[Eta-ON] DT-800-3 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 / Robust to misalignment
- Maximum 800 W transmitting power
- 3 types of receivers Max 290 W (24 V-10 A), Max 420 W (36 V-10 A), Max 536 W (48 V-10 A)
- Protection: over voltage / over current / over temperature / Foreign Object Detection (FOD)
- High End-to-End Efficiency (DC-to-Battery) (Max. 90%)
- Pre-Charge / Full-Charge Function (User Setup)
- Compatible with wired charging and wireless charging
- Cloud Server Monitoring & Power Management / Eta-PMS (eta-on-pms.com)

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SYSTEM COMPONENTS

- Transmitter (DT-800-3)
  - Transmitter control module
  - Transmitter coil module

- Receiver (DR-2410-3, DR-3610-3, DR-4810-3)
  - Receiver control module
  - Receiver coil module

- Option 1.Tx/Rx Cable length (30, 50, 100 cm)
- Option 2. Server communication (Wi-Fi, LTE)

VERSION

- Version 1.1 Dec. 2023

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SPECIFICATION

TOTAL SYSTEM		
CHARGING CHARACTERISTIC	FREQUENCY	79 ~ 90 kHz
	EFFICIENCY (Max.)	90 % (DC to Battery)
	CHARGE BATTERY	Li-ion battery (7, 10, 13 series pack)
	CHARGE MODE	CC/CV
	CHARGE RANGE	0 ~ 50 mm distance (z-axis) offset (15~40 mm Optimal distance) Max. ±70 mm x-axis offset Max. ±40 mm y-axis offset
COMMUNICATION	Server	Wi-Fi or LTE
	Application	CAN / UART
EVIRONMENT	WORKING TEMP.	up to 80˚C

TRANSMITTER		DT-800-3
INPUT	AC VOLTAGE	220 VAC
	CURRENT (MAX.)	4 A
DIMENSION	CONTROL MODULE SIZE	300 mm X 254 mm X 59 mm (3,410 g)
	COIL MODULE SIZE	304.5 mm X 185 mm X 28 mm (1,490 g)
PROTECTION	OVER CURRENT	Power amp. Protection
	Foreign Object Detection	Conductive material sensing & shut down

RECEIVER		DR-2410-3	DR-3610-3	DR-4810-3
OUTPUT	VOLTAGE RANGE	15 – 29 V	25 – 42 V	38 – 53.6 V
	CHARGE CURRENT (MAX)	10 A	10 A	10 A
	CHARGE POWER (MAX)	290 W	420 W	536 W
DIMENSION	CONTROL MODULE SIZE	198 mm X 103 mm X 47 mm (630 g)		
	COIL MODULE SIZE	202.5 mm x 135.12 mm X 28 mm (790 g)		
PROTECTION	OVER VOLTAGE	200 % rated voltage of full charged battery		
	OVER CURRENT	150 % rated output current		

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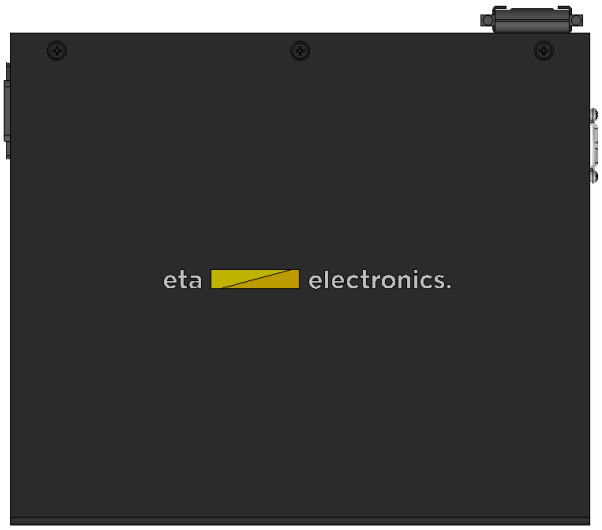
TRANSMITTER CONTROL MODULE

<FRONT VIEW>	<ISOMETRIC VIEW>
	
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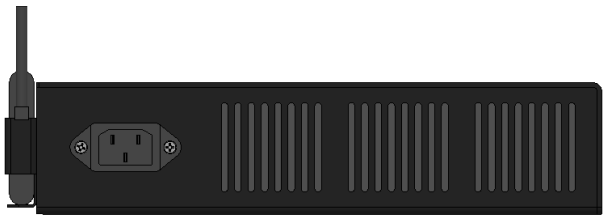	

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TRANSMITTER COIL MODULE

<FRONT VIEW>	< ISOMETRIC VIEW>
	
<SIDE VIEW>	
	

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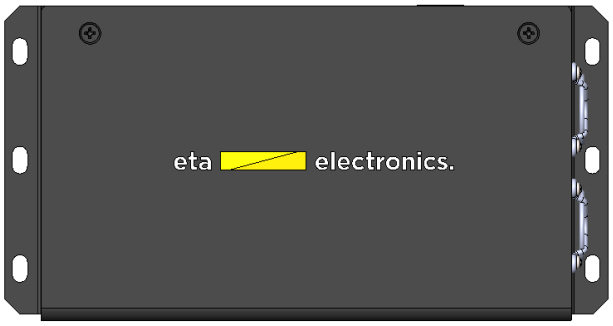
RECEIVER CONTROL MODULE

<FRONT VIEW>	< ISOMETRIC VIEW>
	
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	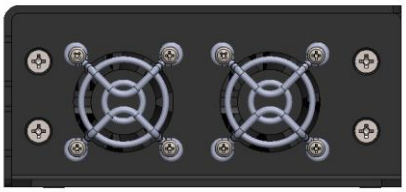

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RECEIVER COIL MODULE

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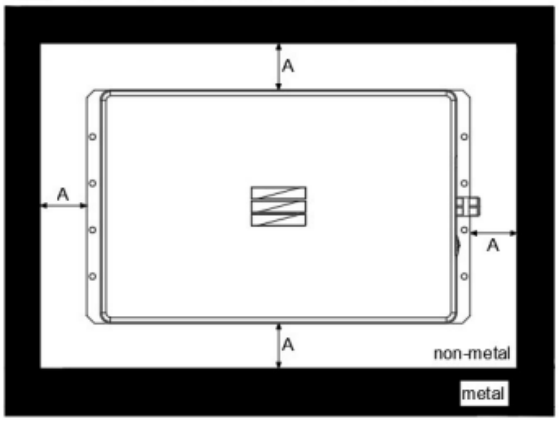
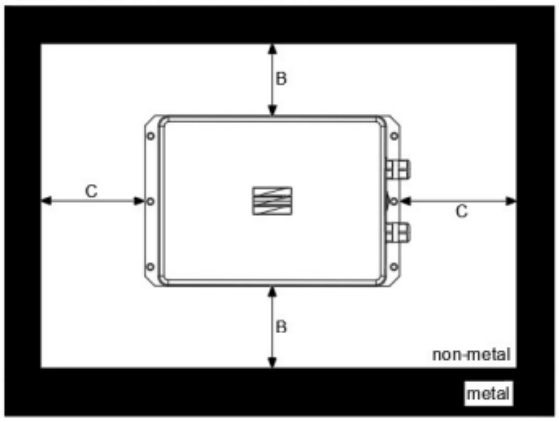
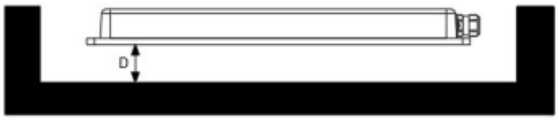
INSTALLATION GUIDE

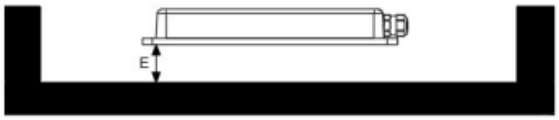
TX COILBOX / DT-800 TX



RX COILBOX / DT-800 RX







(mm)	A	B	C	D	E
Tx Coil Box	35**			*Al : 0 20	
Rx Coil Box		60**	120**		*Al : 0 20

***Al : Aluminum**

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

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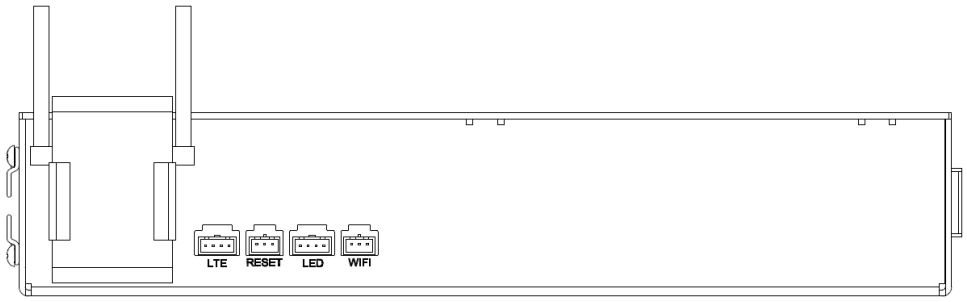
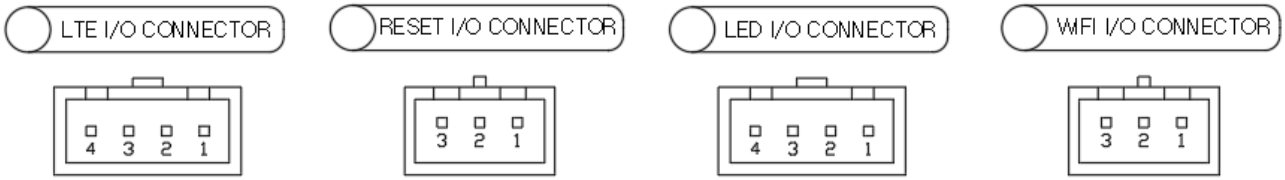
LED/IO CONNECTOR

TX CONTROL MODULE

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





RESET I/O Connector

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

LED I/O Connector

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

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

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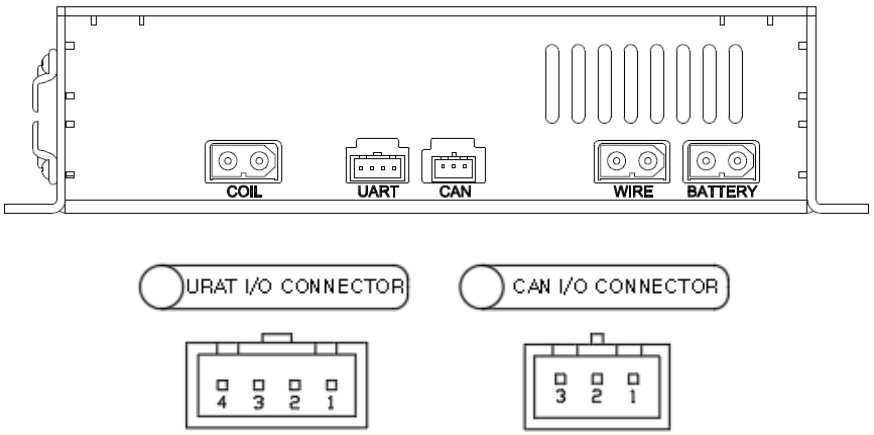
WIFI Setting I/O Connector

Pin number	Pin Name	Type	Function
1	SET_W	Input	Set the WIFI Configuration
2	VDD	Output	3.3V Output
3	GND	-	Ground

RX CONTROL MODULE

- BATTERY, WIRE output housing/ contact: AMASS XT60E-M or equivalent
- UART, CAN housing/ contact: SMAW250-04 or equivalent



CAN I/O Connector

Pin number	Pin Name	Type	Function
1	GND	Output	Ground
2	CAN_H	Input/Output	High level CAN bus line
3	CAN_L	Input/Output	Low level CAN bus line
4	VDD	Input	5V**

**** (Optional) If 5V is not supplied to pin 4, charging data can be received only during charging time.**

UART I/O Connector

Pin number	Pin Name	Type	Function
1	GND	Output	Ground
2	TXD	Output	UARTTransmit Data
3	RXD	Input	UART Receive Data
4	VDD	Input	5V**

**** (Optional) If 5V is not supplied to pin 4, charging data can be received only during charging time.**

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