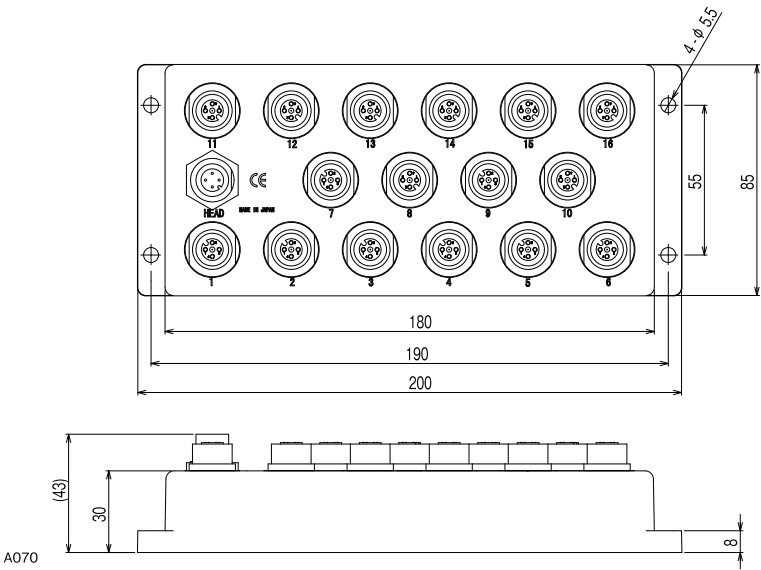
Wiring

Products for maintenance

Special spec.

Alphanumeric product list

for max. 16 sensors Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.

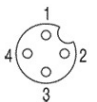
Wiring C026/P.119

Transmitter / Remote terminal	
Type Connector type 1	RS16TB-211P-S04
Code Connector type 2	
Applicable sensor	
DC 3-wire PNP (M12 connector 4-pin : 1:+, 3:-, 4:SI)	
Drive voltage	
24V ± 1.5V DC	
Drive current	
300mA、550mA (depending on the operating distance and the center offset : See Typical Transmitting Diagram on next page)	
Operating temperature	
0...+50℃	
Protection class	
IP67	
Connection Sensor	
Connector M12 (Female) x 16	
Transmitting head	
Connector M12 (Male) x 1	
Material Housing	
PPS	
Weight	
1000 g	
Included	
Ferrite core clamp	
Remarks	
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
Load current	---

*Total current consumption of all connected sensor.

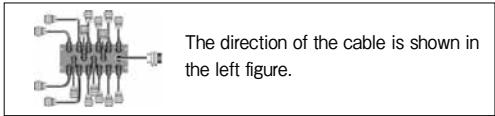
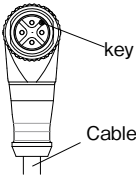
Pin assigned of connector for sensors		1 : + 2 : 3 : - 4 : SI
---------------------------------------	---	---------------------------------

Please use a sensor which works definitely in the condition described on left.

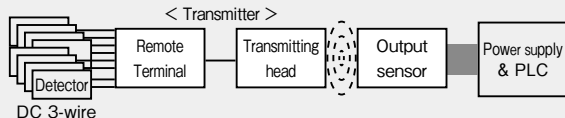
Applicable angle connector type (Detector's connector)

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

1 :Applicable to RS16TB-211



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



RS16TB-211

RSH16TB-30
RSH16EB-30

16

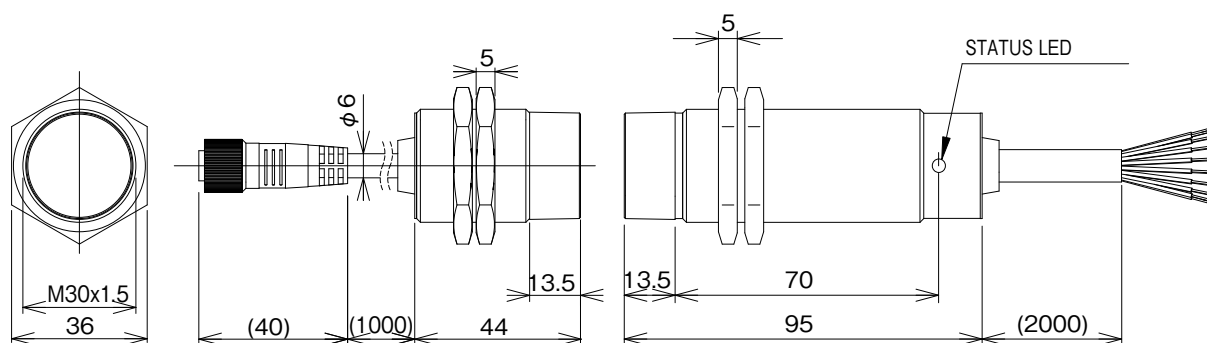
signal

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

Operating distance
0...5mm

Transmitting head

Output sensor



A057

Wiring C026/P.119

Transmitter / Transmitting head		
Type Code	connect to 24 V 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	
Remarks		

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

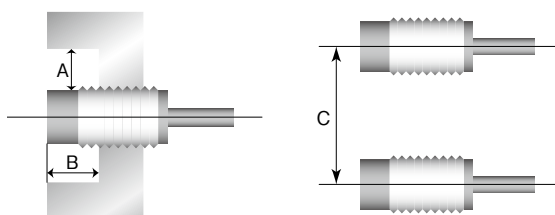
Output sensor	
Type Code	PNP RSH16EB-030P-PU-02
Operational voltage	24V DC ± 10% (incl. ripple)
Current consumption	≤ 1A
No. of output signal	16 +1 (InZone)
Load current	max.50mA per output
Frequency of operation	20Hz
Start-up time	≤ 2 sec.
LED	InZone, OutZone, Over heat, Short
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR/ Ø8.6, 2x0.5mm ² +17x0.18mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable 110 g x 2 m
Remarks	

Installation notes

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

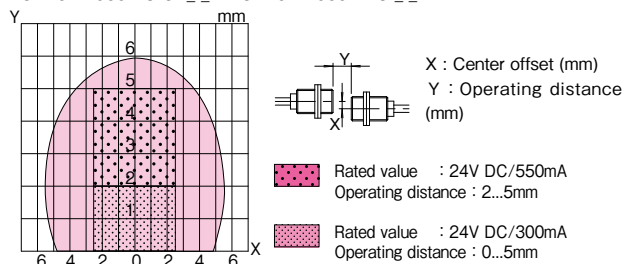
Surrounding metal

Parallel installation



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

RSH16TB-030-PU-CP_ / RSH16EB-030P-PU_

Signal type
SwitchSensor type
DC 3-wire

Remote Sensor

DC 3-wire detector type

DC 3-wire type Terminal unit

DC 2-wire detector type

DC 2-wire type Terminal unit

Exclusive detector type

Thermocouple type

Resistance thermometer type

Load cell type

Analog sensor type

Exclusive sensor

Terminal box other unit

Wiring

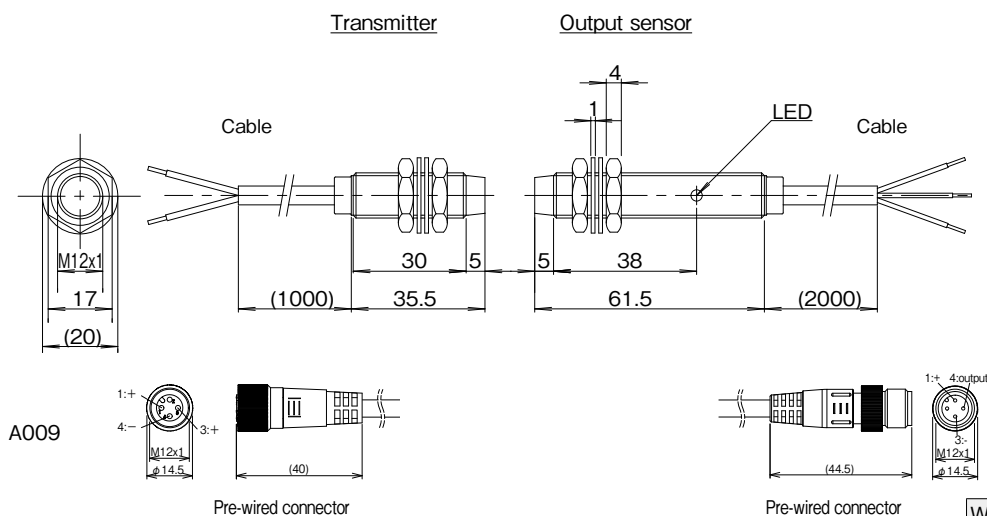
Products for maintenance

Special spec.

Alphanumeric product list

for 1 sensor / Size : M12

Operating distance
0...2mm



Wiring C006/P.116

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

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

Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	\leq 3.5V
Load current	\leq 5mA

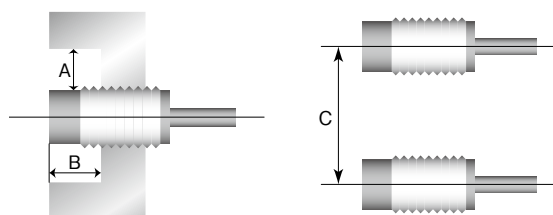
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

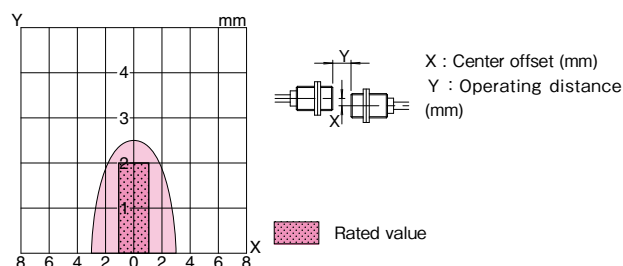
Parallel installation

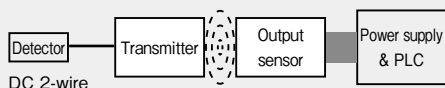


Type Code	A(mm)	B(mm)	C(mm)
RPT-1202D-PU-__	12	12	100
RPE-1202 □ -PU-__			

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

RPT-1202D-PU-__ / RPE-1202 □ -PU-__





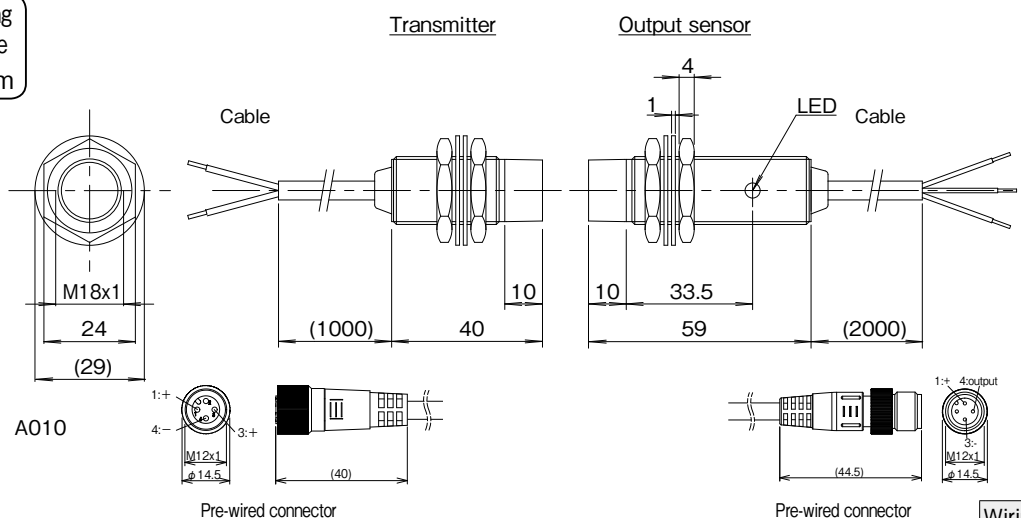
RPT-12
RPE-12

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 signal		1	
Operating distance		0...4mm	
Center offset		± 3mm	
Drive current		5mA	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / Ø5 , 2x0.34mm ²	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 45g + Cable 35g x 1m /+Connector cable 30cm 30g	
		Cable	Pre-wired connector
Type Code	DC 2-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	RPE-1804N-PU-02	RPE-1804N-PU-CP0.3
Code	PNP	RPE-1804P-PU-02	RPE-1804P-PU-CP0.3
Operational voltage		24V DC ± 5% (incl. ripple)	
Current consumption		≤ 150mA	
No. of output signal		1	
Load current		max.50mA	
Frequency of operation		25Hz	
LED		Signal output indication	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / Ø5 , 3x0.34mm ²	
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	NPN	RPE-TF1804N-PU-02	RPE-TF1804N-PU-CP0.3
Code	PNP	RPE-TF1804P-PU-02	RPE-TF1804P-PU-CP0.3
	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Wiring C006/P.116

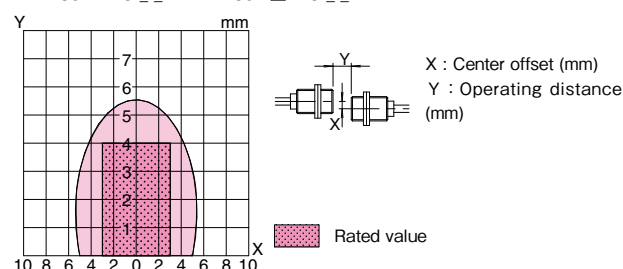
Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	\leq 3.5V
Load current	\leq 5mA

Please use a sensor which works definitely in the condition described on left.

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

RPT-1804D-PU-__ / RPE-1804 □ -PU-__

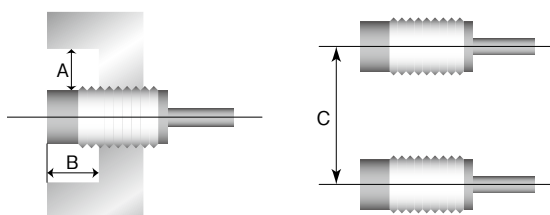


Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Transmitters or Output sensors, keep the minimum distances 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

Sensor type
DC 2-wire

Remote Sensor

DC 3-wire detector type

DC 3-wire type Terminal unit

DC 2-wire detector type

DC 2-wire type Terminal unit

Exclusive detector type

Thermocouple type

Resistance thermometer type

Load cell type

Analog sensor type

Exclusive sensor

Terminal box other unit

Wiring

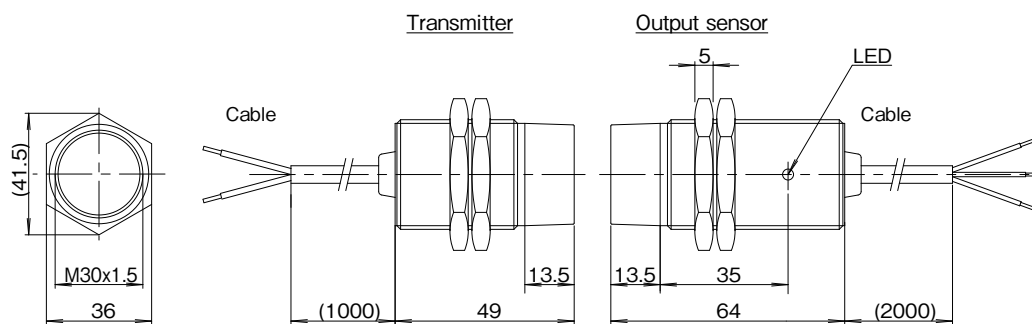
Products for maintenance

Special spec.

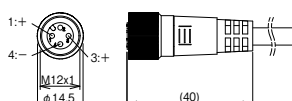
Alphanumeric product list

for 1 sensor / Size : M30

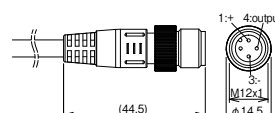
Operating distance
1...8mm



A011



Pre-wired connector



Pre-wired connector

Wiring C006/P.116

Transmitter			
Cable		Pre-wired connector	
Type Code	DC 2-wire	RPT-3008D-PU-01	RPT-3008D-PU-CP0.3
Drive voltage		12V ± 1.5V DC	
Drive current		5mA	
No. of input signal		1	
Operating distance		1...8mm	
Center offset		± 5mm	
Drive current		5mA	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / Ø5 , 2x0.34mm ²	
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	DC 2-wire	RPT-TF3008D-PU-01	RPT-TF3008D-PU-CP0.3
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

		Output sensor	
		Cable	Pre-wired connector
Type	NPN	RPE-3008N-PU-02	RPE-3008N-PU-CP0.3
Code	PNP	RPE-3008P-PU-02	RPE-3008P-PU-CP0.3
Operational voltage		24V DC ± 5% (incl. ripple)	
Current consumption		≤ 150mA	
No. of output signal		1	
Load current		max.50mA	
Frequency of operation		25Hz	
LED		Signal output indication	
Operating temperature		0...+50°C	
Protection class		IP67	
Cable		PUR / Ø5 , 3x0.34mm ²	
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight		Body 130g x Cable 35g x 2m /+Connector cable 30cm 30g	
Anti-weld slag type		Cable	Pre-wired connector
Type Code	NPN	RPE-TF3008N-PU-02	RPE-TF3008N-PU-CP0.3
	PNP	RPE-TF3008P-PU-02	RPE-TF3008P-PU-CP0.3
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin		

Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	\leq 3.5V
Load current	\leq 5mA

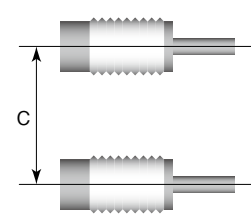
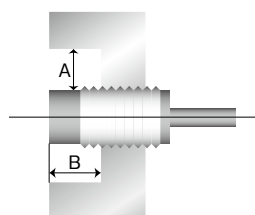
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

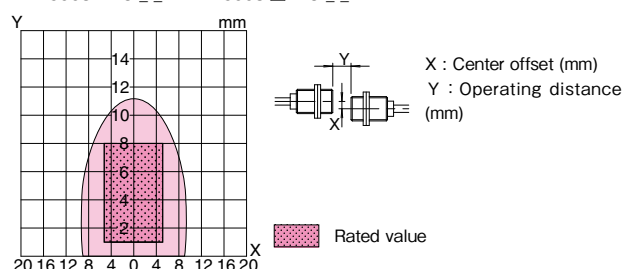
Parallel installation



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

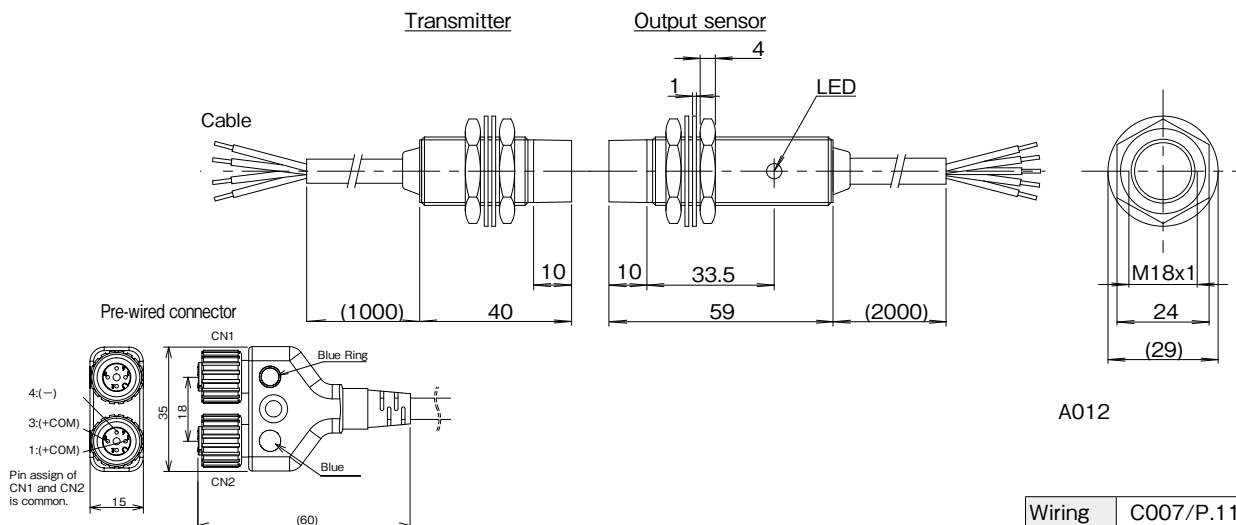
Typical Transmitting Diagram (Supply voltage at 24V/non-flush mount)

RPT-3008D-PU-__ / RPE-3008 □ -PU-__



for max. 2 sensors / Size : M18

Operating distance
0.5...4mm



A012

Wiring C007/P.116

Transmitter		
Type Code	DC 2-wire	RPT2-1804D-PU-01
Drive voltage	12V ± 1.5V DC	
Drive current	5mA per sensor	
No. of input signal	2	
Operating distance	0.5...4mm	
Center offset	± 2.5mm	
Drive current	5mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø6 , 4x0.5mm ²	PVC / Ø6
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	RPT2-TF1804D-PU-01
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Output sensor		
Type	NPN	RPE2-1804N-PU-02
Code	PNP	RPE2-1804P-PU-02
Operational voltage	24V DC ± 10% (incl. ripple)	
Current consumption	≤ 150mA	
No. of output signal	2 +1 (InZone)	
Load current	max.50mA per output	
Frequency of operation	25Hz	
LED	InZone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø6.4 , 5x0.5mm ²	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 60 g + Cable 60 g x 2 m	
Anti-weld slag	NPN	RPE2-TF1804N-PU-02
Type	PNP	RPE2-TF1804P-PU-02
Code	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	≤ 3.5V
Load current	≤ 5mA

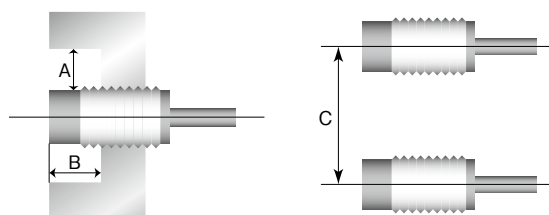
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

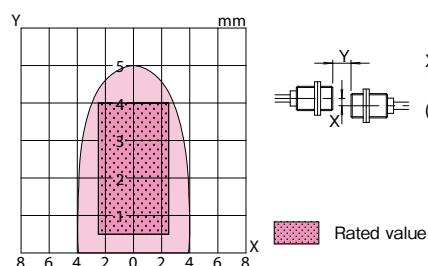
Parallel installation

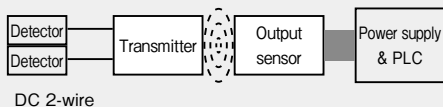


Type Code	A(mm)	B(mm)	C(mm)
RPT2-1804D-PU-__	20	15	110
RPE2-1804 □ -PU-__			

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

RPT2-1804D-PU-__ / RPE2-1804 □ -PU-__



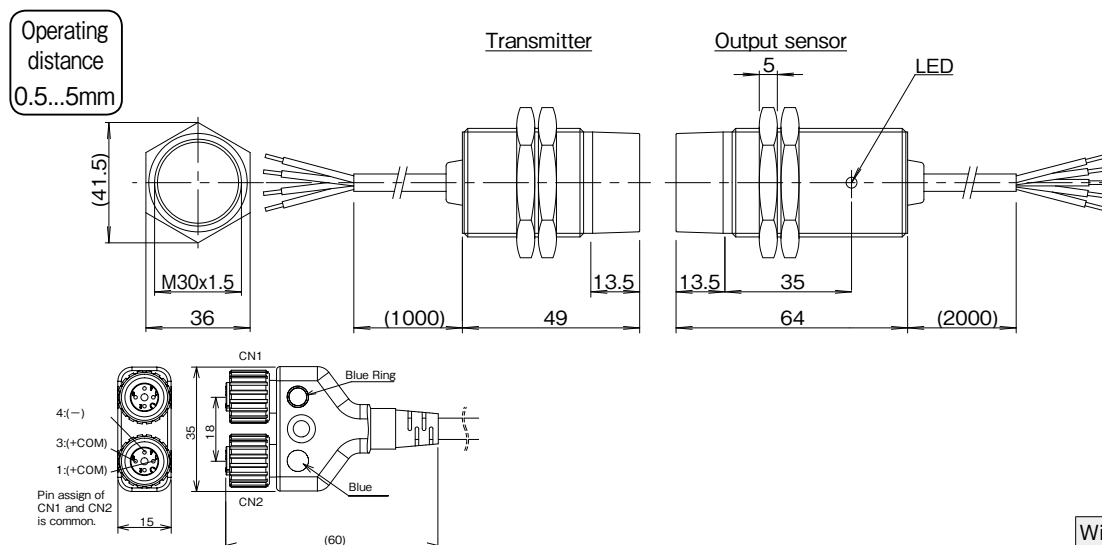


RPT2-18
RPE2-18

RPT2-30
RPE2-30

2
signal

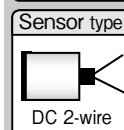
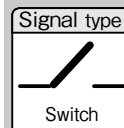
for max. 2 sensors / Size : M30



Transmitter		
Cable		Pre-wired connector
Type Code	DC 2-wire	RPT2-3005D-CP0.3
RPT2-3005D-PU-01		
Drive voltage	12V ± 1.5V DC	
Drive current	5mA per sensor	
No. of input signal	2	
Operating distance	0.5...5mm	
Center offset	± 5mm	
Drive current	5mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø6 , 4x0.5mm ²	PVC / Ø6
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	
	RPT2-TF3005D-PU-01	RPT2-TF3005D-CP0.3
	Material	
	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Output sensor		
Type	NPN	RPE2-3005N-PU-02
Code	PNP	RPE2-3005P-PU-02
Operational voltage	24V DC ± 10% (incl. ripple)	
Current consumption	≤ 150mA	
No. of output signal	2 +1 (InZone)	
Load current	max.50mA per output	
Frequency of operation	25Hz	
LED	InZone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø6.4 , 5x0.5mm ²	
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight	Body 130 g + Cable 60 g x 2 m	
Anti-weld slag	NPN	RPE2-TF3005N-PU-02
	Type PNP	RPE2-TF3005P-PU-02
Code	Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Wiring C007/P.116



Remote
Sensor

DC 3-wire
detector type

DC 3-wire type
Terminal unit

DC 2-wire
detector type

DC 2-wire type
Terminal unit

Exclusive
detector type

Thermocouple
type

Resistance
thermometer type

Load cell type

Analog sensor
type

Exclusive sensor

Terminal box
other unit

Wiring

Products for
maintenance

Special spec.

Alphanumeric
product list

Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	\leq 3.5V
Load current	\leq 5mA

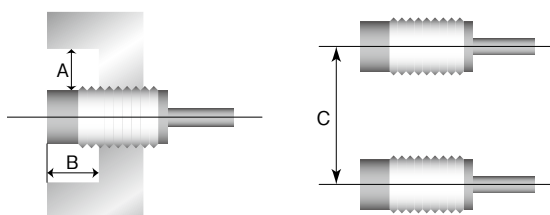
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

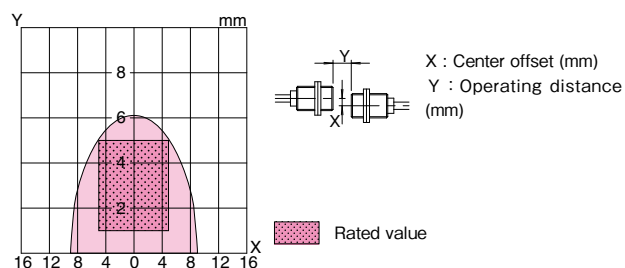
Parallel installation



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

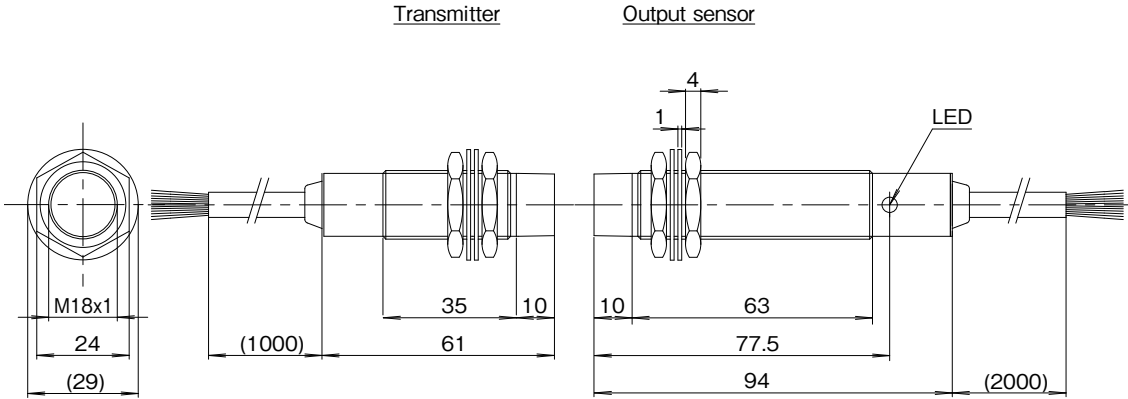
Typical Transmitting Diagram (Supply voltage at 24V/non-flush mount)

RPT2-3005D-PU-__ / RPE2-3005__-PU-__



for max. 4 sensors / Size : M18

Operating
distance
0.5...3mm



A003

Wiring C008/P.116

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

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

Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	\leq 3.5V
Load current	\leq 5mA

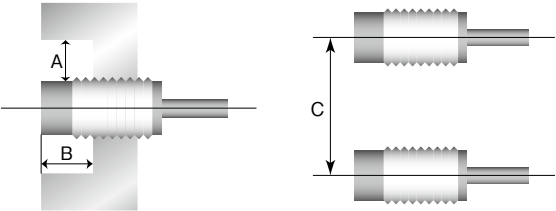
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

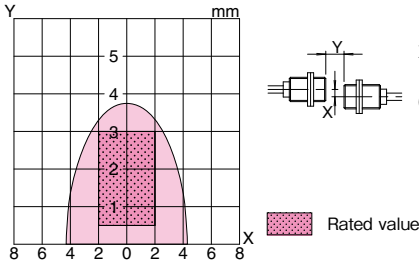
Parallel installation

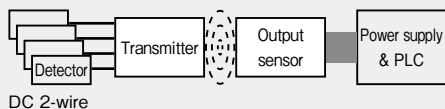


Type Code	A(mm)	B(mm)	C(mm)
RPT4-1803D-PU-__	18	18	110
RPE4-1803 □ -PU-__			

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

RPT4-1803D-PU-__ / RPE4-1803 □ -PU-__





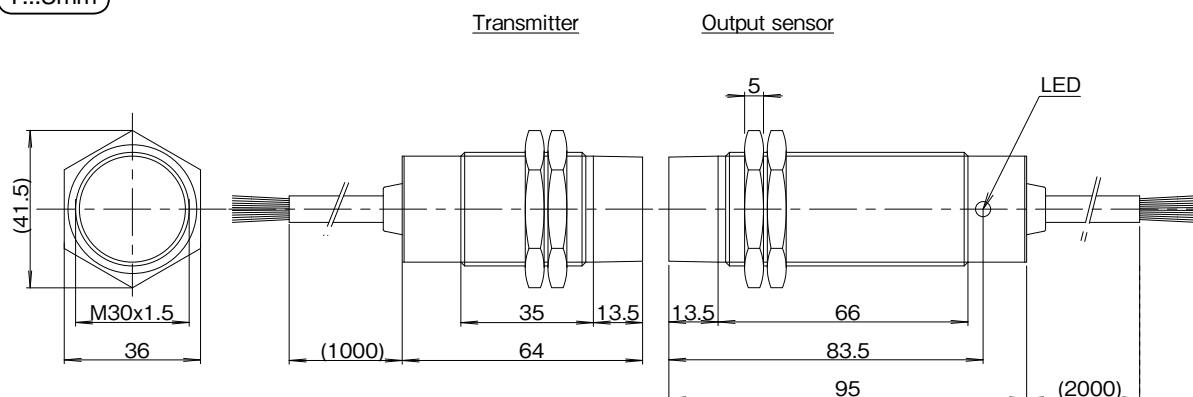
RPT4-18
RPE4-18

RPT4-30
RPE4-30

4
signal

for max. 4 sensors / Size : M30

Operating
distance
1...5mm



A004

Wiring C008/P.116

Transmitter	
Type Code	DC 2-wire RPT4-3005D-PU-01
Drive voltage	12V \pm 1.5V DC
Drive current	5mA per sensor
No. of input signal	4
Operating distance	1...5mm
Center offset	\pm 6mm
Drive current	5mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / \varnothing 6.3 , 7x0.3mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 130 g + Cable 60 g x 1 m
Anti-weld slag Type Code	DC 2-wire RPT4-TF3005D-PU-01
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Output sensor	
Type Code	NPN RPE4-3005N-PU-02 PNP RPE4-3005P-PU-02
Operational voltage	24V DC \pm 5% (incl. ripple)
Current consumption	\leq 150mA
No. of output signal	4 +1 (InZone)
Load current	max.50mA per output
Frequency of operation	30Hz
LED	InZone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / \varnothing 6.3 , 7x0.3mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable 60 g x 2 m
Anti-weld slag Type Code	NPN RPE4-TF3005N-PU-02 PNP RPE4-TF3005P-PU-02
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	\leq 3.5V
Load current	\leq 5mA

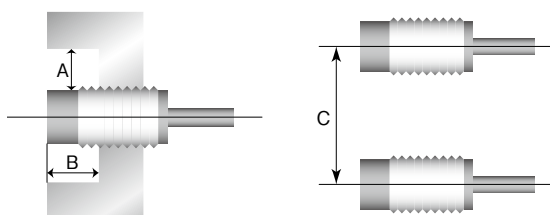
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

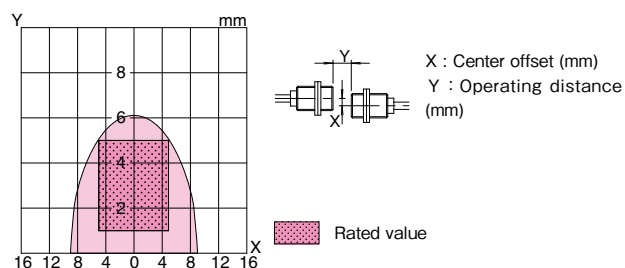
Surrounding metal

Parallel installation

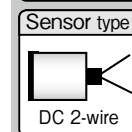
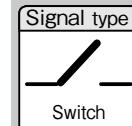


Typical Transmitting Diagram (Supply voltage at 24V/non-flush mount)

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

DC 3-wire
detector type

DC 3-wire type
Terminal unit

DC 2-wire
detector type

DC 2-wire type
Terminal unit

Exclusive
detector type

Thermocouple
type

Resistance
thermometer type

Load cell type

Analog sensor
type

Exclusive sensor

Terminal box
other unit

Wiring

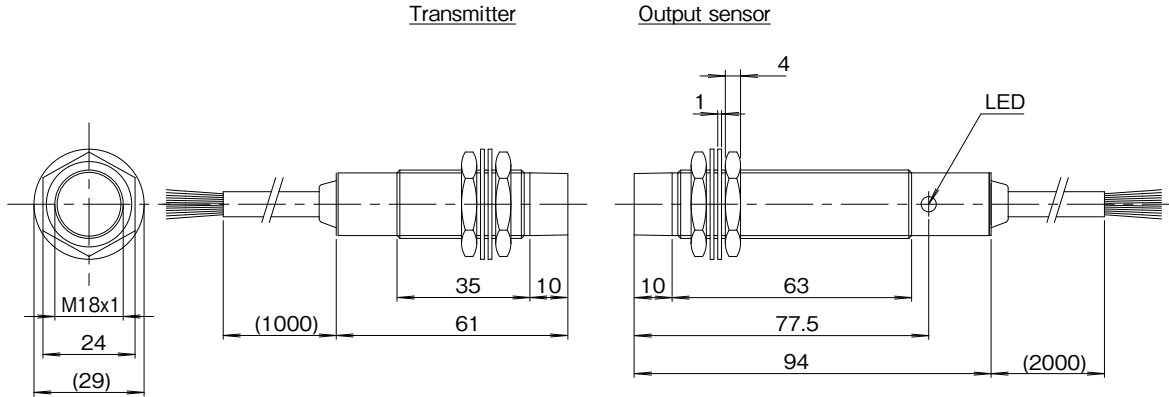
Products for
maintenance

Special spec.

Alphanumeric
product list

for max. 8 sensors / Size : M18

Operating distance
0.5...3mm



A014

Wiring C009/P.117

Transmitter		
Type Code	DC 2-wire	RPT8-1803D-PU-01
Drive voltage	12V ± 1.5V DC	
Drive current	5mA per sensor	
No. of input signal	8	
Operating distance	0.5...3mm	
Center offset	± 2.5mm	
Drive current	5mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø7.9 , 9x0.18mm ²	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 60 g + Cable 75 g x 1 m	
Anti-weld slag Type Code	DC 2-wire	RPT8-TF1803D-PU-01
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Output sensor		
Type Code	NPN	RPE8-1800N-PU-02
	PNP	RPE8-1800P-PU-02
Operational voltage	24V DC ± 10% (incl. ripple)	
Current consumption	≤ 400mA	
No. of output signal	8 + 1 (InZone)	
Load current	max.50mA per output	
Frequency of operation	60Hz	
LED	InZone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø7.7 , 2x0.5mm ² +9x0.18mm ²	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 90 g + Cable 75 g x 2 m	
Anti-weld slag Type Code	NPN	RPE8-TF1800N-PU-02
	PNP	RPE8-TF1800P-PU-02
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	≤ 3.5V
Load current	≤ 5mA

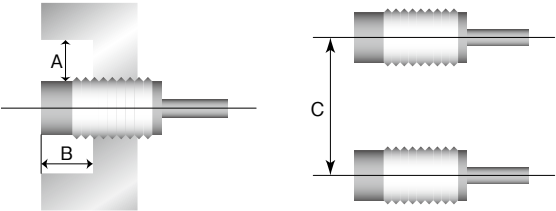
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

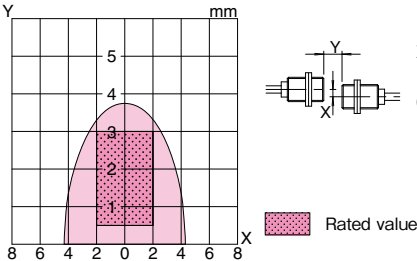
Parallel installation

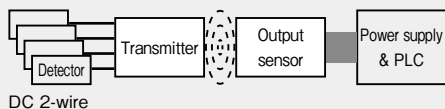


Type Code	A(mm)	B(mm)	C(mm)
RPT8-1803D-PU-__	18	18	110
RPE8-1800 □ -PU-__			

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

RPT8-1803D-PU-__ / RPE8-1800 □ -PU-__





RPT8-18
RPE8-18

RPT8-30
RPE8-30

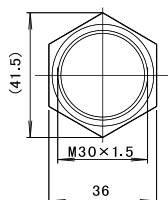
8
signal

for max. 8 sensors / Size : M30

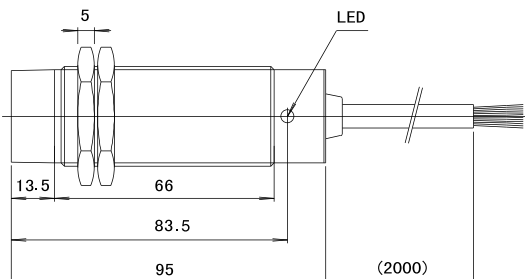
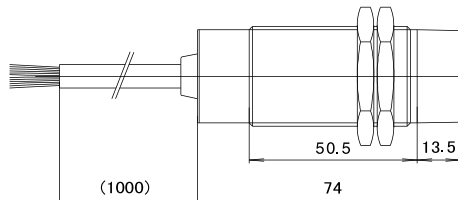
Operating
distance
2...7mm

Transmitter

Output sensor



A005



RPT8-3007D is — common.

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

Wiring C010/P.117

Transmitter	
Type Code	DC 2-wire RPT8-3007D-PU-01
Drive voltage	22V +4 -2V DC
Drive current	5mA per sensor
No. of input signal	8
Operating distance	2...7mm
Center offset	± 3mm
Drive current	5mA
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.7 , 2x0.5mm ² +9x0.18mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 150 g + Cable 75 g x 1 m
Anti-weld slag Type Code	DC 2-wire RPT8-TF3007D-PU-01
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Output sensor	
Type Code	NPN RPE8-3000N-PU-02 PNP RPE8-3000P-PU-02
Operational voltage	24V DC ± 10% (incl. ripple)
Current consumption	≤ 400mA
No. of output signal	8 +1 (InZone)
Load current	max.50mA per output
Frequency of operation	60Hz
LED	InZone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.7 , 2x0.5mm ² +9x0.18mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 190 g + Cable 75 g x 2 m
Anti-weld slag Type Code	NPN RPE8-TF3000N-PU-02 PNP RPE8-TF3000P-PU-02
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin

Applicable sensor

Supply voltage	22V DC
Current consumption	---
Residual voltage	≤ 6V
Load current	≤ 5mA

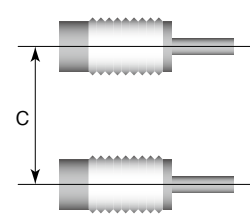
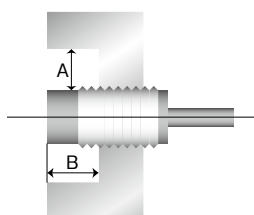
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

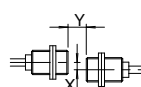
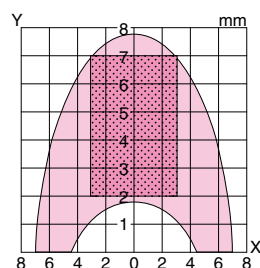
Surrounding metal

Parallel installation



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

RPT8-3007D-PU-__ / RPE8-3000 □ -PU-__



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

Rated value

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

Signal type
Switch

Sensor type
DC 2-wire

Remote
Sensor

DC 3-wire
detector type

DC 3-wire type
Terminal unit

DC 2-wire
detector type

DC 2-wire type
Terminal unit

Exclusive
detector type

Thermocouple
type

Resistance
thermometer type

Load cell type

Analog sensor
type

Exclusive sensor

Terminal box
other unit

Wiring

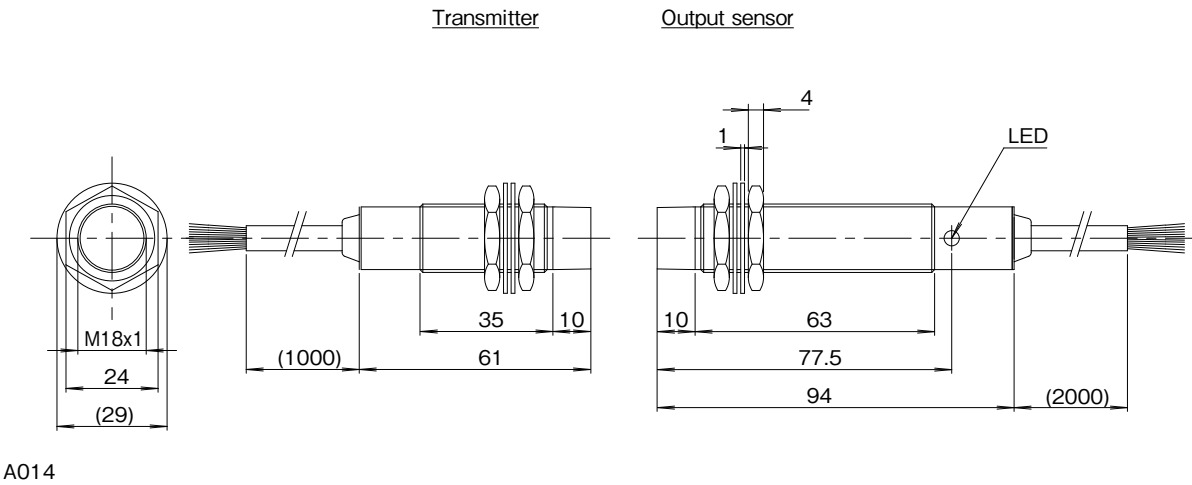
Products for
maintenance

Special spec.

Alphanumeric
product list

for max. 8 sensors / Size : M18

Operating distance
0.5...3mm



Wiring C009/P.117

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

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

Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	\leq 3.5V
Load current	\leq 5mA

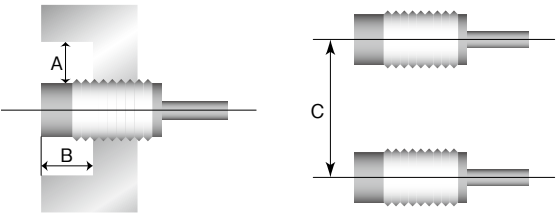
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

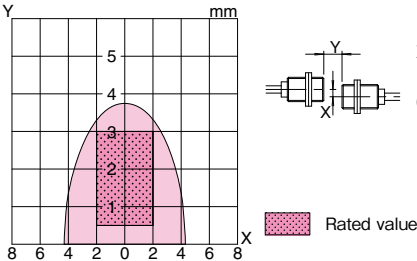
Parallel installation

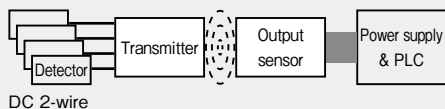


Type Code	A(mm)	B(mm)	C(mm)
RS08TA-018D-PU-__	18	18	110
RS08EA-018 □ -PU-__			

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

RS08TA-018D-PU-__ / RS08EA-018 □ -PU-__





RS08TA-18
RS08EA-18

RS08TA-30
RS08EA-30

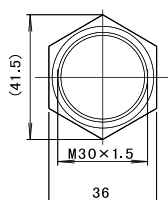
8
signal

for max. 8 sensors / Size : M30

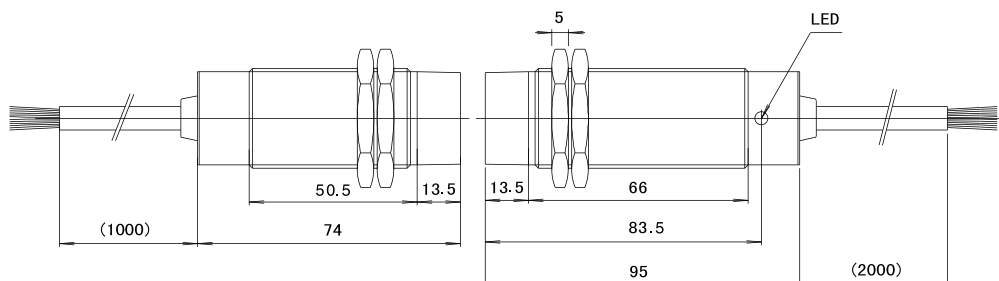
Operating
distance
2...7mm

Transmitter

Output sensor



A005



Wiring C010/P.117

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

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

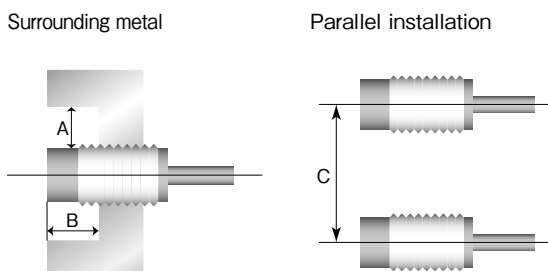
Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	\leq 3.5V
Load current	\leq 5mA

Please use a sensor which works definitely in the condition described on left.

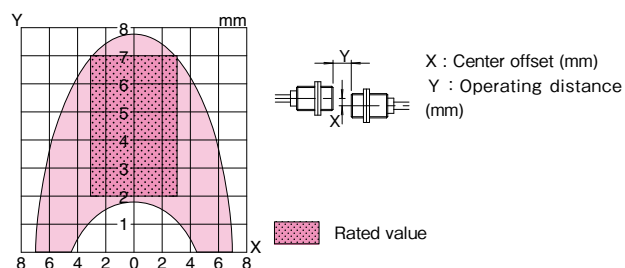
Installation notes

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

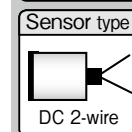
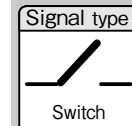


Typical Transmitting Diagram (Supply voltage at 24V/non-flush mount)

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 type
Terminal unit

DC 2-wire
detector type

DC 2-wire type
Terminal unit

Exclusive
detector type

Thermocouple
type

Resistance
thermometer type

Load cell type

Analog sensor
type

Exclusive sensor

Terminal box
other unit

Wiring

Products for
maintenance

Special spec.

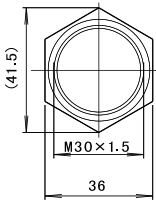
Alphanumeric
product list

for max. 15 sensors / Size : M30

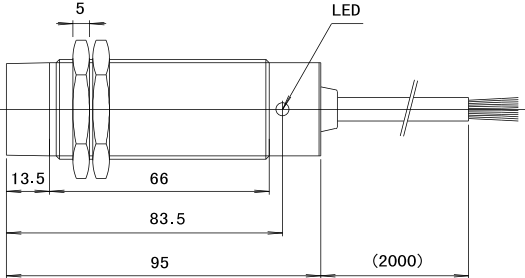
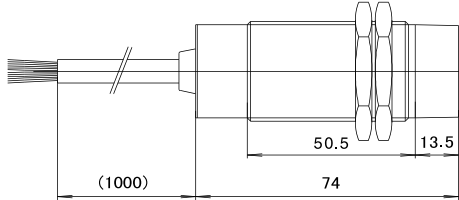
Operating distance
1...5mm

Transmitter

Output sensor



A005



Wiring C011/P.118

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

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

Applicable sensor

Supply voltage	12V DC
Current consumption	---
Residual voltage	\leq 3.5V
Load current	\leq 5mA

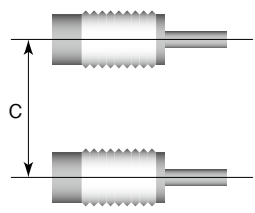
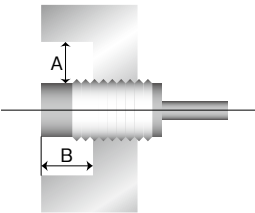
Please use a sensor which works definitely in the condition described on left.

Installation notes

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

Surrounding metal

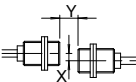
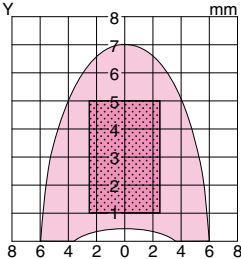
Parallel installation



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)

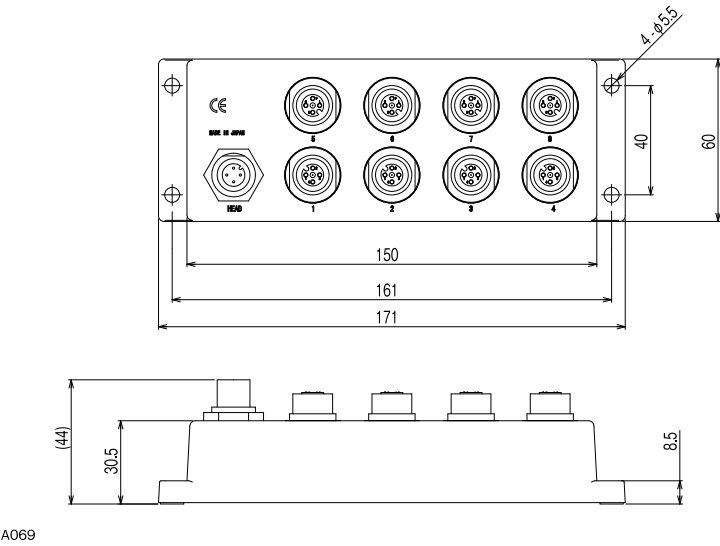
RPT15-3005D-PU-__ / RPE15-3000 □ -PU-__



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

Rated value

for max. 8 sensors Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.


Wiring C025/P.119

Transmitter / Remote terminal	
Type Connector type 1	RS8TA-222D-S04
Code Connector type 2	RS8T-222D-S04
Applicable sensor	DC 2-wire type (M12 connector 4-pin : polarized/1:+,4:-, non-polarized/3:+,4:-)
Drive voltage	22V DC \pm 10%
Drive current	5mA 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
Remarks	The unused connectors should be protected by a protection cap. (option:Type Code XS2Z-12)

Applicable sensor

Supply voltage	22V DC
Current consumption	---
Residual voltage	\leq 6V
Load current	\leq 5mA

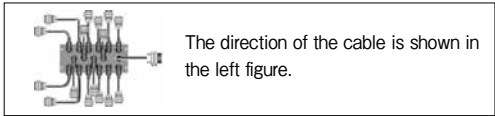
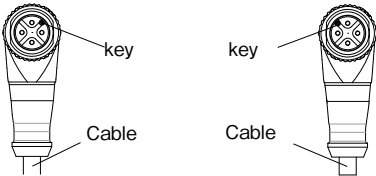
Please use a sensor which works definitely in the condition described on left.

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

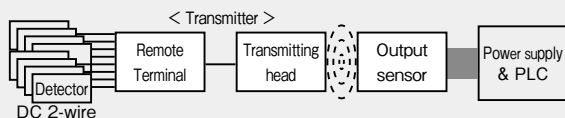
Applicable angle connector type (Detector's connector)

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



RS8TA-222
RS8T-222

RSH8T-30
RSH8E-30

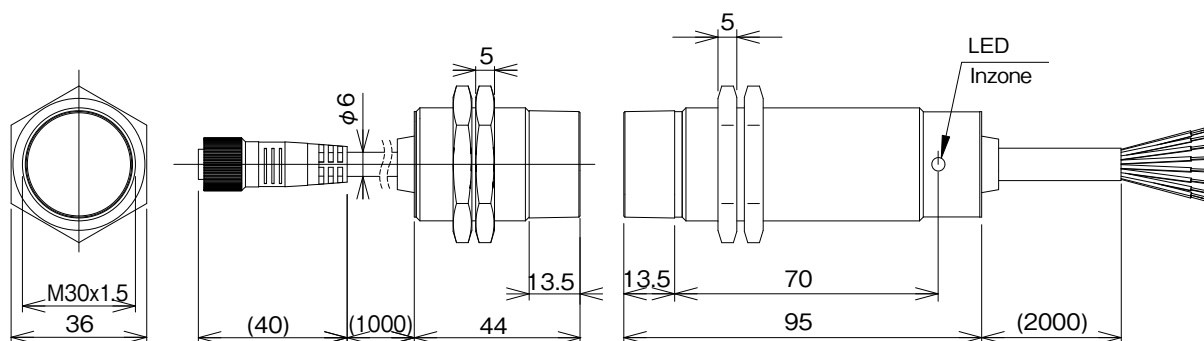
8
signal

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

Operating distance
2...8mm

Transmitting head

Output sensor



A057

Wiring C025/P.119

Transmitter / Transmitting head		
Type Code	connect to Remote Terminal	RSH8T-030-PU-CP1.0
Drive voltage	22V \pm 1.5V DC	
Drive current	120mA	
Remote terminal	RS8TA-222_-S04、RS8T-222_-S04	
Operating distance	2...8mm	
Center offset	\pm 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 x 1 m	
Anti-weld slag Type Code	connect to Remote Terminal	RSH8T-TF030-PU-CP1.0
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

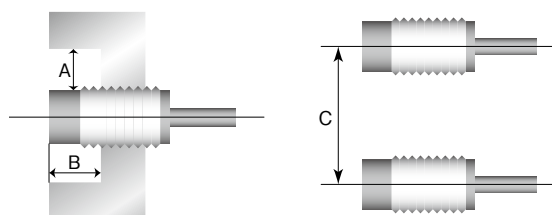
Output sensor		
Type Code	NPN PNP	RSH8E-030N-PU-02 RSH8E-030P-PU-02
Operational voltage	24V DC \pm 10% (incl. ripple)	
Current consumption	\leq 500mA	
No. of output signal	8 +1 (InZone)	
Load current	max.50mA per output	
Frequency of operation	20Hz	
LED	InZone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR/ \varnothing 7.7、2x0.5mm ² +9x0.18mm ²	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 160 g + Cable 75 g x 2 m	
Anti-weld slag Type Code	NPN PNP	RSH8E-TF030N-PU-02 RSH8E-TF030P-PU-02
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 Transmitters or Output sensors, keep the minimum distances as described below.

Surrounding metal

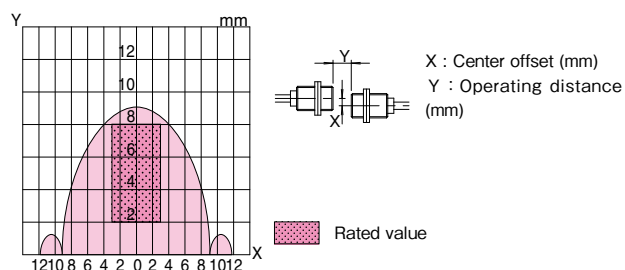
Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RSH8T-030-PU-CP-__	30	30	160
RSH8E-030 □ -PU-__			

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

RSH8T-030-PU-CP-__ / RSH8E-030 □ -PU-__



Signal type
Switch

Sensor type
DC 2-wire

Remote Sensor

DC 3-wire detector type

DC 3-wire type Terminal unit

DC 2-wire detector type

DC 2-wire type Terminal unit

Exclusive detector type

Thermocouple type

Resistance thermometer type

Load cell type

Analog sensor type

Exclusive sensor

Terminal box other unit

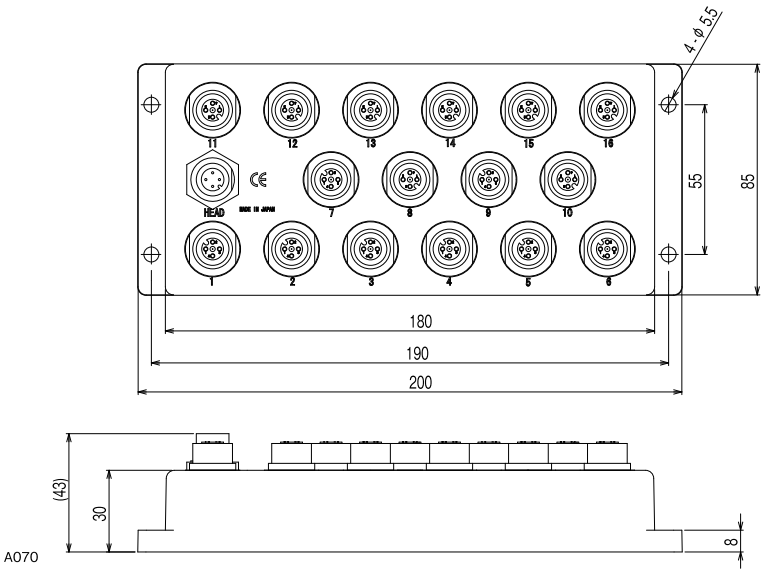
Wiring

Products for maintenance

Special spec.

Alphanumeric product list

for max. 16 sensors Terminal unit type / Remote Terminal



This dimensional drawing shows connector type 1.

Wiring C026/P.119

Transmitter / Remote terminal	
Type Connector type 1	RS16TA-211D-S04
Code Connector type 2	RS16T-211D-S04
Applicable sensor	DC 2-wire type (M12 connector 4-pin : polarized/1:+,4:-, non-polarized/3:+,4:-)
Drive voltage	22V DC \pm 10%
Drive current	5mA 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	1000 g
Remarks	The unused connectors should be protected by a protection cap. (option:Type Code XS2Z-12)

Applicable sensor

Supply voltage	22V DC
Current consumption	---
Residual voltage	\leq 6V
Load current	\leq 5mA

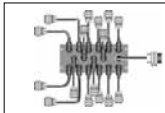
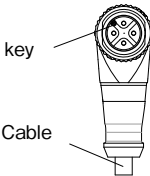
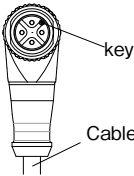
Please use a sensor which works definitely in the condition described on left.

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.

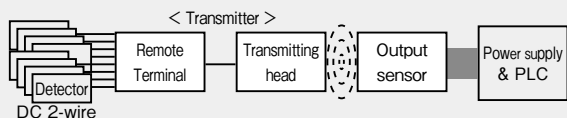
1 :Applicable to RS16TA-211_

2 :Applicable to RS16T-211_



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

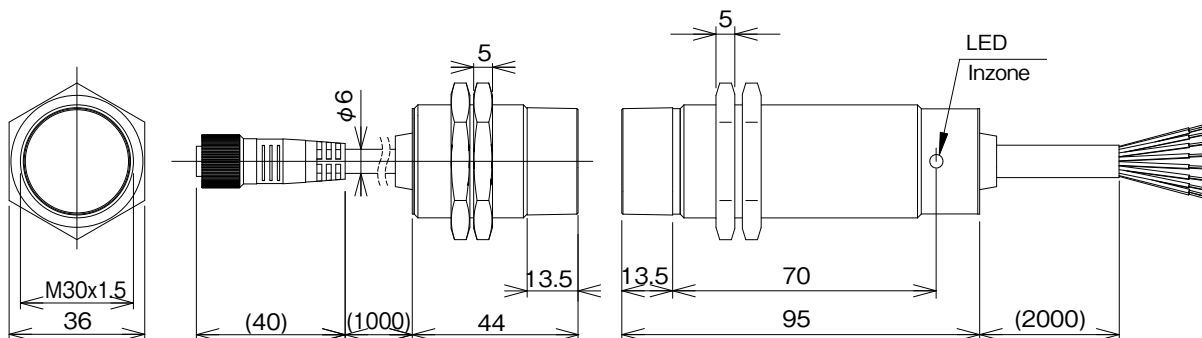
signal

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

Operating distance
2...8mm

Transmitting head

Output sensor

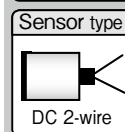
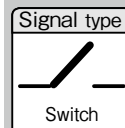


A057

Wiring C026/P.119

Transmitter / Transmitting head		
Type Code	connect to Remote Terminal	RSH16T-030-PU-CP1.0
Drive voltage	22V \pm 1.5V DC	
Drive current	120mA	
Remote terminal	RS16TA-211_-S04, RS16T-211_-S04	
Operating distance	2...8mm	
Center offset	\pm 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 x 1 m	
Anti-weld slag Type Code	connect to Remote Terminal	RSH16T-TF030-PU-CP1.0
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	

Output sensor		
Type Code	NPN	RSH16E-030N-PU-02
	PNP	RSH16E-030P-PU-02
Operational voltage	24V DC \pm 10% (incl. ripple)	
Current consumption	\leq 500mA	
No. of output signal	16 +1 (InZone)	
Load current	max.50mA per output	
Frequency of operation	20Hz	
LED	InZone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR/ \varnothing 8.5, 2x0.5mm ² +17x0.18mm ²	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 160 g + Cable 110 g x 2 m	
Anti-weld slag Type Code	NPN	RSH16E-TF030N-PU-02
	PNP	RSH16E-TF030P-PU-02
Material	Housing:Fluorinated resin coated/Active face:Fluorinated resin	



Remote Sensor

DC 3-wire detector type

DC 3-wire type Terminal unit

DC 2-wire detector type

DC 2-wire type Terminal unit

Exclusive detector type

Thermocouple type

Resistance thermometer type

Load cell type

Analog sensor type

Exclusive sensor

Terminal box other unit

Wiring

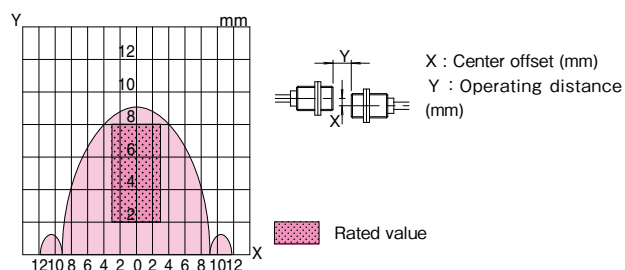
Products for maintenance

Special spec.

Alphanumeric product list

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

RSH16T-030-PU-CP-__ / RSH16E-030 □ -PU-__

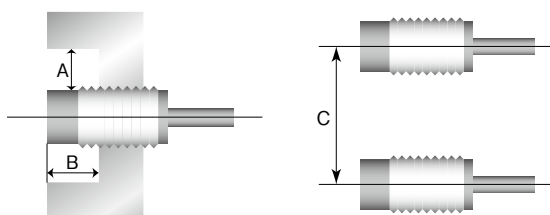


Installation notes

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

Surrounding metal

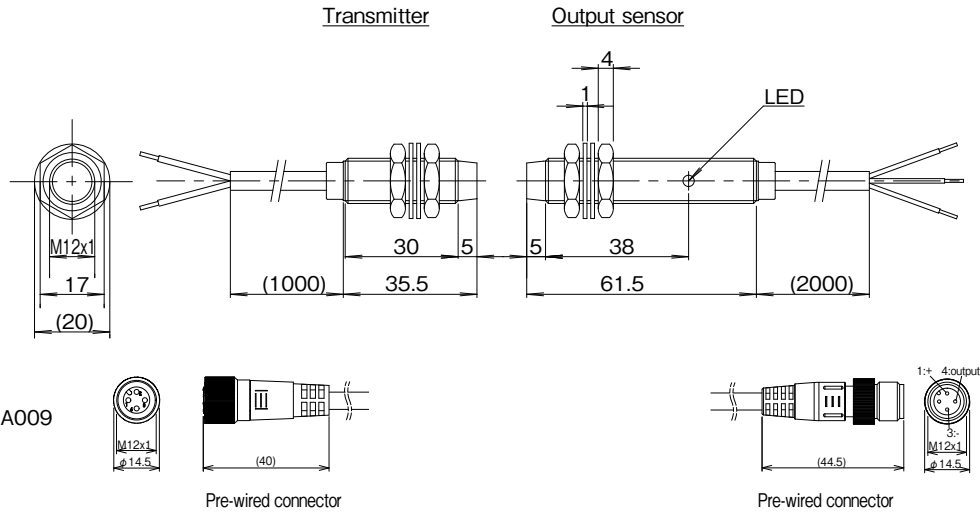
Parallel installation



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

for 1 sensor / Size : M12

Operating distance
0...2mm



Wiring C012/P.120

Transmitter		
Type	Cable	Pre-wired connector
RXD	RXT-1202-PU-01	RXT-1202-PU-CP0.3
Code	Mechanical	RST-1202-PU-01
		-
Drive voltage	---	
Drive current	---	
No. of input signal	1	
Operating distance	0...2mm (0...1.6mm)	
Center offset	± 1.5mm	
Drive current	---	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø5 , 2x0.34mm ²	
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight	Body 30g + Cable 25g x 1m /+Connector cable 30cm 30g	
Remarks	() : Operating distance when flush-mounted	

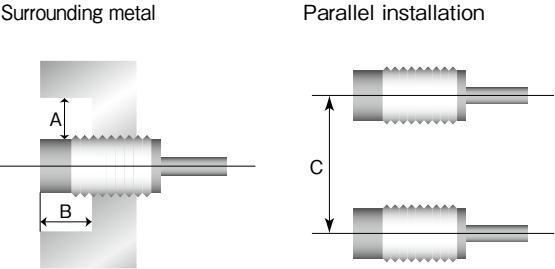
Output sensor		
Type	Cable	Pre-wired connector
NPN	RXE-1202N-PU-02	RXE-1202N-PU-CP0.3
Code	PNP	RXE-1202P-PU-02
		RXE-1202P-PU-CP0.3
Operational voltage	24V DC ± 10% (incl. ripple)	
Current consumption	≤ 25mA	
No. of output signal	1	
Load current	max.100mA	
Frequency of operation	25Hz	
LED	Signal output indication	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø5 , 3x0.34mm ²	
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight	Body 40g + Cable 35g x 2m /+Connector cable 30cm 30g	
Remarks		

Applicable sensor

- The applicable sensor for RXT is an exclusive sensor RXD series. (see P.103)
- 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.

Installation notes

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

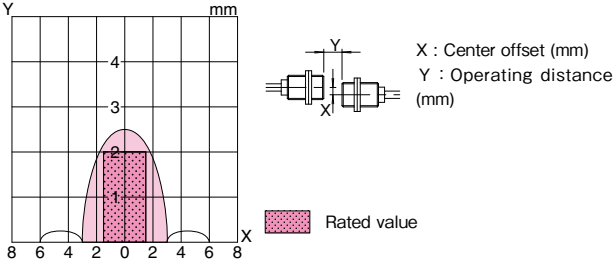


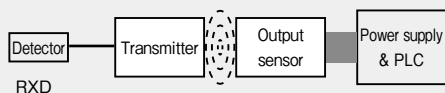
Type Code	A(mm)	B(mm)	C(mm)
RXT-1202-PU-__	12 (6)	12 (0)	100 (20)
RXE-1202 □ -PU-__			

() : Flush-mounted in metal

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

RXT-1202-PU-__ / RXE-1202 □ -PU-__





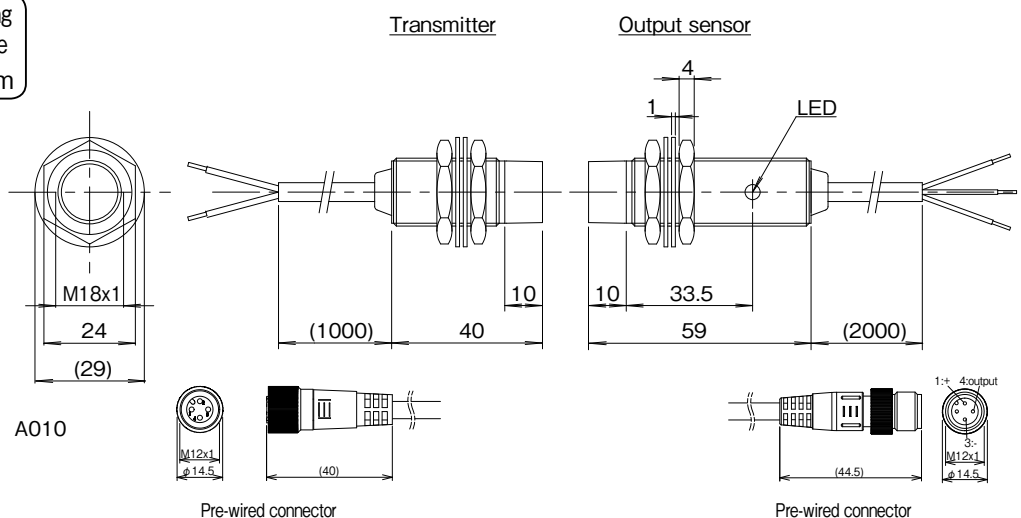
RXT-12
RXE-12

RXT-18
RXE-18

1
signal

for 1 sensor / Size : M18

Operating distance
0...5mm



Wiring C012/P.120

Transmitter			
Type Code	RXD	Cable	Pre-wired connector
		RXT-1805-PU-01	RXT-1805-PU-CP0.3
Drive voltage	---		
Drive current	---		
No. of input signal	1		
Operating distance	0...5mm (0...4mm)		
Center offset	± 2.5mm		
Drive current	---		
Operating temperature	0...+50°C		
Protection class	IP67		
Cable	PUR / Ø5 , 2x0.34mm ²		
Material Housing	Nickel plated brass		
Active face	Nylon 12		
Weight	Body 40g + Cable 25g x 1m/+Connector cable 30cm 30g		
Remarks	() : Operating distance when flush-mounted		

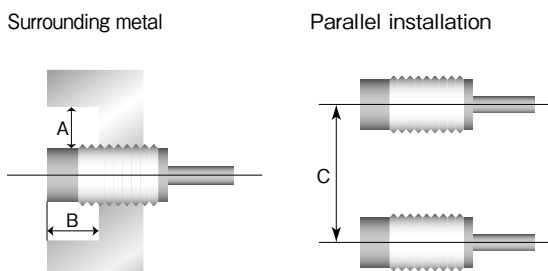
Output sensor			
Type Code	NPN PNP	Cable	Pre-wired connector
		RXE-1805N-PU-02 RXE-1805P-PU-02	RXE-1805N-PU-CP0.3 RXE-1805P-PU-CP0.3
Operational voltage	24V DC ± 10% (incl. ripple)		
Current consumption	≤ 25mA		
No. of output signal	1		
Load current	max.100mA		
Frequency of operation	25Hz		
LED	Signal output indication		
Operating temperature	0...+50°C		
Protection class	IP67		
Cable	PUR / Ø5 , 3x0.34mm ²		
Material Housing	Nickel plated brass		
Active face	Nylon 12		
Weight	Body 60g + Cable 35g x 2m/+Connector cable 30cm 30g		
Remarks			

Applicable sensor

- The applicable sensor for RXT is an exclusive sensor RXD series. (see P.103)
- It is no problem even if the outer diameter of RXD and RXT is different.

Installation notes

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

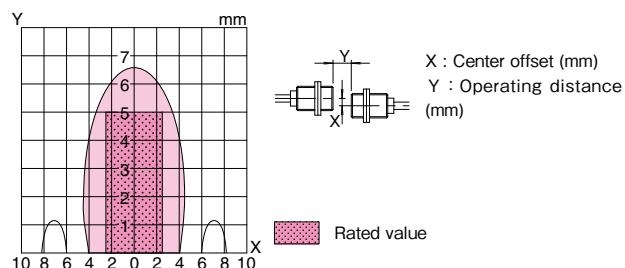


Type Code	A(mm)	B(mm)	C(mm)
RXT-1805-PU-__	18 (9)	18 (0)	110 (35)
RXE-1805 □ -PU-__			

() : Flush-mounted in metal

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

RXT-1805-PU-__ / RXE-1805 □ -PU-__



Signal type
Switch

Sensor type
RXD
DC 2-wire

Remote Sensor

DC 3-wire detector type

DC 3-wire type Terminal unit

DC 2-wire detector type

DC 2-wire type Terminal unit

Exclusive detector type

Thermocouple type

Resistance thermometer type

Load cell type

Analog sensor type

Exclusive sensor

Terminal box other unit

Wiring

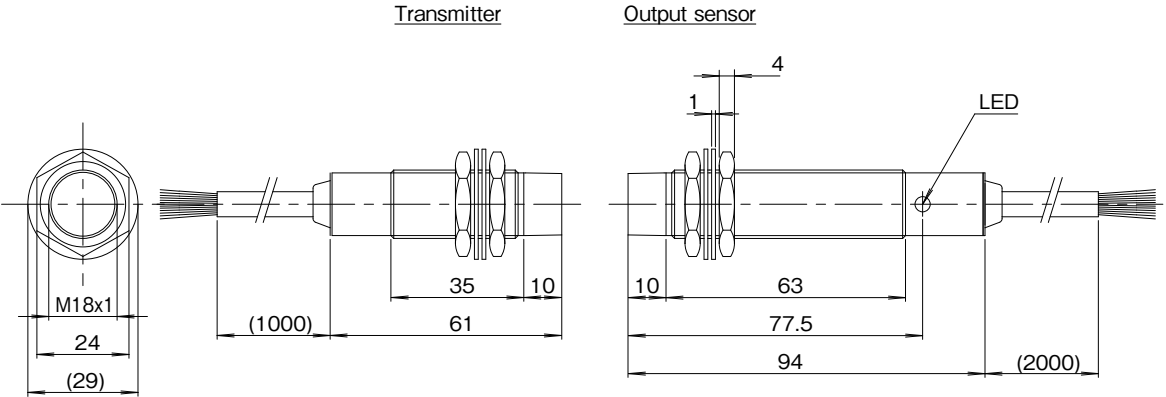
Products for maintenance

Special spec.

Alphanumeric product list

for max. 8 sensors / Size : M18

Operating
distance
1...5mm



A014

Wiring C027/P.120

Transmitter		
Type Code	RXD / Mechanical	RXT8-1805-PU-01
Drive voltage	---	
Drive current	---	
No. of input signal	8	
Operating distance	1...5mm	
Center offset	± 2.5mm	
Drive current	---	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø7.9 , 9x0.18mm ²	
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight	Body 65 g + Cable 75 g x 1 m	
Remarks		

Output sensor		
Type Code	NPN / PNP	RXE8-1800N-PU-02 / RXE8-1800P-PU-02
Operational voltage	24V DC ± 10% (incl. ripple)	
Current consumption	≤ 150mA	
No. of output signal	8 + 1 (InZone)	
Load current	max.50mA per output	
Frequency of operation	100Hz	
LED	InZone	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø7.7 , 2x0.5mm ² +9x0.18mm ²	
Material	Housing	Nickel plated brass
	Active face	Nylon 12
Weight	Body 95 g + Cable 75 g x 2 m	
Remarks		

Applicable sensor

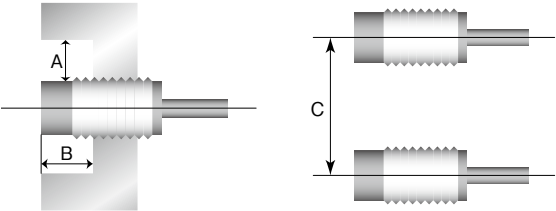
- The applicable sensor is an exclusive sensor RXD series (see P.103) and a mechanical switch. The standard sensors can not be used.
- It is no problem even if the outer diameter of RXD and Transmitter is different.
- When using a mechanical switch, it should be the micro-load type without LED.

Installation notes

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

Surrounding metal

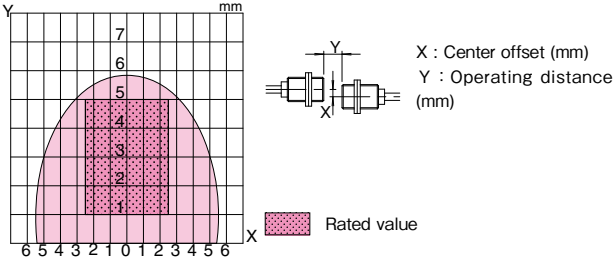
Parallel installation

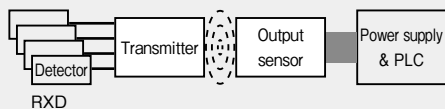


Type Code	A(mm)	B(mm)	C(mm)
RXT8-1805-PU-__	18	18	110
RXE8-1800 □ -PU-__			

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

RXT8-1805-PU-__ / RXE8-1800 □ -PU-__





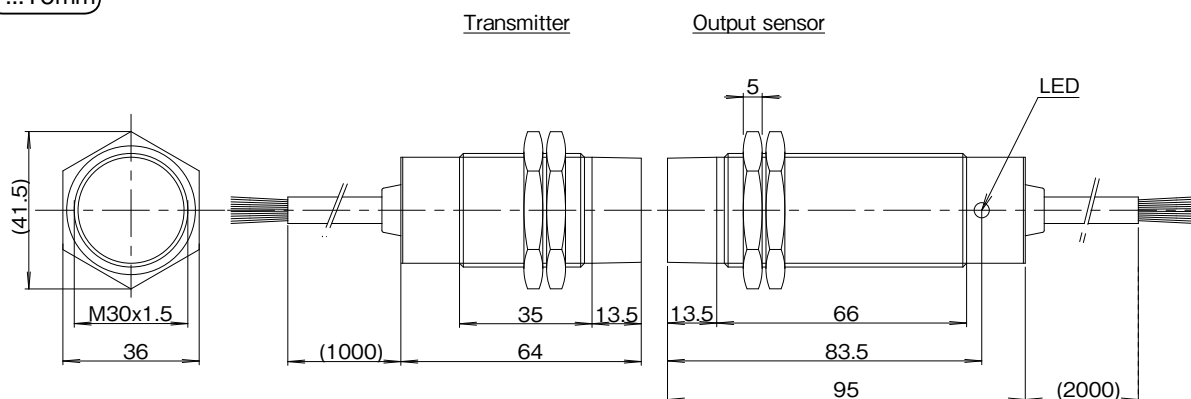
RXT8-18
RXE8-18

RXT8-30
RXE8-30

8
signal

for max. 8 sensors / Size : M30

Operating
distance
1...10mm



A004

Wiring C027/P.120

Transmitter	
Type RXD / Code Mechanical	RXT8-3010-PU-01
Drive voltage	---
Drive current	---
No. of input signal	8
Operating distance	1...10mm
Center offset	± 3mm
Drive current	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.9 , 9x0.18mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 110 g + Cable 75 g x 1 m
Remarks	

Output sensor	
Type NPN PNP	RXE8-3000N-PU-02 RXE8-3000P-PU-02
Operational voltage	24V DC ± 10% (incl. ripple)
Current consumption	≤ 150mA
No. of output signal	8 +1 (InZone)
Load current	max.50mA per output
Frequency of operation	100Hz
LED	InZone
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.7 , 2x0.5mm ² +9x0.18mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 160 g + Cable 75 g x 2 m
Remarks	

Applicable sensor

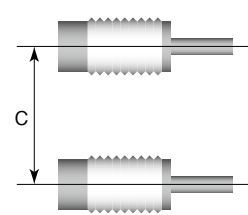
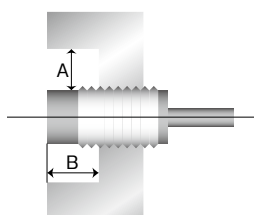
- The applicable sensor is an exclusive sensor RXD series (see P.103) and a mechanical switch. The standard sensors can not be used.
- It is no problem even if the outer diameter of RXD and Transmitter is different.
- When using a mechanical switch, it should be the micro-load type without LED.

Installation notes

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

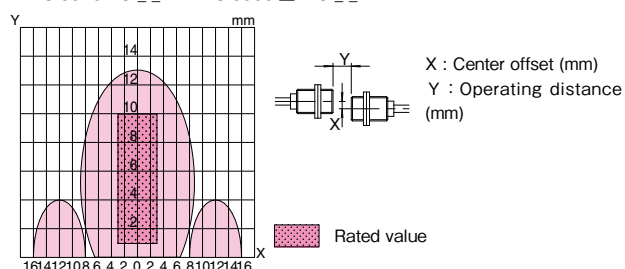
Surrounding metal

Parallel installation



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

RXT8-3010-PU-__ / RXE8-3000 □ -PU-__



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

Signal type
Switch

Sensor type
RXD
DC 2-wire

Remote
Sensor

DC 3-wire
detector type

DC 3-wire type
Terminal unit

DC 2-wire
detector type

DC 2-wire type
Terminal unit

Exclusive
detector type

Thermocouple
type

Resistance
thermometer type

Load cell type

Analog sensor
type

Exclusive sensor

Terminal box
other unit

Wiring

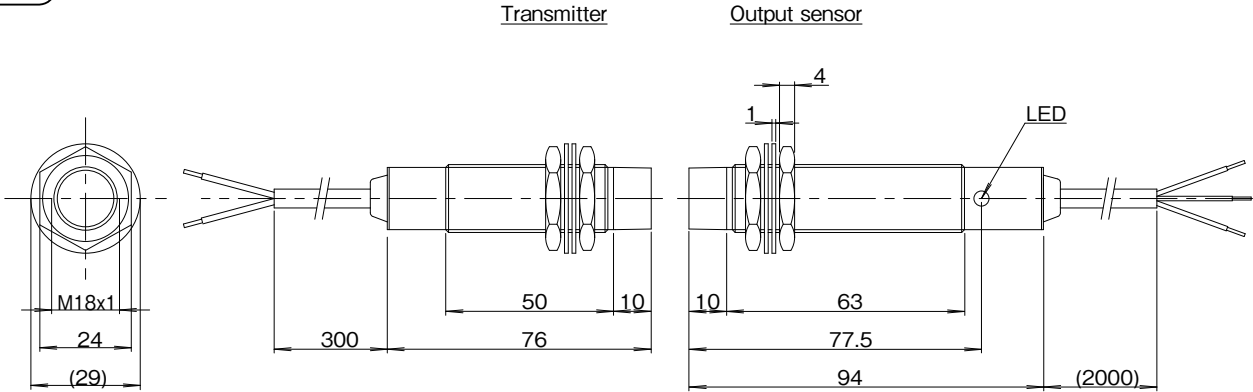
Products for
maintenance

Special spec.

Alphanumeric
product list

for 1 thermocouple K type / Size : M18

Operating
distance
1...4mm



A035

Wiring C014/P.121

Transmitter	
Type Code	Thermocouple K 0...1000°C
RTT-1804-K100	
Applicable sensor	Thermocouple K type
No. of input signal	1
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 ² , ellipse 5x3.5mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 75 g + Cable 40 g x 1 m
Remarks	

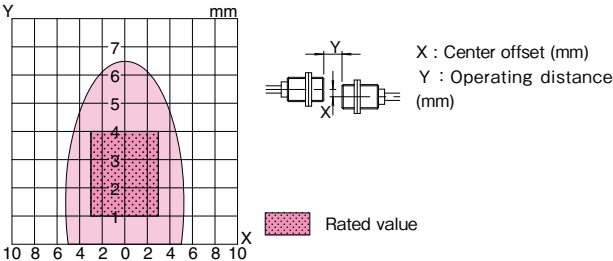
Output sensor	
Type Code	Current output
RTE-1804E-PU-02	
Operational voltage	24V DC ± 5% (incl. ripple)
Current consumption	≤ 150mA
No. of output signal	1
Output signal	4...20mA
Resolution	0.1%
Response delay	≤ 0.5 sec.
LED	InZone
Operating temperature	0...+60°C
Protection class	IP67
Cable	PUR / Ø5 , 3x0.34mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 95 g + Cable 35 g x 2 m
Remarks	

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)

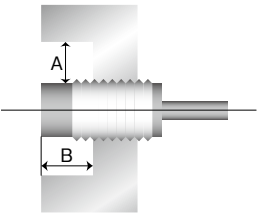
RTT-1804-K100 / RTE-1804E-PU-__



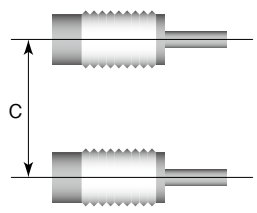
Installation notes

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

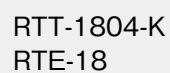
Surrounding metal




Parallel installation




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



Signal type
 <p>Analog</p>

Sensor type



Thermocouple K

DC 3-wire
detector type

DC 3-wire type
Terminal unit

DC 2-wire
detector type

DC 2-wire type
Terminal unit

Exclusive
detector type

Thermocouple
K type

Resistance thermometer typeLoad cell typeAnalog sensor type

Exclusive sensor

Terminal box
other unit

Wiring

Products for maintenance

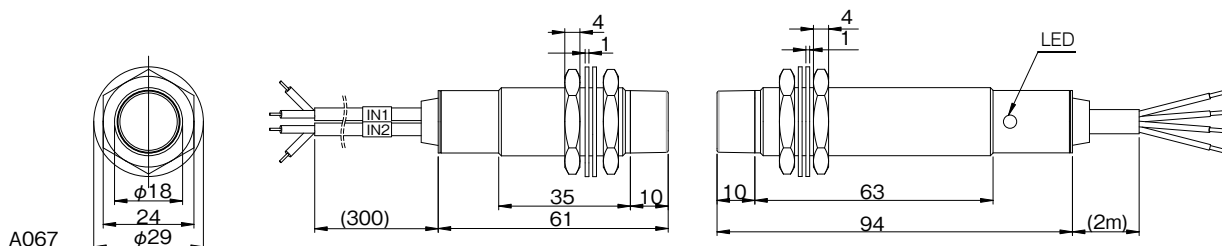
Special spec.Alphanumeric
product list

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.121

Transmitter	
Type	0...1000°C
Code	0...300°C
Applicable sensor	JIS Thermocouple K
No. of input signal	2 (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)
Remarks	

Output sensor	
Type	
Code	RS02E-018E-PU-02
Operational voltage	24V DC $\pm 5\%$ (include ripple)
Current consumption	$\leq 150\text{mA}$
No. of output signal	4 ... 20 mA $\times 2$
Load current	$\leq 400 \Omega$
Resolution	$\leq 0.1\%$ FS
Response delay	≤ 0.5 sec.
Linearity	$\leq \pm 0.8\%$ FS
LED	InZone (data valid)
Operating temperature	0...+80°C
Protection class	IP67
Cable	PUR、 $\varnothing 5\text{mm}/4 \times 0.25\text{mm}^2$
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 95g + Cable 30g x 2m
Remarks	

Notes

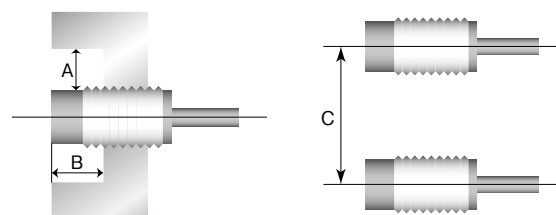
- Please use thermocouple K type complying to JIS.
- The measurement temperature range is within the specifications mentioned above.
- Output is current source, therefore please connect the load between output and negative.

Installation notes

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

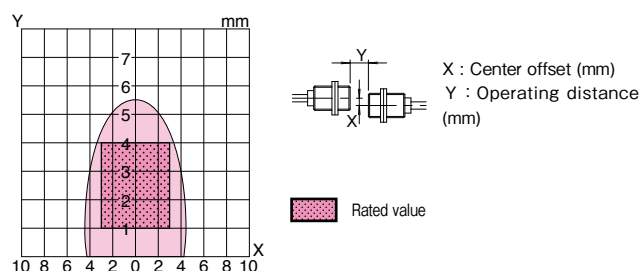
Surrounding metal

Parallel installation

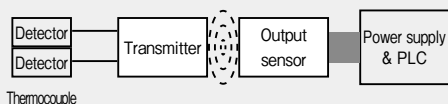


Typical Transmitting Diagram (Supply voltage at 24V/non-flush mount)

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



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

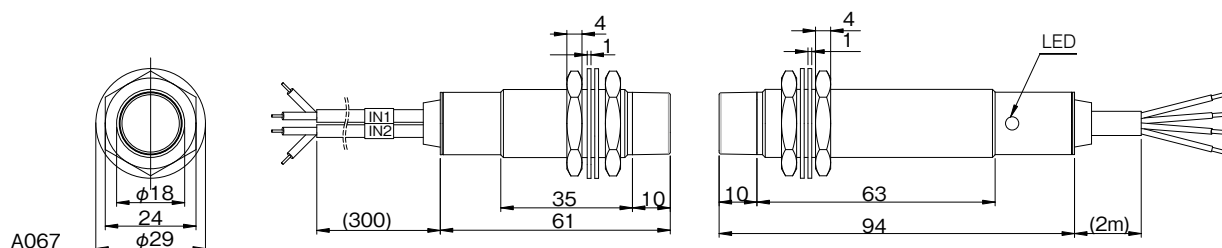
2
signal

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.121

Transmitter	
Type Code	0...300°C RS02T-018-J300
Applicable sensor	JIS Thermocouple J type
No. of input signal	2
Measuring range	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)
Remarks	

Output sensor	
Type Code	RS02E-018E-PU-02
Operational voltage	24V DC $\pm 5\%$ (include ripple)
Current consumption	$\leq 150\text{mA}$
No. of output signal	4 ... 20 mA $\times 2$
Load current	$\leq 400 \Omega$
Resolution	$\leq 0.1\% \text{ FS}$
Response delay	$\leq 0.5 \text{ sec.}$
Linearity	$\leq \pm 0.8\% \text{ FS}$
LED	InZone (data valid)
Operating temperature	0...+80°C
Protection class	IP67
Cable	PUR、 $\varnothing 5\text{mm}/4 \times 0.25\text{mm}^2$
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 95 g + Cable 30 g x 2m
Remarks	

Notes

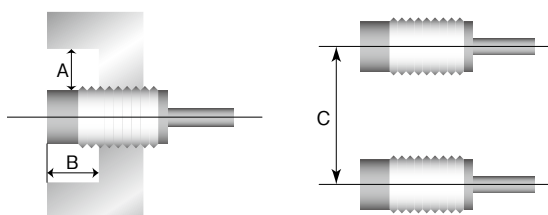
- Please use thermocouple J type complying to JIS.
- The measurement temperature range is within the specifications mentioned above.
- Output is current source, therefore please connect the load between output and negative.

Installation notes

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

Surrounding metal

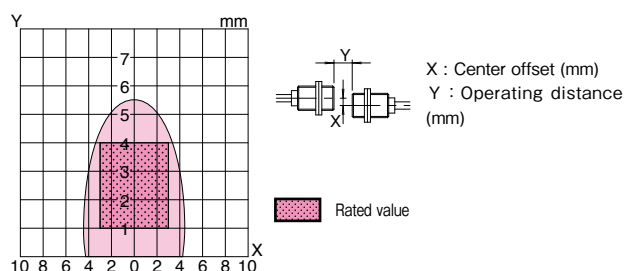
Parallel installation



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

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

RS02T-018-J300 / RS02E-018E-PU-__



Signal type
Analog

Sensor type
Thermocouple K · J

Remote Sensor

DC 3-wire detector type

DC 3-wire type Terminal unit

DC 2-wire detector type

DC 2-wire type 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

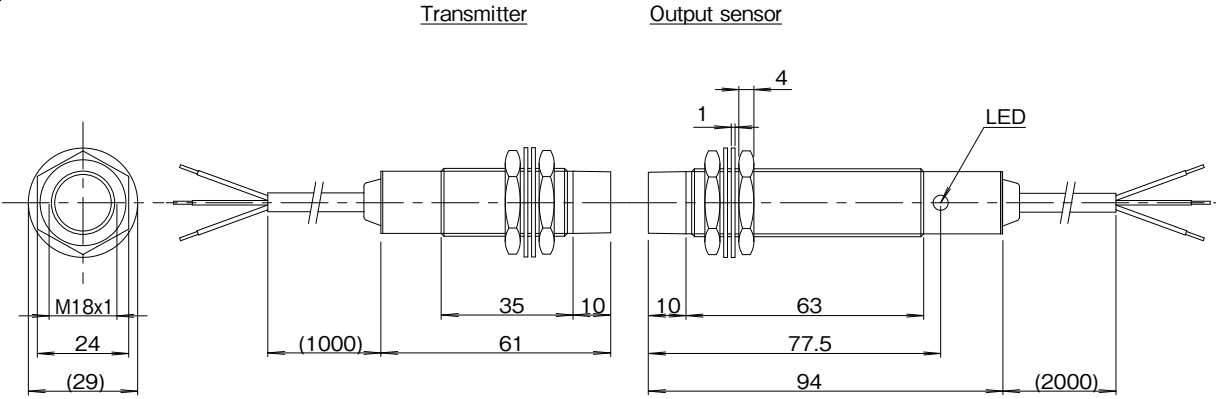
Products for maintenance

Special spec.

Alphanumeric product list

for 1 resistance thermometer / Size : M18

Operating
distance
1...4mm



A039

Wiring C016/P.121

Transmitter	
Type	0...100°C RTT-1804-PT1B10-PU-01
Code	0...200°C RTT-1804-PT1B20-PU-01
	0...300°C RTT-1804-PT1B30-PU-01
Applicable sensor	Resistance Thermometer type Pt100 3-wire
No. of input signal	1
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 / Ø5 , 3x0.34mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 75 g + Cable 35 g x 1 m
Remarks	

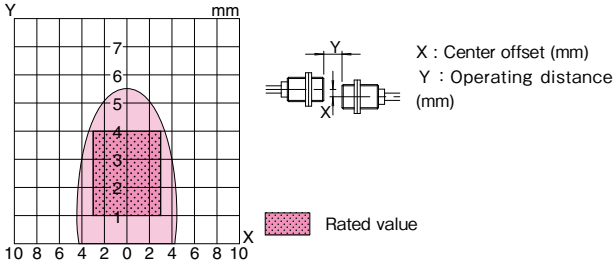
Output sensor	
Type	RTE-1804E-PU-02
Code	Current output
Operational voltage	24V DC ± 5% (incl. ripple)
Current consumption	≤ 150mA
No. of output signal	1
Output	4...20mA
Resolution	≤ 0.5°C
Response delay	≤ 0.5 sec.
LED	InZone
Operating temperature	0...+60°C
Protection class	IP67
Cable	PUR / Ø5 , 3x0.34mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 95 g + Cable 35 g x 2 m
Remarks	

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 / RTT-9012-PT1B10-PU : 0...100 degree C
RTT-1804-PT1B20-PU / RTT-9012-PT1B20-PU : 0...200 degree C
RTT-1804-PT1B30-PU / RTT-9012-PT1B30-PU : 0...300 degree C
- Output is current source , therefore please connect the load between output and negative.

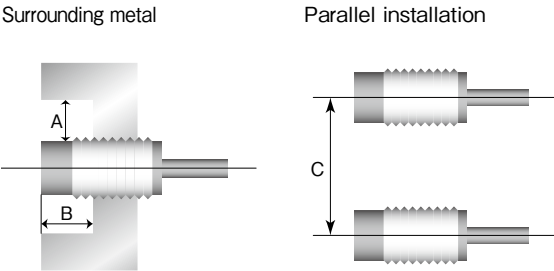
Typical Transmitting Diagram (Supply voltage at 24V/non-flush mount)

RTT-1804-PT1B_0-PU-01 / RTE-1804E-PU-02

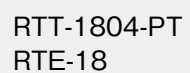


Installation notes

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



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



1 signal



Analog



Resistance Thermometer

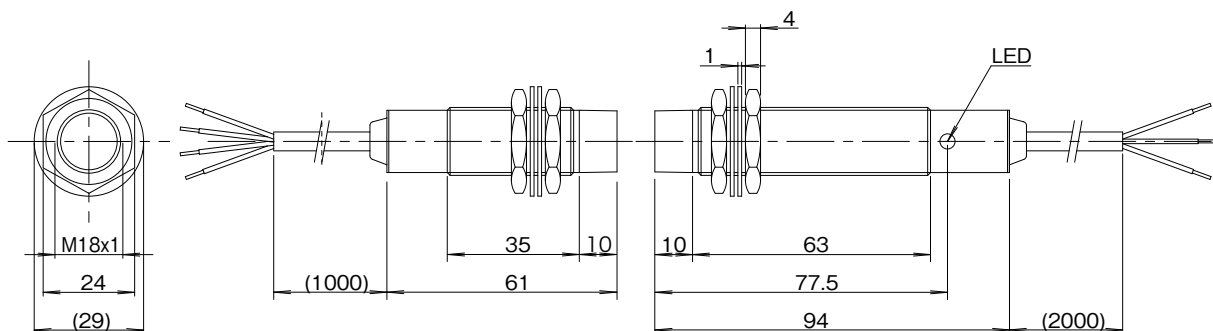
Alphanumeric
product list[illegible]

for 1 load cell / Size : M18

Operating distance
1...4mm

Transmitter

Output sensor



A040

Wiring C017/P.121

Transmitter			
Type	1mV/V	RNT-1804-LC10-PU-01	
Code	1.5mV/V	RNT-1804-LC15-PU-01	
	2mV/V	RNT-1804-LC20-PU-01	
Applicable sensor	Compression load cell 350 Ω ± 10%		
No. of input signal	1		
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 ² with shield		
Material	Housing	Nickel plated brass	
	Active face	Nylon 12	
Weight	Body 80 g + Cable 50 g x 1 m		
Remarks			

Output sensor		
Type	RTE-1804E-PU-02	
Code		
Current output		
Operational voltage	24V DC ± 5% (incl. ripple)	
Current consumption	≤ 150mA	
No. of output signal	1	
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 / Ø5 , 3x0.34mm ²	
Material Housing	Nickel plated brass	
Active face	Nylon 12	
Weight	Body 95 g + Cable 35 g x 2 m	
Remarks		

Notes

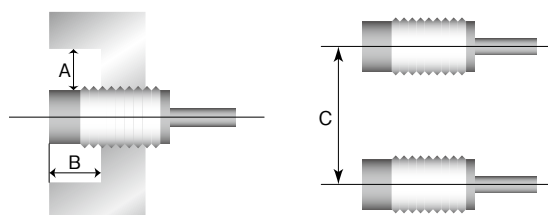
- Use a compression load cell (350 ohm +/- 10%) as a detector.
- Connect the load between output and negative, for current output is current source.

Installation notes

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

Surrounding metal

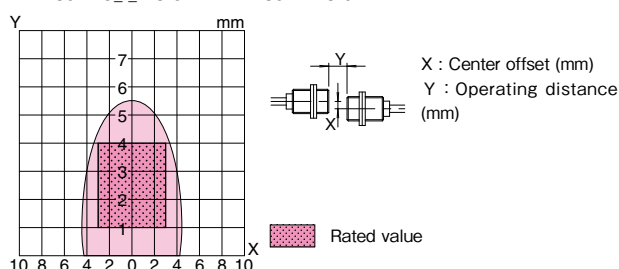
Parallel installation

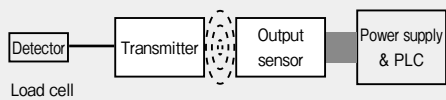


Type Code	A(mm)	B(mm)	C(mm)
RTT-1804-LC_ _-PU- _ _	20	15	110
RTE-1804E-PU- _ _			

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

RTT-1804-LC_ _-PU-01 / RTE-1804E-PU-02





RNT-18_LC
RNE-18

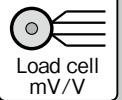
1 signal

Signal type



Analog

Sensor type	Number of sensors	Number of nodes	Number of links	Number of clusters	Number of clusters per node	Number of clusters per link	Number of clusters per node per link
Temperature	1	1	1	1	1	1	1
Humidity	1	1	1	1	1	1	1
Light	1	1	1	1	1	1	1
Sound	1	1	1	1	1	1	1
Gas	1	1	1	1	1	1	1
Pressure	1	1	1	1	1	1	1
Acceleration	1	1	1	1	1	1	1
Rotation	1	1	1	1	1	1	1
Position	1	1	1	1	1	1	1
Velocity	1	1	1	1	1	1	1
Temperature	1	1	1	1	1	1	1
Humidity	1	1	1	1	1	1	1
Light	1	1	1	1	1	1	1
Sound	1	1	1	1	1	1	1
Gas	1	1	1	1	1	1	1
Pressure	1	1	1	1	1	1	1
Acceleration	1	1	1	1	1	1	1
Rotation	1	1	1	1	1	1	1
Position	1	1	1	1	1	1	1
Velocity	1	1	1	1	1	1	1

Load cell
mV/V

Remote Sensor

DC 3-wire
detector type

Load cell type

Terminal box
other unit

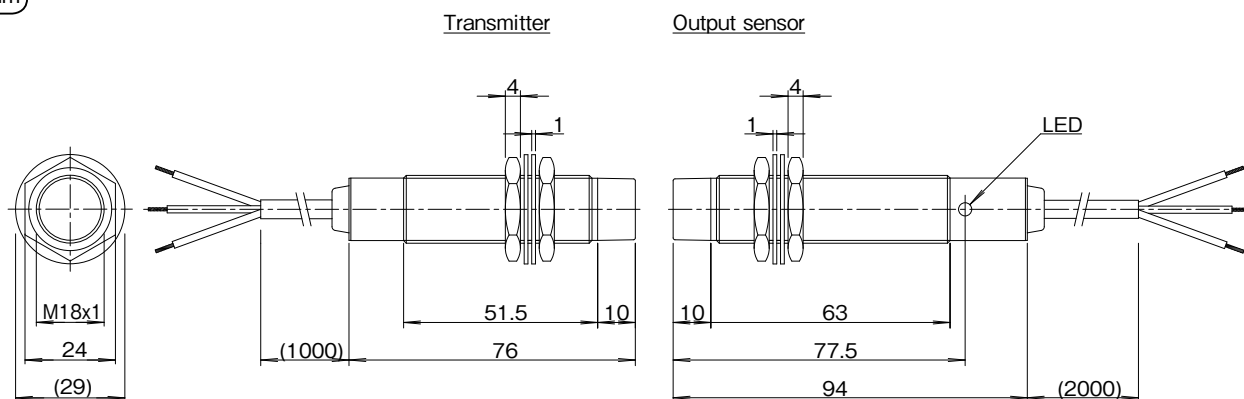
Wiring

Products for maintenance

Alphanumeric
product list

for 1 analog sensor / Size : M18

Operating distance
0...2.5mm



A041

Wiring C018/P.121

Transmitter	
Type Code	0...10V RNT-1803-VS10-PU-01
Applicable sensor	Analog sensor output 0...10V
No. of input signal	1
Drive voltage	20 ± 4V DC
Drive current	max.10mA
Operating distance	0...2.5mm
Center offset	± 2mm
Operating temperature	0...+60°C
Protection class	IP67
Cable	PUR / Ø5 , 3x0.34mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 80 g + Cable 35 g x 1 m
Remarks	

Output sensor	
Type Code	RNE-1803A-PU-02
Operational voltage	24V DC ± 5% (incl. ripple)
Current consumption	≤ 150mA
No. of output signal	1
Output	0...10V
Resolution	0.1%
Response delay	≤ 0.2 sec.
LED	InZone
Operating temperature	0...+60°C
Protection class	IP67
Cable	PUR / Ø5 , 3x0.34mm ²
Material Housing	Nickel plated brass
Active face	Nylon 12
Weight	Body 90 g + Cable 35 g x 2 m
Remarks	

Notes

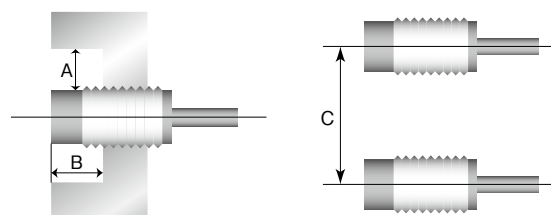
- Use the analog sensors which fulfill the specifications below:
- (1) Output voltage : 0...10V
- (2) Operating voltage : 16...24V
- (3) Current consumption : ≤ 10mA

Installation notes

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

Surrounding metal

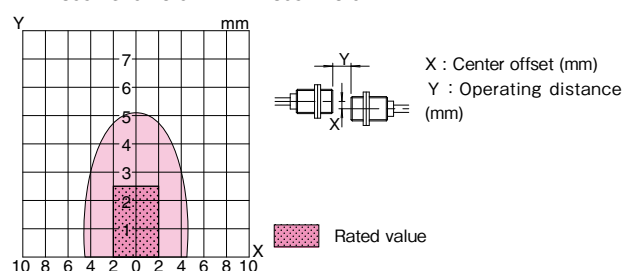
Parallel installation

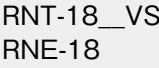




Type Code	A(mm)	B(mm)	C(mm)
RNT-1803-VS10-PU-__	20	15	110
RTE-1803A-PU-__			

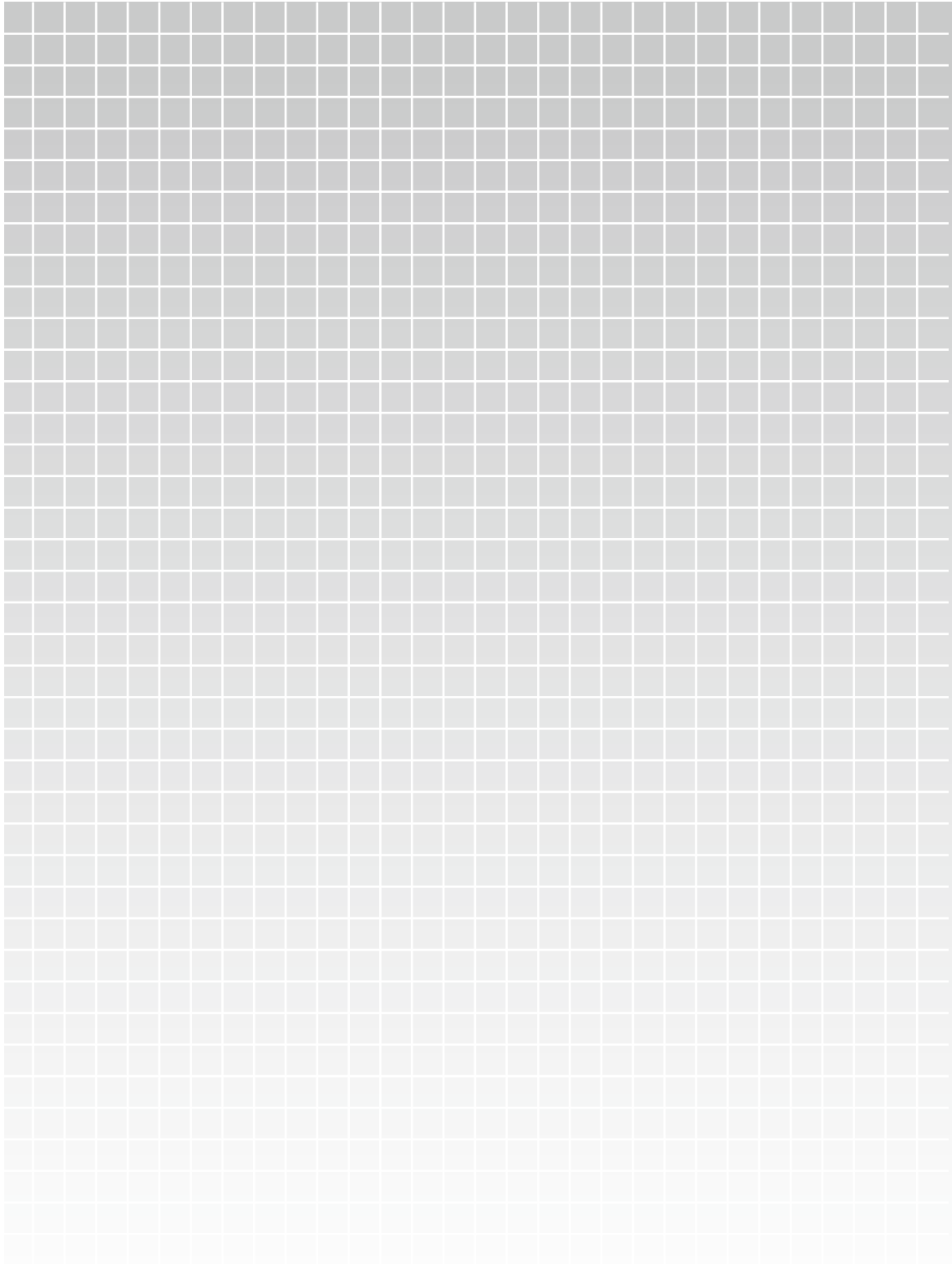
Typical Transmitting Diagram (Supply voltage at 24V/non-flush mount)

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



[illegible]

<div> <div>Signal type</div> <div>  </div> <div>Analog</div> </div>	
<div> <div>Sensor type</div> <div>  </div> <div>0...10V</div> </div>	
Remote Sensor	
DC 3-wire detector type	
DC 3-wire type Terminal unit	
DC 2-wire detector type	
DC 2-wire type Terminal unit	
Exclusive detector type	
Thermocouple type	
Resistance thermometer type	
Load cell type	
<div>Analog sensor type</div>	
Exclusive sensor	
Terminal box other unit	
<div>Wiring</div>	
Products for maintenance	
Special spec	
Alphanumeric product list	



Remote Coupler System	Switch Signal Transmission	4+4 Switch Signal type	80
		8+8 Switch Signal type	82
		64+32 Switch Signal type	84
	Data signal Transmission	RS-232C type	88
		CC-Link type	90
		DeviceNet type	92

Remote
Coupler

4+4
Switch Signal

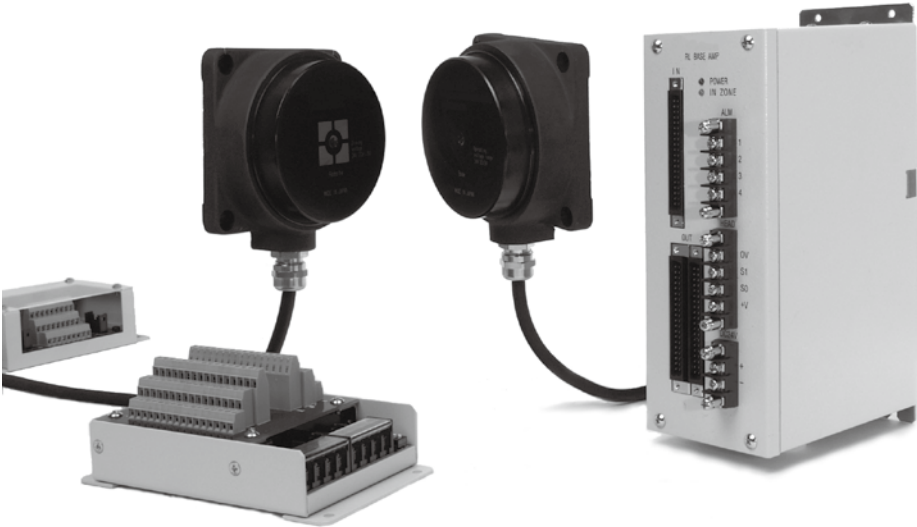
8+8
Switch Signal

64+32
Switch Signal

RS-232C

CC-Link

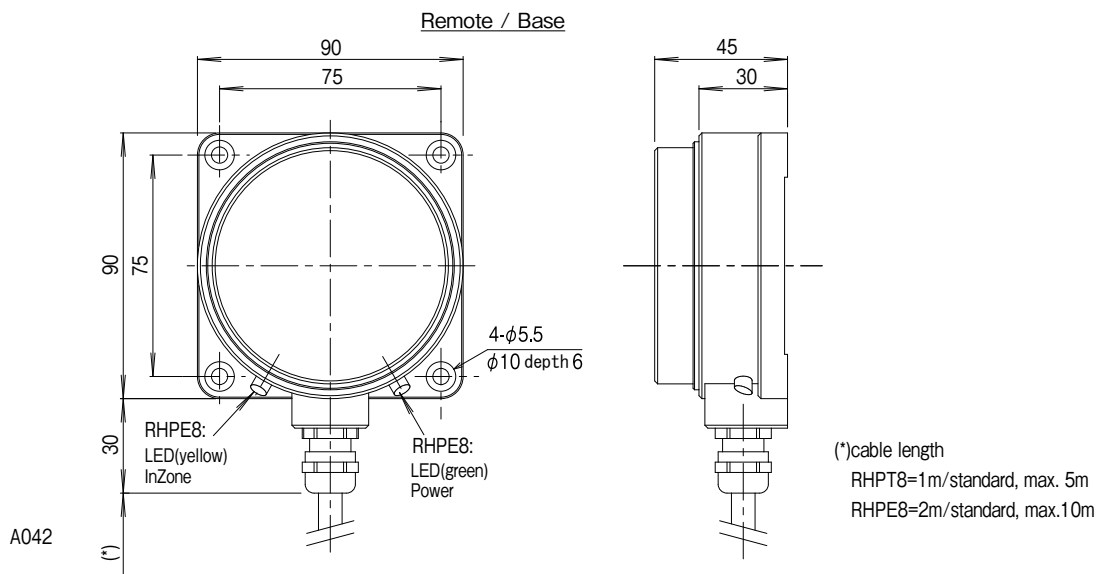
DeviceNet



4 + 4 switch signal / Size : 90 x 90

Operating distance
3...10mm

Remote and Base
shared dimension



(*)cable length
RHPT8=1m/standard, max. 5m
RHPE8=2m/standard, max.10m

Wiring C019/P.122

Remote		
Type	NPN input	RHPT8-8010N-C3-PU-01
Code	PNP input	RHPT8-8010P-C3-PU-01
Drive voltage	24V ± 1.5V DC	
Drive current	max.300mA	
No. of signal	input : 4 + output : 4	
Operating distance	3...10mm	
Center offset	± 7mm	
Drive current	≤ 300mA	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø7.7 , 2x0.5mm ² +9x0.18mm ²	
Material	Housing	Aluminum + alumite processing (metal part)
	Active face	ABS + PBT (resin part)
Weight	Body 620 g + cable 75 g x 1 m	
Remarks		

Base		
Type	NPN output	RHPE8-8010N-C3-PU-02
Code	PNP output	RHPE8-8010P-C3-PU-02
Operational voltage	24V DC ± 10% (incl. ripple)	
Current consumption	≤ 1.5A	
No. of signal	input : 4 + output : 4	
Load current	max.50mA per output	
Frequency of operation	40Hz	
LED	InZone/Power	
Operating temperature	0...+50°C	
Protection class	IP67	
Cable	PUR / Ø7.7 , 2x0.5mm ² +9x0.18mm ²	
Material	Housing	Aluminum + alumite processing (metal part)
	Active face	ABS + PBT (resin part)
Weight	Body 620 g + cable 75 g x 2 m	
Remarks		

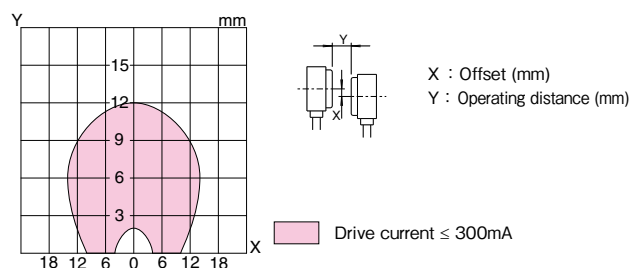
Applicable sensor and actuator

■ 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 以下	- The total current consumption of detectors and driving units must not exceed the rated drive current.
Residual voltage	---	
Load current	---	

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

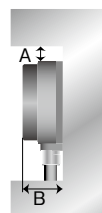
RHPT8-8010 □ -C3-PU-__ / RHPE8-8010 □ -C3-PU-__



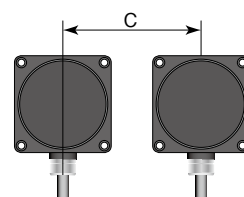
Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Remote or Base, keep the minimum distances 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

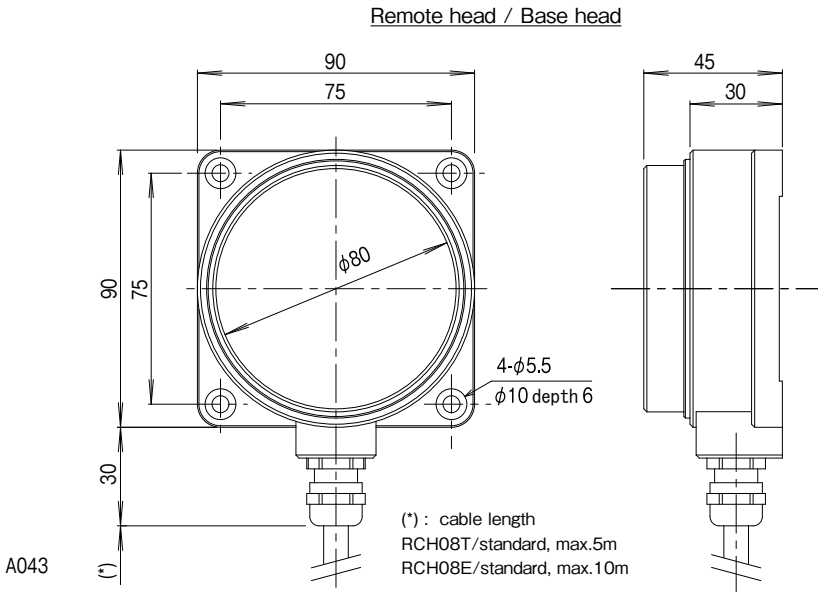
8+8 Switch Signal type / Remote • Base
64+32 Switch Signal type / Remote head • Base head

8+8
64+32 signal

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

Operating distance
4...9mm

Remote head
and 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.122
Wiring 64+32	C023/P.123

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	max.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 ² +2x0.2mm ² with shield
Material	Housing Aluminum + alumite processing (metal part)
	Active face ABS + PBT (resin part)
Weight	Body 600 g + cable 120 g x 1 m
Remarks	

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
Operational voltage	24V DC ± 5% (incl. ripple)
Current consumption	≤ 4A
Load current	---
Frequency of operation	---
LED	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.8, 2x1.25mm ² +2x0.2mm ² with shield
Material	Housing Aluminum + alumite processing (metal part)
	Active face ABS + PBT (resin part)
Weight	Body 620 g + cable 120 g x 2 m
Remarks	

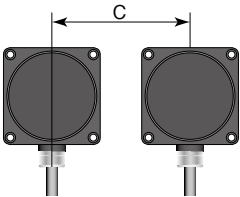
The Remote head in 8+8 signal transmission type can not work with the Base head in 64+32 signal transmission type, and vice versa, though these heads are shared in both transmission type.

Installation notes

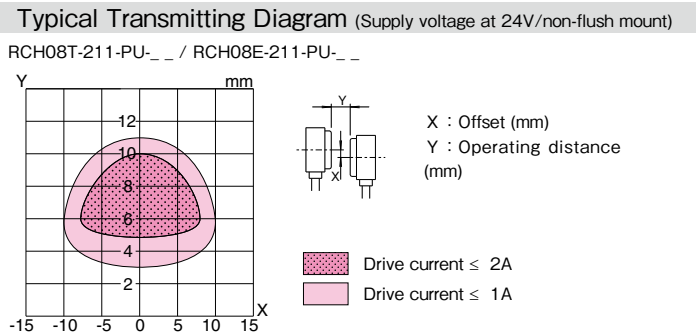
In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Remote and Base, keep the minimum distances as described below.

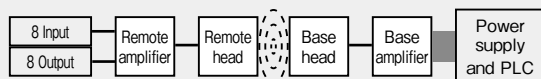
Surrounding metal

Parallel installation



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





RCH08T
RCH08E

RC08T
RC08E

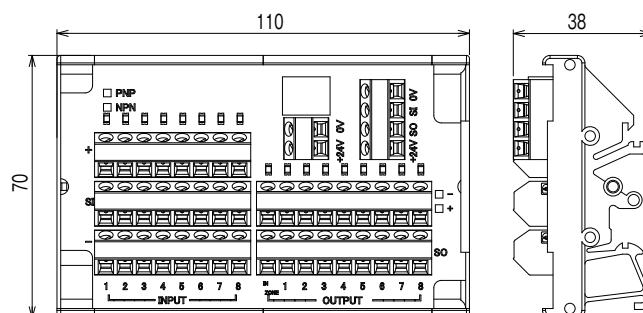
8+8

signal

8+8 switch signal / Size : 110x70

Remote amplifier / Base amplifier

Remote amplifier
and Base amplifier
shared dimension



A044a

Wiring C020/P.122

Remote amplifier		
Type	NPN	RC08T-011N-000
Code	PNP	RC08T-011P-000
Applicable Remote head	RCH08T-211-PU	
Operational voltage	24V DC \pm 10% (from Remote head)	
Current consumption	\leq 150mA	
Input ¹⁾	No. of signal	8 (SI1...8)
	Input logic	NPN or PNP
	Load current	7 mA per input
Output ²⁾	No. of signal	8 (SO1...8) + 1 (InZone)
	Output logic	NPN or PNP
	Load current	max. 300mA per 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	
Remarks		

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	---
Load current	---

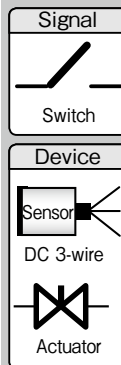
Base amplifier		
Type	NPN	RC08E-011N-000
Code	PNP	RC08E-011P-000
Applicable Base head	RCH08E-211-PU	
Operational voltage	24V DC \pm 10% (incl. ripple)	
Current consumption	\leq 150mA	
Input ³⁾	No. of signal	8 (SI1...8)
	Input logic	NPN or PNP
	Load current	7 mA per input
Output ⁴⁾	No. of signal	8 (SO1...8) + 1 (InZone)
	Output logic	NPN or PNP
	Load current	max. 300mA per 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	
Remarks		

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.



Remote
Coupler

4+4
Switch Signal

8+8
Switch Signal

64+32
Switch Signal

RS-232C

CC-Link

DeviceNet

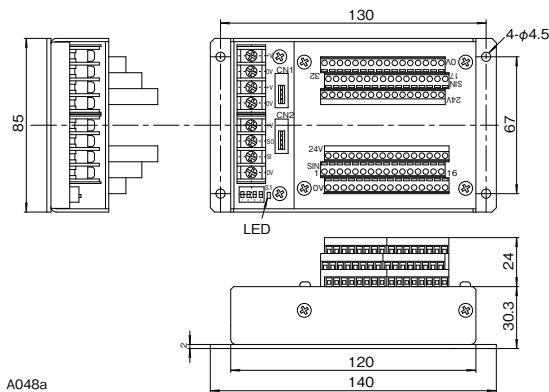
Exclusive
Sensor

Wiring

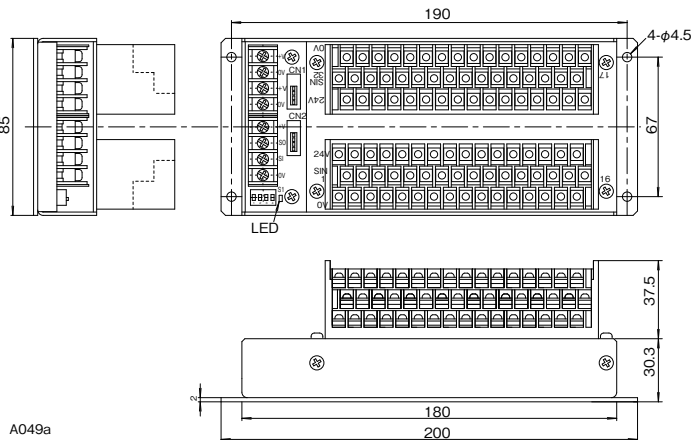
- 1) Input from sensor to Remote amplifier
- 2) Output from Remote amplifier to actuators
- 3) Input from the controller to Base amplifier
- 4) Output from Base amplifier to the controller

64+32 switch signal

Remote amplifier
(Pin terminal)



Remote amplifier
(Ring terminal)



Wiring Please refer to the User's Guide.

		Remote amplifier (Pin terminal)	Remote amplifier (Ring terminal)
Type Code	NPN	RL64T-344N-000	RL64T-345N-000
	PNP	RL64T-344P-000	RL64T-345P-000
Applicable Remote head	RCH08T-211-PU		
Applicable Base amplifier	RL64E-333_-000, RL64EA-355DN-000, RL64E-366CL-000, RL64E-366EI-000		
Input logic	NPN or PNP		
No. of input signal	32		
Load current	7mA per input		
Frequency of operation	20Hz		
Current consumption	≤ 70mA		
LED	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 , 4-pin x 2	Connector: e-con , 4-pin x 2
Operating temperature	0...+50°C		
Weight	620 g		
Remarks			

Applicable sensor and actuator

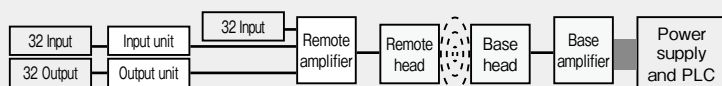
- Remote amplifier RL64T-344/345 can connect up to 32 detectors directly without Input unit.
- Please use a sensor which works definitely in the condition described below.

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

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.

- 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.

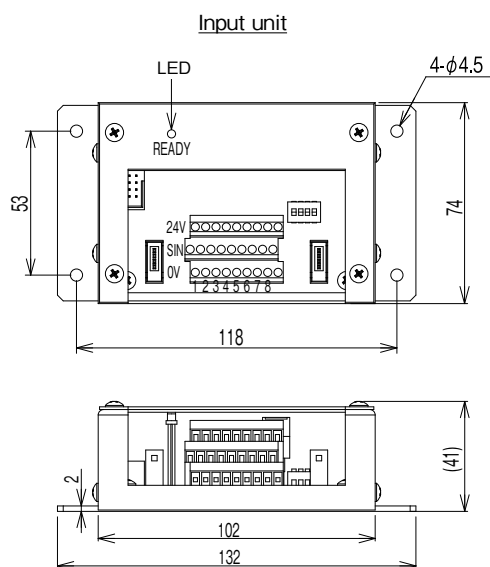


RL64T

RLX08
RLY04

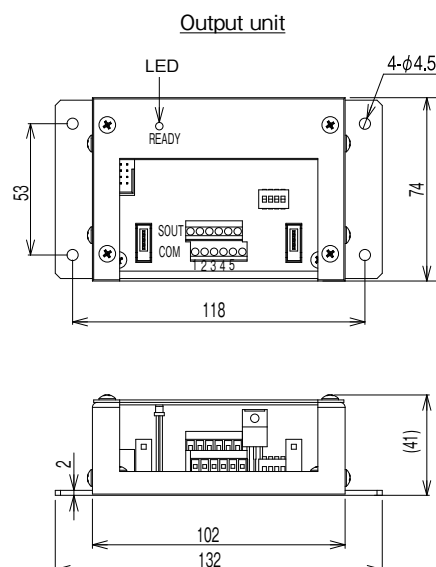
64+32
signal

64+32 switch signal



A052

Wiring Please refer to the User's Guide.

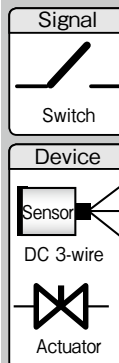


A053

Wiring Please refer to the User's Guide.

Input unit	
Type Code	NPN RLX08-322N
	PNP RLX08-322P
Input logic	NPN or PNP
No. of input signal	8
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
Remarks	

Output unit	
Type Code	NPN RLY04-322N
	PNP RLY04-322P
Output logic	NPN or PNP
No. of output signal	5 (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
Connection 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
Remarks	



Remote Coupler

4+4
Switch Signal

8+8
Switch Signal

64+32
Switch Signal

RS-232C

CC-Link

DeviceNet

Exclusive
Sensor

Applicable sensor and actuator

- Please use a sensor which works definitely in the condition described below.

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

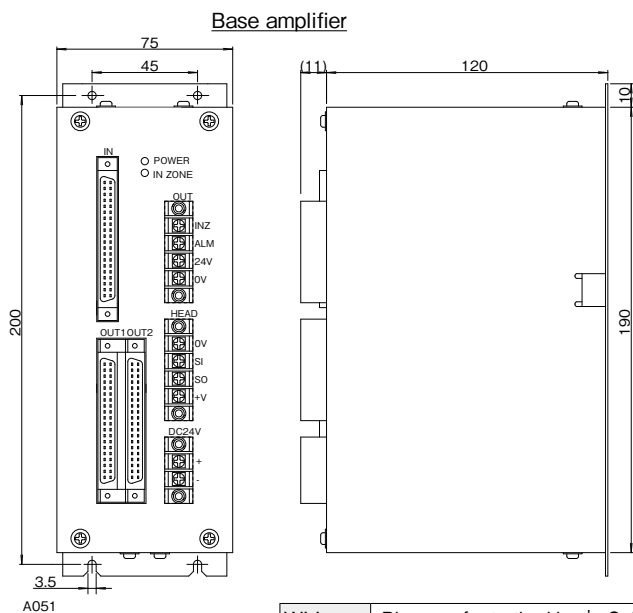
- The total of the current consumption of all units being connected to Remote head - Remote amplifier, an input and output unit, sensors and actuators - must not exceed 2A the drive current which is supplied by the Remote head.
- The input unit connects up to 8 sensors. It can connect up to 4. (Max 64 sensors can be connected to the amplifier and input units.)
- The output unit connects up to 4 actuators. It can connect up to 8

Notes

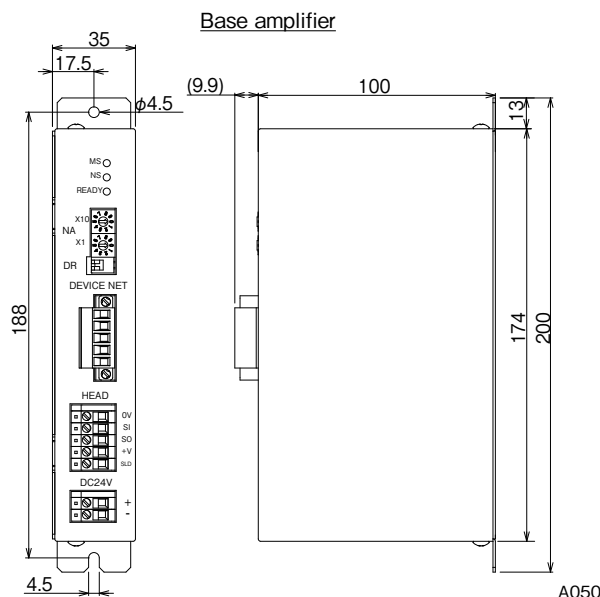
- Prepare the cable, 4 conductors and outer diameter phi 1.35 ... 1.6 mm to connect an input unit and an output unit. An insulation displacement connector is attached to each unit.

Wiring

64+32 switch signal



Wiring Please refer to the User's Guide.



Wiring Please refer to the User's Guide.

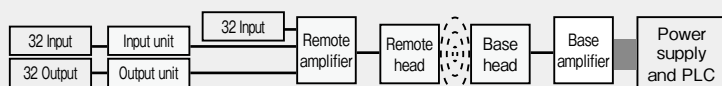
Base amplifier (Parallel I/O)		
Type	NPN	RL64E-333N-000
Code	PNP	RL64E-333P-000
Applicable Base head	RCH08E-211-PU	
Applicable Remote amplifier	RL64T-344_-000 RL64T-345_-000	
Input logic	NPN (current sink), PNP (current source)	
No. of input signal ²⁾	32	
Load current	7mA per input	
Output logic	NPN (current sink), PNP (current source)	
No. of output signal ¹⁾	67 (sensor: 64, InZone: 2, Short detection:1)	
Load current	max.20mA per output	
Operational 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 supply	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	
Remarks	Connectors are supplied with Base amplifier	

Base amplifier (DeviceNet)		
Type	DeviceNet	RL64EA-355DN-000
Code		
Applicable Base head	RCH08E-211-PU	
Applicable Remote amplifier	RL64T-344_-000 RL64T-345_-000	
Communication function	Remotel/O (Poll)	
Baudrate	500k/250k/125k Baud Set up by DIP switch	
Node address	0 ~ 63 Set up by rotary switch	
No. of input signal ¹⁾	64+1 Ready (9 byte)	
No. of output signal ²⁾	32 (4 byte)	
Operational 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 supply	Terminal block : 2 pole x 1
	Head	Terminal block : 5 pole x 1
	DeviceNet	OpenConnector
Operating temperature	0...+50°C	
Weight	550 g	
Remarks		

1) No. of output signal from Remote system

2) No. of input signal to Remote system

Please refer to the manual for more information.

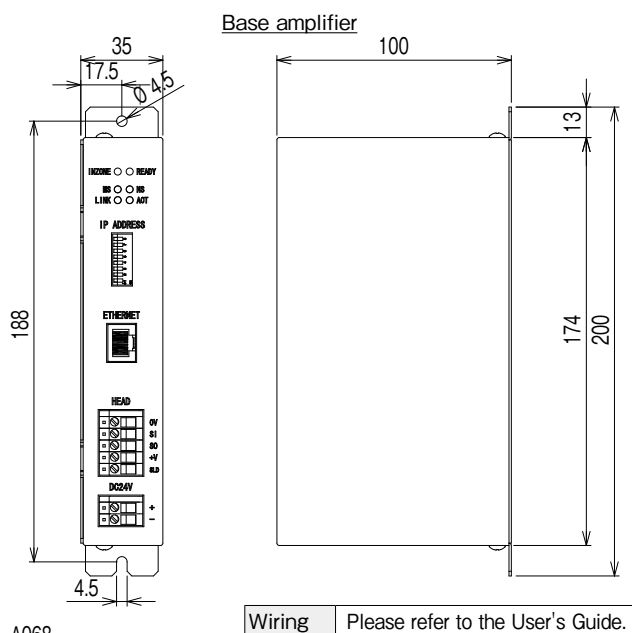
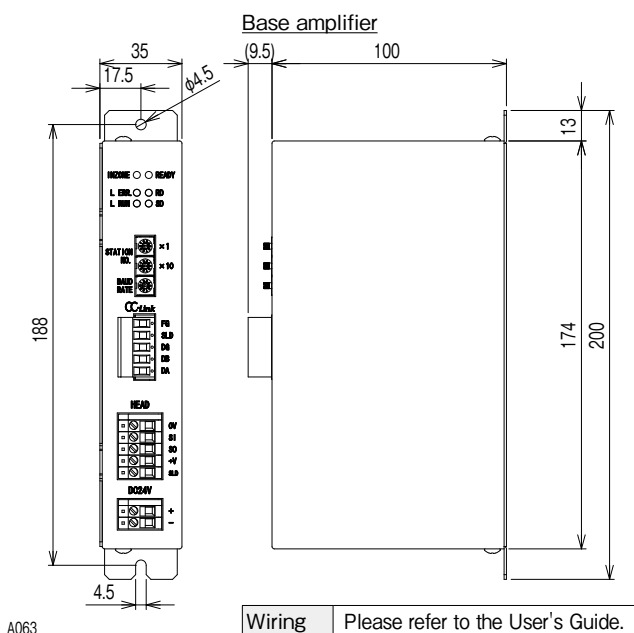


RL64E-333
RL64EA-355

RL64E-366

64+32
signal

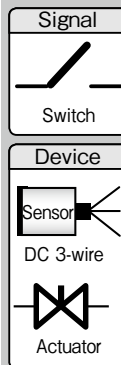
64+32 switch signal



Base amplifier (CC-Link)	
Type CC-Link Code	RL64E-366CL-000
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
No. of stations occupied	3 stations (RX/Ry 96 each bits, RWr/RWw each 12 words)
Baudrate	156k/625k/2.5M/5M/10M bps (Set up by rotary switch)
Station Number	1 ... 62 (Set up by rotary switch)
No. of input signal ¹⁾	64 (RXn0 ... RX(n+3)F) + 1 INZONE
No. of output signal ²⁾	32 (RYn0 ... RX(n+1)F) *1
Operational voltage	24VDC \pm 5% (Ripple less than 1V)
Current consumption	\leq 150 mA
Material	Housing : SPCC-SD (steel plate)
Connection Power supply	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
Remarks	

Base amplifier (EtherNet/IP)	
Type EtherNet/IP Code	RL64E-366EI-000
Applicable Base head	RCH08E-211-PU
Applicable Remote amplifier	RL64T-344_-000 RL64T-345_-000
Protocol	EtherNet/IP
Communication Function	Remote I/O function (Cyclic)
Communication method	Full duplex / half duplex (Automatic negotiation)
Baudrate	100Mbps/10Mbps (Automatic negotiation)
IP address	Set by DIP switch, DHCP and other
No. of input signal ¹⁾	64 + 1 INZONE (9 byte)
No. of output signal ²⁾	32 (4 byte)
Operational voltage	24V DC \pm 5% (Ripple less than 1V)
Current consumption	\leq 150 mA
Material	Housing : SPCC-SD (steel plate)
Connection Power supply	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
Remarks	

*1 n : The address which is allocated for the master station by setting of station number.



Remote Coupler

4+4
Switch Signal

8+8
Switch Signal

64+32
Switch Signal

RS-232C

CC-Link

DeviceNet

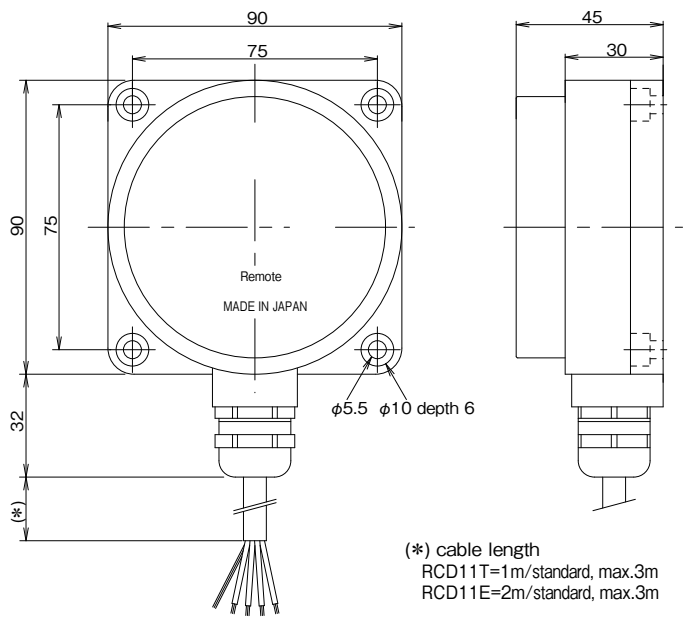
Exclusive
Sensor

Wiring

RS-232C / Size : 90 x 90

Operating distance
3...10mm

Remote and 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	RCD11T-211-PU-01
Drive voltage	24V ± 1.5V DC
Drive current	max.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 ² with shield
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS + PBT (resin part)
Weight	Body 600 g + cable 90 g x 1 m
Remarks	

Base	
Type RS-232C Code	RCD11E-211-PU-02
Operational voltage	24V DC ± 5% (incl. ripple)
Current consumption	≤ 3A
Communication Signal	RS-232C, Full duplex, asynchronous
Speed	4800...38400 bps, without data checking
Delay	≤ 20 μ sec
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.6 , 4x0.75mm ² with shield
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS + PBT (resin part)
Weight	Body 620 g + cable 90 g x 2 m
Remarks	

Applicable device

RCD11T can be connected a device with serial RS-232C interface.

Supply voltage	24V DC
Current consumption	≤ 1 A
Residual voltage	---
Load current	---

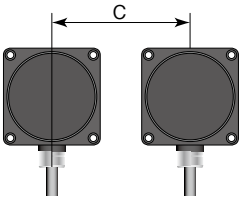
The total of current consumption of all devices connected to Remote must not exceed 1A the drive current.

Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Remote and Base, keep the minimum distances as described below.

Surrounding metal

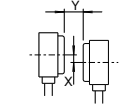
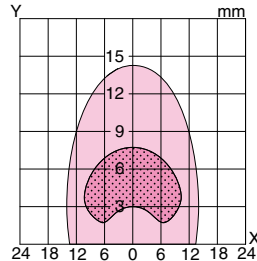
Parallel installation



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

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

RCD11T-211-PU-__ / RCD11E-211-PU-__

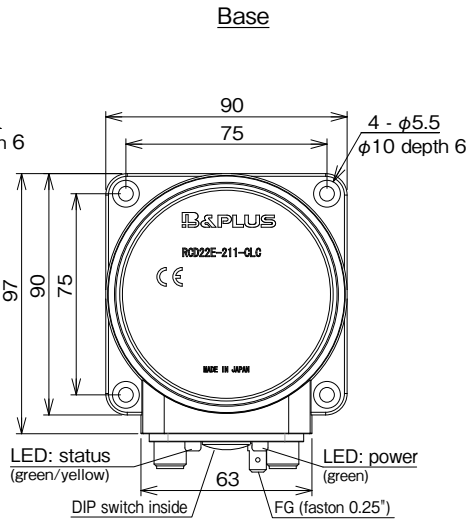
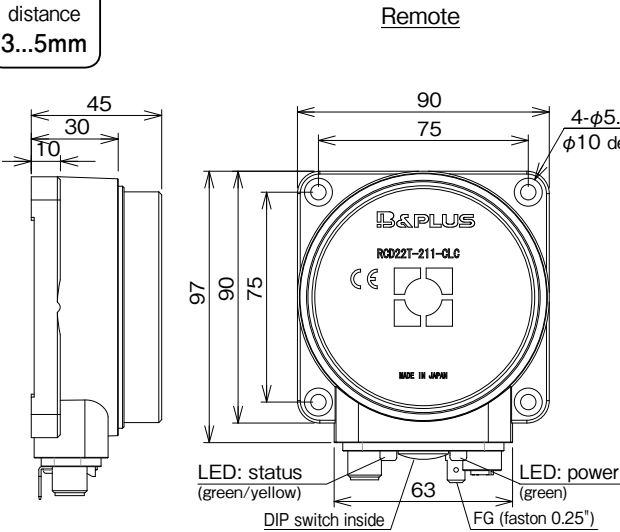


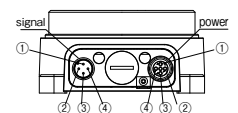
X : Offset (mm)
Y : Operating distance (mm)

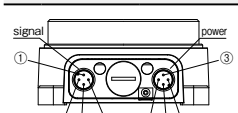
Drive current ≤ 1A
Drive current ≤ 500mA

CC-Link / Size : 97 x 90

Operating distance
3...5mm



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

Base		
		
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	M12 / signal:4-pin (male), Power supply : 4-pin (female)
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS + PBT (resin part)
Weight	800 g
Included	Ferrite core clamp (Gray x 2 · White x 1)

Base	
Type Code	CC-Link RCD22E-211-CLC
Operational voltage	24V DC ± 5% (incl. ripple)
Current consumption	≤ 3A
Communication Signal	CC-Link
Speed	156K...10M bps (set up by DIP switch)
Start up	≤ 2 sec.*
Operating temperature	0...+50°C
Protection class	IP 67
Connector	M12 / signal : 4-pin (male), Power supply : 4-pin (male)
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS + PBT (resin part)
Weight	800g
Included	Ferrite core clamp (Gray x 2 · White x 1)

* 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 on the unit on both ends on CC-Link. Two termination resistors are required for each side, remote side and Base side.
- Please prepare your cable and connectors.

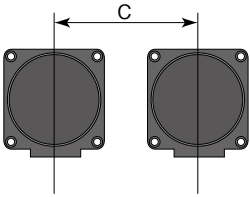
Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Remote and Base, keep the minimum distances as described below.

Surrounding metal



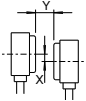
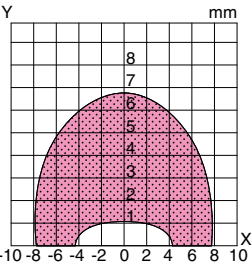
Parallel installation



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

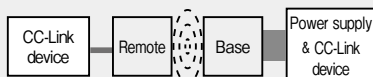
Typical Transmitting Diagram (Supply voltage at 24V/non-flush mount)

RCD22T-211-CLC / RCD22E-211-CLC



X : Offset (mm)
Y : Operating distance (mm)

Drive current ≤ 2A



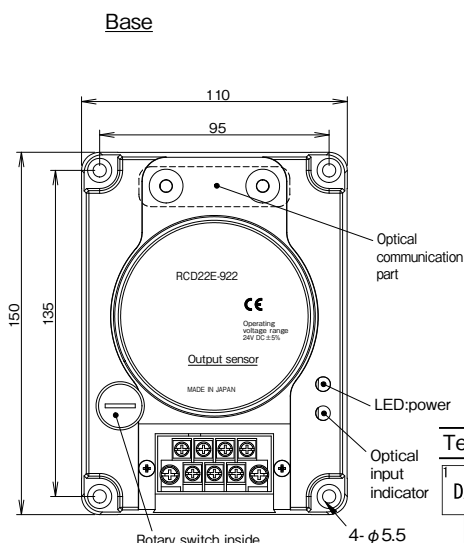
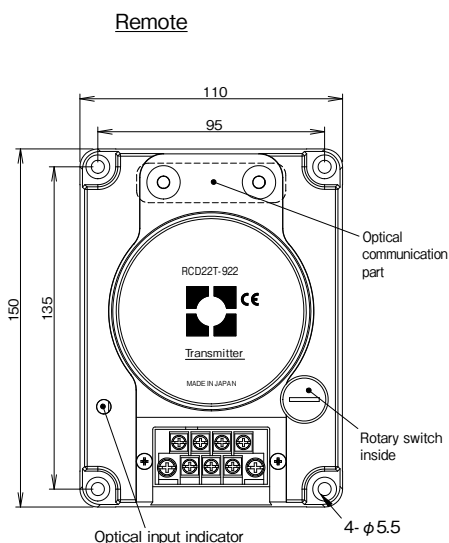
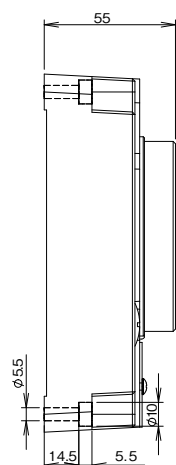
RCD22T-211
RCD22E-211

RCD22T-922
RCD22E-922

CC-Link

CC-Link / Size : 150 x 110

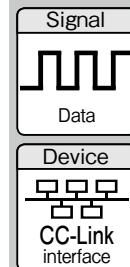
Operating distance
4...6mm



Terminal block			
1	3	5	7
DA	DG	+24V	24G
2	4	6	
DB	SLD	FG	

Remote	
Type Code CC-Link	RCD22T-922
Drive voltage	24V \pm 1.5V DC
Drive current	max.1A
Operating distance	4...6mm
Center offset	\pm 5mm
Drive current	\leq 1A
Operating temperature	0...+50°C
Connection	7 pole Terminal block
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS + PBT (resin part)
Weight	1,300 g
Remarks	

Base	
Type Code CC-Link	RCD22E-922
Operational voltage	24V DC \pm 5% (incl. ripple)
Current consumption	\leq 3A
Communication Signal	CC-Link
Speed	156K/625K/2.5Mbps (Set up by rotary switch)
Start up	\leq 0.5 second
Operating temperature	0...+50°C
Connection	7 pole Terminal block
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS + PBT (resin part)
Weight	1,300 g
Remarks	



Remote Coupler

4+4
Switch Signal

8+8
Switch Signal

64+32
Switch Signal

RS-232C

CC-Link

DeviceNet

Baudrate

SW	bps	Built-in Resistor
1	156K	not use
2	625K	not use
3	2.5M	not use
4	156K	use
5	625K	use
6	2.5M	use

- 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.

Notes

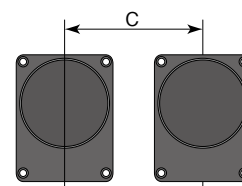
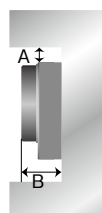
- Since this unit uses the optical communication in the transmission of CC-Link data, be sure to prevent dirt or foreign substances.

Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Remote and Base, keep the minimum distances as described below.

Surrounding metal

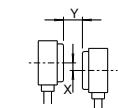
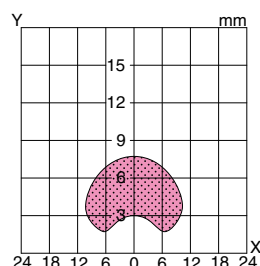
Parallel installation



Type Code	A(mm)	B(mm)	C(mm)
RCD22T-922	50	45	300
RCD22E-922			

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

RCD22T-922 / RCD22E-922

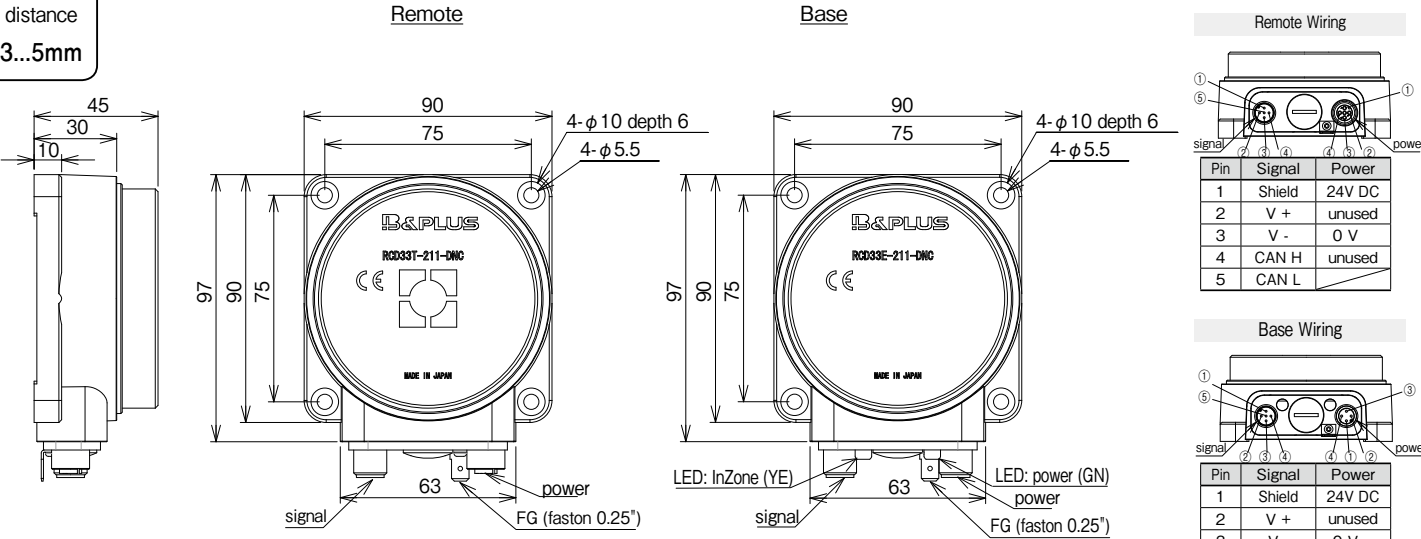


X : Offset (mm)
Y : Operating distance (mm)

Drive current \leq 1A

DeviceNet / Size : 97 x 90

Operating distance
3...5mm

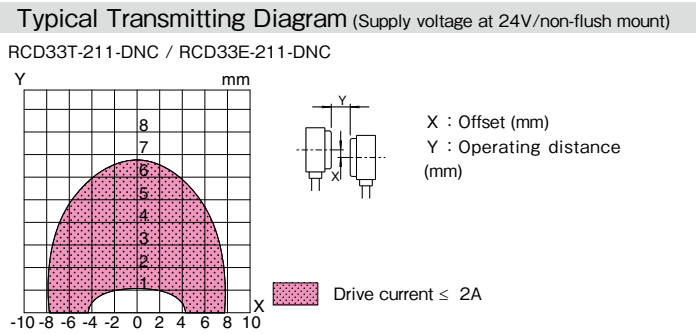


Remote	
Type Code	DeviceNet RCD33T-211-DNC
Drive voltage	24V ± 1.5V DC
Drive current	≤ 2A
Operating distance	3...5mm
Center offset	± 4mm
Drive current	≤ 2A
Operating temperature	0...+50°C
Protection class	IP 67
Connector	M12 / signal:5-pin (male), Power supply : 4-pin (female)
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS + PBT (resin part)
Weight	800 g
Included	Ferrite core clamp

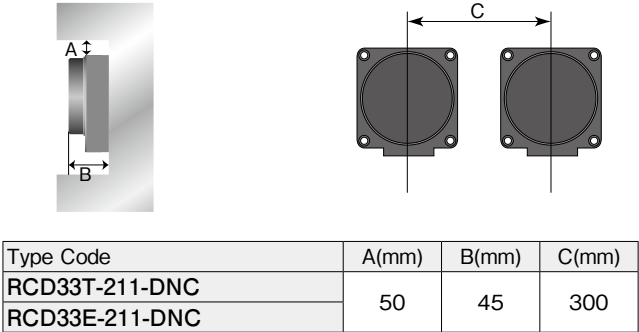
Base	
Type Code	DeviceNet RCD33E-211-DNC
Operational voltage	24V DC ± 5% (incl. ripple)
Current consumption	≤ 3A
Communication signal	DeviceNet (CAN Bus)
Delay	≤ 0.5 μ sec.
Start up	≤ 2 sec.*
Operating temperature	0...+50°C
Protection class	IP 67
Connector	M12 /signal : 5-pin (male), Power supply : 4-pin (male)
Material Housing	Aluminum + alumite processing (metal part)
Active face	ABS + PBT (resin part)
Weight	800 g
Included	Ferrite core clamp

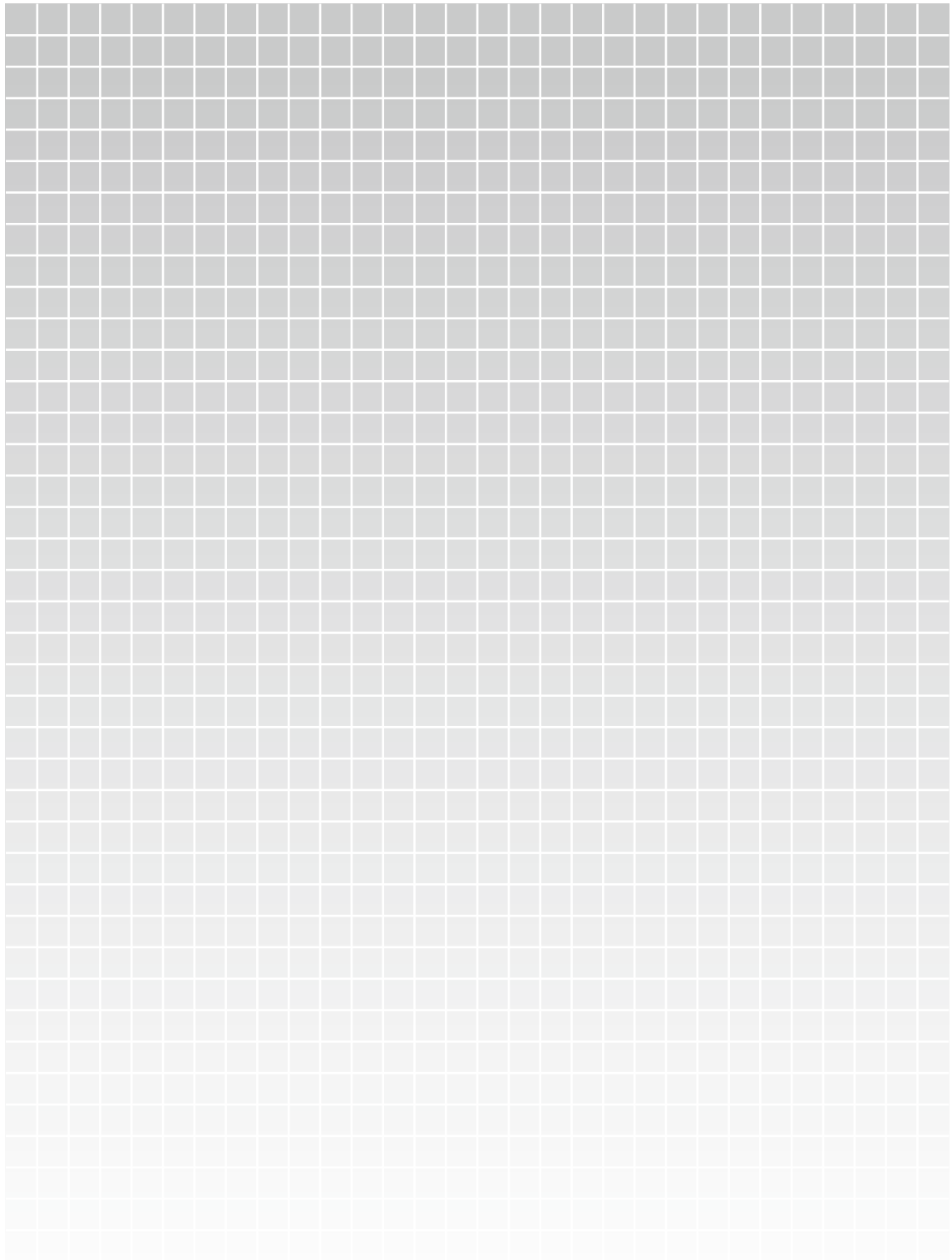
* It is the start up time of Remote system.
The start up time of DeviceNet is varied by the system.

- 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 an user.
 - Please prepare cable and connectors for wiring the system.
 - It is recommended to install RCD33 in metal in order to reduce the influence of self-heating.



- Installation notes
- In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Remote and Base, keep the minimum distances as described below.
- Surrounding metal
- Parallel installation





Remote Power Supply System	Parallel Coupling type	96
	Overlap coupling type	98

Remote
Power
Supply

Parallel
coupling

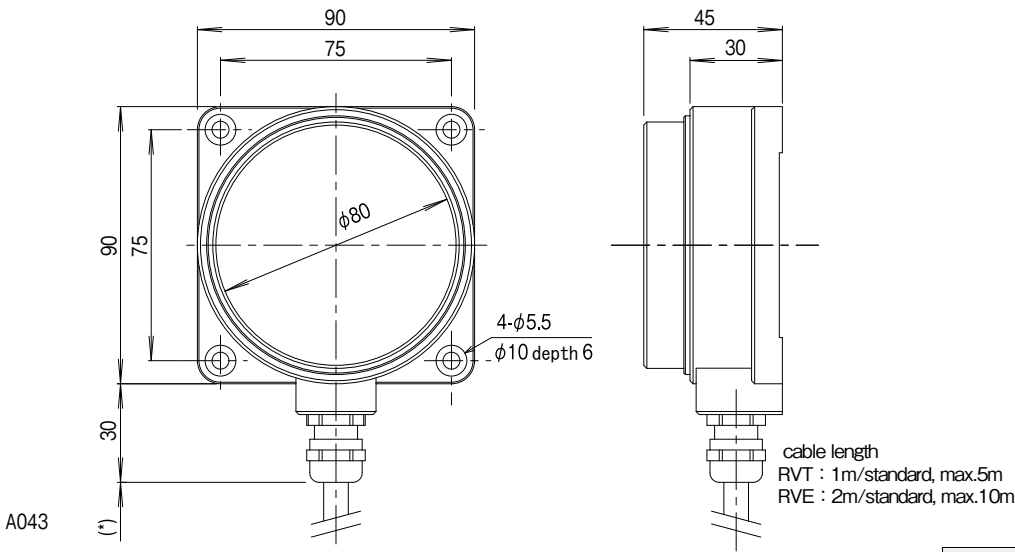
Overlap
coupling



Parallel coupling / Size : 90 x 90

Operating distance
4...9mm

Remote and Base
shared dimension



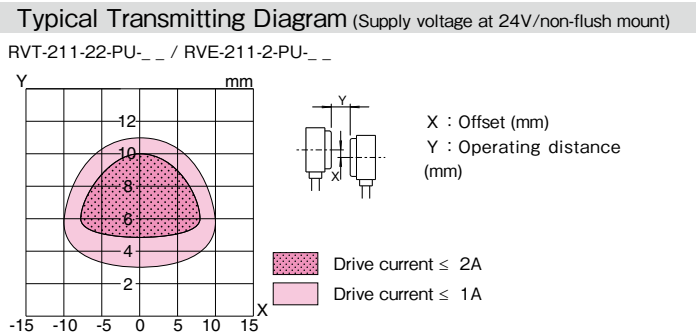
Wiring Brown:+/Blue:-

Remote			
Type Code	RVT-211-22-PU-01		
Drive voltage	24V ± 1.5V DC		
Drive current	max.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 ² +2x0.2mm ² with shield		
Material Housing	Aluminum + alumite processing (metal part)		
Active face	ABS + PBT (resin part)		
Weight	Body 600 g + cable 120 g x 1 m		
Remarks	2 conductors (Black,White:0.2mm ²) are not used.		

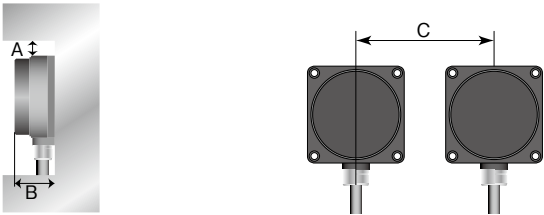
Base	
Type Code	RVE-211-2-PU-02
Operational voltage	24V DC ± 5% (incl. ripple)
Current consumption	≤ 4A
Load current	---
Frequency of operation	---
LED	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø7.8, 2x1.25mm ² +2x0.2mm ² with shield
Material Housing	Aluminum + alumite processing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

Applicable sensor and actuator	
Supply voltage	24V DC
Current consumption	≤ 2A
Residual voltage	---
Load current	---

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

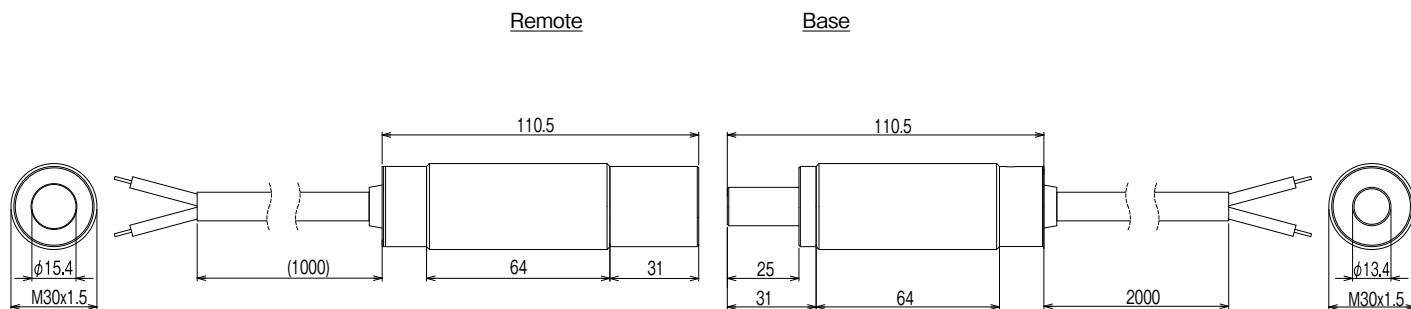


Installation notes	
In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Remote and Base, keep the minimum distances as described below.	
Surrounding metal	Parallel installation



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

Overlap coupling / Size : M30



A054

Wiring Brown:+/Blue:-

Remote	
Type Code	RVTI-030-21-PU-01
Drive voltage	24V \pm 1.5V DC
Drive current	max.1A
Operating distance	3...10mm
Center offset	---
Drive current	\leq 1A
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø6.2 , 2x0.75mm ²
Material Housing	Nickel plated brass
Active face	ABS + PBT
Weight	Body 200 g + cable 50 g x 1 m
Remarks	

Base	
Type Code	RVEI-030-2-PU-02
Operational voltage	24V DC \pm 10% (incl. ripple)
Current consumption	\leq 3A
Load current	---
Frequency of operation	---
LED	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø6.2 , 2x0.75mm ²
Material Housing	Nickel plated brass
Active face	ABS + PBT
Weight	Body 180 g + cable 50 g x 2 m
Remarks	

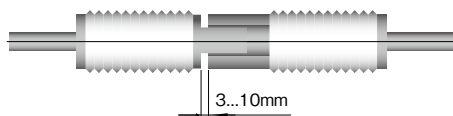
Applicable sensor and actuator

Supply voltage	24V DC
Current consumption	\leq 1A
Residual voltage	---
Load current	---

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

Operating distance

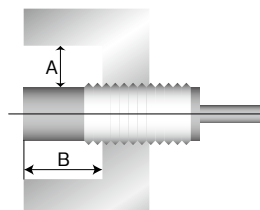
Operating distance of the overlap coupling product is as shown below.



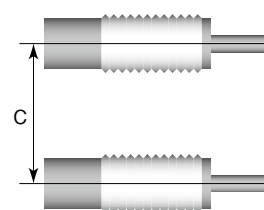
Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Remote and Base, keep the minimum distances as described below.

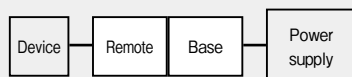
Surrounding metal



Parallel installation



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



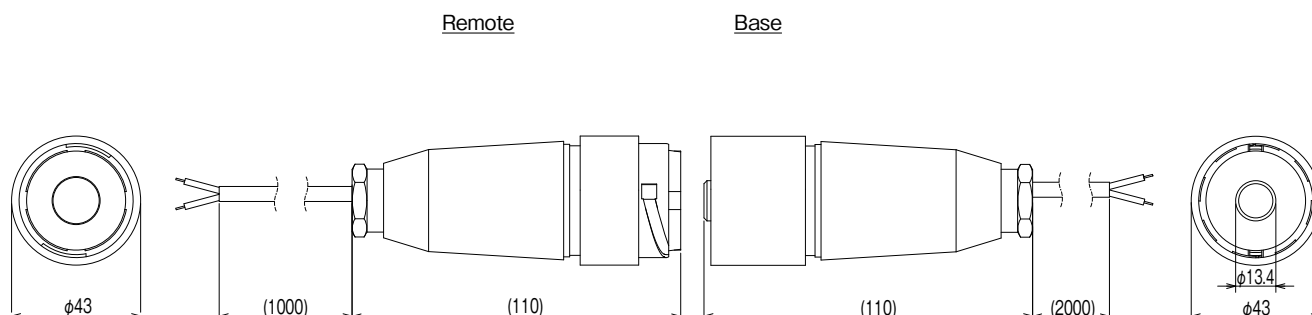
RVTI-030
RVEI-030

RVTI-C01
RVEI-C01

Wireless
Power Supply

Overlap coupling / Size : Ø40

Power supply
24V
/1A



A055

Wiring Brown:+/Blue:-

Remote	
Type Code	RVTI-C01-21-PU-01
Drive voltage	24V \pm 1.5V DC
Drive current	max.1A
Operating distance	0 mm (when over lapped)
Center offset	---
Drive current	\leq 1A
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø6.2, 2x0.75mm ²
Material Housing	Polyamide 6.6
Active face	Polyamide 6.6
Weight	Body 210 g + cable 50 g x 1 m
Remarks	

Base	
Type Code	RVEI-C01-2-PU-02
Operational voltage	24V DC \pm 10% (incl. ripple)
Current consumption	\leq 3A
Load current	---
Frequency of operation	---
LED	---
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR / Ø6.2, 2x0.75mm ²
Material Housing	Polyamide 6.6
Active face	Polyamide 6.6
Weight	Body 200 g + cable 50 g x 2 m
Remarks	

Remote
Power
Supply

Parallel
coupling

Overlap
coupling

Applicable sensor and actuator

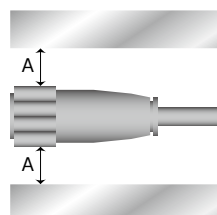
Supply voltage	24V DC
Current consumption	\leq 1A
Residual voltage	---
Load current	---

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

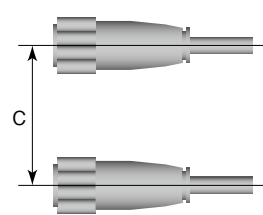
Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted Remote and Base, keep the minimum distances as described below.

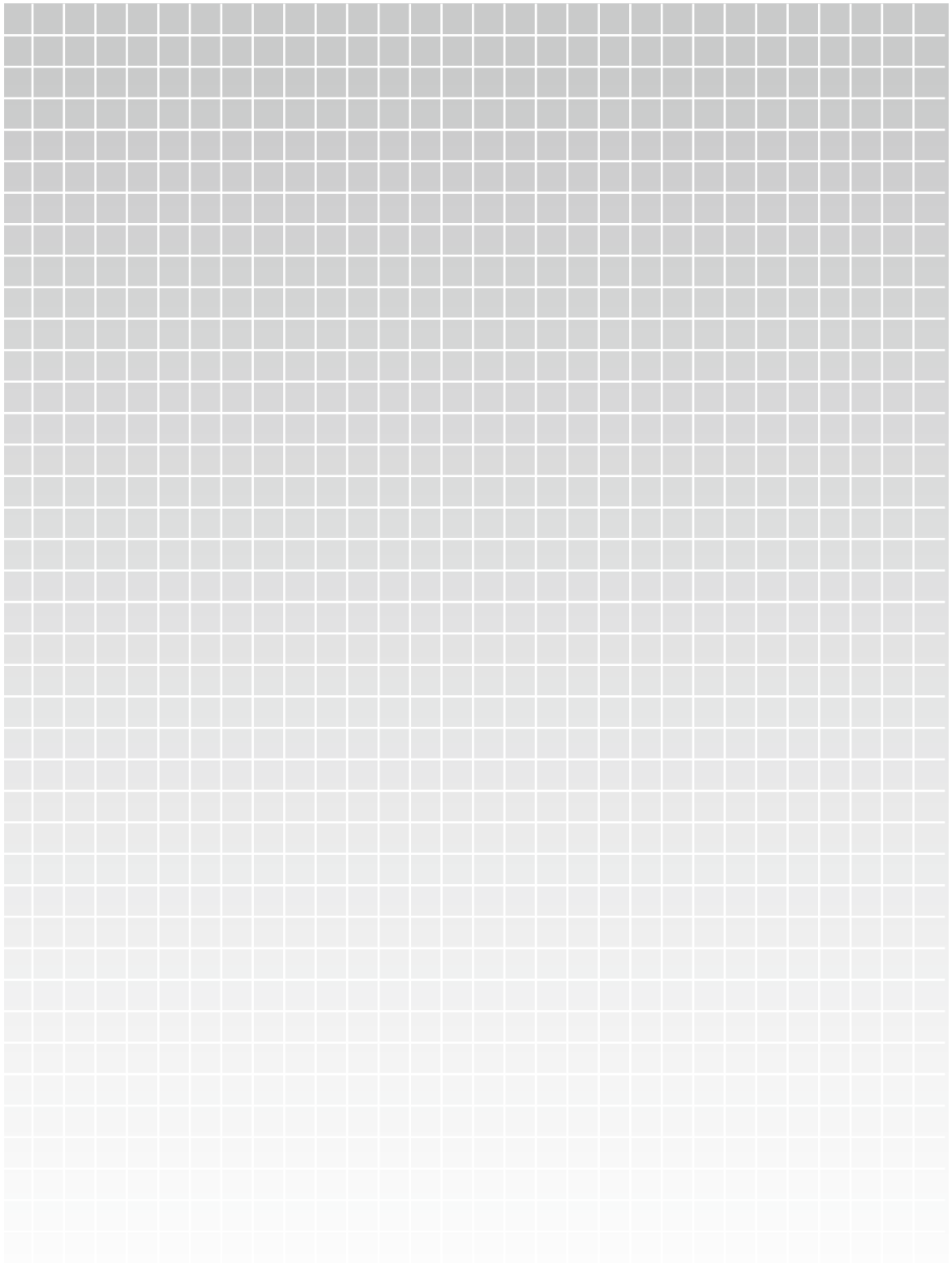
Surrounding metal



Parallel installation



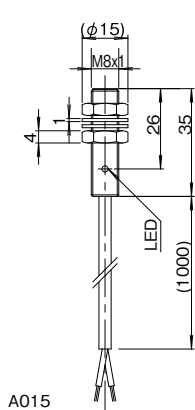
Type Code	A(mm)	B(mm)	C(mm)
RVTI-C01-21-PU-__	20	---	43
RVEI-C01-2-PU-__			



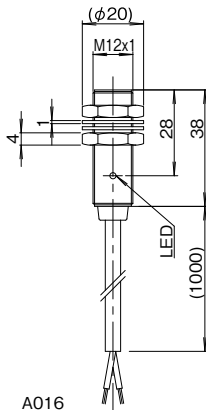
Accessories	Exclusive Proximity Sensor	RFD (DC 2-wire Detector type)	102
		RXD (Exclusive Detector type)	103
	Terminal Box	Standard type	104
		Waterproof type	106
		Connector type	108
	AC Conversion Amplifier		110
	Handy Checker		110

Exclusive proximity sensor with LED / RFD series

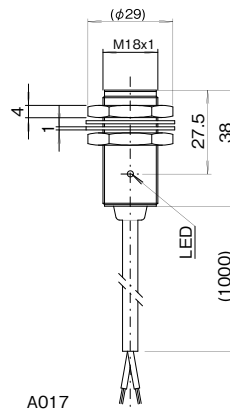
Applicable Transmitter	Transmitter of DC 2-wire detector type (Ref. P.46...63)			
Rated operating distance	1.5mm	2mm	5mm	10mm
Assured operating distance	0...1.2mm	0...1.6mm	0...4mm	0...8mm
Size	M8	M12	M18	M30



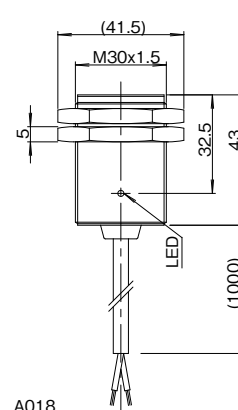
A015



A016



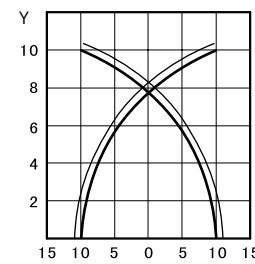
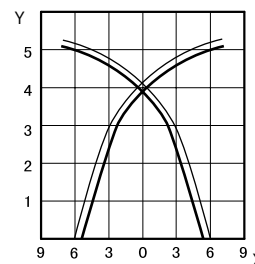
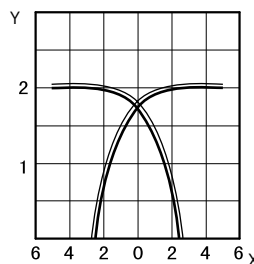
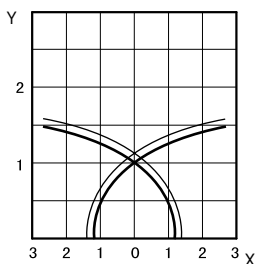
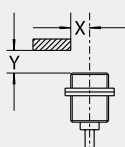
A017



A018

Type Code	RFD-0801-PU-01	RFD-1202-PU-01	RFD-1805-PU-01	RFD-3010-PU-01
Transmitter type	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	Nylon12	Nylon12	Nylon12	Nylon12
Cable	PUR / Ø3.3, 2x0.14mm ²	PUR / Ø5, 2x0.34mm ²	PUR / Ø5, 2x0.34mm ²	PUR / Ø5, 2x0.34mm ²
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

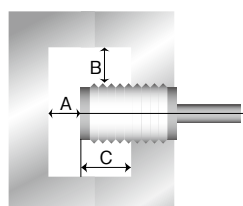
Operating curve



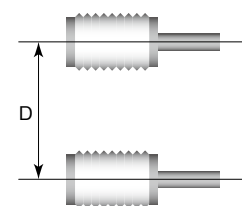
Installation notes

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

Surrounding metal



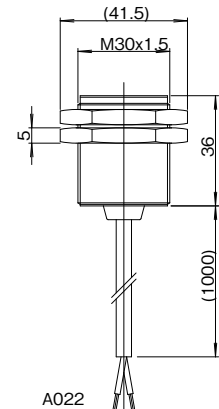
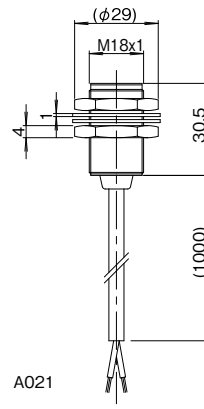
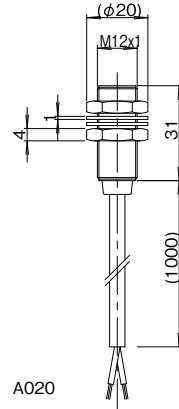
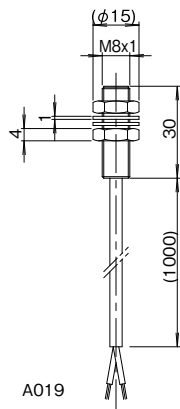
Parallel installation



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

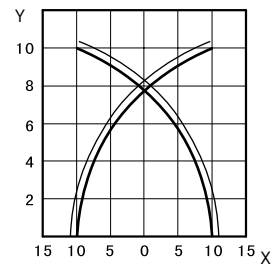
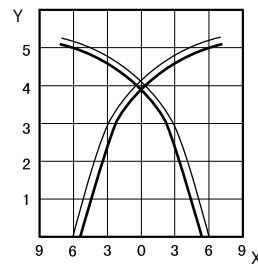
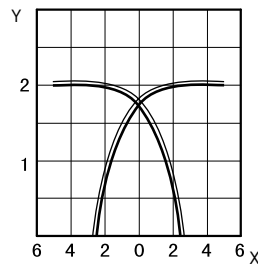
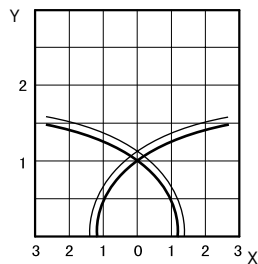
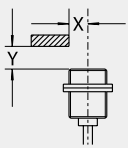
Exclusive proximity sensor without LED / RXD series

Applicable Transmitter	Transmitter of Exclusive detector type (Ref. P.64...67)			
Rated operating distance	1.5mm	2mm	5mm	10mm
Assured operating distance	0...1.2mm	0...1.6mm	0...4mm	0...8mm
Size	M8	M12	M18	M30



Type Code	RXD-0801-PU-01	RXD-1202-PU-01	RXD-1805-PU-01	RXD-3010-PU-01
Transmitter type	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	Nylon12	Nylon12	Nylon12	Nylon12
Cable	PUR / Ø3.3, 2x0.14mm ²	PUR / Ø5, 2x0.34mm ²	PUR / Ø5, 2x0.34mm ²	PUR / Ø5, 2x0.34mm ²
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 type	---	RXD-1202-PU-CP1.0	RXD-1805-PU-CP1.0	RXD-3010-PU-CP1.0

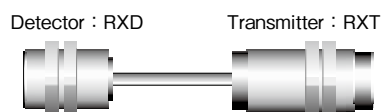
Operating curve



See P.102 for installation notes.

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

Accessory

Exclusive
sensorTerminal box
Other unit

Accessories

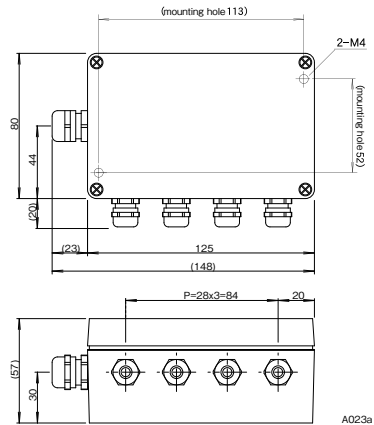
Terminal Box

Standard type

Wiring Transmitter and Detectors

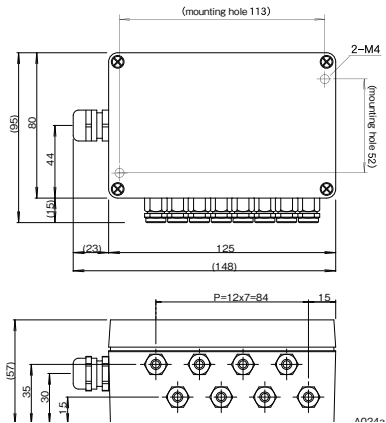
Terminal Box/Standard type for DC 3-wire and DC 2-wire Detector type

Number of Detector	4 Detectors	
--------------------	-------------	--

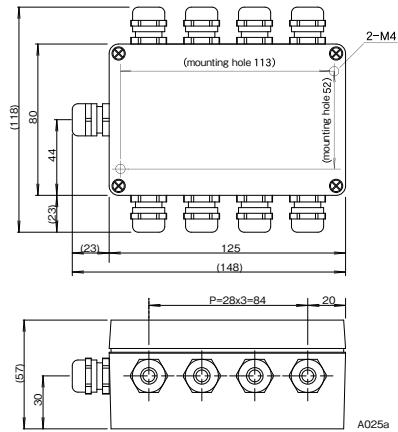


Type Code	RPK-2102	
Material	Housing	Aluminum die casting
	Gascket	Neoprene rubber
Protection class		IP65
Weight		600 g
Terminal block		for Transmitter 6 pole x 2, for Detector 8 pole x 3
Cable gland	Transmitter	PG9 x 1
	Detector	PG7 x 4 (Applicable cable outer diameter Ø2...6.5mm)
Changeover switch	SW1	Changeover NPN/PNP
	SW2	Changeover 3-wire/2-wire
Mounting		M4 allen screw x 2

Number of Detector	8 Detectors	8 Detectors
--------------------	-------------	-------------

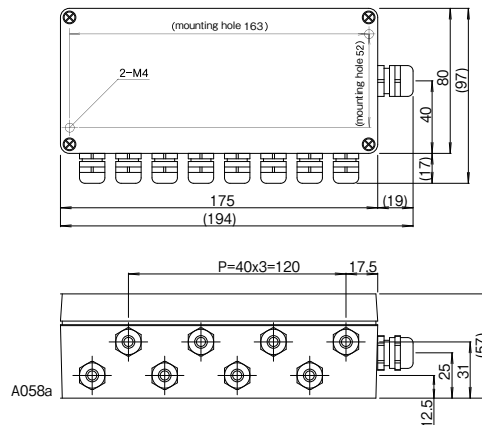


Type Code	RPK-2101	RPK-2103
Material	Housing	Aluminum die casting
	Gascket	Neoprene rubber
Protection class		IP65
Weight		600 g
Terminal block		for Transmitter 6 pole x 2, for Detector 8 pole x 3
Cable gland	Transmitter	PG9 x 1,
	Detector	M8 x 8 (Applicable cable outer diameter Ø3...5.5mm)
Changeover switch	SW1	Changeover NPN/PNP
	SW2	Changeover 3-wire/2-wire
Mounting		M4 allen screw x 2

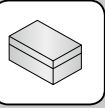


Terminal Box/Standard type for DC 2-wire and Exclusive Detector type

Number of Detector	8 Detectors
--------------------	-------------



Type Code	RFK-3101
Material Housing	Aluminum die casting
Gascket	Neoprene rubber
Protection class	IP65
Weight	800 g
Terminal block	for Transmitter 12 pole x 1, for Detector 12 pole x 1
Cable gland Transmitter	PG9 x 1
gland Detector	PG7 x 8 (Applicable cable outer diameter Ø2...6.5mm)
Changeover SW1	---
switch SW2	---
Mounting	M4 allen screw x 2



Accessory

Exclusive
sensor

Terminal Box

- These products are the terminal box for connectiong 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.

Waterproof type

Wiring Transmitter and Detectors

Number of Detector	8 Detectors	8 Detectors
--------------------	-------------	-------------

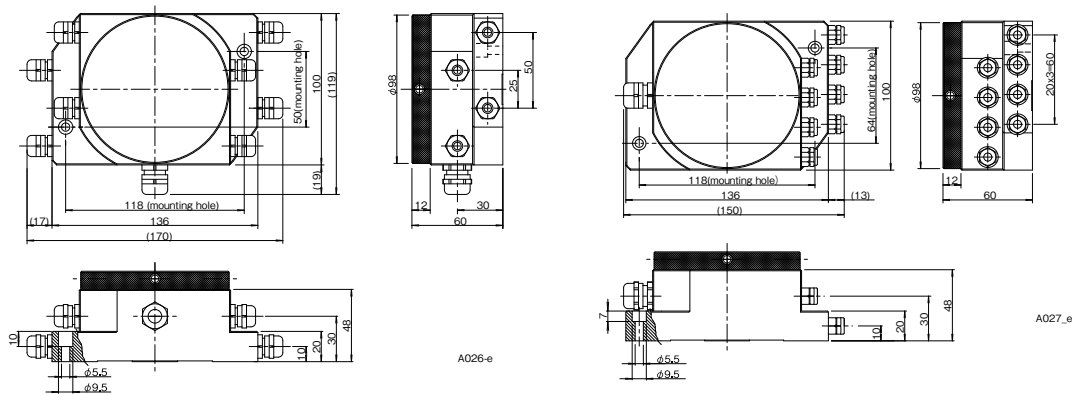


Number of Detector	8 Detectors	15 Detectors
--------------------	-------------	--------------

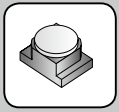
106 | **B&PLUS**

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

Number of Detector	8 Detectors	8 Detectors
--------------------	-------------	-------------



Type Code	RFK-A098-02	RFK-A098-03
Material Housing	Aluminum casting/Machined aluminum	Aluminum casting/Machined aluminum
Gascket	Viton	Viton
Protection class	IP67	IP67
Weight	1,200 g	1,200 g
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	PG9 x 1	PG9 x 1
Transmitter	PG7 x 8 (Applicable cable outer diameter Ø4...6.5mm)	M8 x 8 (Applicable cable outer diameter Ø3...5mm)
Detector	---	---
Changeover switch	SW1	---
SW2	---	---
Mounting	M5 allen screw x 2	M5 allen screw x 2



Accessory

Exclusive sensor

Terminal Box

- These products are the terminal box for connectiong 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.

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

Number of Detector	4 Detectors	8 Detectors

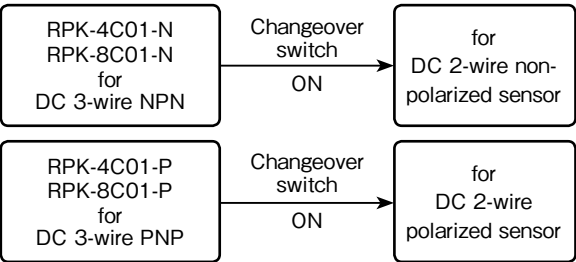
Type	DC3-wire/NPN	RPK-4C01-N
Code	DC3-wire/PNP	RPK-4C01-P
LED	- - -	- - -
Material	Housing	Aluminum casting
	Cap	Machined aluminum
	Gascket	Viton
Protection class	IP67	IP67
Weight	300 g	500 g
Connection	Transmitter	7 pole screwless terminal block
	Detector	4 pole connector (M12 x 4)
Cable gland	Transmitter	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

Type	DC3-wire/NPN	RPK-8C01-N
Code	DC3-wire/PNP	RPK-8C01-P
LED	- - -	- - -
Material	Housing	Aluminum casting
	Cap	Machined aluminum
	Gascket	Viton
Protection class	IP67	IP67
Weight	300 g	500 g
Connection	Transmitter	12 pole screwless terminal block
	Detector	4 pole connector (M12 x 8)
Cable gland	Transmitter	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

Number of Detector	8 Detectors
Terminal box with LED apply only to RGPT series	
Applicable Transmitter	
RGPT-3005	
RGPT-4008	
RGPT-9012	

Using DC 2-wire sensors

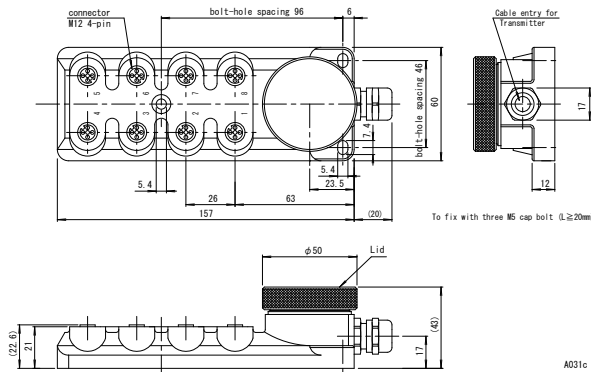
- DC 2-wire sensor can be used with RPK-4C01- N/P and RPK-8C01- N/P by switching the 3-wire/2-wire changeover switch.



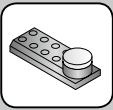
Type	DC3-wire/NPN	RPK-8C01L-N
Code	DC3-wire/PNP	RPK-8C01L-P
LED	Function indication/Power	Function indication/Power
Material	Housing	Aluminum casting
	Cap	Machined aluminum
	Gascket	Viton
Protection class	IP67	IP67
Weight	500 g	500 g
Connection	Transmitter	11 pole screwless terminal block
	Detector	4 pole connector (M12 x 8)
Cable gland	PG9 x 1 for Transmitter	PG9 x 1 for Transmitter
Changeover switch	Only for DC 3-wire sensors	Only for DC 3-wire sensors
Mounting	M5 allen screw x 3	M5 allen screw x 3

Terminal Box/Connector type for Exclusive proximity sensor type

Number of Detector	8 Detectors
--------------------	-------------



Type Code	RXD	RFK-8C01
LED		- - -
Material	Housing	Aluminum casting
	Cap	Machined aluminum
	Gascket	Viton
Protection class		IP67
Weight		500 g
Connection	Transmitter	12 pole screwless terminal block
	Detector	4 pole connector (M12 x 8)
Cable gland	Transmitter	PG9 x 1
Changeover switch		Exclusive proximity sensor RXD only
Mounting		M5 allen screw x 3



Accessory

Exclusive sensor

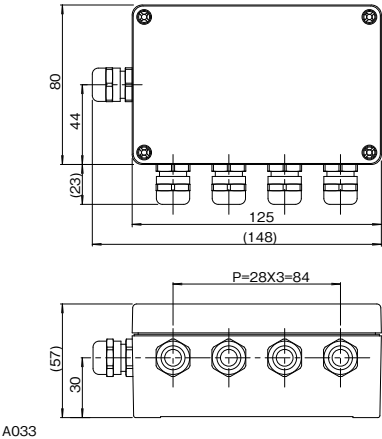
Terminal Box

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

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.



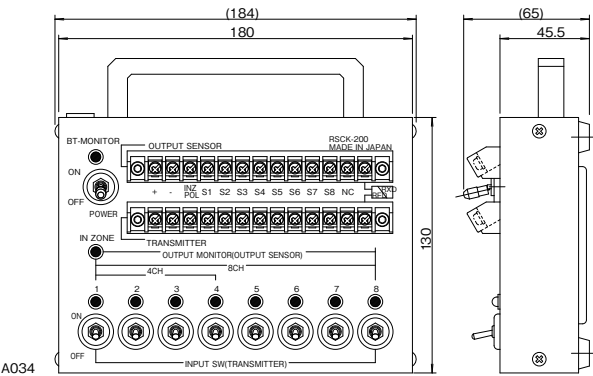
Type Code	RGPT4T-AC100-KB02A
Applicable Transmitter	RGPT-9012-V2430-PU- _ _
Number of Detectors	4*
Drive current	5...6mA per sensor
Drive voltage	100V AC (Pseudo sine wave)
Frequency of operation	20Hz
Material Body /Gasket	Aluminum die casting/Neoprene rubber
Operating temperature	0...+50°C
Protection class	IP65
Weight	600g
Cable gland for Detector	PG9X4 (Ø4...8mm)
Mounting	M4 allen screw x 2

*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 .

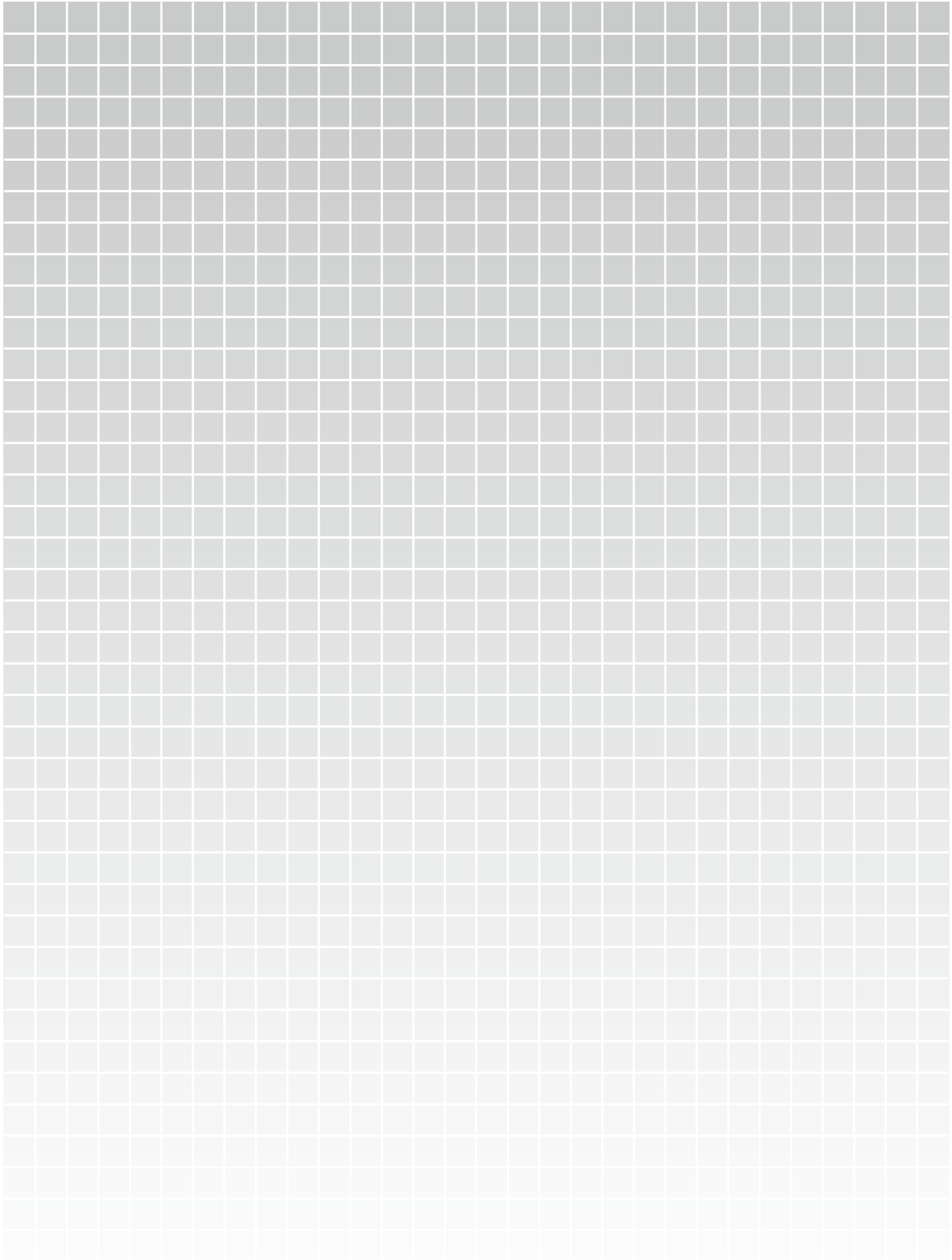


Type Code	RSCK-200
LED	Battery/InZone/Signal x 8
Material Housing/Battery box	Aluminum/ABS
Terminal block	13 pole x 2
Toggle switch	Power / 8 Input signal
Applicable Output sensor	Current consumption ≤ 400 mA
Applicable Transmitter	Using with above mentioned Output sensor as well as be able to use a 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

Accessory

Exclusive
sensor

AC amplifier
Checker



Wiring	114
Products for Maintenance	125
Custom products	126
Alphanumeric Products List	128

Remote
Sensor

Remote
Coupler

Remote
Power
Supply

Wiring

Products for
Maintenance

Custom
Products

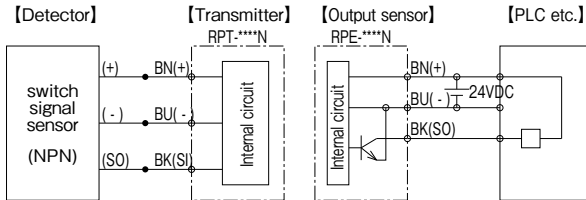
Alphanumeric
product list

Remote Sensor system

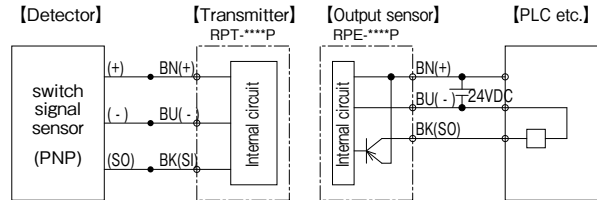
C001 DC 3-wire Detector type No. of signal : 1

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

■ NPN



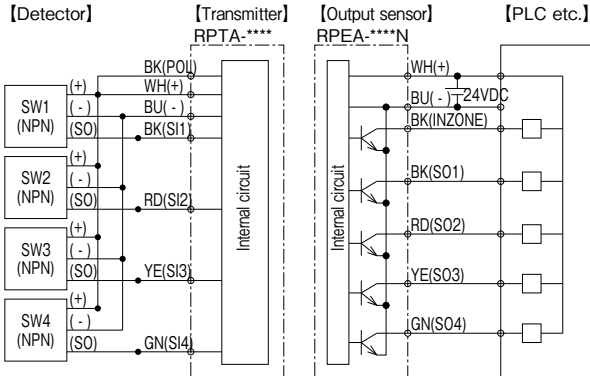
■ PNP



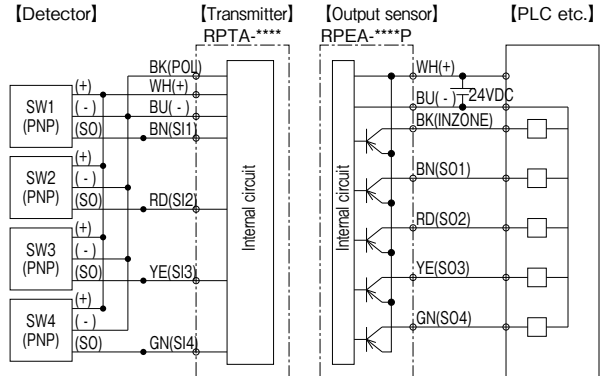
C002 DC 3-wire Detector type No. of signal : 4

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

■ NPN



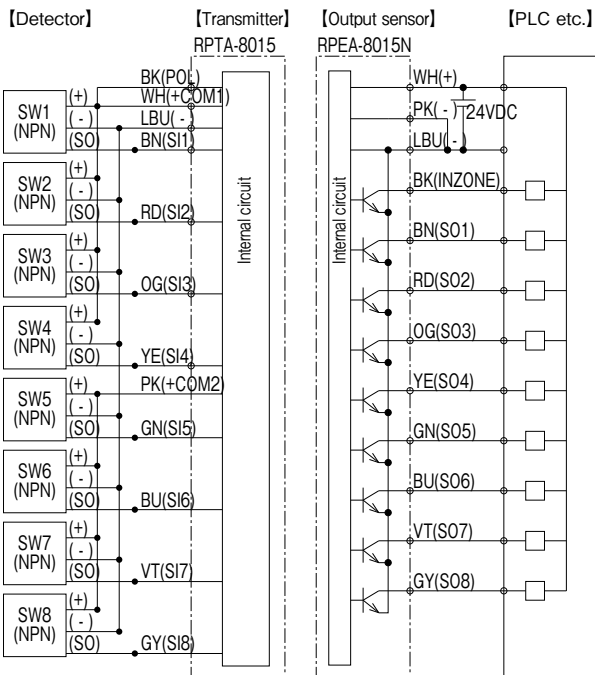
■ PNP



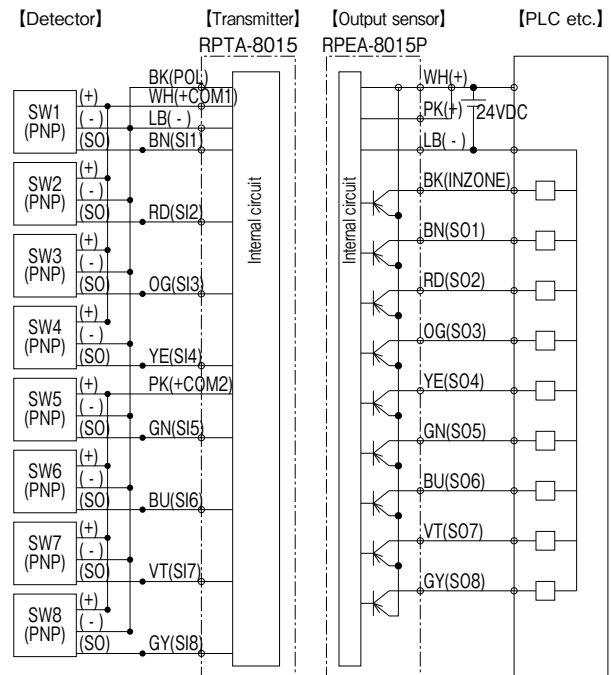
C003 DC 3-wire Detector type No. of signal : 8

RPTA-8015 / RPEA-8015_

■ NPN



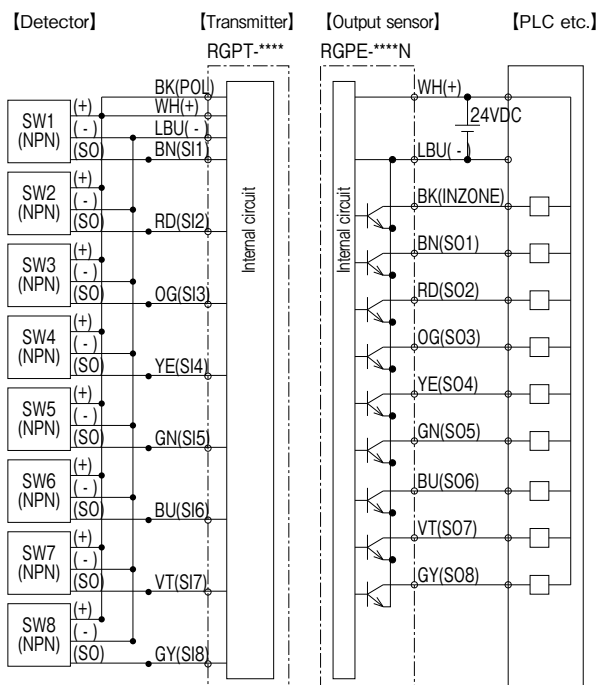
■ PNP



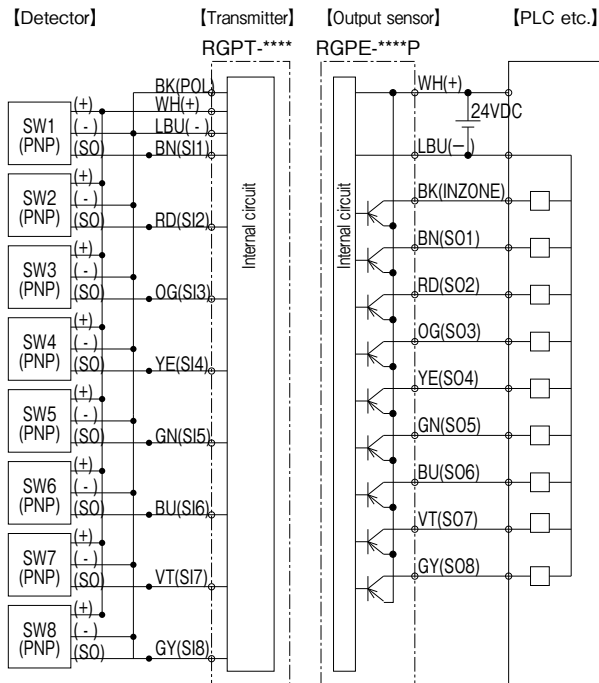
C004 DC 3-wire Detector type No. of signal : 8

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

NPN



PNP



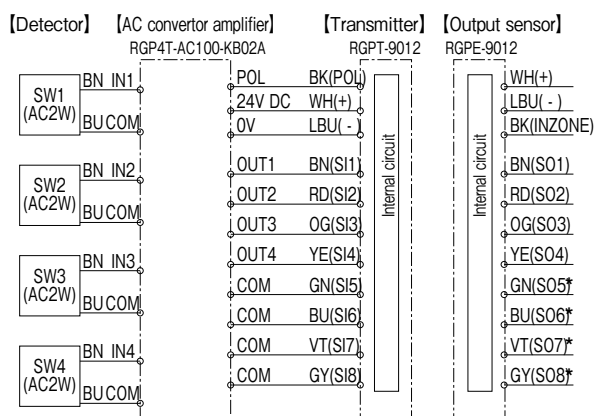
Remote
Sensor

Remote
Coupler

Remote
Power
Supply

C005 AC conversion amplifier No. of signal: 4

RGPT4T-AC100-KB02A

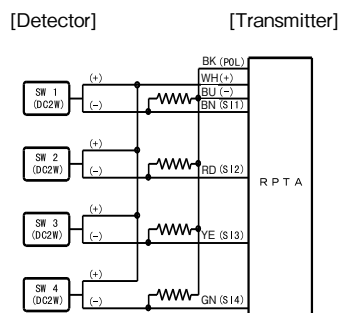


* SO5...SO8 will be ON when Transmitter and Output sensor are operating in Inzone.

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.

Wiring

Products for
Maintenance

Custom
Products

Alphanumeric
Product List

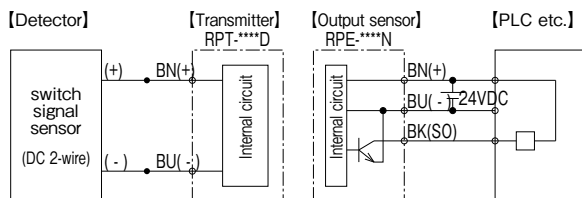
-Please refer to the instruction of User's guide supplied with the products for installation and operation.

-Remote system in this catalog comply with EMC with CE indication attached, but they do not respond to excessive surge. Please be sure to make proper countermeasures to avoid excessive surge when the cable length of Output Sensor exceeds 10m.

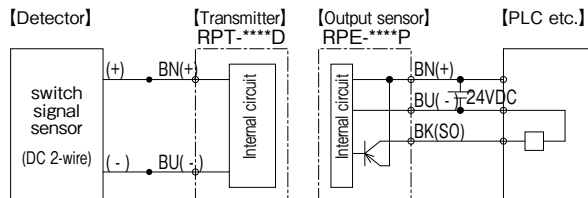
C006 DC 2-wire Detector type No. of signal : 1

RPT-1202D / RPE-1202_
RPT-1804D / RPE-1804_
RPT-3008D / RPE-3008_

■ NPN



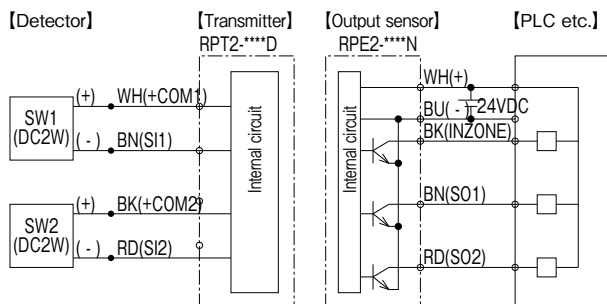
■ PNP



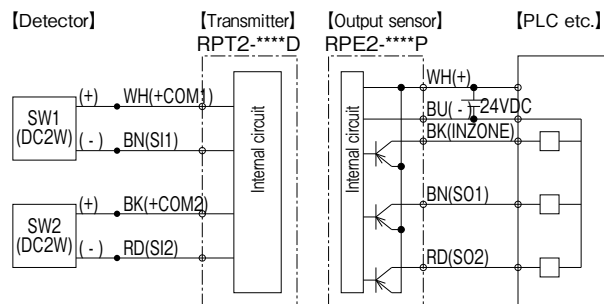
C007 DC 2-wire Detector type No. of signal : 2

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

■ NPN



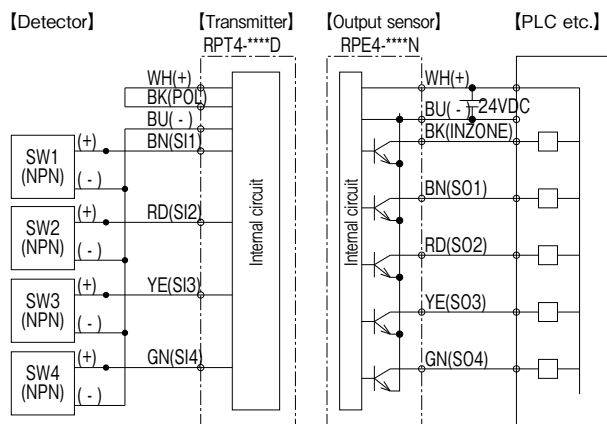
■ PNP



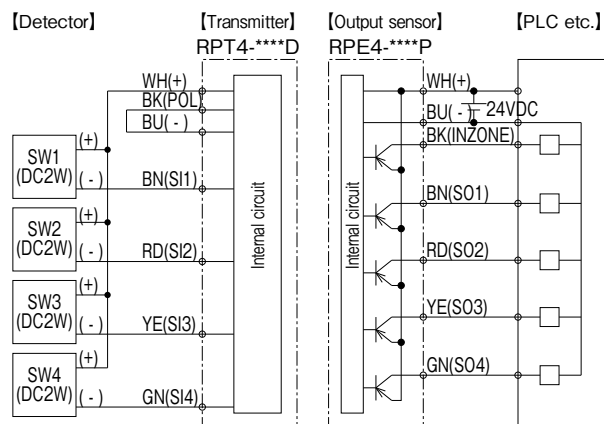
C008 DC 2-wire Detector type No. of signal : 4

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

■ NPN



■ PNP



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

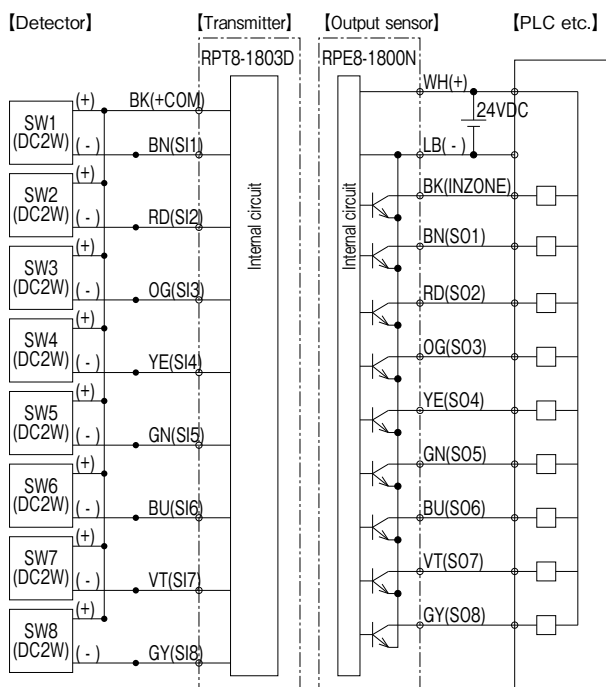
-Please refer to the instruction of User's guide supplied with the products for installation and operation.

-Remote system in this catalog comply with EMC with CE indication attached, but they do not respond to excessive surge.
Please be sure to make proper countermeasures to avoid excessive surge when the cable length of Output Sensor exceeds 10m.

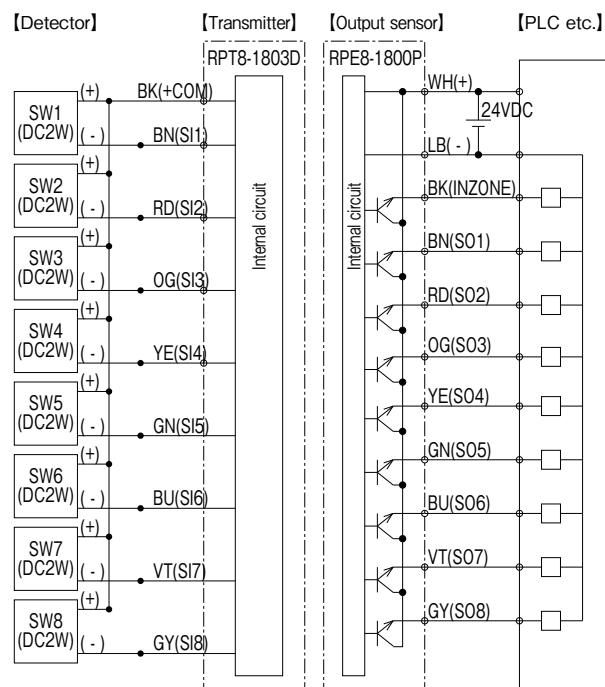
C009 DC 2-wire Detector type No. of signal : 8

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

■ NPN



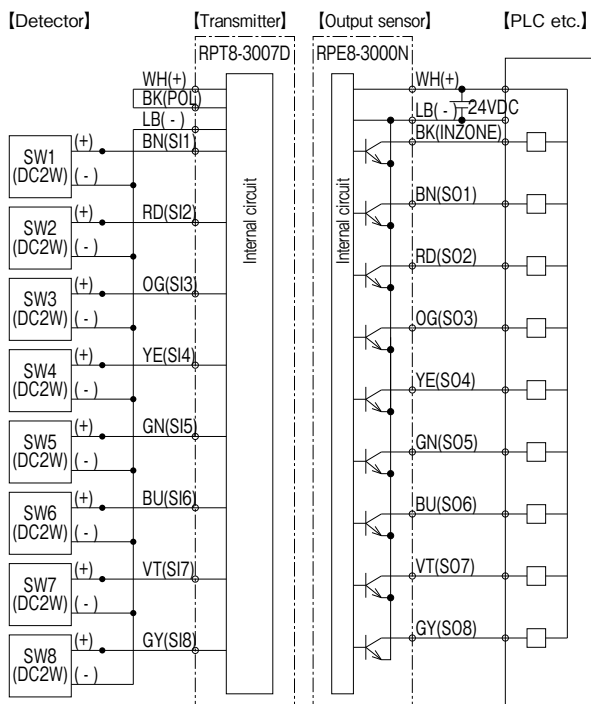
■ PNP



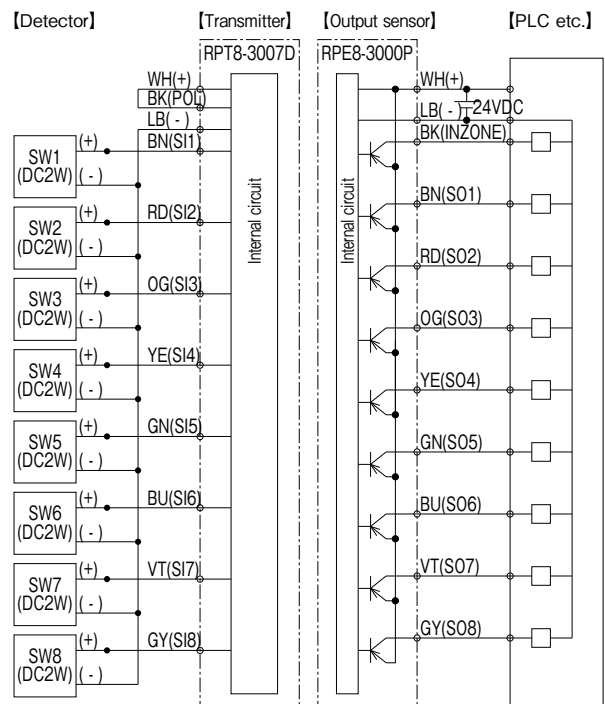
C010 DC 2-wire Detector type No. of signal : 8

RPT8-3007D / RPE8-3000_

■ NPN



■ PNP



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

Remote
Sensor

Remote
Coupler

Remote
Power
Supply

Wiring

Products for
Maintenance

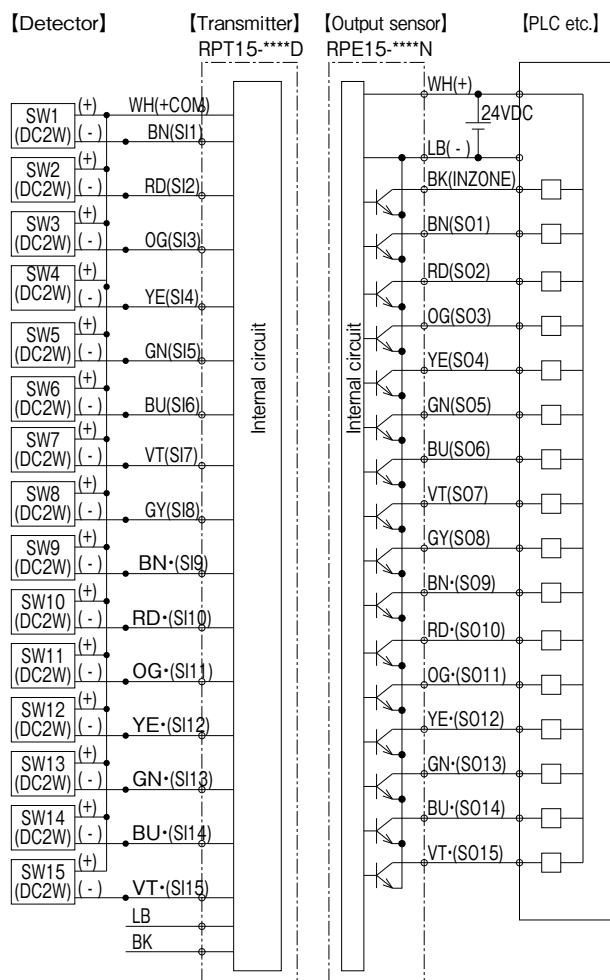
Custom
Products

Alphanumeric
Product List

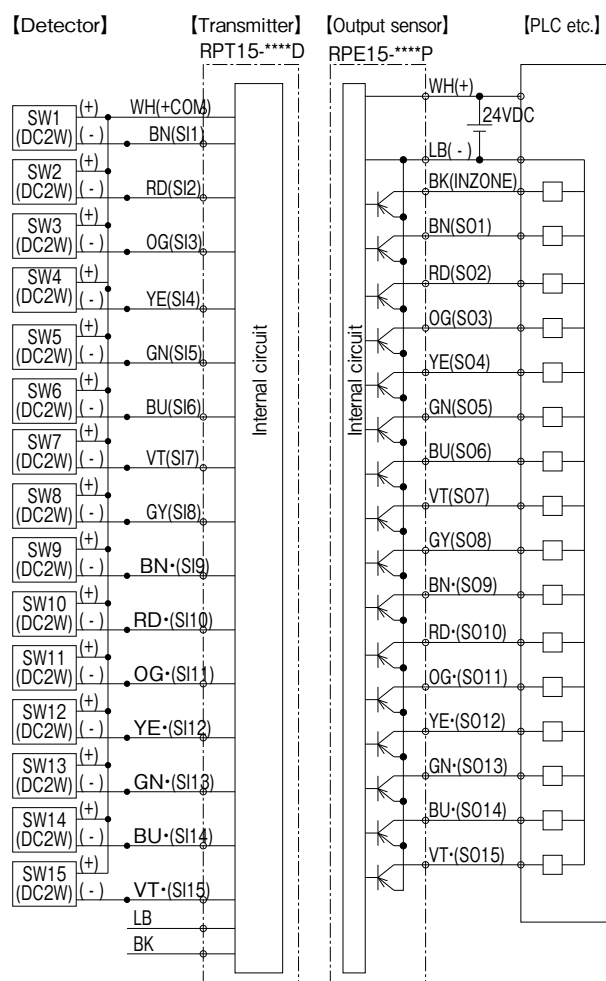
C011 DC 2-wire Detector type No. of signal : 15

RPT15-3005D / RPE15-3000_

■ NPN



■ PNP



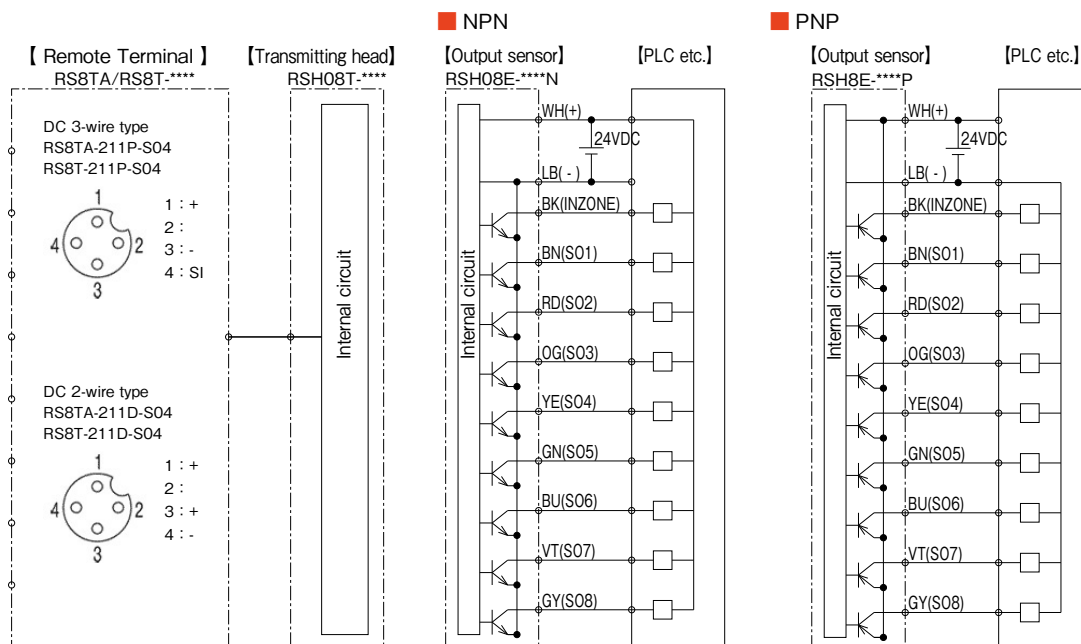
-Please refer to the instruction of User's guide supplied with the products for installation and operation.

-Remote system in this catalog comply with EMC with CE indication attached, but they do not respond to excessive surge.
 Please be sure to make proper countermeasures to avoid excessive surge when the cable length of Output Sensor exceeds 10m.

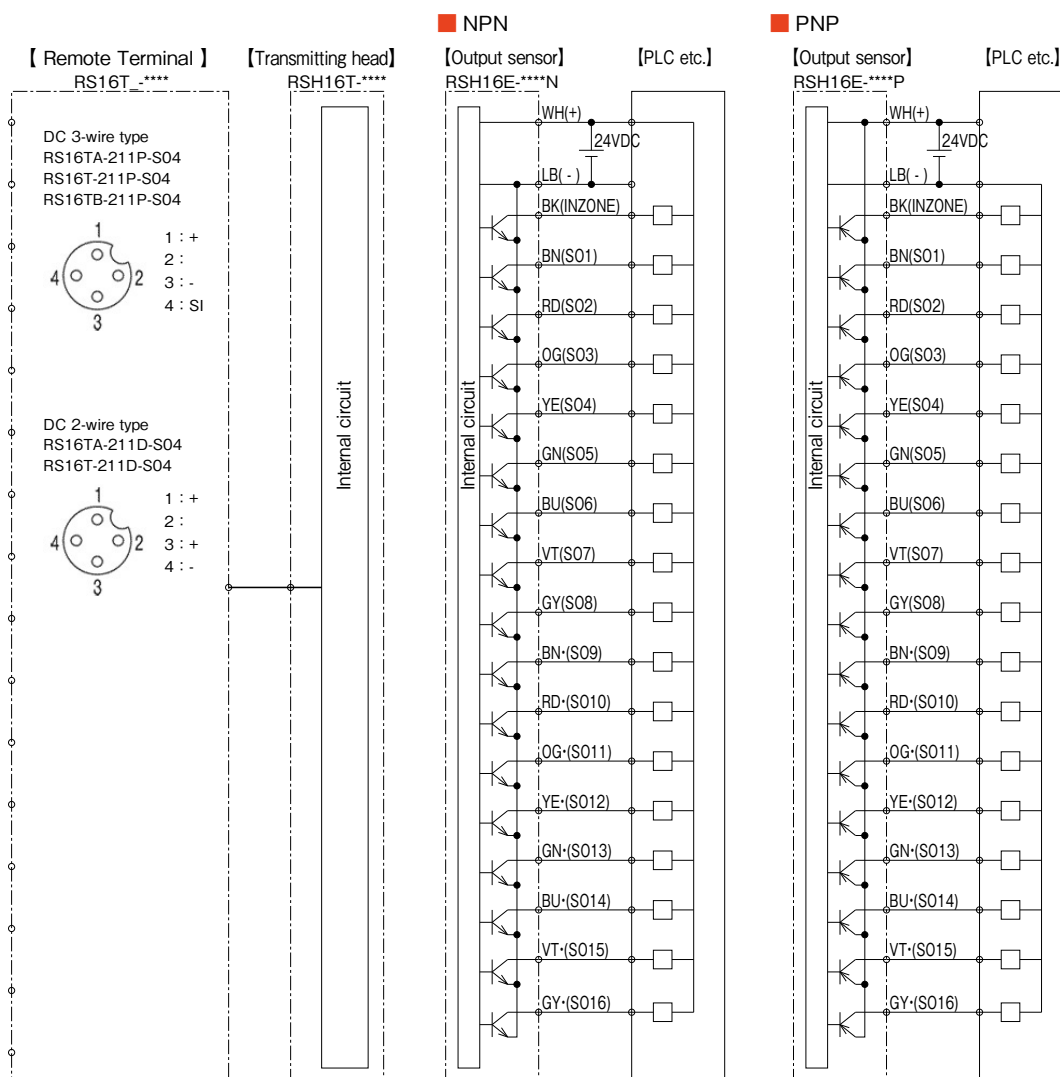
Remote Sensor system

Switch signal / Terminal Unit

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



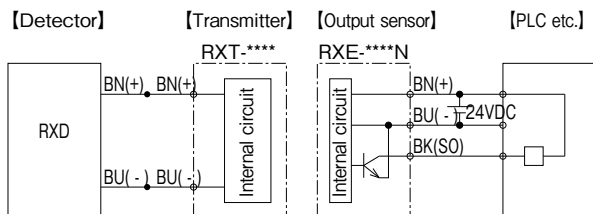
C026 DC 2-wire Detector type /DC 3-wire Detector type No. of signal : 16
RS16TA/RS16T-211_-S04 / RSH16T-030-PU / RSH16E-030 □ -PU
RS16TB-211P-S04 / RSH16TB-030-PU / RSH16EB-030P-PU



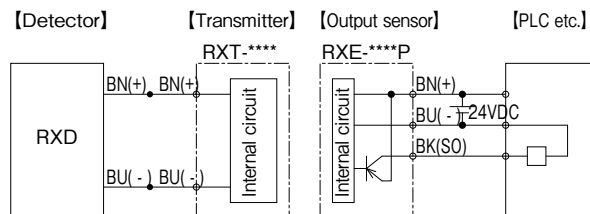
C012 Exclusive sensor type No. of signal : 1

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

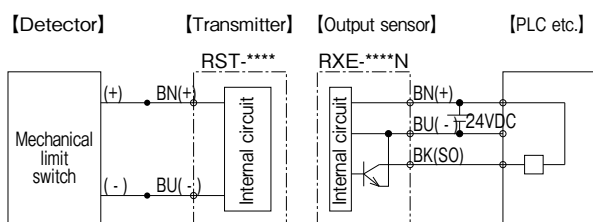
Exclusive proximity sensor RXD (NPN)



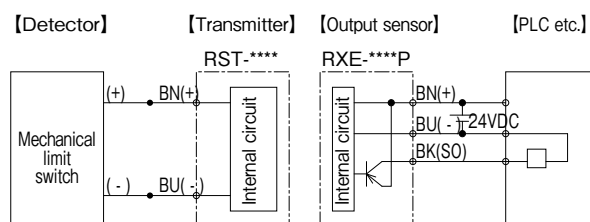
Exclusive proximity sensor RXD (PNP)



Mechanical limit switch (NPN)



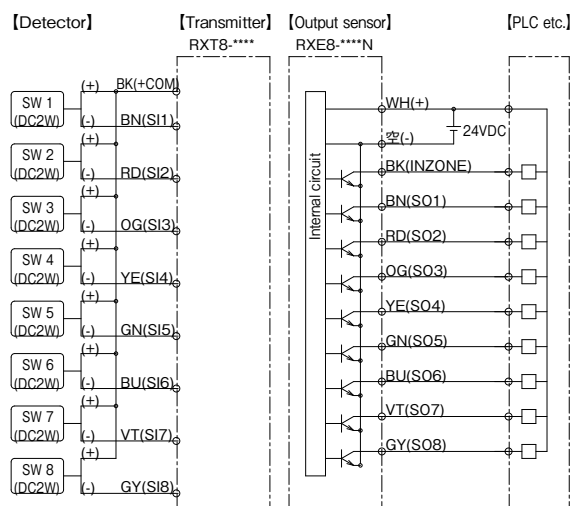
Mechanical limit switch (PNP)



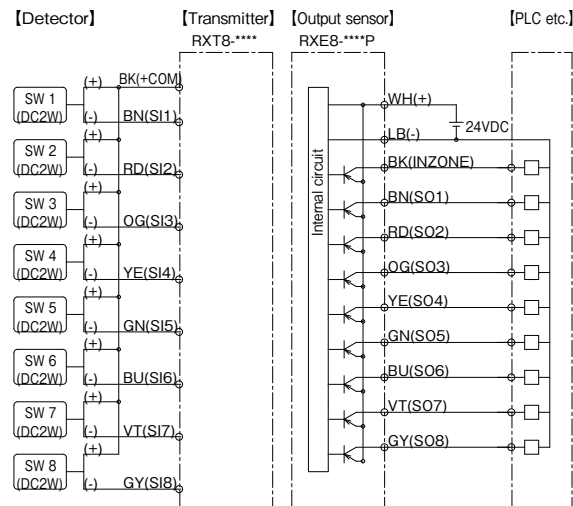
C027 Exclusive sensor type No. of signal : 8

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

NPN



PNP

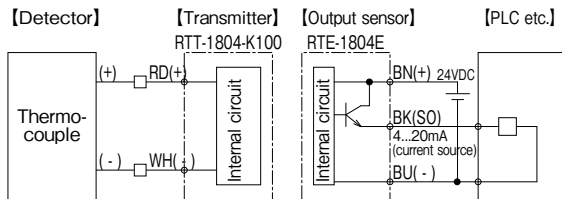


-Please refer to the instruction of User's guide supplied with the products for installation and operation.

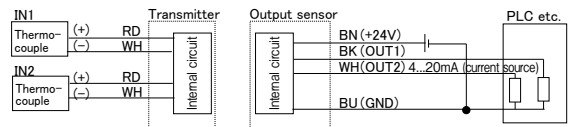
-Remote system in this catalog comply with EMC with CE indication attached, but they do not respond to excessive surge.
Please be sure to make proper countermeasures to avoid excessive surge when the cable length of Output Sensor exceeds 10m.

Remote Sensor system
Analog signal Transmission

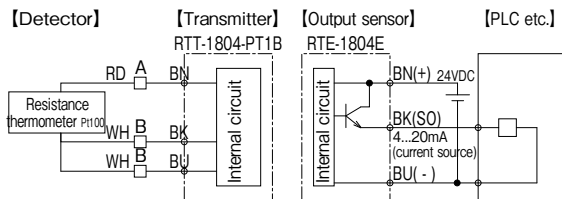
C014 Thermocouple type No. of signal : 1
RTT-1804-K100 / RTE-1804E



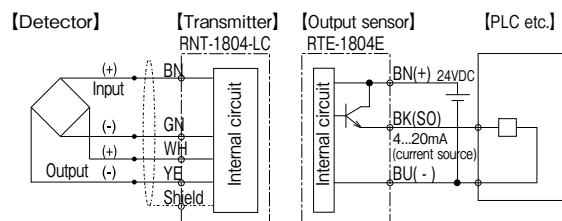
C015 Thermocouple type No. of signal : 2
RS02T-018-K*** / RS02E-018E-PU
RS02T-018-J300 / RS02E-018E-PU



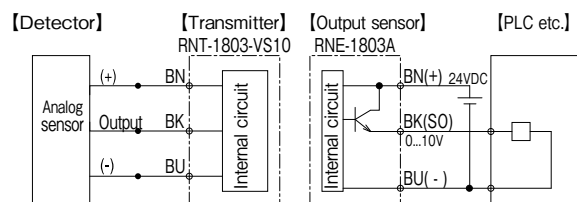
C016 Resistance thermometer type No. of signal : 1
RTT-1804-PT1B / RTE-1804E



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
Sensor

Remote
Coupler

Remote
Power
Supply

Wiring

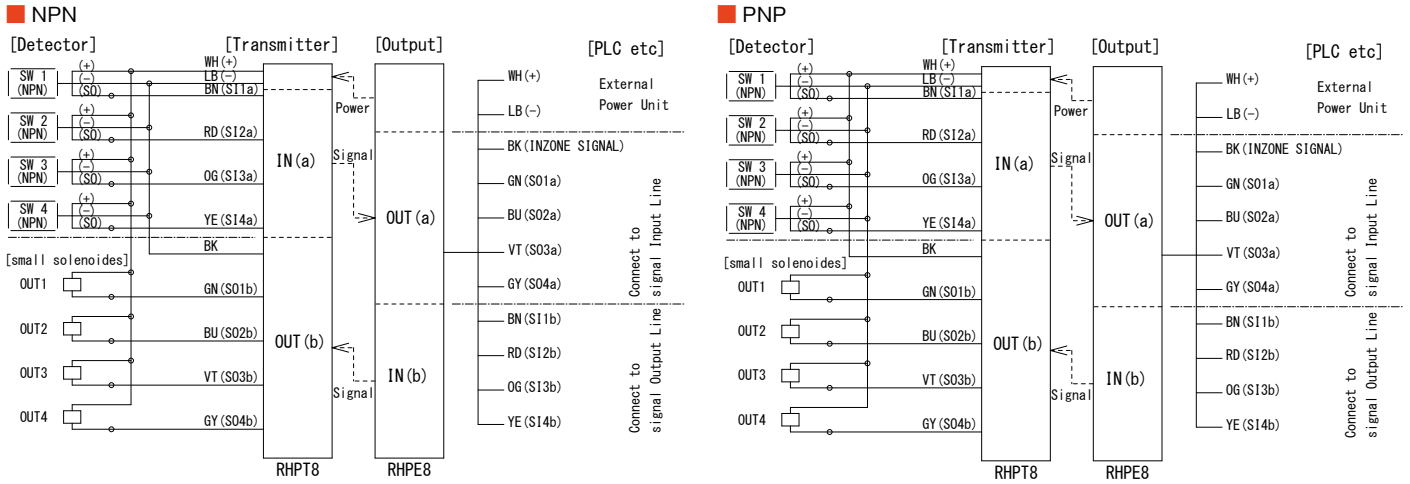
Products for
Maintenance

Custom
Products

Alphanumeric
Product List

Remote Coupler system

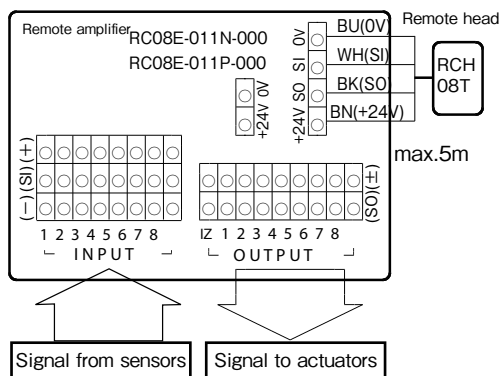
C019 Bi-directional switch signal : 4+4
RHPT8-8010_ / RHPE8-8010_



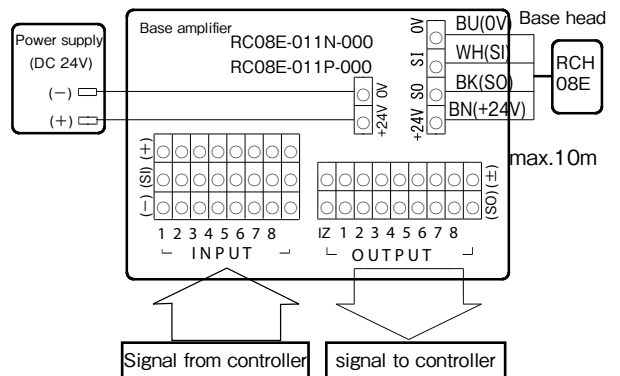
C020 Bi-directional switch signal : 8 + 8
Remote head RCH08T-211 Base head RCH08E-211
Remote amplifier RC08T-011_000 Base amplifier RC08E-011_000

Wiring Head and Amplifier

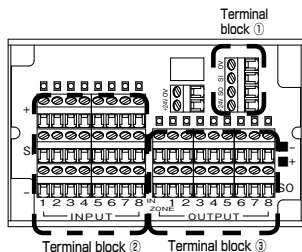
Remote head and Remote amplifier



Base head and Base amplifier

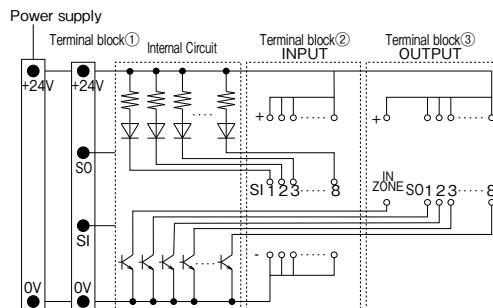


Amplifier internal circuit



NPN

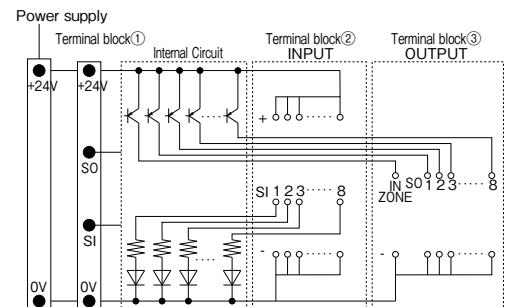
Base amplifier RC08E-011N-000
Remote amplifier RC08T-011N-000



- +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.

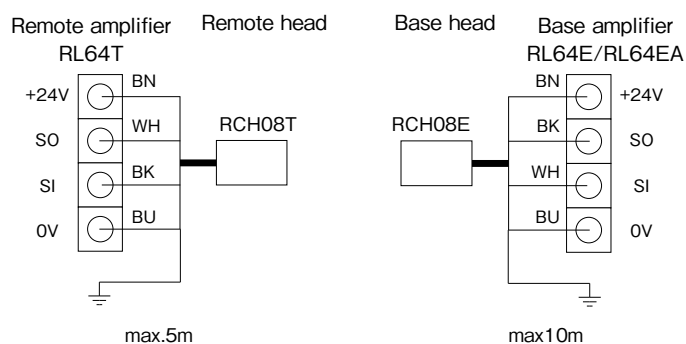
PNP

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.

C023 Bi-directional switch signal : 64+32
RCH08T-211 / RCH08E-211



The wiring about Base amplifier, Remote amplifier, Input unit, Output unit, please refer to the User's Guide.

Details about Base amplifiers of 64+32 signal transmission, please refer to the manual.

Remote
Sensor

Remote
Coupler

Remote
Power
Supply

Wiring

Products for
Maintenance

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Products

Alphanumeric
Product List

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

-Remote system in this catalog comply with EMC with CE indication attached, but they do not respond to excessive surge.
Please be sure to make proper countermeasures to avoid excessive surge when the cable length of Output Sensor exceeds 10m.

Parallel connection of Transmitter

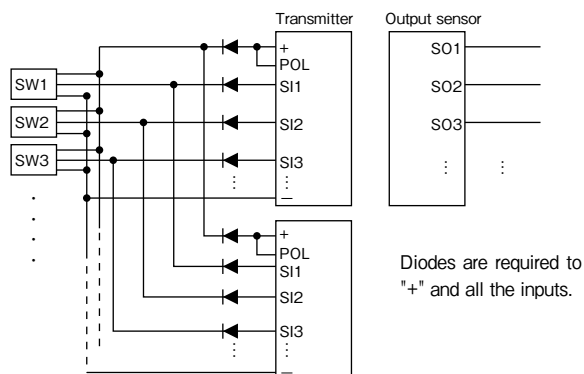
When remote sensor system transmitter (switch signal transmission) is parallelly-connected with detector sensor, put a diode to avoid sneak current.

DC 3-wire Detector type / NPN

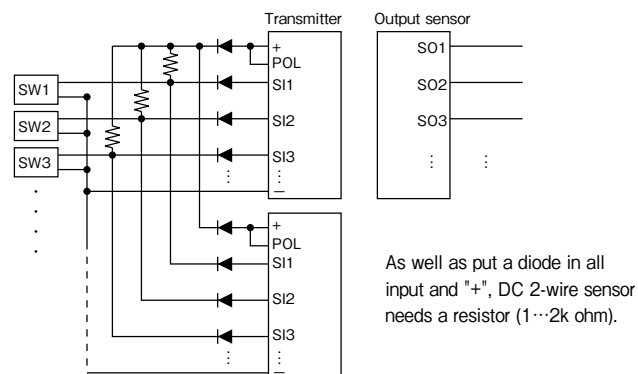
When DC 3-wire type transmitter is parallelly-connected with DC 3-wire NPN type sensor, please put a diode in all inputs and "+".

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

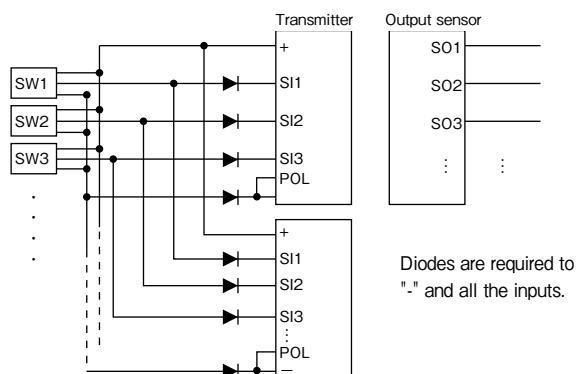


DC 3-wire Detector type / PNP

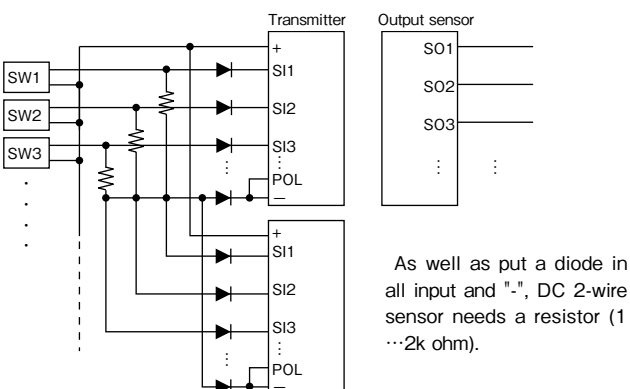
When DC 3-wire type transmitter is parallelly-connected with DC 3-wire PNP type sensor, please put a diode in all inputs and "-".

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



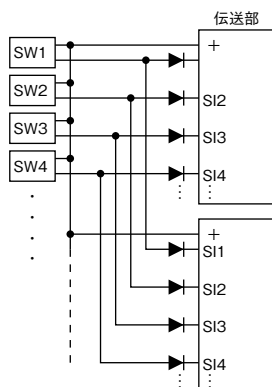
DC 2-wire Detector type

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

■ + common

Appropriate Transmitter

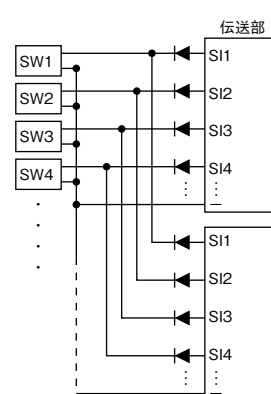
RPT2-1804D
RPT2-3005D
RPT4-1803D (+ common)
RPT4-3005D (+ common)
RPT8-1803D
RS08TA-018D
RS08TA-030D
RPT15-3005D
RPT8-3007D-TYT19



■ - common

Appropriate Transmitter

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



Products for Maintenance

These products are manufactured for the maintenance use only.

Remote Sensor system

Transmission type	No. of signal	Type Code	Remarks
Switch signal transmission	1	RAT-1805-PU	Transmitter
		RAT-3010-PU	Transmitter
		RQE-1804 □ -PU	Output sensor
		RQT-1804 □ -PU	Transmitter
		RST-1805-PU	Transmitter
		RST-3010-PU	Transmitter
		RWT-E3000-PU	Double Remote
		RWT-E1800-PU	Double Remote
		RWT-R3000-PU	Double Remote
		RWT-R1800-PU	Double Remote
		RXE-3010 □ -PU	Output sensor
		RXT-3010-PU	Transmitter
	4	RPEA-FX406 □ -PU	Output sensor
		RPTA-FX406-PU	Transmitter
		RPEA-3005 □ -GM-PU	Output sensor
	8	RFTA-1805-PU	Transmitter
		RFEA-1805 □ -PU	Output sensor
		RFTA-3010-PU	Transmitter
		RFEA-3010 □ -PU	Output sensor
		RFTA-3018-PU	Transmitter
		RFEA-3018 □ -PU	Output sensor
		RFTB-1803-PU	Transmitter
		RFEB-1803 □ -PU	Output sensor
		RFTB-3005-PU	Transmitter
		RFEB-3005 □ -PU	Output sensor
		RPTA-8010-PU	Transmitter
		RPEA-8010 □ -PU	Output sensor
Analog signal transmission Resistance thermometer type	1	RTE-9012E-PU	Output sensor
		RTT-9012-PT1B □ 0-PU	Transmitter
	6	RHT-3005Y-PU	Transmitting head
		RHE-3005CY-PU	OutputHead
		RTT06-KB01-K100	Transmitting amplifier
		RTT06-KB01-J30	Transmitting amplifier
		RTE06-KB01-E	Output amplifier

Remote Coupler system

Transmission type	No. of signal	Type Code	Remarks
Detect+control signal (Bi-directional signal)	8+8	RHPT-8010-V2410-PU	Remote Head
		RHP16TN-RS01	Remote Amplifier
		RHP16P-RS01	
		RHPE-8010-V2410-PU	Base Head
		RHP16EN-RS01	Base Amplifier
		RHP16P-RS01	
Detect+control signal (Bi-directional signal) /Remote Link system	64+32	RLH64T-211-PU	Remote Head
		RLH00T-211-PU	
		RL64T-322-000	Remote Amplifier
		RLH64E-211-PU	Base Head
		RLH00E-211-PU	
		RL64E-311 □ -000	Base Amplifier

Remote Power Supply system

Transmission type	Supply capability	Type Code	Remarks
Power supply only	24V/1A	RHVT-MX90-D2410	Remote
		RHVE-MX90-D24	Base
	24V/5A	RHVT-QA15-D2450	Remote
		RHVE-QA15-A10	Base

Exclusive proximity sensor

Specification	Type Code	Remarks
Aluminum chip non-detection	RFD-1804AL-PU	
Aluminum detection	RFD-1804NM-PU	
	RFD-3008NM-PU	
exclusive use for RF/A	RXD-3010M-PU	

Remote
Sensor

Remote
Coupler

Remote
Power
Supply

Wiring

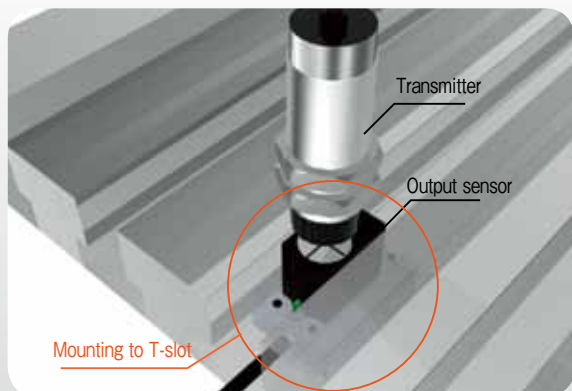
Products for
Maintenance

Custom
Products

Alphanumeric
Product List

These are manufactured according to our customers' specific requirements.

Mounting to T-slot of press machine



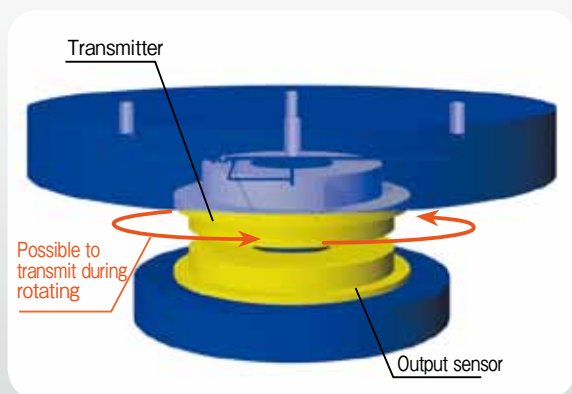
T-slot form which can fit to the T-slot of the ram on the press machine
 Making the non-contact wiring of the workpiece confirming sensor of the die and prevent mis-pressing.
 Save the trouble of attaching or detaching the connector.
 (T-slot form is produced by customer specifications.)

T-slot form

- Speed up the die change
- Space-saving by mounting to T-slot



Transmit anywhere at 360 degree



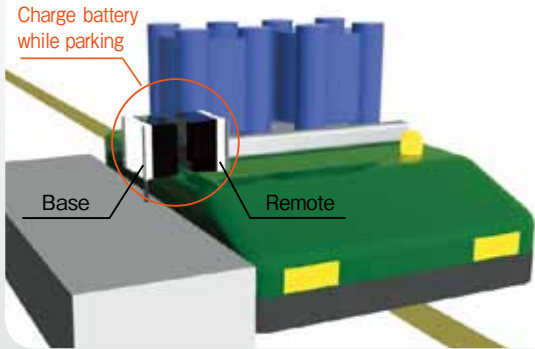
Requires a power supply and signal transmission during rotating and also when the Remote system cannot be mounted on to the rotating shaft, we provide ring shape remote system upon request of customer
 (Ring shape will be designed based on the customer specification)

Ring form

- Continuous power supply and signal transmission during rotating
- For substitution of slipping



Non-contact battery charge to the AGV



Remote Power Supply system for charging 24V battery
It can charge battery at the AGV parked position, therefore
it save substantial time in changing batteries.



The product with controller which monitors and
controls of the battery-charge is also available.

28V DC/4A
non-contact
power supply

- Charge battery wirelessly at the parked position
- Available in dusty and dirty environment



28V DC/4A power supply Type Code
Remote : RVTA-411-44-PU
Base : RVEA-411-3-PU

Remote
Sensor

Remote
Coupler

Remote
Power
Supply

Wiring

Products for
Maintenance

Custom
Products

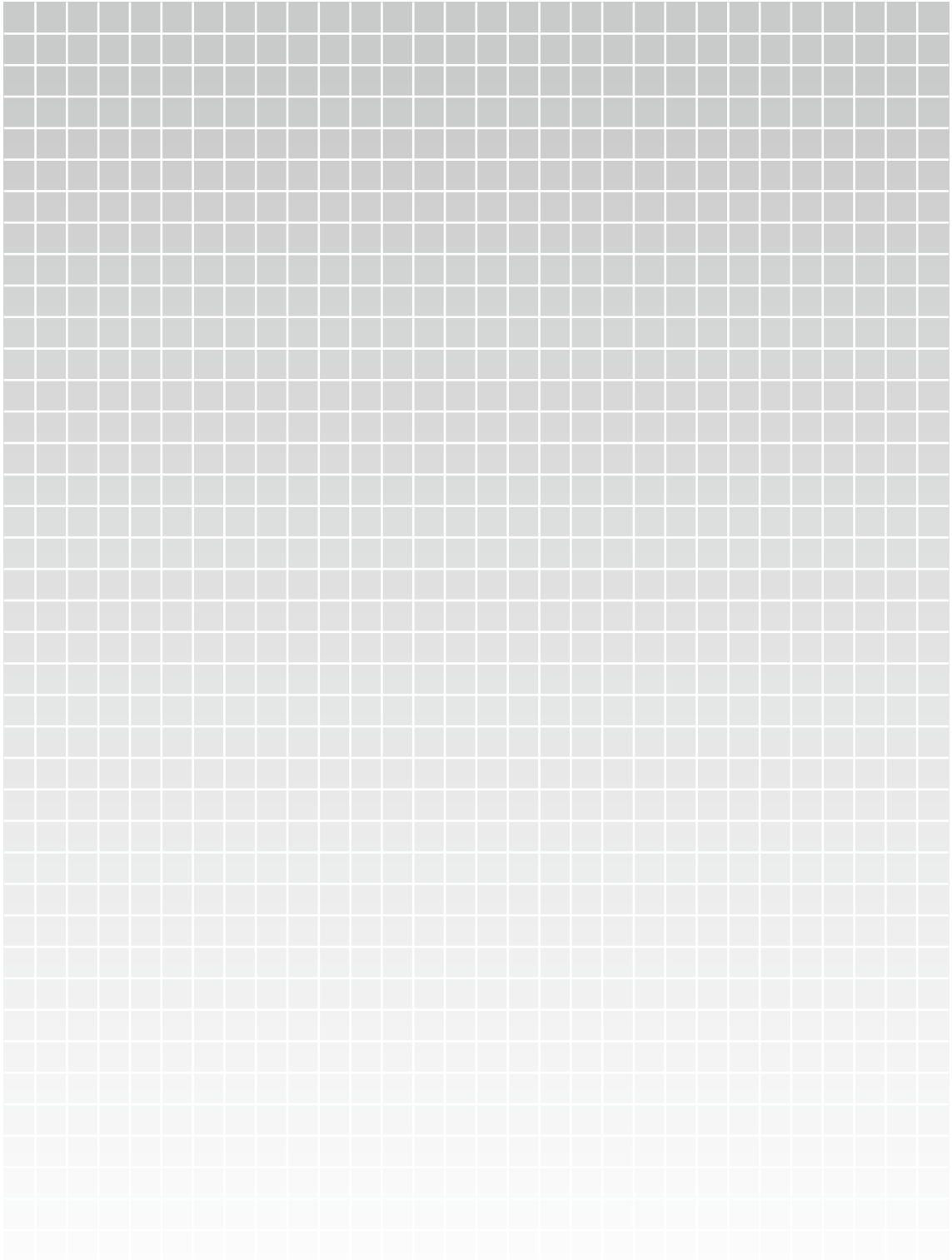
Alphanumeric
Product List

Please contact to our salesperson about special specification products.

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RC08E-011N-000	83
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RC08T-011P-000	83
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RCD11T-211-PU	88
RCD22E-211-CLC	90
RCD22E-922	91
RCD22T-211-CLC	90
RCD22T-922	91
RCD33E-211-DNC	92
RCD33T-211-DNC	92
RCH08E-211-PU	82
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RFD-1805-PU-CP	102
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RFK-A098-03	107
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RGPE-4008-V1220NB-PU	37
RGPE-4008-V1220PB-PU	37
RGPE-9012-V2430N-PU	39
RGPE-9012-V2430P-PU	39
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RGPT-4008-V1220B-PU	37
RGPT-9012-V2430-PU	39
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RPT8-TF3007D-PU	55
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RPTA-TF1803-PU	34
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E-mail: b-plus@b-plus-kk.jp

www.b-plus-kk.jp



Our quality management system and environment management system have been registered as meeting the requirements of ISO9001/2008 and ISO 14001/2004.



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