

PM-80K

DC FAST CHARGING STATION



Features

- ✓ Flexible Charging Mode
- ✓ Large Protection Structures
- ✓ Multiple Communication
(Modbus TCP, SNMP, IEC61850, etc.)
- ✓ Innovative Design
- ✓ Fully Isolated Input and Output
- ✓ User Friendly Interface
- ✓ 7" Touch Screen HMI
- ✓ Smart Technology
- ✓ Adjustable Power Options
(20kW, 40kW, 80kW)
- ✓ European Standards
- ✓ Current THD (I_{THD}) < 5%
- ✓ Input Power Factor pF > 0.99

Technical Specifications

GENERAL

Model / Power	EVCR-400VDC/50-100-200A
Topology	3 Phase / High Frequency Power Factor Corrected IGBT Rectifier
Control	Microprocessor Controlled System
Configuration	Single

INPUT

Output Isolation Transformer	Galvanically isolated / Primary & Secondary Earth Screened
Nominal Voltage and Tolerance	380/400/415 VAC ±15%
Input Wiring	3 Phase 3 Wires + Ground
Nominal Frequency	50 Hz / 60Hz ±5%
Input Power Factor (PF)	0.99
Input Current THDI	<5%
Input Protection	Thermic Magnetic Overcurrent protection via MCB-MCCB and Overvoltage / Undervoltage protection
Input Filtering	RFI, EMI

OUTPUT

Battery Charging Principle	Constant Current/ Constant Voltage
Rated Power	20kW/40kW/80kW
Nominal Output Voltage	400VDC
Output Voltage Adjustment	400VDC can be set between 300VDC - 500VDC
Nominal Output Current	50A/100A/200A
Output Current Adjustment	0-100% of Nominal Output Current
Static Tolerance	<1%
Output Voltage Ripple RMS	1% RMS AC of Output Voltage
Efficiency at full load	>90%
Float voltage (V/C)	4,15-4,20V Lithium Ion Battery (97Cell / 3,6V / 100-400Ah)
Output Protection	Short Circuit, MCB-MCCB and Overvoltage / Undervoltage protection
Filtering	L-C Filter

CONTROL ELEMENTS

Battery Test	Automatic or manual selectable.
Charging Timer	0 – 99,9 hours adjustable by 1 minute accuracy
Emergency Power Off	Available

ALARM CONTACTS

Open or closed free alarm contacts	Line MCB OFF / Mains Failure , Battery MCB OFF, Low Battery Failure, Over Output Voltage, Charger Failure, Over Temperature, Earth Fault
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DISPLAY PANEL & MEASUREMENT

Measurements	TFT Screen for Rectifier Total Output Voltage / Current, Line Voltage / Line Current / Frequency
Indicators	Float Mode, Current Mode, Low Battery, Battery Test Failure, Line MCB OFF, Fan Failure, Over Voltage, Under Voltage, Over Temperature, Rectifier Failure, Mains ON (LED indication), Battery MCB (LED indication), Earth Fault (+ / -)
Adjustable Parameters	Low Battery Voltage , Battery Test , Charger Output Voltage, Battery Charge Current, LED test and ON - OFF.
Event History	Line MCB ON / off, Battery MCB ON / OFF, AC Line Input High / Low / Normal , Low Battery, Battery OK, Rectifier Overvoltage / Undervoltage / OK, Overtemperature / Normal Temperature, Battery Test Fail / OK events are displayed on time base. Last 250 events recorded and displayed on front panel and on PC via RS 485
Sound Alarm	On Warning Messages 2 Short 'beep' per 2 seconds

COMMUNICATION (OPTIONAL)

Communication	Modbus, ModbusRTU, TCP/IP, SNMP, Profibus Communications via RS485 port
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SAFETY & ENVIRONMENT

Circuit Breakers	Input/Output - MCB/MCCB
Over Voltage Protection	IEEE 587 4500 A, 110 Joules / 40kA Surge Arrestor
Electrical Interference Reduction	FCC Part 15 Class B
Electrical Standards	EN 50091-1 (Security) / EN 50091-2 (EMC)
Protection Level / Color	IP 54 / RAL7035
Isolation Voltage	2000VAC input/chassis and output/chassis
MTBF	100,000 hrs.
Enclosure Material	Mild Steel, Zinc-phosphate coated; 100 µm electrostatic paint; 2 mm thickness
Cooling	Forced fans with thermostat control
Cable Entry	Back/Bottom
Distribution	Available on request
Heater & Lightning	Available on request
Operating Temperature	-20 / +50 °C
Relative humidity	5 - 90 %
Operating Altitude	Max. 2000 Mt.
Noise Level	Max. 60 db
Cabin Dimension	(H)1950 (W)600 (D)600mm