



720 Watt Electric Vehicle Li-Ion Charger Data Sheet



Description:

The EVC 720Watt is a 2 stage constant current / constant voltage charger for use in charging Lithium Ion battery systems used in Electric Vehicles.

Features:

- Universal AC Input / Full Range
- 90 264 VAC Input
- **High Reliability**
- Communications via CAN bus
- Efficiency up to 94%
- Over Voltage Protection
- **Short Circuit Protection**
- **Over Temperature Protection**
- Waterproof IP65 Enclosure
- **RoHS Compliant**
- 2 Year Warranty



Model Number	Output Current	Current Range	Voltage Range
EVC-116-720	6A	5.8 – 6.2A	69V – 116V

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Specifications:

Input Parameters				
	Min	Тур	Max	Units
Input Voltage Range* *Designed to optimum performance at 110 and 220	90	110	264	VAC
nominal lines Input Frequency		47 – 63		Hz
Power Factor				
110 VAC Input, Full Load	0.99			
220 VAC Input, Full Load	0.96			
Input Current				
110VAC, Continuous			10	A rms
240VAC, Continuous			5	
Efficiency				
115VAC Full Load		92		
220VAC Full Load		94		

Output Parameters				
	Min	Тур	Max	Units
Output Power	406	612	720	W
Noise & Ripple – lout 25°C – 20MHz bandwidth			10	% lout
Turn-on Delay Time – Full Load			3	Sec
Overshoot and Undershoot Response (Power On/Off)			10	%





Specifications:

General Specifications					
Short Circuit Potection Hiccup Mode		de			
	Self Recovery whe	Self Recovery when fault is removed			
Over Voltage Protection	between 127.8 ar	Enters Auto recovery mode when output voltage is between 127.8 and 162.7V. The unit will return to normal operation when powered back on.			
Over Temperature Protection	temperature outs will enter hiccup i	The unit will go into thermal protection as the maximum temperature outside the case exceeds 85±5 °C. The unit will enter hiccup mode and will self-recover when the temperature becomes normal.			
MTBF: (MIL-HDBK-217F 25°C)	≥ 200,000 Hours				
Temperature - Operating	MIN	-23	0.0		
	MAX	85	ōC.		
Temperature - Storage	MIN	-40	<u>°</u> C		
	MAX	+85	<u> </u>		
Relative Humidity		10% - 100%			
Weatherproof		IP65 for Enclosure			
	IP25 for Charger Connector		nnector		
Case Size		12.20 x 7.08 x 2.0"			
	310mm x 180mm x 51mm				
Ar		Anodized Black Finish			
Unit Weight		2.9 kg			
Agency Approval	Desig	Designed to meet UL/CSA and TUV			

Electromagnetic Compatibility EMI/EMC	
EMI, RFI	Comply with EN55002 Class A, shall have a minimum if 6dB margin.
Immunity:	
EN61000-3-2	Harmonic Current Emission
EN61000-3-3	Voltage Fluctuations and Flicker
EN61000-4-2	ESD 8kV Air Discharge, 4kV Contact Discharge
EN61000-4-3	Radio-Frequency Electromagnetic Field Susceptibility Test- Rs
EN61000-4-4	Electrical Fast Transient/Burst – EFD
EN61000-4-5	Surge Immunity Test, AC power line: line to line 2kV, line to each 4kV
EN61000-4-6	Conducted Radio Frequency Disturbance
EN61000-4-8	Power Frequency Magnetic Field Test
EN61000-4-11	Voltage Dips

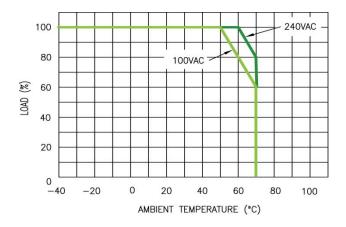
Notes:

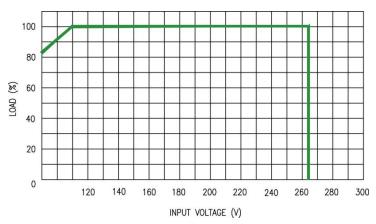
(1) Specification is subject to change without notice.



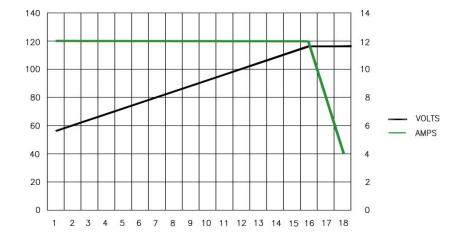


Derating Curves:





Charging Curve:

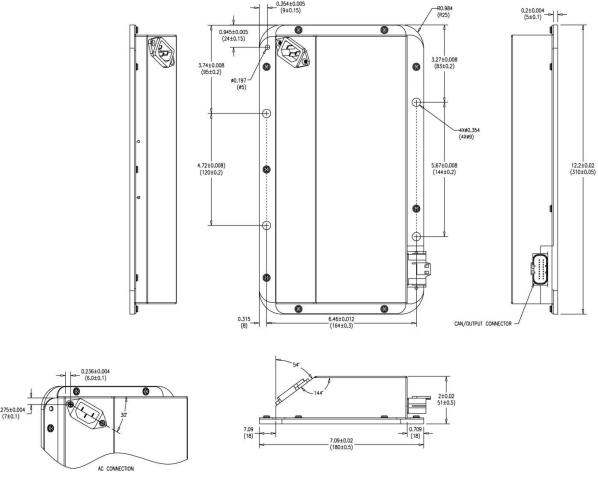


AMPS	VOLTS
6	56
6	60
6	64
6	68
6	72
6	76
6	80
6	84
6	88
6	92
6	96
6	100
6	104
6	108
6	112
6	116
4	116.2
2	116.2





Case Specifications:



All dimensions are inches

CAN Signal Connector:

Will be JAE MX23A18NF1 present on a PCB connector and shall be mounted to the charger body Pinout, by pin number. Undefined pins are no connection or factory use.

Pin	Function
1	Not Connected
2	Not Connected
3	B- Output
4	CAN-gnd
5	CAN-5V
6	CANL
7	CANH
8	Not Connected
9	B+ Output

Pin	Function
10	B+ Output
11	ob_charger_attached [charger_attached]
12	Charger_en_0 [charger_en_n]
13	Ob_charger_ref_0 [charger_gnd_ref]
14	B- Output
15	Programming gnd
16	Programming bgnd
17	Programming reset
18	Programming vdd