

Remote Coupler System  
RS-232C version / RCD11 series

Remote : RCD11T-211-PU-\_\_  
Base : RCD11E-211-PU-\_\_

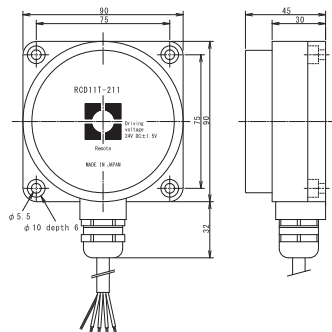
**Attention for Installation**

(Read this section thoroughly before installation.)

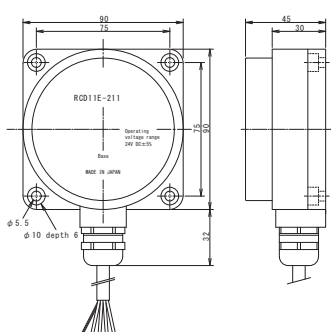
Before using the Remote Sensor, read this manual carefully.  
During installation and operation, pay close attention to the safety aspect.

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

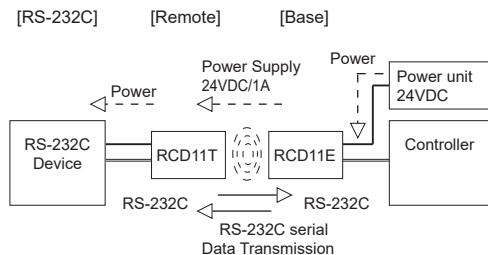
Remote : RCD11T-211-PU-\_\_



Base : RCD11E-211-PU-\_\_



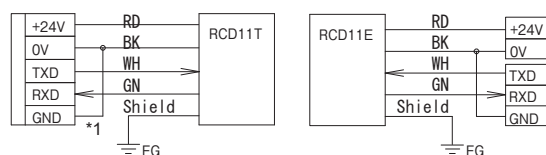
Construction of the System



[ Function of each Component ]

Remote : A unit that is mounted on the moving side, communicates RS-232C data with a Base and supplies power to connected with each RS-232C interface device unit.  
Base : A unit that is mounted on the fixed side, communicates RS-232C data with a Remote and supplies power without physical contact.

Wiring



\*1: In the following cases, this wiring is necessary.

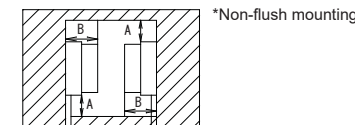
- When 0V is not connected with GND of RS-232C in the equipment.
- For the equipment that doesn't need the power supply from RCD11T.

<<Notes>>

1. RCD11 with cable length up to 3m have indication of the CE marking which verifies that the products comply with the requirements of EMC directive. When the cable is extended over 3m, it will result in the loss of the verification.
2. Please sure to connect the unit of which load current (current consumption) is over 200mA. If the load current is small, it could cause the malfunction..
3. If the operating distance is less than the operating distance showed in specification, or if the sensor is used without connecting load, please contact us before installation.

Influence of Surrounding Metal

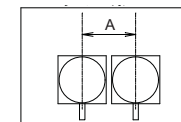
In order to avoid influence of surrounding metal when sensor is mounted in metal, keep the minimum distance as described below.



Type number	A (mm)	B (mm)
RCD11T-211-PU	50	45
RCD11E-211-PU		

Mutual Interference

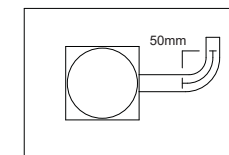
In order to avoid mutual interference between parallel mounted sensors, keep the minimum distance as described below.



Type number	A (mm)
RCD11T-211-PU	300
RCD11E-211-PU	

Bending radius of cable

The minimum bending radius for the sensors are 50mm.



\* Never pull the cable strong in installing.

Specification

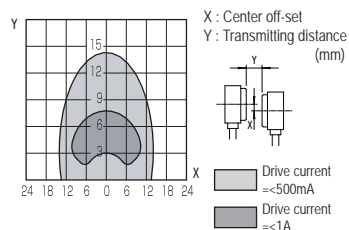
Type number	RCD11T-211-PU-__	RCD11E-211-PU-__
Drive voltage	24V DC+1.5V (ripple : =<1V)	
Drive current	max. 500mA   max. 1A	
Transmitting distance	3...10mm   4...6mm	
Center off-set	+5mm   +5mm	
Supply voltage		24V DC+5% (incl. ripple)
Current consumption		max. 3A
Serial signal communication	RS-232C, Duplex, Asynchronous	
	4800...38400bps, without data check	
Signal communication delay	=<20 micro sec.	

◆ Please note that the signal may become unstable (false signal or chattering) when the transmission distance and the center offset are outside the specification range.

◆ The inzone signal is a preliminary signal for confirming that the output signal is established within the specification range. Please note that it does not guarantee signals output outside the specification range.

Transmitting Area Diagram

[Example : Supply voltage at 24V DC]



◆ Wrong signal could be output when operating distance or center offset is out of specification range.