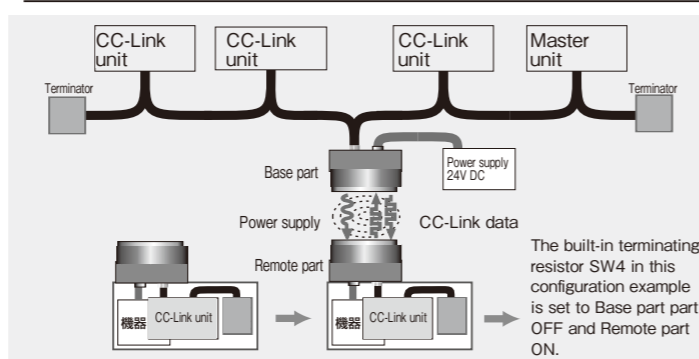


Remote Coupler System
CC-Link version

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

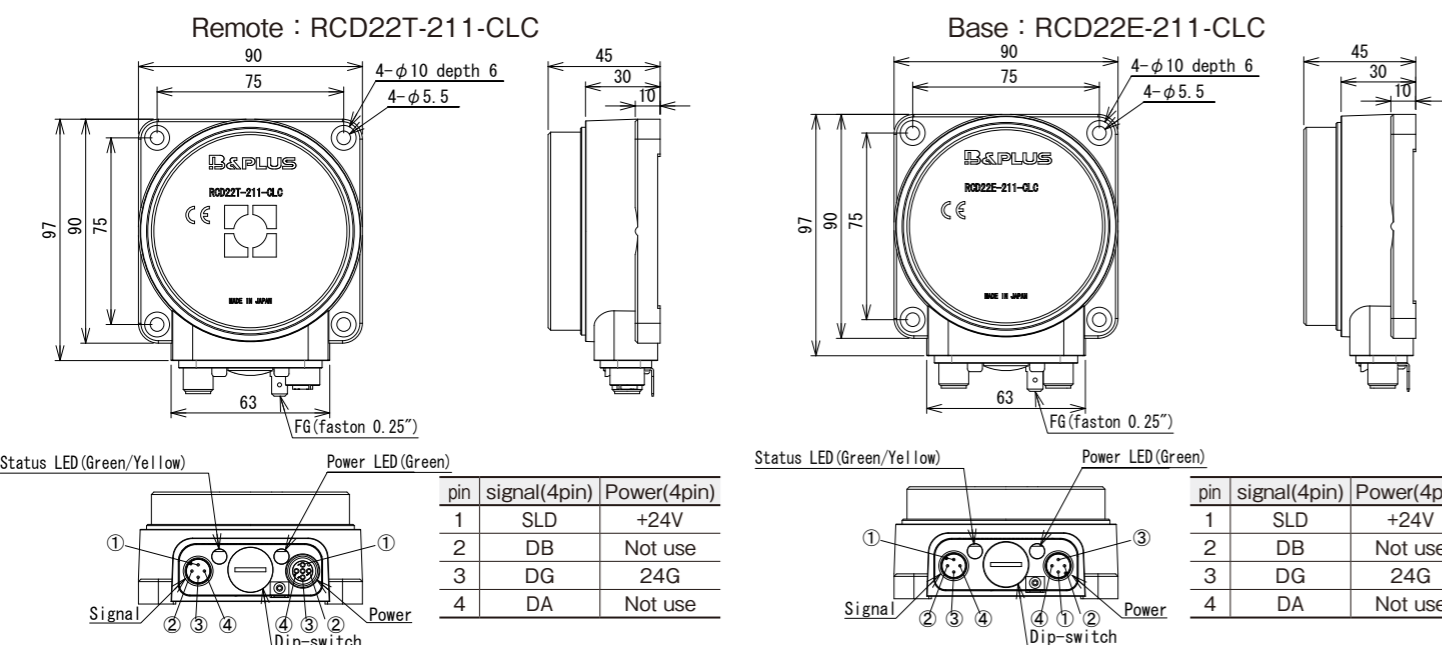
Construction of the system



【Function of each Component】

Remote Base Mounted on a moving side. It transmits CC-Link data to the Base and supplies power to connected CC-Link interface device.
Base Mounted on the fixed side. It transmits CC-Link data to the Remote and supplies power to the Remote inductively through air-gap.

Dimensions



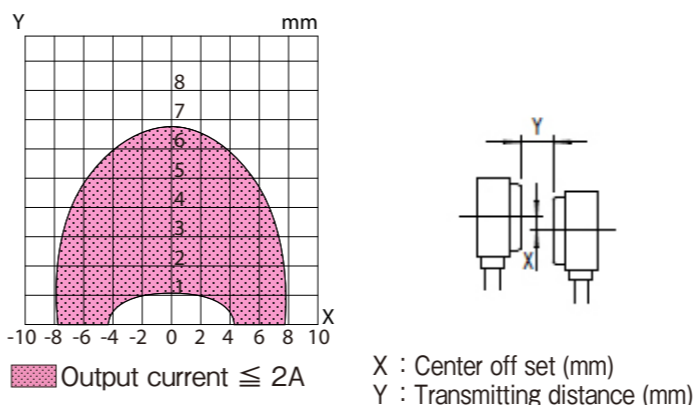
Specifications

Type number	RCD22T-211-CLC	Type number	RCD22E-211-CLC
Output voltage	24V ± 1.5V DC	Supply voltage	24 V DC ± 5 % (include ripple)
Output current	≤ 2A	Current consumption	≤ 3 A
Transmitting distance	3...5mm	Communication	CC-Link data
Center off-set	± 4mm	Communication speed	156kbps...10M bps (Changes by Dip switch)
Operating temperature	0...+50 °C	Data delay	max.30bit
Degree of protection	IP 67	Start-up time	≤ 2 sec*
Connector Signal/ Power	M12/4 pin Male Acoding / M12/4 pin Female Acoding	Operating temperature	0...+50 °C
Available connector cable Signal/Power	VA-4DSX5CCG4[5m] / TM-4DBX5HG2-1/3[5m])	Connector Signal/ PowerSignal	M12/4 pin Male Acoding / M12/4 pin Male Acoding
Material	Housing	Available connector cable Signal/Power	VA-4DSX5CCG4[5m] / TM-4DSX5HG2-1/3[5m]
	Active surface	Degree of protection	IP 67
Bundled items	Ferrite core clamp (Gray x2 / White x1)	Material Housing	Aluminum anodized finish
		Active surface	ABS + PBT
		Bundled items	Ferrite core clamp (Gray x2 / White x1)

*Compatible with CC-Link Ver.1.10/Ver.2.0.
No settings for station type, number of occupied stations, etc. are required.
*The built-in DIP switches can be used only to set the communication speed and internal terminating resistor.
*No communication problem even if multiple remote coupler system CC-Link specifications are used.

* 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 CC-Link established.

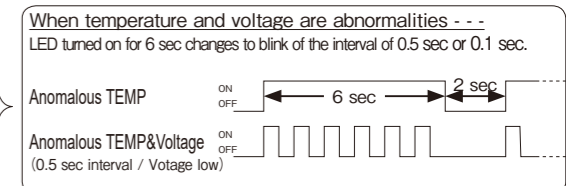
Transmitting Area Diagram (Non-flush mounted) [Example : Supply voltage at 24V DC]



-Design the product so that it can be used under the wiring and ambient conditions specified in the specifications. Also, design the product to meet the requirements for "transmission distance," "axis misalignment," "output voltage," and "output current."
Designing out of the specifications may cause unexpected malfunctions, troubles, or failures due to deterioration of internal components.
-In remote coupler systems, the control signal may become unstable outside of specification. If it affects the operation of the equipment, start data communication after it is within the specification range.

LED indication

LED	Color	LED	State
Power LED		ON	The power supply* is supplied.
Base & Remote part	Green	OFF	The power supply* is not supplied.
		Blink	Anomalous temperature (turn on : 9s / turn off : 2s)
Base 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	Output 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.
		Blink	Interval of blinking varies by the baud rate. (Refer to upper table.)

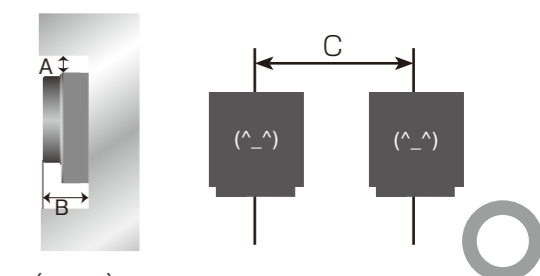


* When excessive heat is generated. It stops the power supply and once heat cool-down, RCD22E would be restarted.

Installation

-To avoid the influence of surrounding metal and mutual interference between products, be sure to open a space larger than the value shown in the table below.(Fig.1)

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

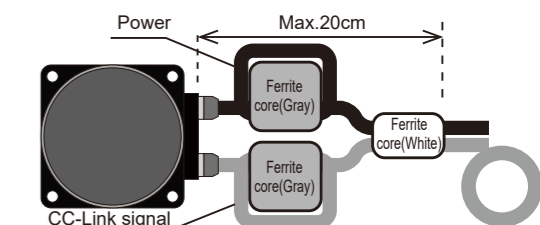


(Fig.1) arrange with space

-Be sure to attach the included ferrite clamp (gray) to the communication cable and power cable in two turns, and attach the ferrite clamp (white) to the communication cable and power cable together in one turn within 20 cm from the Base part and Remote part main unit. Figure 2. (Figure 2)

Setting ferrite core clamp

- When installing a ferrite clamp, be careful not to apply excessive stress to the cable due to sudden bending at the connector end or both ends of the ferrite clamp.



(Fig.2) Clamping

- When routing cables with bends, install them above the bend radius of the cables to be used.

- Install so that water and cutting water do not get on the end (wiring part) of the cable. Moisture is transmitted from the cable core to the main body, causing short circuits and corrosion.

- Fix the peripheral cables and install them so that they will not be shaken or shocked.

- Use the tab terminal (FG) in a place where the noise environment is bad. (Fig.3)



(Fig.3) Installation using the tab terminal

- To reduce the effect of self-heating, it is recommended to install it on metal using case mounting screws.

- Since metal overheating and internal elements may be damaged, install the base so that it does not face the metal before turning on the power. (Fig.4)

- Do not put metal objects between the operating heads.

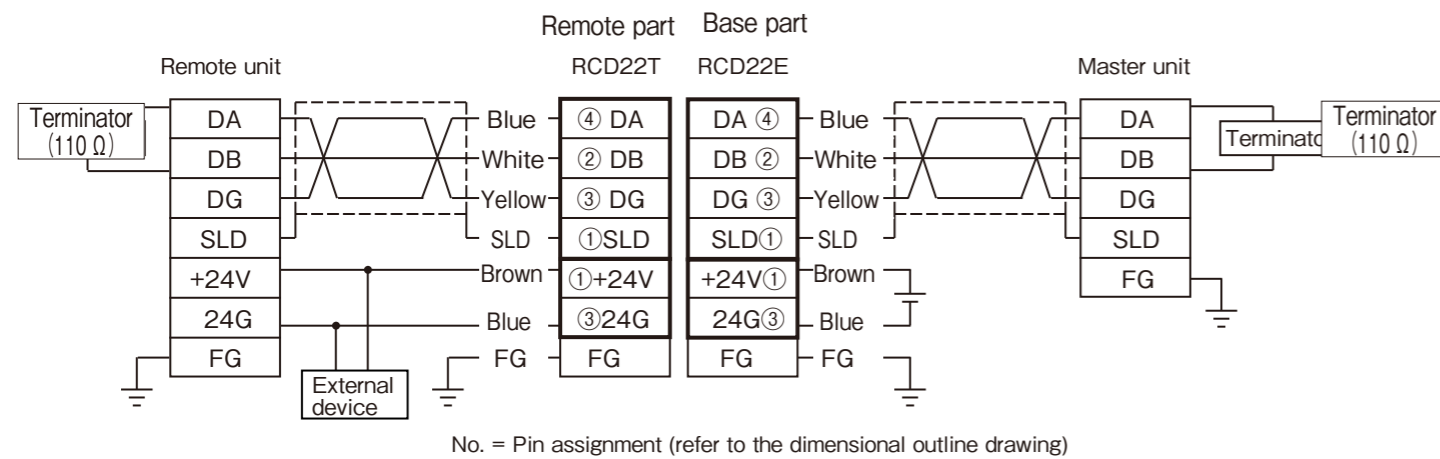
- If foreign material get inside the device from the end of the connector, it may cause fire, smoke, fire, electric shock, or malfunction due to malfunction or short circuit.(Fig.5)



(Fig.4)Metal facing

(Fig.5)Foreign material invades inside the sensor

Wiring diagram between master unit and slave



- The cable color in this wiring diagram shows the cable color when using the recommended connector cable. When wiring, check the instruction manual of the cable you actually use before wiring.

- 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. (Refer to the following Setting for Switch and Status LED indication (Remote part/Base part part))

- When installing with T-branch wiring, set the communication speed to 625 kbps or less.

- 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].

- Always use a constant voltage power supply such as a switching power supply. (Use of a power supply with a ripple greater than the rated value, such as a full-wave rectifier power supply, may cause malfunction.)

- Please set the cable length to consider the total length of the entire network according to CC-Link manual.

- When the Remote part and the Base part are not facing each other, no signal is sent from the Remote part, but there is no problem in communication on the Base part.

Setting for Switch and Status LED indication (Remote part/Base part part)

Communication speed is set with SW 1 ~ 3, when SW 4 is turned on, Terminator(110Ω) can be used.

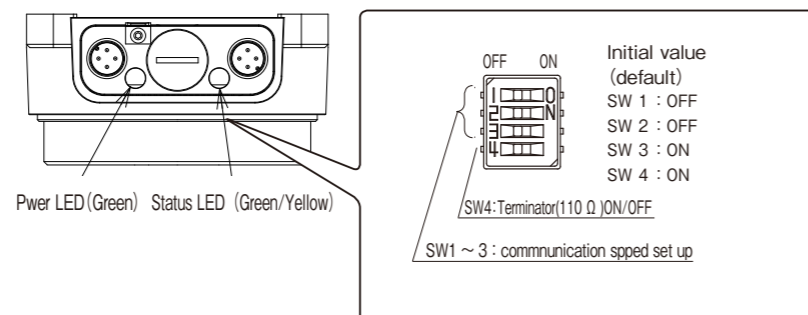
Setting for Switch

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

*Always make changes to the DIP switches with the power turned off.

If changed while energized, communication is disabled and the status LED blinks at 0.5 second intervals.

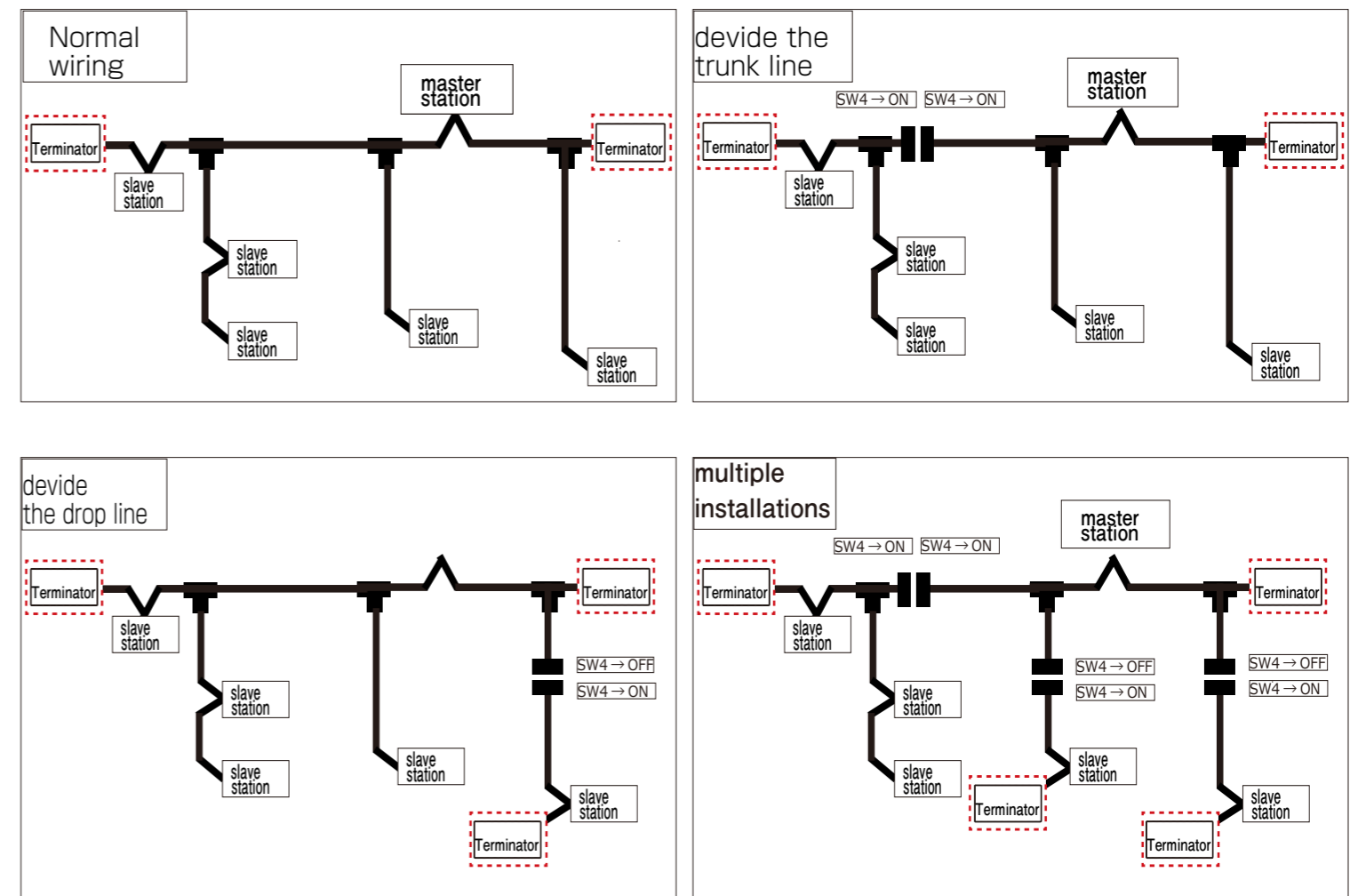
*If the dip switch lid is opened, close it tightly to prevent water from entering.



Wiring sample

Please read the CC-Link Installation Manual carefully when wiring.

The following is a wiring example of a T-branch without repeater function.



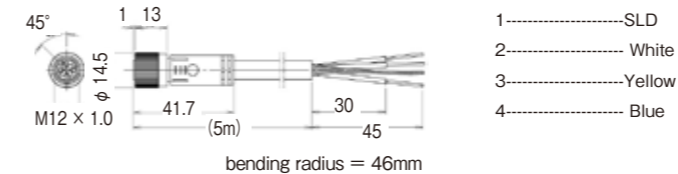
Optional parts

[communication cable / power cable]

Recommended connector cable is available as an option. Please use in combination with the remote coupler system.

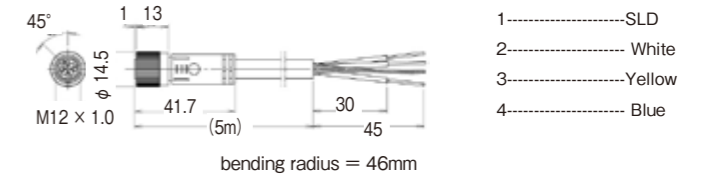
for RCD22T (Remote part)

Communication cable VA-4DSX5CCG4 (M12/4 pin female,5m)

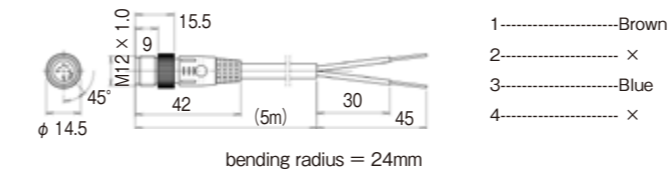


for RCD22E (Base part part)

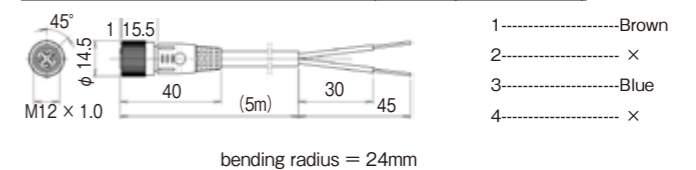
Communication cable VA-4DSX5CCG4 (M12/4 pin female, 5m)



Power cable : TM-4DBX5HG2-1/3 (M12/4 pin male,5m)



Power cable : TM-4DSX5HG2-1/3 (M12/4 pin male, 5m)



[Ferrite clamp]

The included Ferrite clamp is available as an option in case it is damaged or lost.

Ferrite clamp (White) : DK-Z/RFC-H13

Ferrite clamp (Gray) : DK-Z/E04SR401938



White

Gray

⚠ Precautions for installation and design

■ Be sure to check it as there are various dangers such as failure if it is installed incorrectly

- Impact and external noise may cause malfunction or failure. Wire the cable away from power lines and high-voltage equipment without giving a shock. (Fig. 6)

- This product has the CE mark on the exterior of the product. However, we do not support surges, so if you use the cable with a cable length of more than 10 m, take measures to prevent excessive surges from being applied.

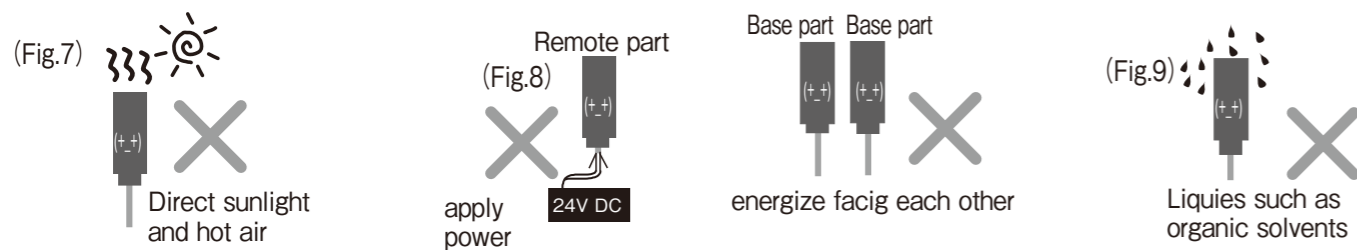
- Use within the range where the total current consumption of the connected devices does not exceed the output current value.

- To consider and reduce the self-heating of this product, take measures so that it can be used below the specified ambient temperature. In order to reduce the effect of self-heating (heat dissipation), it is recommended to mount it on metal using case mounting screws.

- Installed in a place where it is exposed to direct sunlight or hot air from a heater, it may cause a fire or malfunction. (Fig. 7)

- If you apply power to the remote unit or energize either one with the base units facing each other, a malfunction may occur. (Fig. 8)

- Please use in an environment where organic solvents and liquids containing them do not come in contact. (Fig. 9)



- The remote coupler system is a system that supplies and transmits power and signals in a non-contact manner. Please do not use it for any other purpose.

- Design with the combination described in the instruction manual or user's guide. Opposition in any other combination may cause malfunction or damage.

- If power exceeds the rated voltage, there is a risk of heat generation and ignition. Before supplying power, be sure to check that the power supply is specified in the specifications.

- Design so that it can be used under the wiring and surrounding environment conditions specified in the specifications. Also, design to satisfy the "transmission distance", "center off-set", "output voltage", and "output current". Designs outside the specifications may cause unexpected malfunctions, troubles, and failures due to deterioration of internal parts.

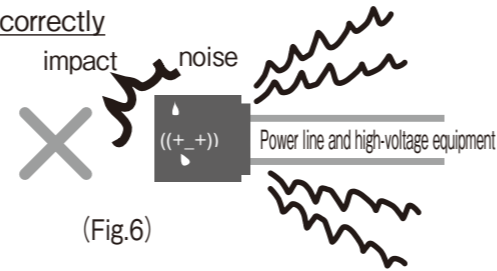
- When wiring for installation, maintenance, failure, etc., be sure to check that the main breaker (power panel) is cut before performing the work. If you work on a live line, you may get an electric shock or malfunction.

- As with other electronic devices, inrush current may occur when the system starts up, so set the power supply in consideration of the inrush current.

- Please be sure in the withstanding voltage test that a capacitor (50VDC 3.3nF) is built in between the each power supply pin (+24V/24G) and the FG.

- Design the system so that the entire system works safely even if the external power supply is abnormal or the product fails.

- Please be careful about the influence on the material degradation due to the installation environment and the intrusion of foreign material. Especially when using it outdoors, please install it with less influence from ultraviolet rays.



⚠ Other note

■ About product handling

- Do not disassemble or modify our products. It may cause a malfunction, fire, electric shock, etc., or cause serious damage. Also, if it is disassembled or modified, it will not be covered by the warranty.

- If you are in an abnormal condition such as smoke, strange noise, or strange odor, stop using the product immediately because there is a risk of malfunction, fire, electric shock, or accident.

- Be sure to use accessories and specified parts. If you do not use it, it may cause malfunction, accident, malfunction, fire, etc.

- If any equipment is added or moved, please check the installation conditions again.

- If any equipment is added or moved, please check the installation conditions again.

• Please note that the contents and specifications of this manual are subject to change without notice. If you have any questions about the contents of this document, please contact us.

■ Standards and regulations

• The control communication device installed in the product corresponds to a "weak radio station (weak radio wave device)", so the Minister of Internal Affairs and Communications' radio station permit (diploma) is not required. However, please be careful when operating it as it may affect electronic devices and medical devices (pacemakers, etc.).

• When using the product outside Japan, please check the standards and regulations that the system should comply with and take appropriate measures.

Product failures due to mishandling are increasing.
Please be sure to read this manual, and if you have any concerns, please contact the following before energizing.

B & PLUS K.K.

<https://www.b-plus-kk.jp/> E-mail sales@b-plus-kk.jp