

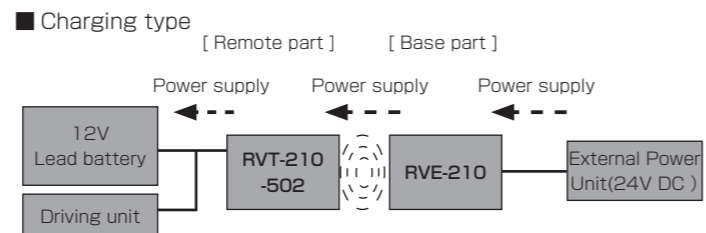
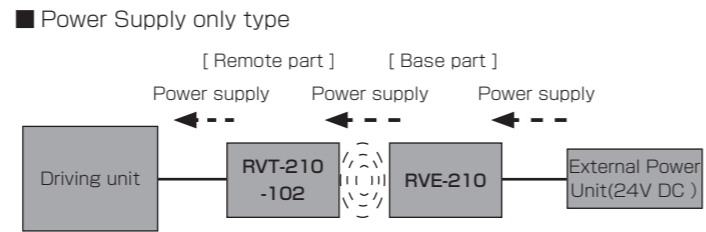
Remote power supply system
30W Power Supply only type / Charging

type
Base part : RVE-210-2-PU-__
Remote part : RVT-210-102-PU-__ (Power Supply only type)
RVT-210-502-PU-__
(Charging type, Lead battery exclusive use)

! Safety Considerations

Before using the product, please check the specifications and installation precautions described in this instruction manual.

System configuration

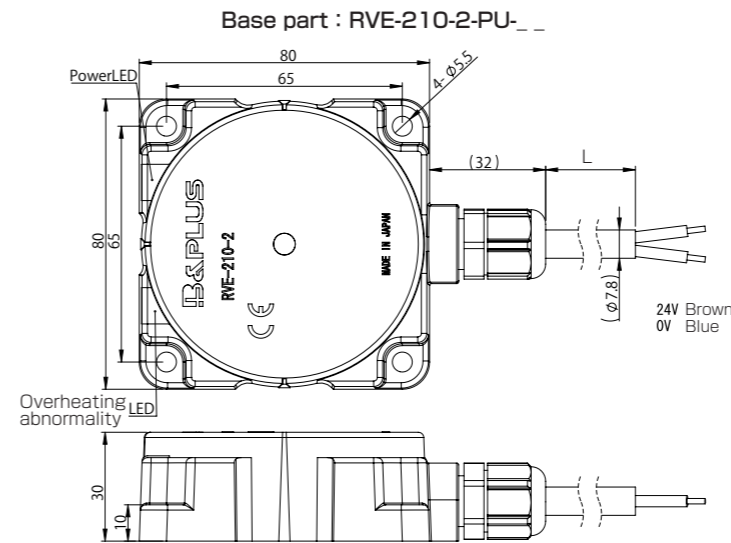


【Function of each component】

Remote part : It receives power from the base part and supplies power to the drive unit or lead-acid battery.

Base part : Supplies the required operating power to the remote part.

Dimension

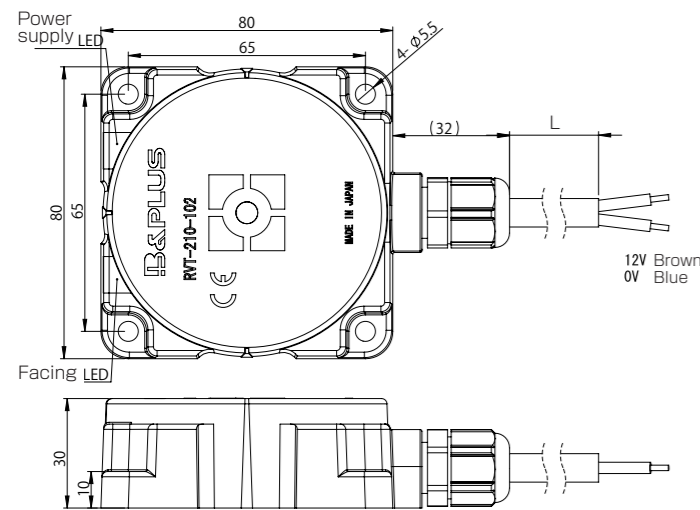


Specification of the System

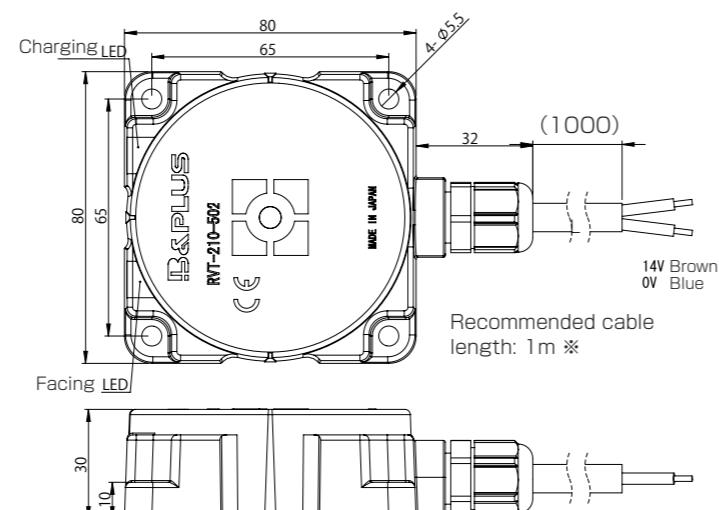
Type code	RVE-210-2-PU-__
Supply voltage	24V DC ± 10%(incl.ripple)
Current consumption	≤ 2A
LED	It shows the power supply and overheating in the LED lighting
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR φ 7.8mm / 2x1.5
Material	PTB
Weight	280 g+82g/m(cable)

Dimension

Remote part : Power Supply only type
RVT-210-102-PU-__



Remote part : Charging type (Lead battery exclusive use)
RVT-210-502-PU-__



Specification of the System

Type code	RVT-210-102-PU-__
Operating distance	4...10mm
Center off-set	± 5mm
Drive voltage	12V ± 5%
Drive current	2.5A
LED	It represents the state of the power supply and facing in the LED
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR φ 7.8mm / 2x1.5
Material	PTB
Weight	280 g+82g/m(cable)

L=Cable length
The notation in meters to the end of the model ...PU-02 ⇒ 2m

Type code	RVT-210-502-PU-__
Operating distance	4...10mm
Center off-set	± 5mm
Drive voltage	≤ 14.4V CV control upper limit voltage typ14.0V
Drive current	2A CC control current
LED	It represents the state of the charger and facing with LED
Operating temperature	0...+50°C
Protection class	IP67
Cable	PUR φ 7.8mm / 2x1.5
Material	PTB
Weight	280 g+82g/m(cable)

* If the remote part cable is long, the charging voltage will change due to the voltage drop caused by the cable. Please contact us for cable lengths exceeding 1m.

Usable battery specifications	
Battery type	Lead battery
Battery voltage	12V DC
Charging current	≥ 2A

LED indication

RVT-210-102-PU-__			RVT-210-502-PU-__			RVE-210-2-PU-__		
LED	Status	Color	LED	Status	Color	LED	Status	Color
Powering LED	Powering	Lighting up (yellow)	Charging LED	Charging	Lighting up (yellow)	Power LED	Power supplying	Lighting up (green)
Facing LED	Facing	Lighting up (green)	Facing LED	Facing	Lighting up (green)	Overheating abnormality LED	Internal element overheating	Lighting up (yellow)

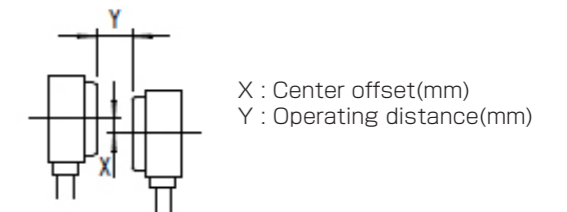
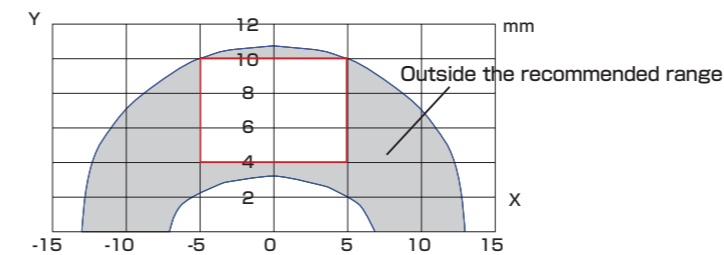
Operating distance

< If you do not keep the transmission distance, it may cause a malfunction >

- If the product is held for a long time under an out-of-specification operating distance / center offset / overload condition, the product may be damaged due to abnormal heating.
- Facing LED means a backup signal to confirm that the signal is established when used within the specifications. Please note that we do not guarantee signals outside the specifications.

Type code	Operating distance (Y)	Center offset (X)	Drive Current
Power Supply only type : RVT-210-102	4...10mm	± 5mm	≤ 2.5A
Charging type : RVT-210-502			≤ 2.0A

Typical Transmitting Diagram (Supply voltage at 24V / non-flush mount)



Installation notes

In order to avoid influence of surrounding metal, or to avoid mutual influence between parallel-mounted sensors, keep the minimum free zone as described below.

Tightening torque ⇒ 1.5N·m

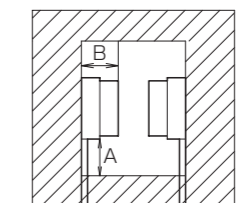
Type code	A	B	C	D
RVE-210-2-PU-__				
RVT-210-102-PU-__ RVT-210-502-PU-__	50	30	30	300

【Precautions surrounding metal and heat generation】

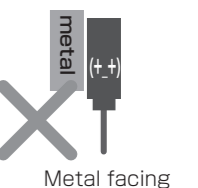
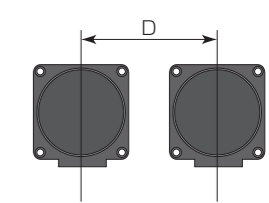
< It is very dangerous if the product faces metal. To prevent damage to the equipment due to the presence of metal, be sure to observe the following. >

- If the power is turned on with metal chips or cutting pieces adhering to the transmission surface of the "base head part" "remote head part", the "base head part" or adhering metal chips or cutting pieces the base head and attached metal chips and cutting pieces may generate heat, leading to an unexpected accident. Be sure to remove metal chips, cutting pieces, etc. adhering to the transmission surface of the head before operating the system.
- Do not put metal objects between the operating coils. There is a possibility of heat generation and ignition due to induction heating.
- If the product is energized and faced with metal, the possibility of failure is extremely high. Be sure to turn on the power after installation to avoid metal opposition.
- Please install in consideration of heat dissipation so that heat does not accumulate around the main body.
- When installing products in parallel, be sure to leave a space of at least the specified value to avoid mutual interference between the products.

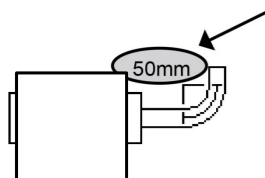
■ Surrounding metal



■ Parallel installation



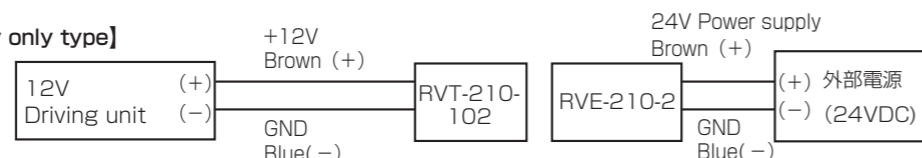
Bending radius of Cable



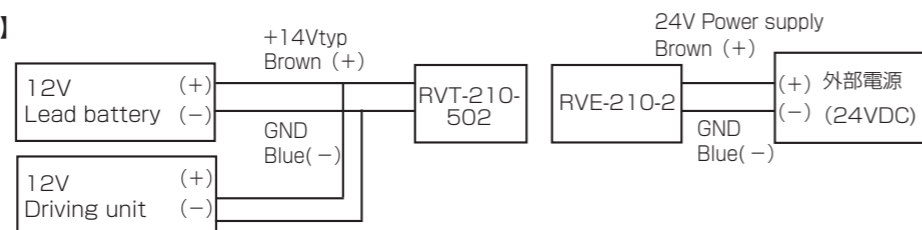
- The minimum bending radius for these sensors are 50mm.
- Never pull the cable strongly in installing. It leads to damage and increases the risk of product failure.
- Install so that water and cutting water do not splash on the wiring at the end of the cable. Moisture may be infiltrated through the cable core to the main body, leading to problems such as short circuits and corrosion.

Wiring

[Wiring diagram/ Power Supply only type]



[Wiring diagram/Charging type]

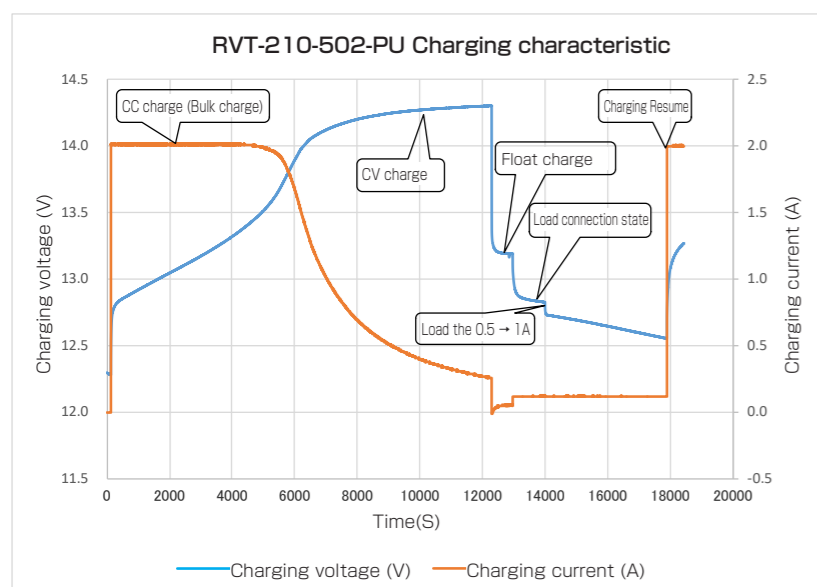


[Power supply and wiring] < If you make a mistake in wiring, it will break down >

- When performing installation (including wiring), maintenance, failure handling, etc., be sure to check that the main breaker (power panel) is cut before performing the work. If you work while the line is live, you may get an electric shock or malfunction.
- Please follow the procedure correctly. If there is a defect in the installation work, it may cause a malfunction, electric shock, fire, etc.
- Use a constant voltage power supply such as a switching power supply. (If a power supply with ripples above the rating, such as a full-wave rectified power supply, is used, it may cause malfunction.)
- When connecting the rechargeable type battery, check the wiring carefully before connecting. Reversing the polarity will lead to product failure.

Charging Characteristics

Charging type for RVT-210-502-PU



PE12V12 (manufactured by GS Yuasa) after a 50% discharge, evaluate the charging characteristics of a combination of RVE-210-2-PU / RVT-210-502-PU. RVT-210-502-PU operation at 4 Step 3 stage lead battery profile.

[Regarding the battery]

- In the over-discharge state (about 10V or less battery voltage), to limit the charging current to about 130mA. Usually return to the charging cycle when it exceeds approximately 10V.
- Voltage restart the charge from the float charge is about 12.6V.
- Refer to the charging characteristics diagram on the left, and connect batteries with matching charging characteristics before use. Also, due to individual product differences and battery characteristics, recharging may start immediately after charging is completed, so check the specifications of the battery to be used before using it according to the specifications.
- Since the remote part does not have a battery temperature protection function, manage it on the battery side.
- Depending on the battery, the voltage may not be output unless the startup process is performed, so refer to the instruction manual of the battery. If there is no output from the battery (0V), the remote system will consider it a voltage error or disconnection and will not start charging.

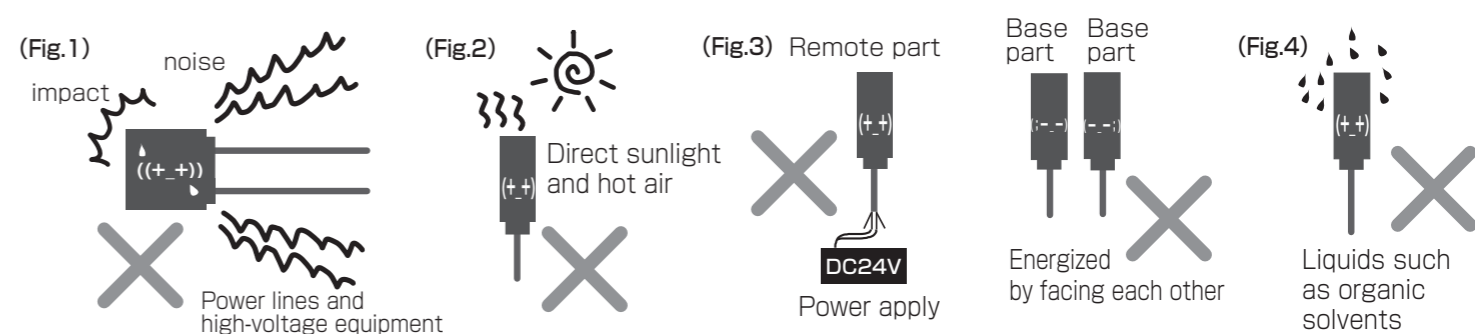
Product failures due to mishandling are increasing. Please be sure to read this manual, and if you have any concerns, please contact the following before energizing. Mail : sales@b-plus-kk.jp

⚠ Attention for installation

Please read carefully before using and full attention to Safety Considerations. Incorrect handling may cause not only malfunction or failure, leading to an accident or injury. Also in order to prevent damage or injury, please look after.

[Installation condition] < If you install it incorrectly, there are various dangers such as failure >

- 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.
- As with other electronic devices, inrush current may be generated when the system starts up, so please set the power supply in consideration of the inrush current.
- Attach it to metal to reduce the effects of noise and self-heating.
- Use the charging type within the range where the constant voltage and constant current values do not exceed the maximum charging voltage and maximum charging current of the connected battery.
- Please use it with the heads facing each other correctly according to the specifications.
- Regarding the installation location, in order to consider and reduce the self-heating of this product, take measures so that it can be used below the specified ambient temperature.
- Impact and external noise may cause malfunction or failure. Do not subject it to shocks and be unaffected by noise. (Fig.1)
- If it is 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.2)
- If you apply power to the remote part or energize either one with the base part facing each other, a failure may occur. (Fig.3)
- Please use the case in an environment where it is not exposed to organic solvents or liquids containing them. (Fig.4)



⚠ Other notes

[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.).
- To a product EMC Directive order, CE marking is on the product appearance or a cable. When using an output sensor with cable length longer than 10m, a measure to protect the sensor from surge current should be taken.
- When using the product outside Japan, check the appropriate standards and regulations, etc. that the customer's system should meet, and then please take appropriate measures.

[Other]

- Please don't resolution remodeling or modify the product. Failure to do so may result in fire, electric shock or malfunction. In addition, there is a risk that can lead to serious injury.
- Do not perform the resolution and remodeling. If you do these things, it will not be covered by the warranty.
- Smoke, or in the case of such an abnormal state when abnormal noise or offensive smell is, please stop using it immediately. The malfunction or electric shock, the cause of the fire.
- If you want to dispose of this product, you will be disposed of as industrial waste.
- Always, use the specified parts and accessories. It can cause the malfunction or accident or the cause of the fire.
- Specifications subject to change without notice. If there is a point of notice about the contents of this document, feel free to contact us, thank you.

Wireless Power Supply by
B & PLUS K.K.

Mail : sales@b-plus-kk.jp
Web : https://www.b-plus-kk.jp/