

Remote Coupler System IO-Link version	
Remote	: RCD55T-211-IOC
Base	: RCD55E-211-IOC

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 Base part 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

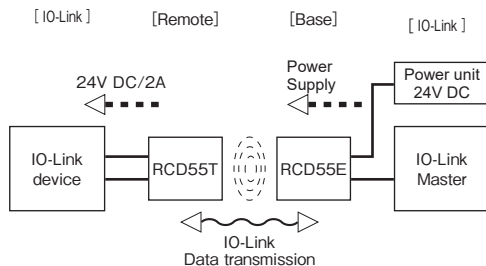
Remote : RCD55T-211-IOC

pin	Signal(5pin)	Power(5pin)
1	L+	+24V
2	Not use	Not use
3	L-	0V
4	C/Q	Not use
5	Not use	Not use

Please connect nothing to the unused pin.

Type number	RCD55T-211-IOC
Drive voltage	24V ± 1.5V DC
Drive current	≤ 2A
Transmitting distance	3...5mm
Center off-set	± 4mm
Operating/Storage temperature	0...+50°C / -25...+70°C
Operating/Storage humidity	35 ~ 90%RH / 35 ~ 90%RH
Protection class	IP 67
Connector	Signal/Power M12 /5 pin female A coding/ M12 /5 pin female A coding
Housing	Aluminum anodized finish
Material	Active surface PA12
Bundled items	Ferrite core clamp (Gray x2 / White x1)

Construction of the System



[Function of each Component]

- Remote** : A unit that is mounted on the moving side. It communicates IO-Link data with a Base and supplies power to connected each device.
- Base** : A unit that is mounted on the fixed side. It communicates IO-Link data with a Remote and supplies power by non-contact.

Base : RCD55E-211-IOC

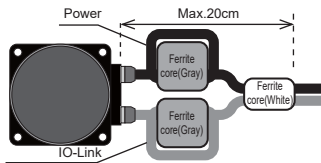
pin	Signal(4pin)	Power(4pin)
1	L+	+24V
2	Not use	Not use
3	L-	0V
4	C/Q	Not use

Please connect nothing to the unused pin.

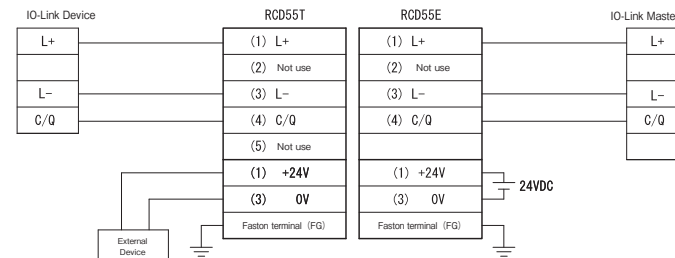
Type number	RCD55E-211-IOC
Supply voltage	24 V DC ± 5 % (include ripple)
Current consumption	≤ 3.2 A
Transmission signal	IO-Link data (Non-supported SIO mode)
Transmission speed	38.4 Kbps
Start-up time	≤ 1 sec*
Data delay time	≤ 100 μ S
Operating/Storage temperature	0...+50°C / -25...+70°C
Operating/Storage humidity	35 ~ 90%RH / 35 ~ 90%RH
Protection class	IP 67
Connector	Signal/Power M12 /4 pin male A coding/ M12 /4 pin male A coding
Material	Housing Aluminum anodized finish
Active surface	PA12
Bundled items	Ferrite core clamp (Gray x2 / White x1)

* This means the time since the timing when a Remote part and a Base part are energized within the transmission area until the timing when the wireless signal transmission starts. It doesn't mean the time until the system as IO-Link established.

Setting ferrite core clamp



Wiring between Master unit and Remote unit



Notes

- Since RCD55 is naturally cooling system, it is recommended to install RCD55 in metal in order to reduce the influence of self-heating. The operating temperature should be within the specification with considering of self-heating.
- Attach ferrite core clamp to the power and signal line less than 20cm 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 1Turn , Power line is 1Turn.
- For wiring of external power unit 24V DC and FG, please refer to wiring daigram above. Please ground RCD55 with FG tab.
- Drive voltage/ Supply voltage is the value measured at the connector of Remote/ Base part. Please be noted that a drop voltage (the product of the current and the conductor resistance) will be caused at each power cable.
- Connectors and cables are not included in.
- Do not face two RCD55E(Base part) when they are powered. There is a possibility of breaking down.

LED indication

LED	Color	LED state	State
Power LED	Green	ON	The power supply* is supplied.
		OFF	The power supply* is not supplied.
Remote&Base part	Green	Blink	Over heating (turn on : 6s / turn off : 2s)
		Blink	Drive voltage is low. (turn on : 0.5s / turn off : 0.5s)
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)
Status LED	Yellow	ON	Remote (or Base) part is existing in the transmission area.(INZONE)
		OFF	No Remote (or Base) part is existing in the transmission area.

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

When temperature and voltage are abnormalities - - -

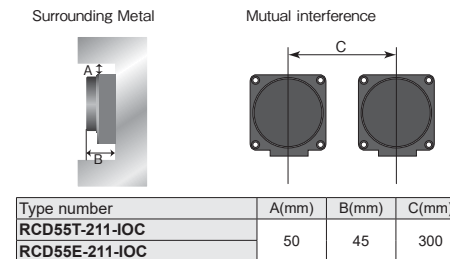
Over heating
LED turned on for 6 sec changes to blink of the interval of 0.5 sec or 0.1 sec.

Over heating & abnormal voltage
(0.5 sec interval / Voltage low)

* When excessive heat is generated. It stops the power supply and once heat cool-down, RCD55E would be restarted.

Mutual Interference

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



Transmitting Area Diagram (Non-flush mounted)

