



3.3KW Can Bus Charger HK-MF-312-10-X 312 Volt



Overview

The **HK-MF-312-10-X** 3.3KW CAN Bus 312 Volt Charger features a small form factor and high efficiency. Built in features include both Output over-voltage and over-current protection.

Other features include reverse polarity protection as well as under-voltage and under-current protection. The unit is fully sealed and waterproof, making it suitable for most environments. Manufactured in China by TC Chargers.

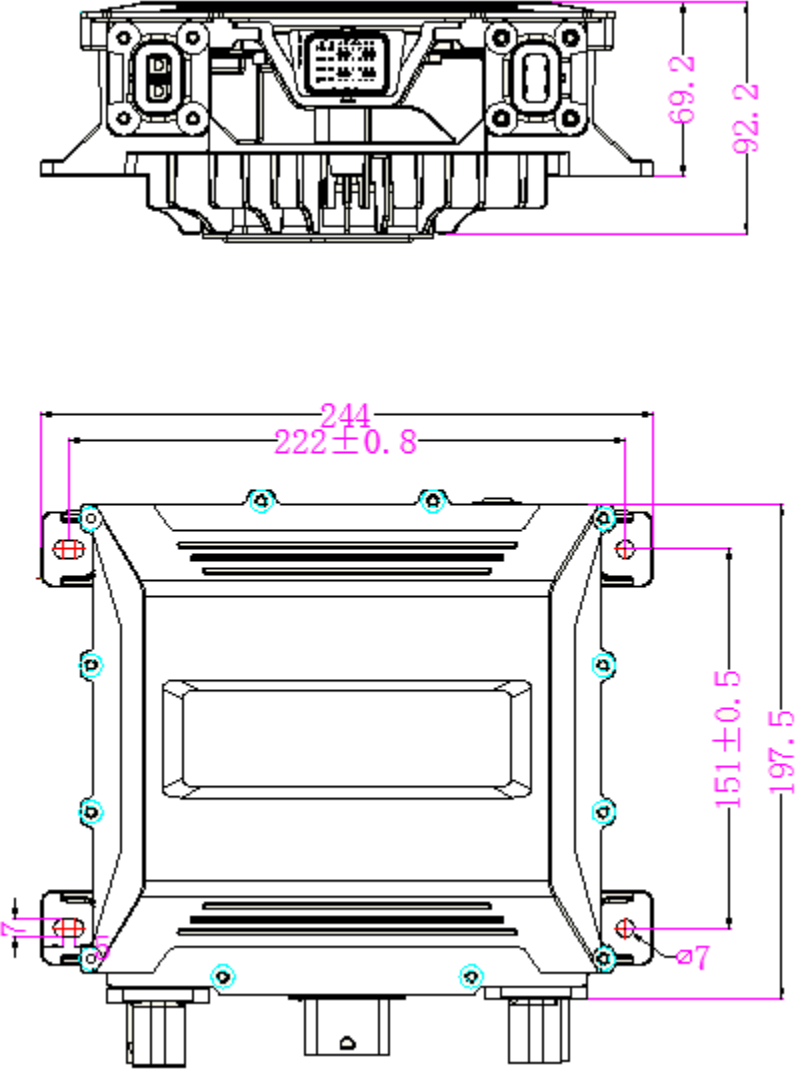
Specifications

AC Input Voltage Range:	AC 90V ~ 264V
DC Output Voltage Range:	110 – 440VDC
AC Input Frequency:	45Hz ~ 65Hz
Full Loading Efficiency:	≥93%
Shock & Vibration:	QC/T 895-2011
Operating Temperature:	-40C ~ 85C
Charging Control:	CAN BUS
Cooling Method:	Electric Fan

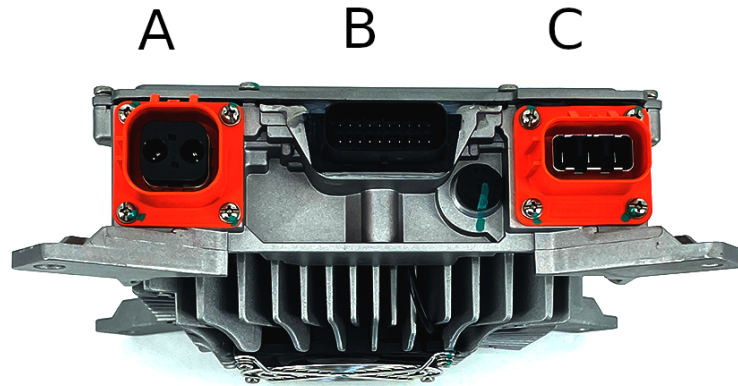
Protection Features

Output Over-voltage:	Stops the output when the output voltage exceeds + 1% of max output voltage
Output Over-current:	Stops the output when the output current exceeds + 1% of max output current
Short Circuit Protection:	Unit will automatically stop output if short detected
Reverse Polarity:	Charger will not operate if polarity is reversed
Input Under-voltage:	If AC input is lower than 85V unit will shut down
Input Over-voltage:	If AC input is greater than 265V the charger will shut down
Thermal Self Protection:	The charging current reduces automatically if internal temp exceeds 85C

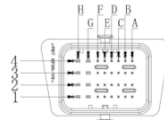
Physical Dimensions – HK-MF-312-10-X Charger



Pin Connectors - HK-MF-312-10-X Charger



A



B



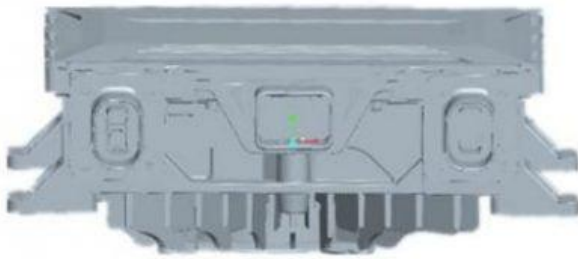
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Terminal number	Line diameter	Line kind	function definition
1	8 mm ²	High voltage cable	Output+
2	8 mm ²	High voltage cable	Output-

Terminal No.	Signal name	Wire color	Function	Rated voltage (V)	Rated current (mA)	Wire gauge (mm ²)	Notes
1	1A	Thermistor 1 +	/	/	/	/	reserved
2	1B	Thermistor 1 -	/	/	/	/	reserved
3	1C	Thermistor 2 +	/	/	/	/	reserved
4	1D	Thermistor 2 -	/	/	/	/	reserved
5	1E	External red indicator light	Charging status indicator red light output positive	/	/	/	used
6	1F	External connection with a green indicator light	Charging status indicator green light output positive	/	/	/	used
7	1G	NC	/	/	/	/	reserved
8	1H	KL30 circuit +	Normal power input power supply 0-18v	/	/	/	reserved
9	2A	HW WAKEUP OUTPUT	The OBC wakeup output	20mA	analog output	/	Connect BMS and VC1; for continuous high level effectiveness (reserved)
10	2B	hw_wakeup_in	input wake up signal	/	/	/	reserved
11	2C	NC	/	/	/	/	/
12	2D	NC	/	/	/	/	/
13	2E	NC	/	/	/	/	/
14	2F	CAN GND	CAN the earth	20mA	Communication to	/	reserved
15	2G	NC	/	/	/	/	/
16	2H	OBC low-voltage power -	OBC low-voltage power supply -	/	output 13.8V5.5A	/	used
17	3A	CC	lockage affirm	20mA	analog input	/	Check whether the charging plug is connected in the vehicle (reserved)
18	3B	CP	power affirm	20mA	analog input	/	To adjust the maximum allowable current of the charging station and confirm the grounding reliability (error code)
19	3C	Charging lock-keeping signal (00)	/	/	/	/	reserved
20	3D	Charging lock-keeping signal (1000)	/	/	/	/	reserved
21	3E	NC	/	/	/	/	/
22	3F	Electrical lock feedback line 1	Electrical lock feedback line 1	/	/	/	reserved
23	3G	NC	/	/	/	/	/
24	3H	Electronic lock power +	Lock the charging plug	/	/	/	reserved
25	4A	CAN_H	CAN high	20mA	number	/	used
26	4B	CAN_L	CAN low	20mA	number	/	used
27	4C	High-voltage interlock signal HVIL +	High voltage interlock 1	/	/	/	reserved
28	4D	High-voltage interlock signal HVIL -	High voltage interlock 2	/	/	/	reserved
29	4E	Electronic lock feedback line 2	Electronic lock feedback line 2	/	/	/	reserved

Terminal No.	Line diameter	Line type	function definition	Connector model
1	2.1 mm ²	High voltage cable	V+	
2	2.1 mm ²	High voltage cable	V-	
3	2.1 mm ²	High voltage cable	N	

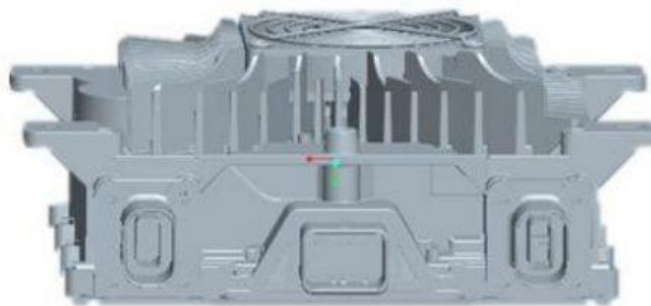
Installation Requirements – HK-MF-312-10-X Charger



Best installation method



General installation method



Prohibited installation method

Prohibited installation method is due to the risk of water entering the hole where the fan wire passes into the case.