



HEMS Controller Datasheet

The enjoyelec HEMS Controller connects and manages solar PV, battery storage, heat pumps, EV chargers, smart meters, and other controllable energy devices within a single system.

It provides local energy management, real-time control, and cloud-based monitoring. With support for multiple communication protocols and flexible integration interfaces, the controller enables interoperability across different manufacturers and existing installations.

The controller supports grid-compliant operation, including grid-oriented control according to §14a EnWG and feed-in management requirements under §9 EEG.



AI-Native Optimization

Cloud+Edge Orchestration

GDPR-Compliant

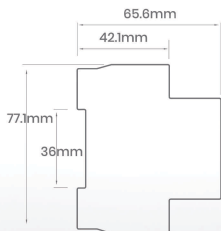
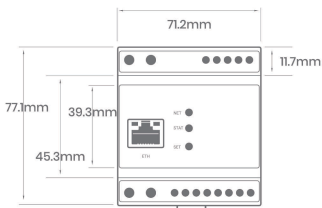
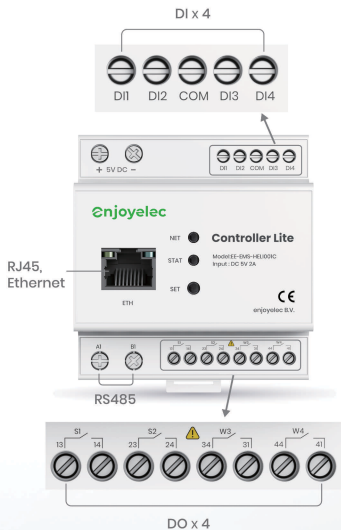
Manufacturer Independence

enjoyelec B.V.

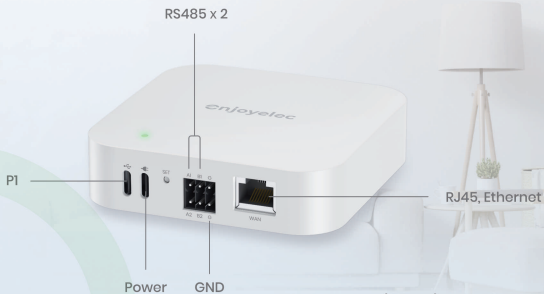
www.enjoyelec.net info@enjoyelec.net



Controller Lite



Controller Air 2



Dimensions(WxHxD): 90x90x30mm

Controller Connectivity



PV



Battery



EV Charger



Heat Pump



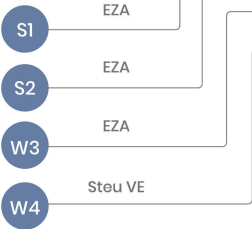
Meter



Smart Plug



FNN
Steuerbox



SG Ready Steu VE
§ 14a



FNN
Steuerbox



Router



FNN
Steuerbox



Router





Product Name	Controller Lite		Controller Air 2
Model	EE-EMS-HELI001C	EE-EMS-HELI001N	EE-EMS-EB22
Communication Interaction			
WAN	ETH x 1, 10/100Mbps		WAN x 1, 10/100Mbps
WIFI	/	2.4GHz/5GHz	2.4GHz/5GHz
Bluetooth	/	BLE5.0	BLE5.0
RS485	COM x 1, 1200 — 115200bps (Default Baud Rate: 9600 (Configurable))		COM x 2, 1200 — 115200bps (Default Baud Rate: 9600 (Configurable))
zigbee	/	zigbee3.0	zigbee3.0
Digital Inputs	DI x 4		NA
Digital Outputs	DO x 4		NA
Communication Protocols			
Ethernet	Modbus-TCP		Modbus-TCP
RS485	Modbus-RTU		Modbus-RTU
Zigbee	/	zigbee3.0	Zigbee 3.0
OCPP	OCPP 1.6 (Via Cloud)		OCPP 1.6 (Via Cloud)
EEBUS	EEBUS (SHIP 1.0.1\SPINE 1.3.0\LPC\LPP\MPC)		EEBUS (SHIP 1.0.1\SPINE 1.3.0\LPC\LPP\MPC)
SG Ready	SG Ready		NA
OpenADR	OpenADR 2.0		OpenADR 2.0
Display			
LED	LED x 2		LED x 2
Button	Button x 1		Button x 1
Environment			
Operating Temperature	-30°C ~ 50°C		-30°C ~ 50°C
Storage Temperature	-40°C ~ 70°C		-40°C ~ 70°C
Allowable relative humidity range (non-condensing)	5% ~ 95%		5% ~ 95%
Max. operating altitude	2,000m		2,000m
Electrical Parameters			
Power Input	5.0V DC, 2.0A		Type-C, 5.0V DC, 2.0A
Power Consumption	Typical 5W, Maximum 10W		Typical 5W, Maximum 10W
Dimensions (W x H x D)	71.2mm x 77.1mm x 65.6mm		90mm x 90mm x 30mm
Weight	205g		110g
Degree of protection	IP20		IP20
Installation Method	Rail-mounting		Free Placement
System			
System	LINUX, supports OTA, remote upgrades secured through SSL encryption		