

EV ON-BOARD CHARGER



Features

- Universal AC input range
- Input/output protections
- Intelligent charging modes
- Customized CAN communication optional
- 250/500kbs communication rate optional
- UDS bootloader and diagnostic optional
- IP67 enclosure, air cooled

Main Specifications

Part Number		Input Voltage	Output Voltage	Output Current	Ripple & Noise (mVp-p)
OBC		85-265Vac	200-420Vdc	0-20A	$\leq \pm 2\%$

Electrical Specifications

These specifications are valid over the converter's full ranges of input voltage output voltage and current, and operating temperature unless noted otherwise.

Input Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Input Voltage	AC input	85	220	265	Vac
Wakeup Voltage		9	12	16	Vdc
Bias Voltage		9	12	16	Vdc
Input Frequency		45	50	65	Hz
Input Current		-	-	32	A
Inrush Current		-	-	50	A
Current Draw of Wakeup		-	-	0.3	mA
Leakage Current		-	-	3	mA
Power Factor	$\geq 50\%$ load	0.99			

Output Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Output Voltage		200	-	420	Vdc
Output Current		0	-	20	A
Output Power		-	-	6600	W
Output Current Accuracy	Typical Vin, full load, Ta = 25°C	-	-	±0.4	A
Output Ripple & Noise	20MHz bandwidth, with 0.1uF and 47uF capacitor, typical Vin	-	-	±2%	mVp-p
Output Wakeup Voltage		-	12	-	Vdc
Output Wakeup Current		-	-	200	mA
Efficiency	Typical Vin, full load, Ta = 25°C	94	-	-	%

Protection Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Input Under-voltage Protection		75	80	85	Vac
Input Under-voltage Recovery	Auto-recovery	80	85	90	Vac
Input Over-voltage Protection		265	270	275	Vac
Input Over-voltage Recovery	Auto-recovery	260	265	270	Vac
Output Under-voltage Protection		190	195	200	Vdc
Output Under-voltage Recovery	Auto-recovery	195	200	205	Vdc
Output Over-voltage Protection		420	440	460	Vdc
Output Over-voltage Recovery	Auto-recovery	415	435	455	Vdc
Over Temperature Protection (coolant temperature)	Reduced output power	60	-	85	°C
	Shut down	95	-	-	°C
Output Short Circuit Protection	Shut down, auto-recovery				

Environmental Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Operating Temperature	Automatically reduces the output power when the coolant temperature goes over 65°C.	-40	-	+85	°C
Storage Temperature		-40	-	+105	°C
Relative Humidity	No condensation	5	-	95	%
Altitude		-	-	5000	m
Cooling	Liquid cooled				
Ingress Protection	IP67				
Weight			8.4		kg
Acoustic Noise	QC/T 895-2011	-	-	60	dB

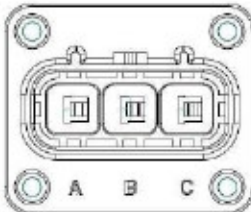
Safety Specifications

Parameter	Notes & Conditions	Min	Typical	Max	Unit
Isolation Voltage	Input-Output, 1 min.	2000	-	-	Vac
		2800	-	-	Vdc
Insulation Resistance		20	-	-	MΩ
Grounding Resistance	Case-Ground	-	-	0.1	Ω
Input Discharge	The input terminal voltage will drop below 60V within 1s after the input power is cut off				
Electric Clearance	GB/T 18488.1-2001				

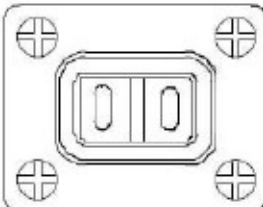
Reliability Specifications

Parameter	Standard
Durability	QC/T 895-2011
	QC/T 24347-2009
EMC	GB/T 18487.1-2001
Harmonic Current	GB17625.0-2003, CLASS A
Vibration	QC/T 413 – 2002 3.12 (ISO 16750-3 4.2.2.2)
Shock	ISO 16750-3 4.2.2.2
Salt Fog	QC/T 413 – 2002 3.13

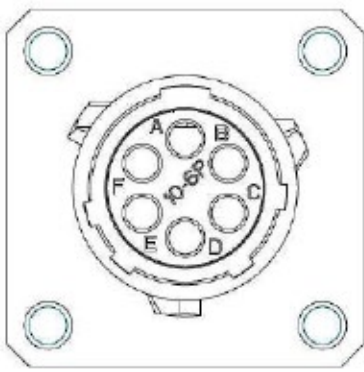
Input Connector Description

PIN NO.	Name	Model: XXC106-EV-P3Z	Mating Connector: XX106-EV-S3T
		Supplier: Xinxi	
A	N		
B	PE		
C	L		

High Voltage Output Connector Description

PIN NO.	Name	Model: XXC105-EV-P2ZB	Mating Connector: XXC105-EV-S2TB
		Supplier: Xinxi	
A	Out +		
B	Out -		
1	Interlock		
2	Interlock		

Signal Connector Description

PIN NO.	Name	Model: RTOW0106PN03	Mating Connector: RT0W6106SNHEC03
		Supplier: Amphenol	
A	CAN L		
B	CAN H		
C	CAN GND -		
D	13.8V +		
E	13.8V -		
F	Enable 12V		

Mechanical Parameters (unit: mm)

