

Remote Coupler System
CC-Link version

Remote : RCD22T-211-CLC
Base : RCD22E-211-CLC

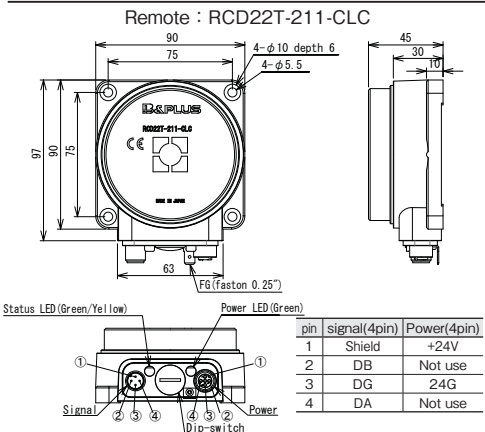
Attention for Installation

(Read this section thoroughly before installation.)

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

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

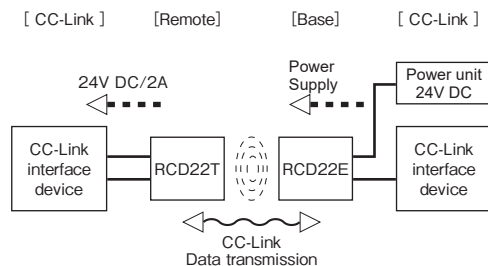
Specification



Type number	RCD22T-211-CLC
Drive voltage	24V ± 1.5V DC
Drive current	≤ 2A
Transmitting distance	3...5mm
Center off-set	± 4mm
Operating temperature	0...+50 °C
Degree of protection	IP 67
Connector	Signal M12/4 pin Male (Available accessory : VA-4DSX5CCG4[5m]) Power M12/4 pin Female (Available accessory : TM-4DBX5HG2-1/3[5m])
Housing	Aluminum anodized finish
Material	Active surface ABS + PBT
Bundled items	Ferrite core clamp (Gray x2 / White x1)

- ◆ 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.

Construction of the System

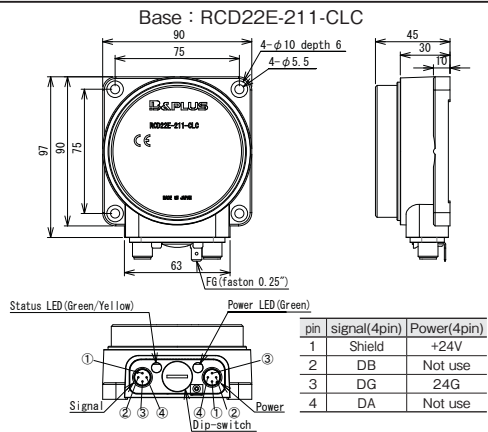


Function of each Component

Remote : A unit that is mounted on the moving side. It communicates CC-Link data with a Base and supplies power to connected each CC-Link unit.

Base : A unit that is mounted on the fixed side. It communicates CC-Link data with a Remote and supplies power non contact.

*There is no need to set the of channel or number of occupied channels etc. for this unit. It can be used by setting baud rate / built-in terminator by a Dip-switch.

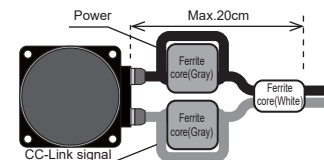


Type number	RCD22E-211-CLC
Supply voltage	24 V DC ± 5 % (include ripple)
Current consumption	≤ 3 A
Communication	CC-Link data
Baud rate	156K...10M bps (Changes by Dip switch)
Start-up time	≤ 2 sec*
Operating temperature	0...+50 °C
Connector	Signal M12/4 pin Male (Available accessory : VA-4DSX5CCG4[5m]) Power M12/4 pin Male (Available accessory : TM-4DSX5HG2-1/3[5m])
Degree of protection	IP 67
Material	Housing Aluminum anodized finish Active surface ABS + PBT
Bundled items	Ferrite core clamp (Gray x2 / White x1)

- * It is the boot-time of RCD22. The start-up time of CC-Link varies by system.

Wiring

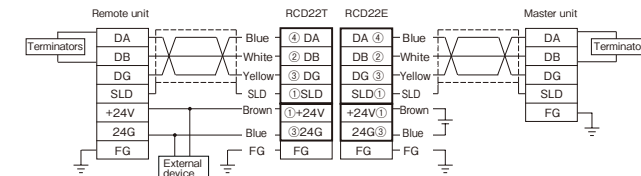
Setting ferrite core clamp



Notes

- It is recommended to install RCD22 in metal in order to reduce the influence of self-heating.
- Attach ferrite core clamp to the power and signal line less than 20 cm from a main part according to the above-mentioned Setting ferrite core clamp.
- Ferrite core clamp (Gray) : Signal line is 2 Turn , Power line is 2 Turn / Ferrite core clamp (White) : Signal line is 1 Turn , Power line is 1 Turn. In order to attach ferrite core clamps, when you carry out T-junction, the baud-rate should be 625 Kbps or less.
- Connect "Terminators" between DA-DB of the last unit on the CC-Link network.
- When this unit mounted on the both end of CC-Link network, please set the Dip switch SW4 to ON.
- For wiring of external power unit 24V DC to FG, please return to wiring. Connect "+" of power unit +24V DC to a terminal indicated [+24V] , "-" to [24G].
- Please set the cable length to consider the total length of the entire network.
- Connectors and cables are not included in RCD22.
- Ground RCD22T with FG tab and fixing screws.
- Do not face two RCD22E(Base part) when they are powered. There is a possibility of breaking down.
- RCD22 meets the requirements of EMC and indicates the CE-mark on it.

Wiring between Master unit and Remote unite



Setting for Switch and LED indication

Baudrate is set with SW1...3, when SW4 is turned on, Terminators can be used.

**Change a Dip-switch after certainly turning off the power.

Setting for Switch

Baud rate	SW3	SW2	SW1	LED status	Interval when LED blinks
156kbps	OFF	OFF	OFF	Lighting once every 2 seconds.	ON / OFF
625kbps	OFF	OFF	ON	Turning off once every 2 seconds.	ON / OFF
2.5Mbps	OFF	ON	OFF	Lighting twice every 2 seconds.	ON / OFF
5Mbps	OFF	ON	ON	Turning off twice every 2 seconds.	ON / OFF
10Mbps	ON	OFF	OFF	Lighting 3 times every 2 seconds.	ON / OFF
---	ON	OFF	ON	LED keeps on when set error	ON / OFF
---	ON	ON	OFF	LED keeps on when set error	ON / OFF
---	ON	ON	ON	LED keeps on when set error	ON / OFF

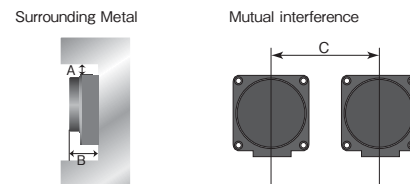
LED indication

LED	Color	LED state	State
Power LED	Green	ON	The power supply* is supplied.
Base & Remote part	Green	OFF	The power supply* is not supplied.
Base part	Green	Blink	Anomalous temperature (turn on : 9s / turn off : 2s)
Remote part	Green	Blink	Supply voltage is low. (turn on : 0.5s / turn off : 0.5s)
		Blink	Supply voltage is high. (turn on : 0.1s / turn off : 0.1s)
Remote part	Green	Blink	Drive voltage is low. (turn on : 0.5s / turn off : 0.5s)
Status LED	Yellow	ON	Inzone.
Base & Remote part	Green	ON	Unusual data is received continuously.
Base & Remote part	Green	Blink	Interval of blinking varies by the baud rate. (Refer to upper table.)

*Indicates External power supply at Base and indicates Base part at Remote.

Mutual Interference

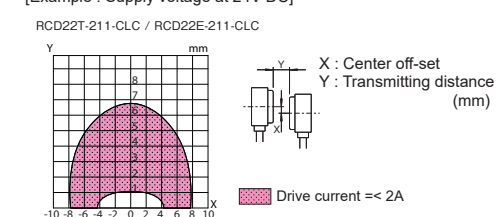
In order to avoid influence of surrounding metal and mutual interference, keep the minimum distance as described below.



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

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.