power your future

Charging station for electric vehicles with energy storage **EV-CME150 (60kW/142kWh)**

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The EV-CME charging station integrated with energy storage is a state-of-the-art infrastructure solution that enables efficient charging of electric vehicles, especially in areas with limited AC grid connection capacity.

The station's housing is made of powder-coated stainless steel and has an IP54 protection rating and IK10 mechanical resistance, making it weatherproof. Authorisation of the charging process takes place via an RFID reader or optionally via an external application. In addition, the station can be equipped with a 55" display for remote and independent management of advertising content.

The EV-CME offers direct current (DC) charging of electric vehicles with up to 150 kW via two Type 2 CCS connectors. The unit is supplied with three-phase 400 V at 50 Hz in TN, with a connection power of 65 kVA. The substation supports the OCPP 1.6 communication protocol and is equipped with a GSM modem as standard. Operation is via a touchscreen display or optionally via the charging service provider's application.

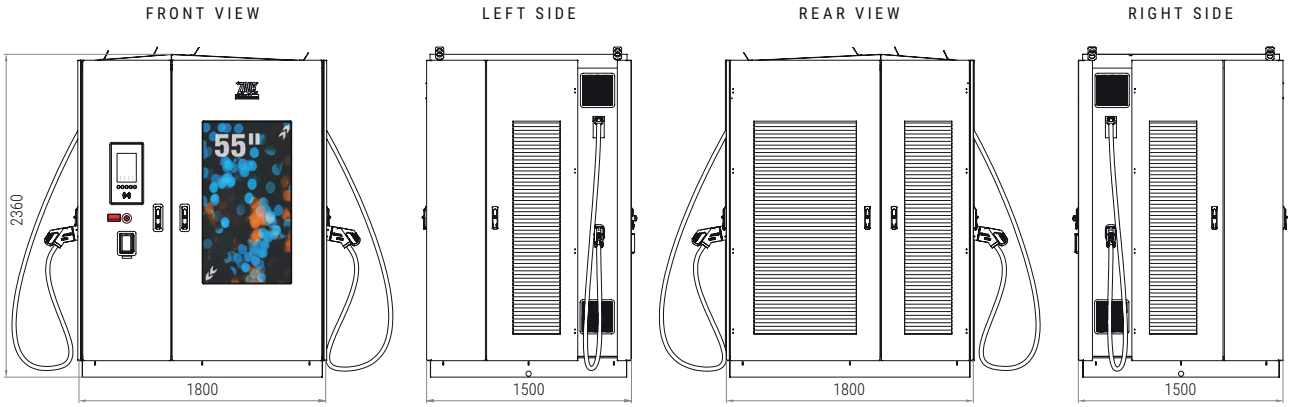
A key component of the station is an energy storage system based on 142 kWh lithium-ion batteries. The energy storage accumulates energy during periods of low demand or when energy is cheaper, and then uses it to rapidly charge vehicles during peak demand.

EV-CME can also balance the grid, accumulating excess energy and giving it back during periods of deficit, which contributes to grid stabilisation and will enable the use of dynamic tariffs.

This solution is particularly suitable for cities where the need to install charging stations is high, but poor power supply infrastructure prevents the installation of traditional DC stations. With this technology, it is possible to place charging stations in strategic locations without the need for significant redevelopment of existing infrastructure.

It is possible to manufacture an EV-CME with higher parameters. The chart shows an example solution only.

Charging station facades

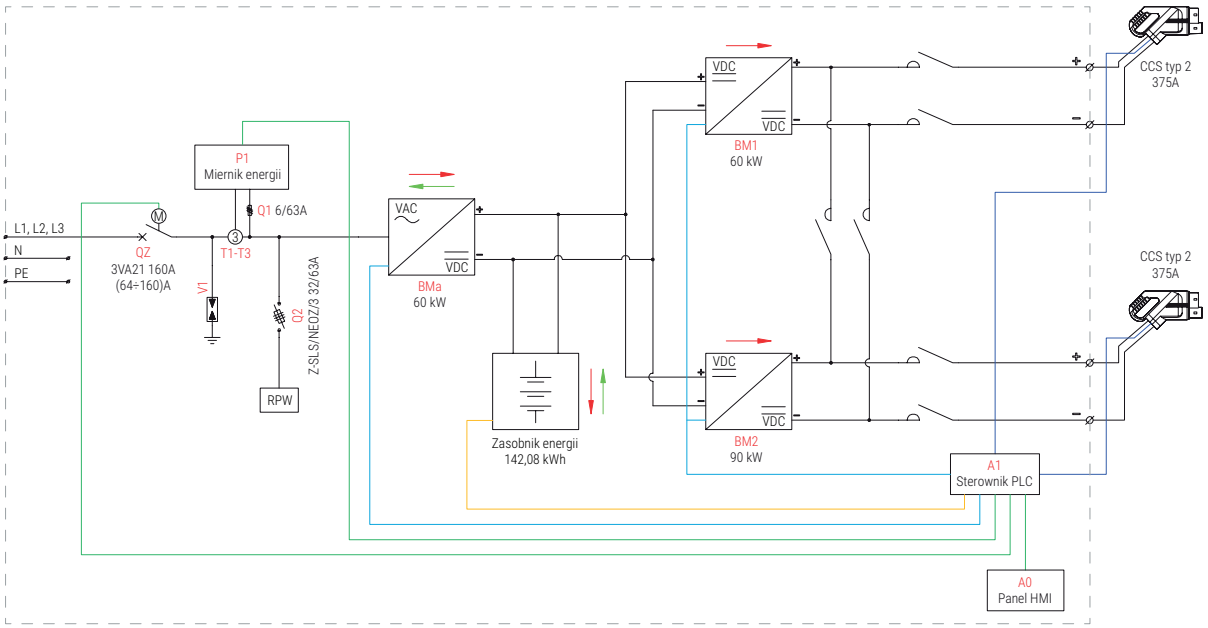


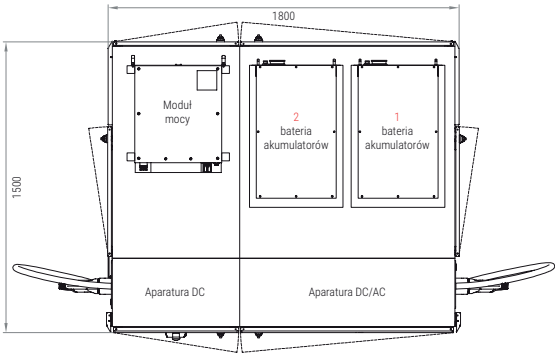
Technical specifications

				EV-CME150 (60kW/142kWh)		
AC POWER SUPPLY	Voltage U_{AC}			3 x 400 V / 50 Hz		
	Protection			3VA21 160A (64÷160)A		
	Connection power			65 kVA		
	Network layout			TN-S, TN-C-S, TN-C		
ENERGY STORAGE PARAMETERS	Maximum charging / discharging power to the grid			60 kW		
	Installed capacity			142.08 kWh		
	DC voltage range			650–800 VDC		
CHARGING STATION PARAMETERS	Charging with current DC	Rated power		150 kW		
		Output voltage U_{DC}		30 ÷ 1000 VDC		
		Number of connectors / type		2 / CCS typ 2		
		Maximum current at the charging connector		375A (up to 500A in Boost Mode)		
		Power distribution between connectors	Connector 1	150 kW	–	60 kW
			Connector 2	–	150 kW	90 kW
		Charging cable length		4,2 m ±5% [1]		
	Charging system			Mode 4		
	Communication protocol			OCPP 1.6J, OCPP 2.0.1		
	Charging authorisation			RFID card / charging service provider application [2]		
	10'' display			10-inch – standard		
GENERAL CHARACTERISTICS	55'' display			55" display, remote and independent management of advertising content – optional		
	Degree of protection			IP54 / IK10		
	External dimensions			1800mm x 1500mm x 2360mm		
	Weight			~ 2800 kg		
	Working temperature range			up -30°C to +50°C		
	Standards and norms			CE, LVD 2014/35/UE, EMC 2014/30/UE, PN EN IEC 61851 1, PN-EN 61851 23, PN EN 61851 24, PN EN 62196-1, PN EN 62196 3:2015-02, DIN SPEC 70121		

[1] standard charging cable length 4.2m ±5%, other on request after consultation with the manufacturer
[2] optional

Electrical diagram, arrangement of equipment





NOTE: Due to technological progress, the manufacturer reserves the right to make technical changes without notice. Please contact the manufacturer for updates.

The authors of the study request the respected users to report their comments on errors, shortcomings or inaccuracies noted in this offer to the following address: katalog@zpue.pl.

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