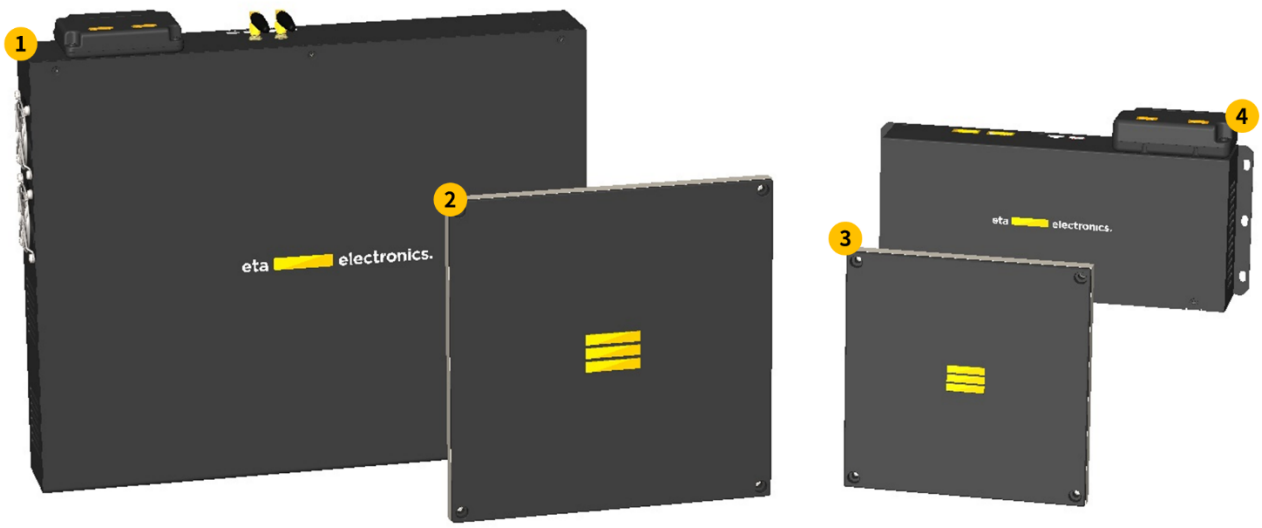
ELYX-40A Wireless PowerTransfer Solution



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 3,000 W transmitting power
- Receiver programmable according to battery specifications (7–14s Li-ion battery, Max 40 A)
- Protection: over voltage / over current / over temperature / Foreign Object Detection (FOD)
- High End-to-End Efficiency (DC-to-Battery) (Max. 88%)
- Pre-Charge / Full-Charge Function (User Setup)
- Compatible with wired charging and wireless charging
- Cloud Server Monitoring & Power Management / ELYX Link

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- **SYSTEM COMPONENTS**
- Transmitter (DT-40A)
  - Transmitter control module
  - Transmitter coil module

- Receiver (DR-40A)
  - Receiver control module
  - Receiver coil module

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

VERSION

- Version 0.97 Aug. 2026
- Version 0.97 May. 2026

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SPECIFICATION

TOTAL SYSTEM		
CHARGING CHARACTERISTIC	FREQUENCY	79–90 kHz
	EFFICIENCY (Max.)	88% (DC to Battery)
	CHARGE BATTERY	Li-ion (7–14 series pack); LFP (8–16 series pack)
	CHARGE MODE	CC/CV
	CHARGE RANGE	0–50 mm distance (z-axis) offset (20–40 mm Optimal distance) Max. ±50 mm x-axis offset Max. ±50 mm y-axis offset
COMMUNICATION	Server	Wi-Fi
	Application	CAN
ENVIRONMENT	AMBIENTTEMP.	- 15 ~ 45˚C
	COOLING	Fan

TRANSMITTER		DT-40A
INPUT	AC VOLTAGE RANGE	180–264 VAC
	FREQUENCY	47–63 Hz
	AC CURRENT (Max.)	20A / 180VAC 16 A / 230 VAC
	POWER FACTOR	0.95@230 VAC at full load
DIMENSION	CONTROL MODULE SIZE	430 mm X 360 mm X 70 mm (7,930 g)
	COIL MODULE SIZE	250 mm X 250 mm X 15 mm (2,160 g)
PROTECTION	OVERTEMPERATURE	≥ 80°C: Output power derated to 70% of rated power ≥ 90°C: Charging shutdown
	Foreign Object Detection	Conductive material sensing & shut down

RECEIVER		DR-40A
OUTPUT	VOLTAGE RANGE	20–58.8 V (Programmable voltage range)
	CHARGE CURRENT (Max.)	40 A
	CHARGE POWER (Max.)	2,352 W
	RIPPLE &TOLERANCE	±1%
DIMENSION	CONTROL MODULE SIZE	290 mm X 145 mm X 50 mm (1,640 g)
	COIL MODULE SIZE	190 mm x 190 mm X 15 mm (1,250 g)**
PROTECTION	OVER VOLTAGE	105% rated voltage of full charged battery
	OVER CURRENT	105% rated output current
	OVERTEMPERATURE	≥ 80°C: Output power derated to 70% of rated power ≥ 90°C: Charging shutdown

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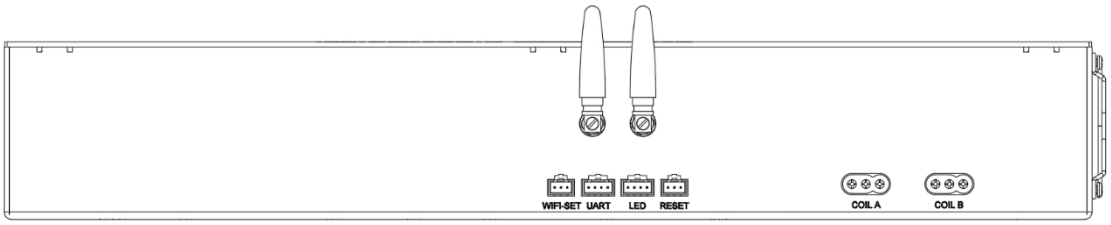
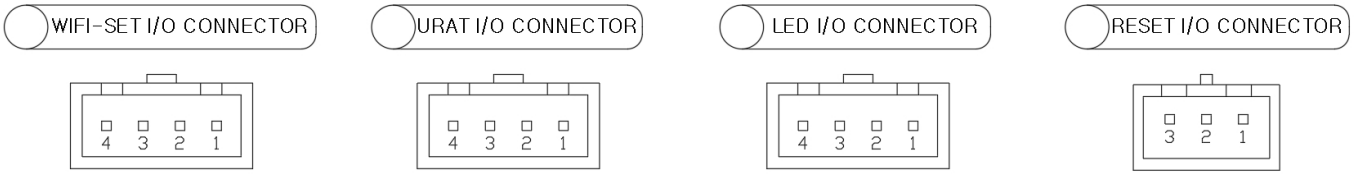
I/O CONNECTOR

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	GND		Ground
3	VDD	Output	3.3V Output

LED I/O Connector

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

WIFI Setting I/O Connector

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

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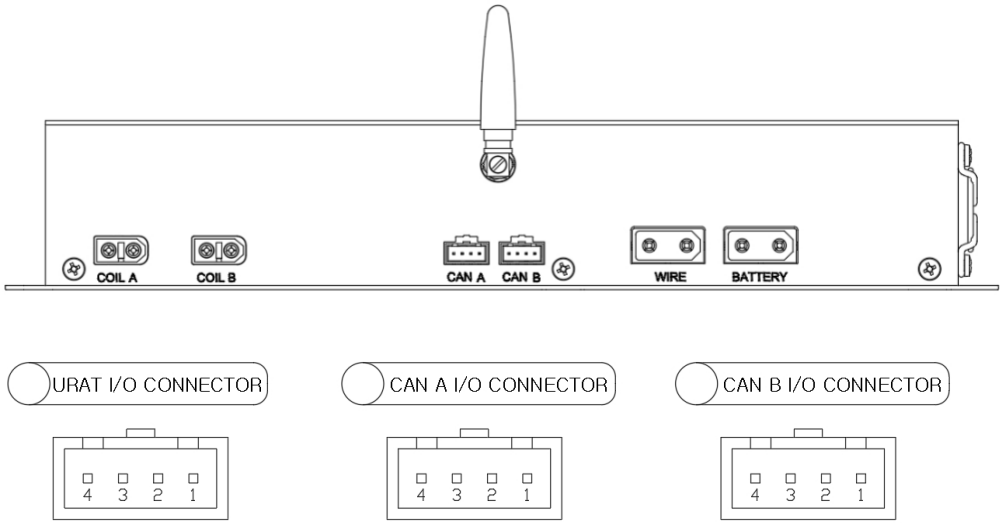
Rx Control Module

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



UART I/O Connector

Pin number	Pin Name	Type	Function
1	GND	Output	Ground
2	TXD	Output	UART Transmit 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.**

CAN A,B 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.**

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