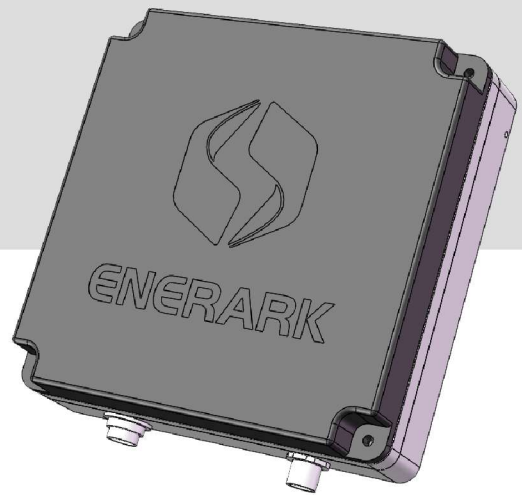




Intelligent Wireless Charging System

Product Manual



Model:
ERK/WPT-300WB01

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Thank you for using Enerark's wireless charging system. Please read this manual carefully before use. Please keep it after reading.

Safety Information



Please follow the instructions. Misuse may cause damage.



High voltage product. Be careful of electric shock.



Surface is hot when charging, please do not touch it.



For safety purpose, please ensure good grounding before operation.

Specifications Summary

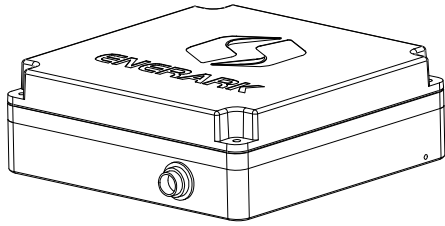
Enerark ERK/WPT-300WB01 Intelligent Wireless Charging System is suitable for all kinds of contactless charging applications, such as robotic and mobile devices. The summary of product specification is as follows:

- Contactless charging system is safe, reliable and adaptive to industrial, scientific and medical (ISM) sectors.
- Electromagnetic (EM) resonance technology offers high efficiency and high fault tolerance.
- System operating frequency is at 6.78MHz (ISM band), which is compliant with Japan (ARIB- STDT113) , EU (CISPR) , US (FCC-Part15) .
- Intelligent sensing of temperature, voltage and current are included for safety and system stability.
- Over discharge restart function enables manual recharge on exhausted battery
- Support laser positioning (Optional) : unidirectional entry, dual positioning correction
- Compact, no surrounding clearance required, Easy to Install and use
- Both TX & RX are equipped with digital ports, which provides two-way digital signal communication (wire & wireless), battery status, control and monitor charging process.
- Digital interface is available to enable bidirectional communication and control between user system and this product.
- Tx and Rx modules are fully sealed design, which enable universal compliance to any application.

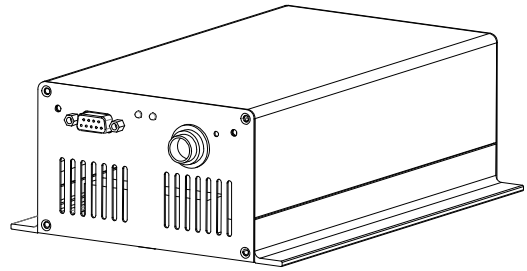
Model	Enerark ERK/WPT-300WB01
Input	220V/ ~
Charging current	3.5A (Constant Current)
Charging voltage	54.6V (Constant Voltage)
Charging gap	11 mm +/-2mm
Position tolerance	+/- 20mm
Temperature	-20 ~ 40 °C
IP Grade	IP67
Communication Port	CAN, RS485, RS422

* Charging voltage is set for 48V Li-ion battery by default. 24v & 12V are optional

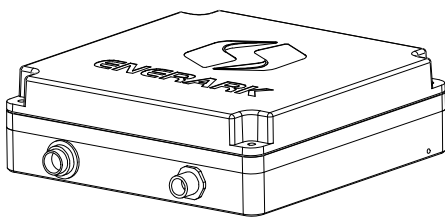
Package Contents



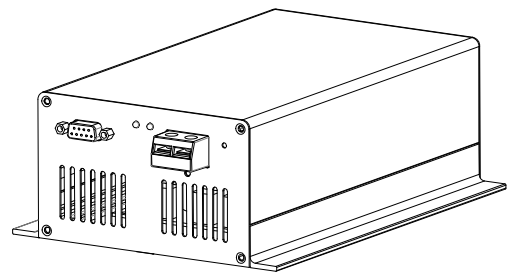
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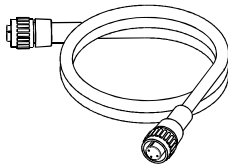
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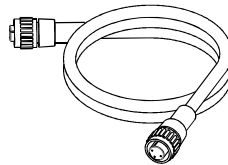
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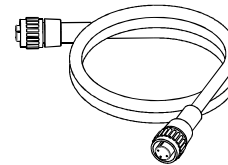
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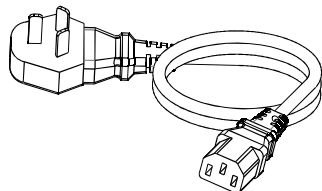
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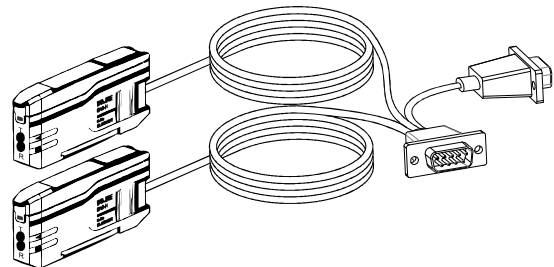
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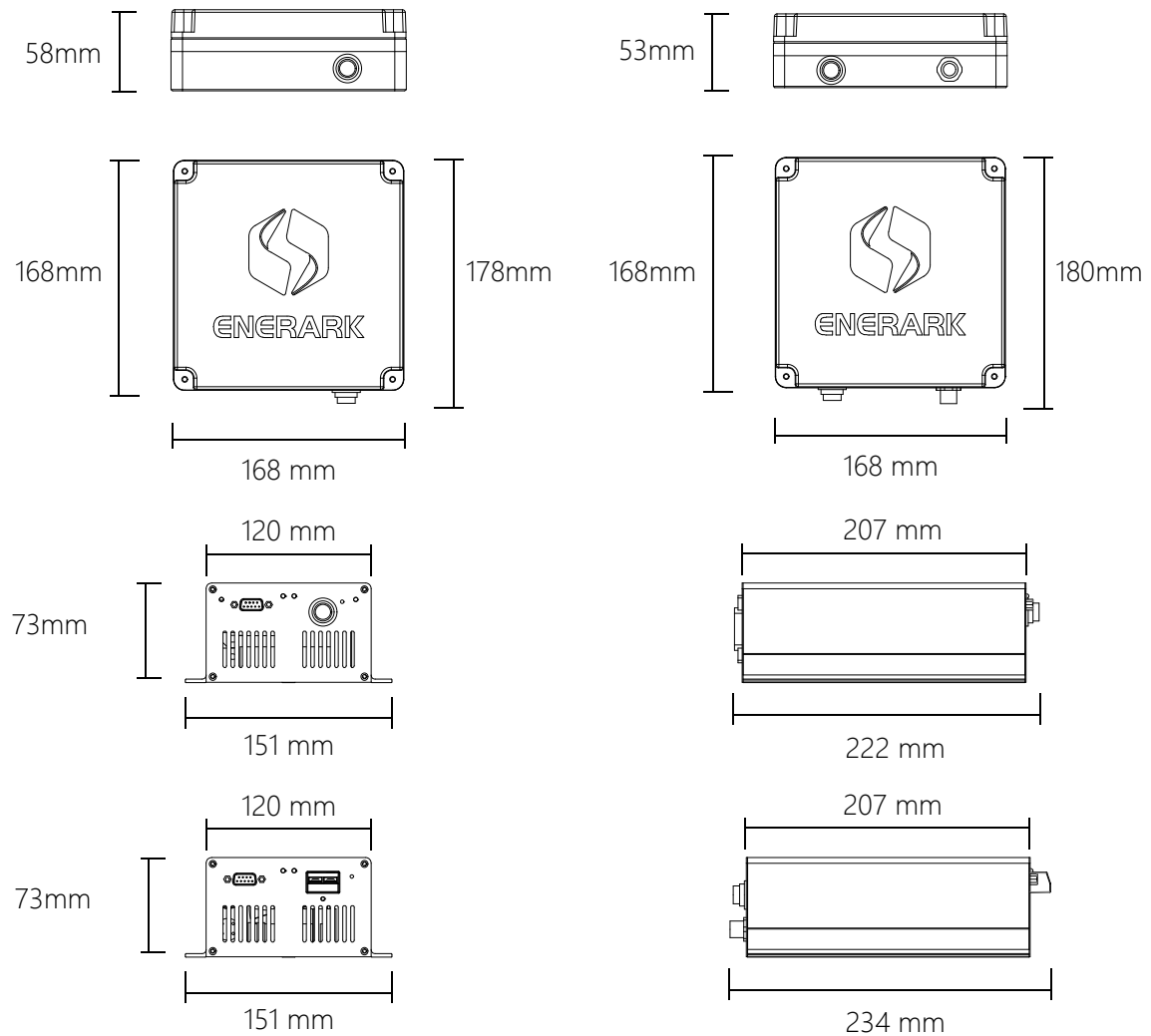


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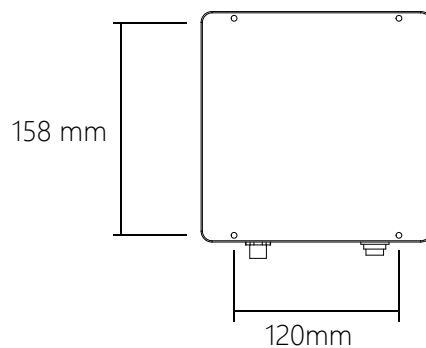
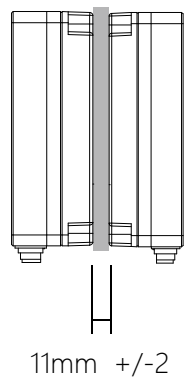
1 Transmitter 2 DC Power Supply 3 Receiver 4 Rx Controller Box
5\6\7 Cable 8 Power Cable 9 Laser Sensor(optional)

External & Installed Dimensions

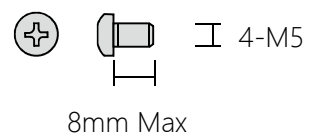
External Dimensions



Installed Dimensions

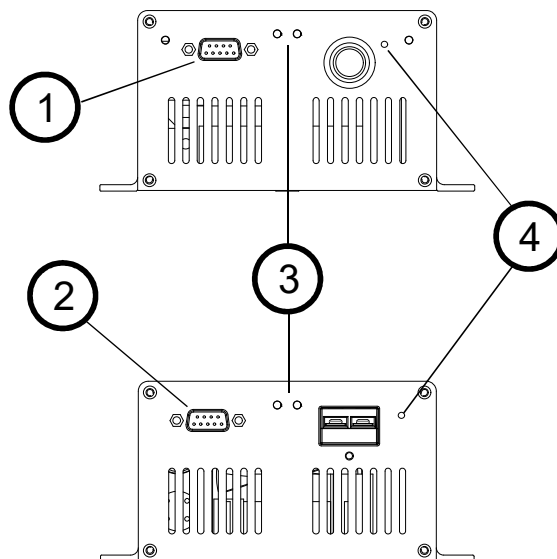


Surrounding Clearance



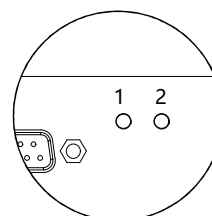
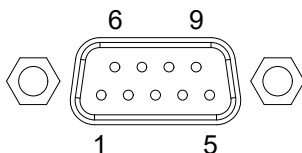
Ports and Indicators

Position



- 1 Transmitter DB9 Port
- 2 Receiver Db9 Port
- 3 LED Indicator
- 4 Emergency Charging Button

Port Description and LED Indicator

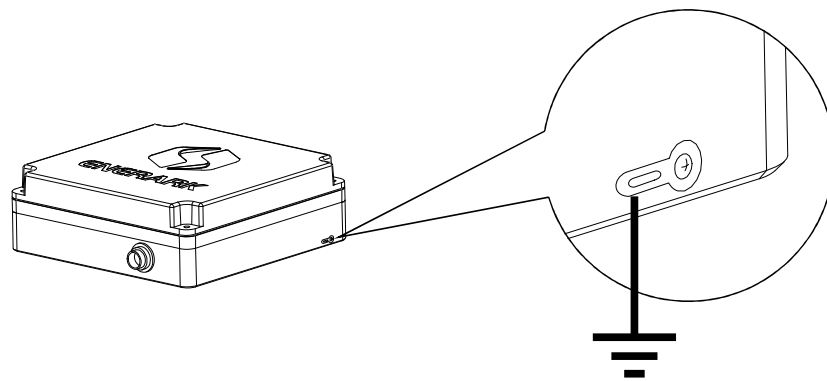
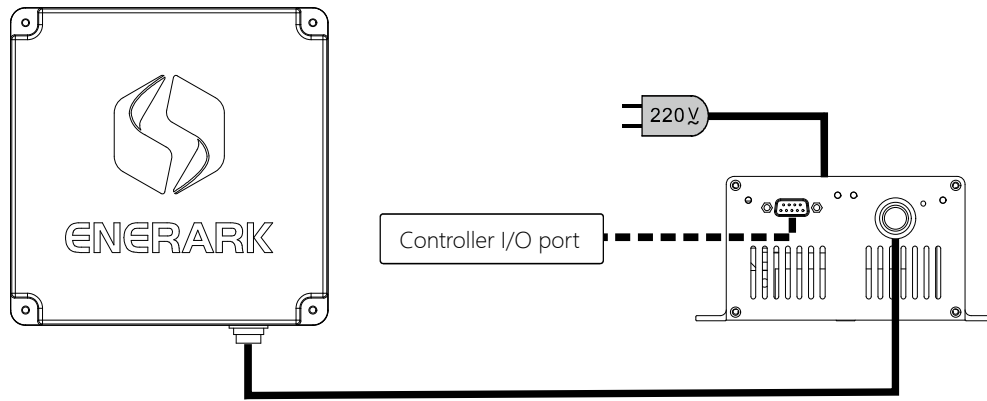


DB9	1	2	3	4	5	6	7	8	9
Transmitter	RS485+	RS485-	CANH	CANL	GND	KEY	Laser Sensor Input 1	12V	Leser Sensor Input 2
Reciver	RS485+	RS485-	CANH	CANL	GND	KEY	Emergency +5V	GND	5V

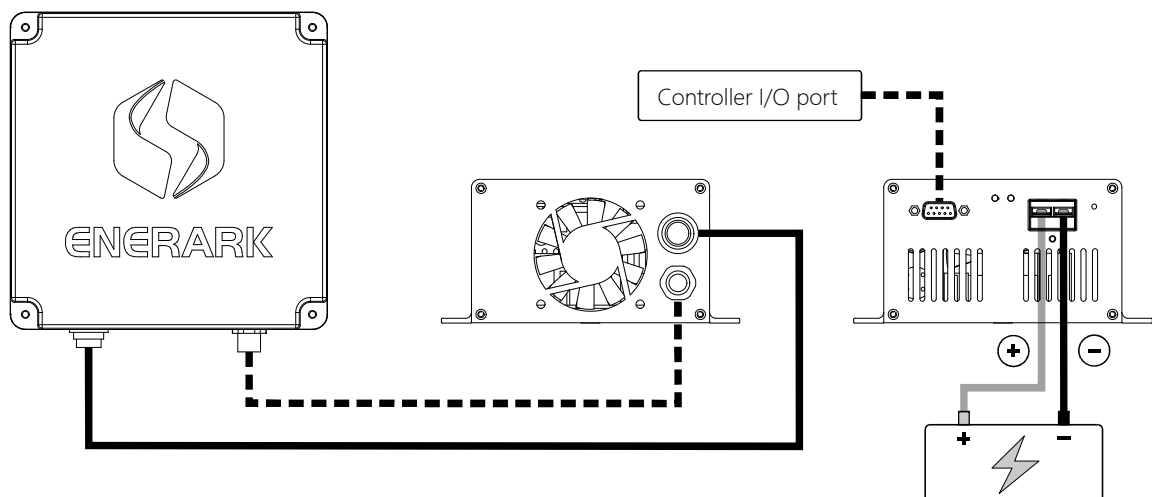
LED1	Off	Green	Green	Green
LED2	Off	Off	Green Flashing	Red Flashing
Status	Off	Standby	Charging	System Protection

Setup Guide

Transmitter

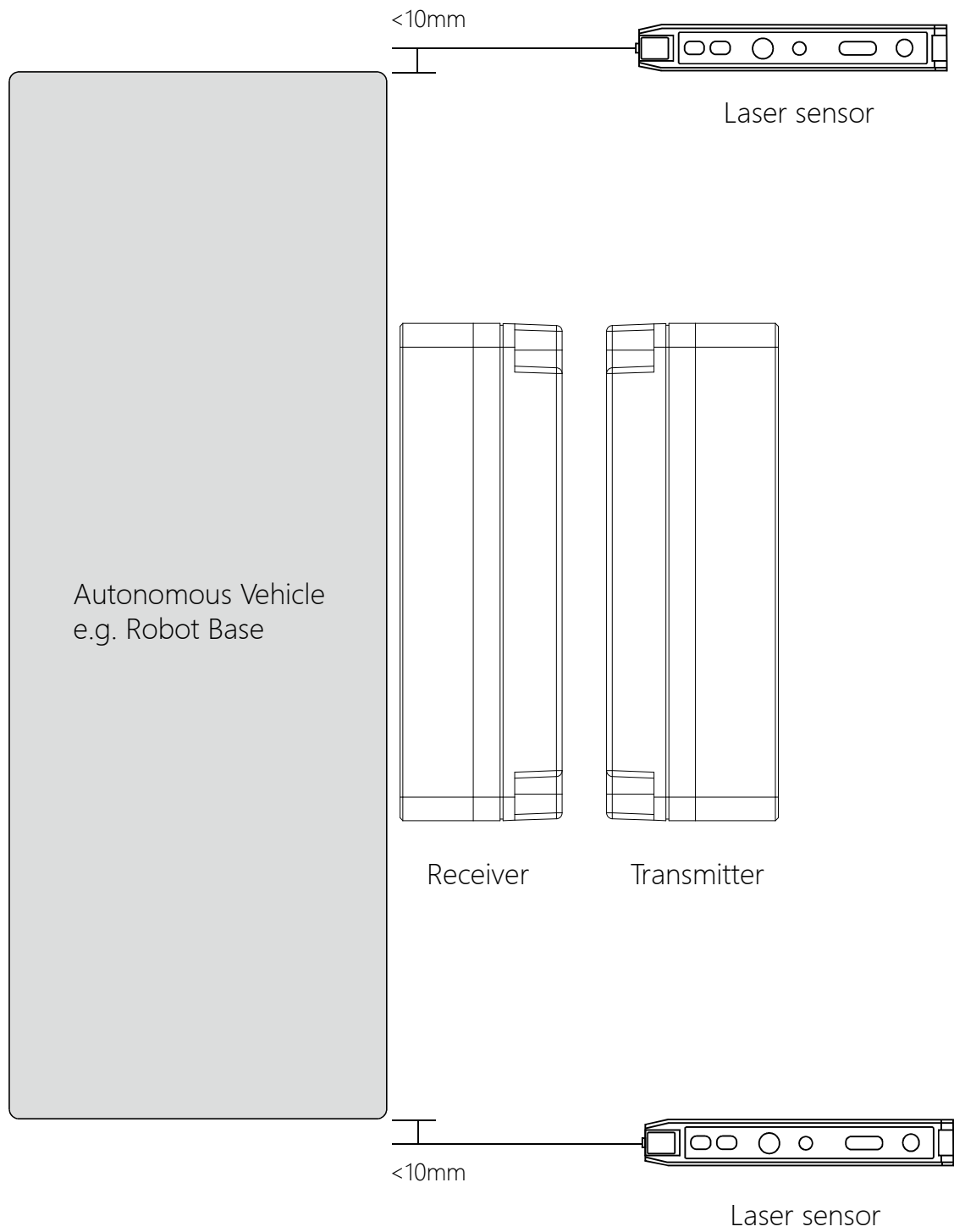


Receiver



Laser Sensor Installation Guide

Laser Sensor Installation Guide(Optional)



Operational Guide

Normal Charging Operation

1. Connect and install as instructed
2. Configure software and protocol based on "Software and communication manuals"
3. Start charging
4. Stop charging, receiver leaves, system standby

Emergency Charging Operation

1. When the autonomous vehicle over discharges and not returning, emergency charging function can be used.
2. Manually move the receiving vehicle to the charging station.
3. Connect the external 5V to DB9 port according to the description.
4. Press and hold the emergency charging button until the LED2 is flashing GREEN, then the system should start to charge.
5. In case the LED2 is flashing RED, it means the Tx and Rx maybe misaligned. Please realign and repeat.
6. When charging is completed, remove the external 5V supply (e.g. USB power bank, 5V battery jumper wire) on the receiver side.

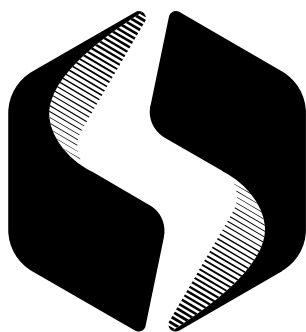
Abnormal Operations and Solutions

Faults	Issues	Solutions
Tx LED1 - OFF	Loose connection	Reconnect and tighten
Rx LED1 - OFF	Loose connection	Reconnect and tighten
	Battery over discharged	Perform emergency charging operation (Pg.8)
Tx/Rx LED2 RED Flashing	Abnormal parameters detected	Check "Software and communication manuals" for error codes description and follow the suggestions
	Misalignment in Emergency Charging Operation	Realign and press the emergency charging button to restart the emergency charging process.
	System protection	System protection mode. System should restart automatically.

For other questions, please contact the manufacturer's technical support

Product Maintenance

1. Please ensure regular maintenance of the product.
2. Please disconnect from the main supply if not using the product for a long time.
3. Please ensure nothing block the ventilation of the product.
4. Please ensure no metallic object between Tx and Rx when charging in operation.
5. Please ensure the cables are in good condition.



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