

## [Eta-ON] CT-200 Series Wireless Power Transfer Solution



① Tx control module    ② Tx coil module    ③ Rx coil module    ④ Rx control module

### FEATURE

- High distance charging range
- Maximum 200W transmitting power
- Three types of receivers Max 145W (24V-05A), Max 168W (36V-04 A), Max 160.8W (48V-03 A)
- Protection: over voltage / over current / over temperature / Foreign Object Detection (FOD)
- High End-to-End Efficiency (DC-to-Battery) (Max. 88%)
- Monitoring & Power Management

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## SYSTEM COMPONENTS

- Transmitter (CT-200)
  - Transmitter control module
  - Transmitter coil module
  
- Receiver (CR-24-05, CR-36-04, CR-48-03)
  - Receiver control module
  - Receiver coil module

## VERSION

- Version 3.1 Aug. 2024
- Version 3.0 Apr. 2024
- Version 2.0 Mar. 2024
- Version 1.1 Dec. 2023
- Version 1.0 Aug. 2023

**SPECIFICATION**

<b>TOTAL SYSTEM</b>		
<b>CHARGING CHARACTERISTIC</b>	FREQUENCY	79 ~ 90 kHz
	EFFICIENCY (Max.)	88 % (DC to Battery)
	CHARGE BATTERY	Li-ion battery (7, 10, 13 series pack)
	CHARGE MODE	CC/CV
	CHARGE RANGE	0 – 40 mm distance(z-axis) offset (10 – 30 mm Optimal distance) Max. ±20 mm x-axis offset Max. ±20 mm y-axis offset
<b>COMMUNICATION</b>	Monitoring	UART
<b>ENVIRONMENT</b>	WORKINGTEMP.	up to 80°C

<b>TRANSMITTER</b>		<b>CT-200</b>
<b>INPUT</b>	ACVOLTAGE	220VAC
	CURRENT (MAX.)	1.5 A
<b>DIMENSION</b>	CONTROL MODULE SIZE	155 mm X 150 mm X 42 mm (1,000 g)
	COIL MODULE SIZE	200 mm x 106 mm x 18 mm (430 g)
<b>PROTECTION</b>	OVER CURRENT	Power amp. Protection
	Foreign Object Detection	Conductive material sensing & shut down

<b>RECEIVER</b>		<b>CR-24-05</b>	<b>CR-36-04</b>	<b>CR-48-03</b>
<b>OUTPUT</b>	VOLTAGE RANGE	15 – 29V	25 – 42V	38 – 53.6V
	CHARGE CURRENT (MAX)	5 A	4 A	3 A
	CHARGE POWER (MAX)	145W	168W	160.8W
<b>DIMENSION</b>	CONTROL MODULE SIZE	110 mm X 83 mm X 18 mm (220 g)		
	COIL MODULE SIZE	168 mm X 70 mm X 24.5 mm (250 g)		
<b>PROTECTION</b>	OVERVOLTAGE	200 % rated voltage of full charged battery		
	OVER CURRENT	150 % rated output current		

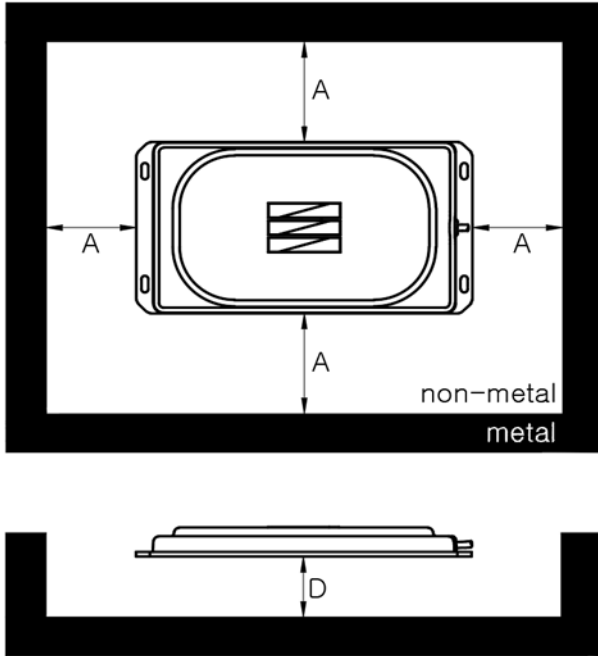
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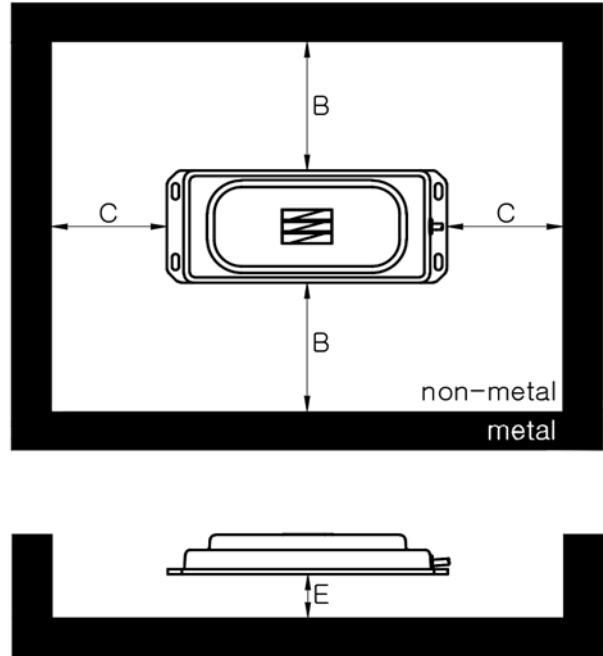
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# INSTALLATION GUIDE

Tx Coil Module



Rx Coil Module



(mm)	A	B	C	D	E
Tx Coil Module	25**			*Al : 0 20	
Rx Coil Module		55**	45**		*Al : 0 20

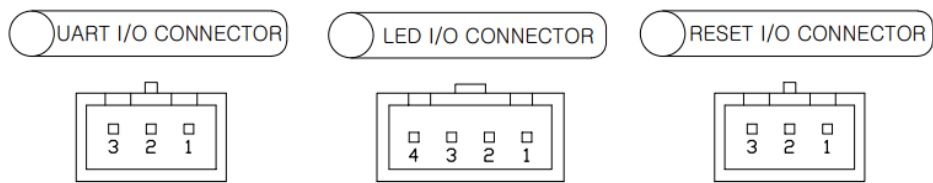
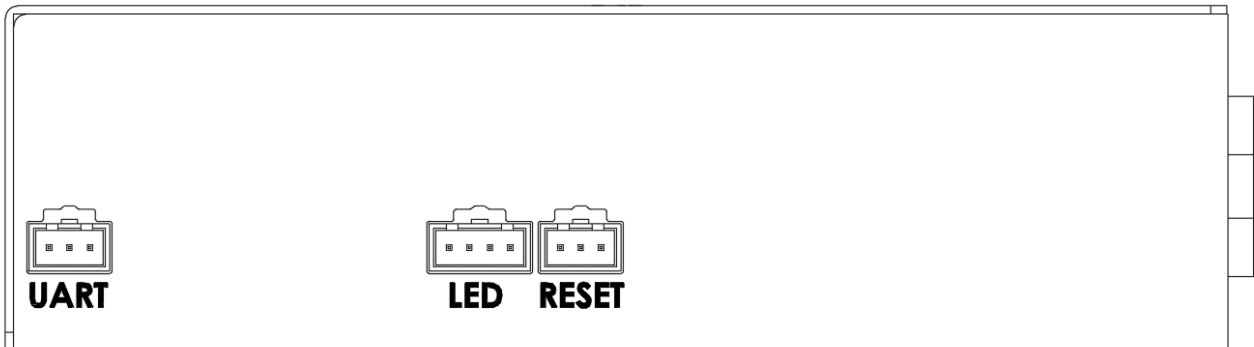
**\*Al : Aluminum**

**\*\*This numbers could be changed.**

## I/O CONNECTOR

### Tx Control Module

- LED housing/ contact : SMAW250-04 or equivalent
- UART, LED housing/ contact : SMAW250-04 or equivalent
- RESET housing/ contact : SMAW250-03 or equivalent



#### UART I/O Connector

Pin number	Pin Name	Type	Function
1	TXD	Output	UART Transmit Data
2	RXD	Input	UART Receive Data
3	GND	-	Ground

#### LED I/O Connector

Pin number	Pin Name	Type	Function
1	GND	-	Ground
2	Red	Output	Red Light Control Signal
3	Green	Output	Green Light Control Signal
4	Yellow	Output	Yellow Light Control Signal

#### LED Output Display

Name	Display	Output	Function
Initialization	Red & Yellow & Green	Present	Displaying during system initialization and calibration

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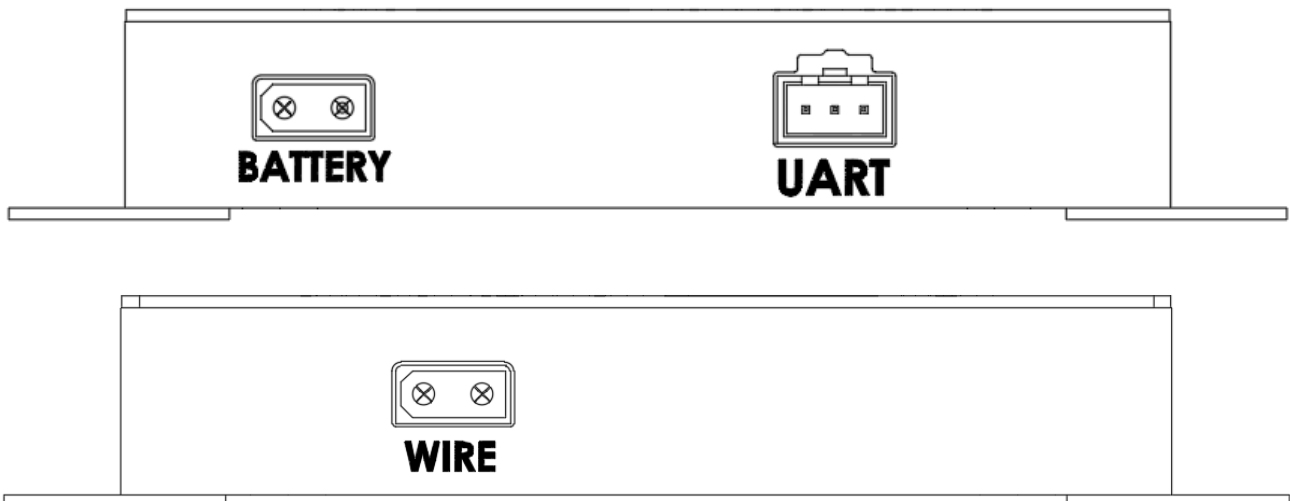
Ready	Yellow	Blink	Display searching the receivers
Charge	Green	Blink	Displaying during constant current or voltage charge operation
Full-Charge	Green	Present	Display full charging of battery
Error	Red	Present	Indicates abnormality

### RESET I/O Connector

Pin number	Pin Name	Type	Function
1	VCC	Output	3.3V Output
2	OUT	Input	MCU Reset
3	GND	-	Ground

### Rx Control Module

- BATTERY,WIRE output housing/ contact: AMASS XT30PW0-M or equivalent
- UART housing/ contact: SMAW250-04 or equivalent



### UART I/O Connector

Pin number	Pin Name	Type	Function
1	TXD	Output	UART Transmit Data
2	RXD	Input	UART Receive Data
3	GND	-	Ground
4	VDD	Input	3.3V