

ELYX-150 Wireless PowerTransfer 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-5A), Max 168W (36V-4 A), Max 160.8W (48V-3 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

Eta Electronics contact@etaelec.com

HQ 38542 2514, Globalventure-dong, Gyeongbuktechnopark, 27, Sampung-ro, Gyeongsan-si, Gyeongsangbuk-do

R&D 04314 6F, 271, Wonhyo-ro, Yongsan-gu, Seoul

SYSTEM COMPONENTS

- Transmitter (DT-150)
 - Transmitter control module
 - Transmitter coil module

- Receiver (DR-150-24, DR-150-36, DR-150-48)
 - Receiver control module
 - Receiver coil module

VERSION

- Version 1.0 May. 2025

SPECIFICATION

TOTAL SYSTEM		
CHARGING CHARACTERISTIC	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. ± 40 mm x-axis offset Max. ± 20 mm y-axis offset
COMMUNICATION	Monitoring	UART
ENVIRONMENT	AMBIENTTEMP.	- 15 ~ 45°C

TRANSMITTER		DT-150
INPUT	ACVOLTAGE	220 VAC
	CURRENT (MAX.)	1.5 A
DIMENSION	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)
PROTECTION	OVER CURRENT	Power amp. Protection
	Foreign Object Detection	Conductive material sensing & shut down

RECEIVER		DR-150-24	DR-150-36	DR-150-48
OUTPUT	VOLTAGE RANGE	15 – 29 V	25 – 42 V	38 – 53.6 V
	CHARGE CURRENT (MAX)	5 A	4 A	3 A
	CHARGE POWER (MAX)	145 W	168 W	160.8 W
DIMENSION	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)		
PROTECTION	OVERVOLTAGE	105 % rated voltage of full charged battery		
	OVER CURRENT	120 % rated output current		

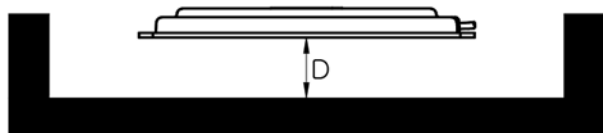
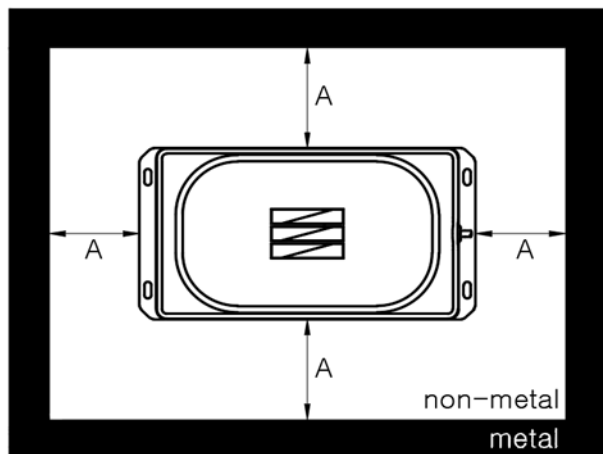
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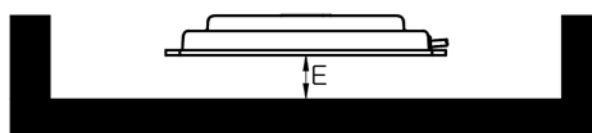
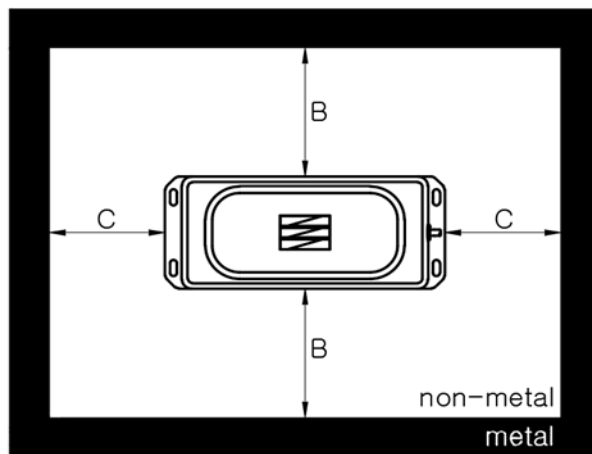
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INSTALLATION GUIDE

Tx coil module



Rx coil module



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

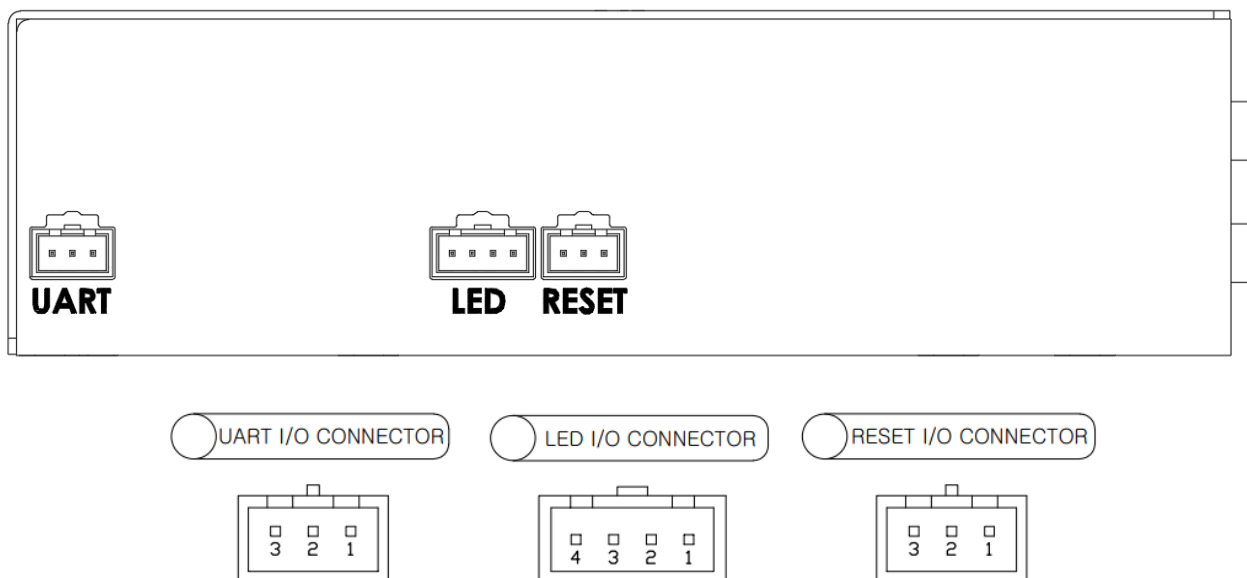
***Al : Aluminum**

****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
Ready	Yellow	Blink	Display searching the receivers

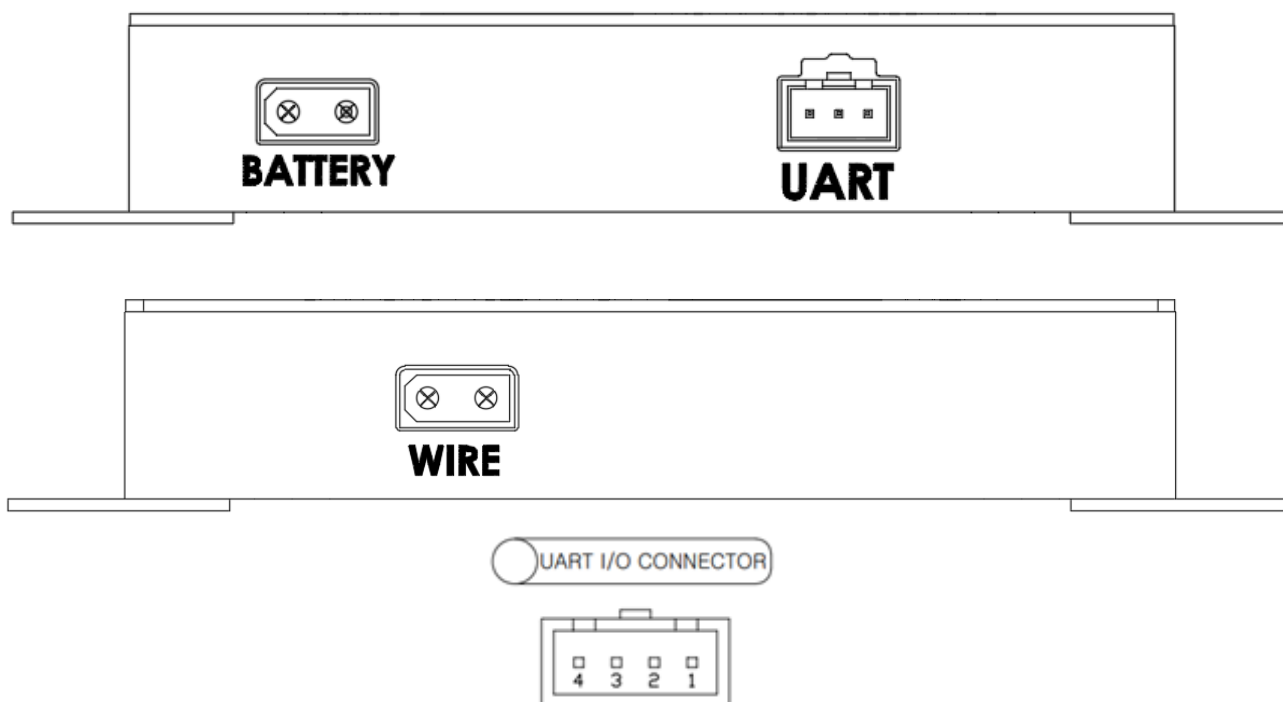
Charge	Green	Blink	Displaying during constant current or voltage charge operation
Full-Charge	Green	Present	Display full charging of battery
Error	Red	Present	Indicates abnormality

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	VDD	Input	3.3V**
2	GND	-	Ground
3	RXD	Input	UART Receive Data
4	TXD	Output	UART Transmit Data

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