Remote Coupler System
DeviceNet version

Remote : RCD33T-211-DNC
Base : RCD33E-211-DNC

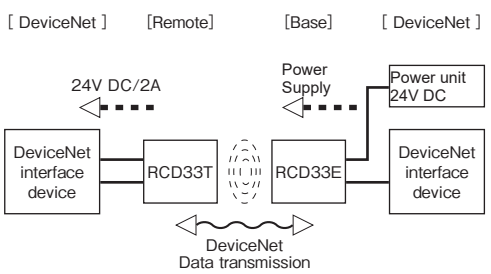
Attention for Installation

(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 exceed and may cause malfunction.
◆ Ensure correct connections by reference to the wiring diagram.
◆ To avoid malfunction caused by induction noise, cable should be kept apart from motor or other power cable.
◆ When the resin (ABS or ABS + PBT) is used to the case or the transmission surface, please be sure to avoid organic solvent or liquid containing them to splash over.
◆ Please install cable end "wiring part" in so that there is no water and cutting fluid. (Water is transmitted to the internal from the cable core, there is a possibility of causing a problem such as short circuit or corrosion.)
◆ Please do not face the output sensor to a metal at all times to avoid metal overheating or damage of the components.
◆ When the unit keeps to be using under out-of-specification distance/center off-set/overload status for long time, it may be damaged by overheating.

Construction of the System

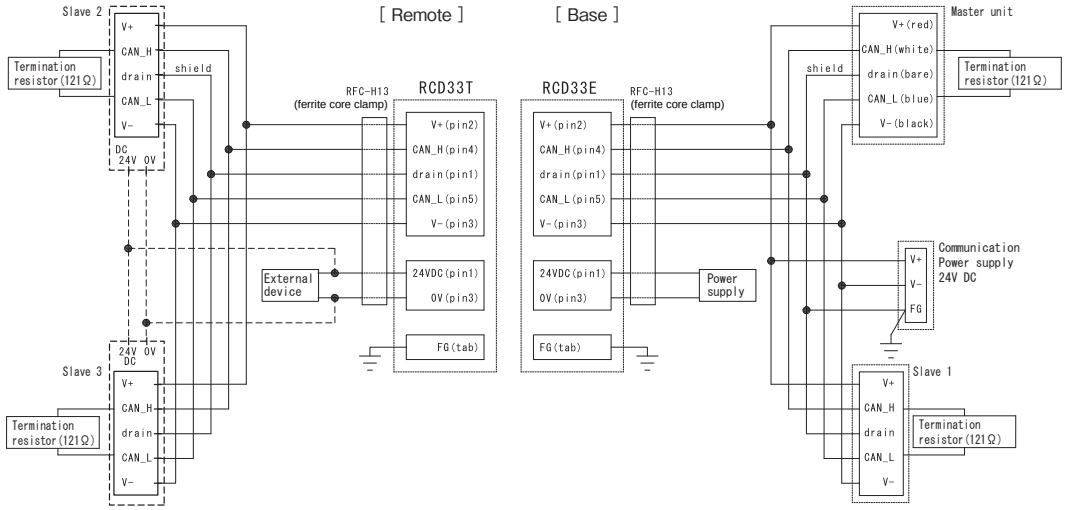


[Function of each Component]

Remote — is mounted on a moving side. It transmits DeviceNet data to the Base and supplies power to connected DeviceNet interface device.

Base — is mountes on the fixed side. It transmits DeviceNet data to the Remote and supplies power to the Remote inductively through air-gap.

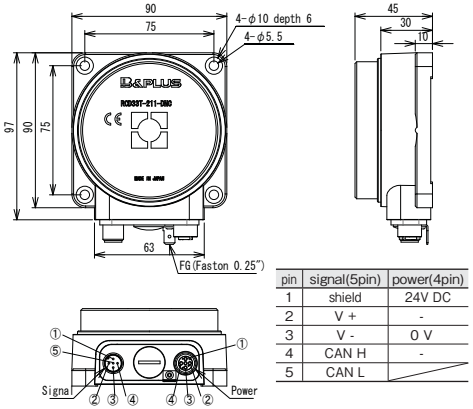
Wiring



[Notes]

- Please set the length of the cable in consideration of the total extension of the entire network.
- Connectors and cables are not included in RCD33.
- The termination resistor is not built in RCD33. It is required at each end of the line of RCD33E(Base) side and RCD33T(Remote) side.
- Drain and FG are connected inside of RCD33T(remote part).
- Ground RCD33T with FG tab and fixing screws.
- RFC-H13(a ferrite core clamp) is bundled with each RCD33E and RCD33T. Clamp the signal cable and power cable together by the clamp at a position within 150mm from RCD33.
- Do not face two RCD33E(Base part) when they are powered. There is a possibility of breaking down.
- RCD33 meets the requirements of EMC and 0indicates the CE-mark on it.

Remote : RCD33T-211-DNC

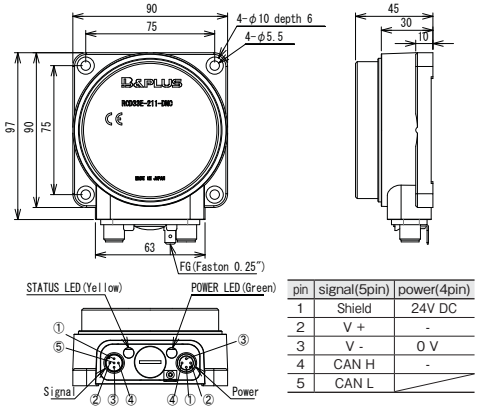


pin	signal(5pin)	power(4pin)
1	shield	24V DC
2	V +	-
3	V -	0 V
4	CAN H	-
5	CAN L	

Type number	RCD33T-211-DNC
Drive voltage	24 V DC+-1.5 V
Drive current	≦ 2 A
Transmitting distance	3...5 mm
Center off-set	± 4 mm
Drive current	≦ 2 A
Operating temperature	0...+50 ℃
Degree of protection	IP 67
Connector Signal	M12/5 pin Male (Available accessory : VA-5DSX5DVG5-BL[5m])
Connector Power	M12/4 pin Female (Available accessory : TM-4DBX5HG2-1/3[5m])
Material Housing	Aluminum anodized finish
Material Active surface	ABS + PBT

◆ 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.

Base : RCD33E-211-DNC



pin	signal(5pin)	power(4pin)
1	Shield	24V DC
2	V +	-
3	V -	0 V
4	CAN H	-
5	CAN L	

Type number	RCD33E-211-DNC
Supply voltage	24 V DC ± 5 % (incrude ripple)
Current consumption	≦ 3 A
Communication	DeviceNet (CAN-bus) data
Baud rate	125K....500K bps
Transmission delay	≦ 0.5 μsec.
Start-up time	≦ 2 sec*
Operating temperature	0...+50 ℃
Connector Signal	M12/5 pin Male (Available accessory : VA-5DSX5DVG5-BL[5m])
Connector Power	M12/4 pin Male (Available accessory : TM-4DSX5HG2-1/3[5m])
Degree of protection	IP 67
Material Housing	Aluminum anodized finish
Material Active surface	ABS + PBT

* It is the boot-time of RCD33.
The start-up time of DeviceNet varies with system.

LED indication of Base part

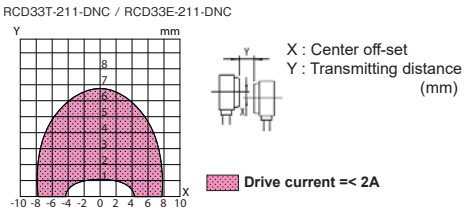
The state of lighting and the situation of LED are as follows.

	LED	interval of blinking	State
POWER LED (Green)	ON	—	The power supply is supplied.
	OFF	—	The power supply is not supplied.
STATUS LED (Yellow)	ON	—	Remote part is in the transmitting area.
	Blink	cycle : 1.5s ON : 0.3s	Remote part is outside of the transmitting area.
	Blink	cycle : 3s ON : 0.1s	Heat is generated in excess because of the overcurrent.*
	OFF	—	V+/V- not connected.

*When heat is generated in excess, it restarts if the supply of the power supply is stopped by Base part, and generation of heat calms down.

Transmitting Area Diagram (Non-flush mounted)

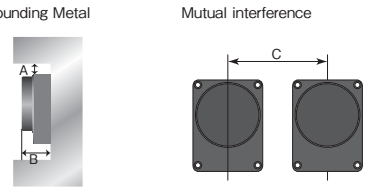
[Example : Supply voltage at 24V DC]



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

Mutual Interference

In order to avoid influence of surrounding metal and mutual interference, keep the minimum distance as described below.



Type number	A(mm)	B(mm)	C(mm)
RCD33T-211-DNC	50	45	300
RCD33E-211-DNC			

B & PLUS K.K.
http://www.b-plus-kk.jp/ E-mail b-plus@b-plus-kk.jp