



Terminal Type



Wiring Type (IP67)



Harness connector type  
5G Antenna power  
(IP66)



## Features

- High efficiency up to 95.5% and active PFC function
- Fanless design, cooling by free air convection
- Aluminum case and filling with heat-conducted glue
- Withstand 10G vibration test
- Wide operating temperature range -40 ~ +70°C
- Charger function for lead-acid batteries and Li-ion batteries
- Built-in default 2/3 stage charging curves and programmable curve
- Built-in CANBus and PMBus / MODBus by optional
- Output voltage and constant current level programmable
- Protections: Short circuit / Over load / Over voltage / Over temperature
- Built-in remote ON-OFF control and DC OK active signal
- Harness connector type with AC fail and T-Alarm signal
- LED indicator for power on and 12V auxiliary power available
- Diverse installation scenarios-Mounting methods
- 6 years warranty

## Applications

- Industrial automation machinery
- Industrial control system at harsh environment
- Mechanical and electrical equipment
- Electronic instruments, equipments
- Charging related equipments.
- 4G telecom system(RRU)
- 5G active antenna unit(AAU)

## GTIN CODE

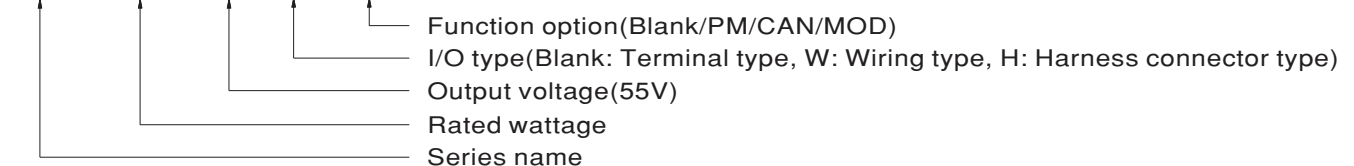
MW Search: <https://www.meanwell.com/serviceGTIN.aspx>

## Description

HEP-2300 is a 2300W industrial AC/DC power supply featuring the outstanding capability to operate under highly humid, dusty, oily, and high-vibration harsh environment. The entire series is housed with the aluminum case and fully potted with heat-conducted glue. Adopting the full range 90~305VAC input, the series provides an output voltage 55V. In addition to the high efficiency up to 95.5%, that the series operates from -40°C ~ 70°C under free air convection without fan. HEP-2300 has the complete protection functions and 10G anti-vibration capability ; It is complied with the international safety regulations such as TUV EN62368-1 UL62368-1, and design refers to EN61558-1 and EN60335-1. HEP-2300 series serves as a high performance power supply solution

## Model Encoding

HEP - 2300 - 55 W CAN



I/O Type	Function type	Communication Protocol	Note
Terminal	Blank	CANBus and PV/PC programmable	In Stock
	PM	PMBus and PV/PC programmable	By request
Wiring	Blank	PV/PC programmable	In Stock
	PM	PMBus	By request
	CAN	CANBus	By request
Harness connector	Blank	CANBus	In Stock
	PM	PMBus	By request
	MOD	MODBus-RTU/RS-485	By request

Note: 1.MEAN WELL can provide complete cable modification services. Please contact sales representatives for details.

2.Charger function by programmer or PMBus/CANBus/MODBus setting

**SPECIFICATION**

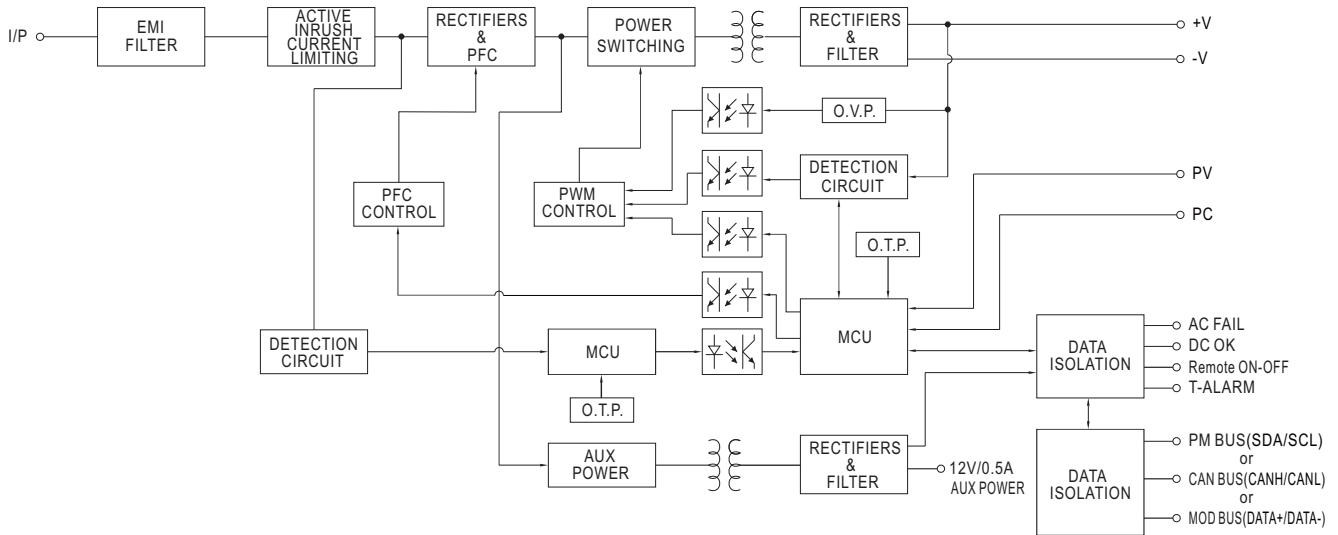
<b>MODEL</b>		HEP-2300-55 <input type="checkbox"/> <input type="checkbox"/>		
<b>OUTPUT</b>	DC VOLTAGE (factory default)	55V		
	CURRENT (factory default)	41.8A		
	RATED CURRENT (max.)	48A		
	POWER (factory default)	2300W		
	RATED POWER (max.)	2304W		
	FULL POWER VOLTAGE RANGE	48 ~ 57.6V		
	RIPPLE & NOISE (max.) Note.2	480mVp-p		
	VOLTAGE ADJ. RANGE	By potentiometer VR 39 ~ 57.6V		
	VOLTAGE TOLERANCE Note.3	± 1.0%		
	LINE REGULATION	± 0.5%		
	LOAD REGULATION	± 0.5%		
SETUP, RISE TIME	1800ms, 100ms/230VAC at full load			
HOLD UP TIME (Typ.)	12ms/230VAC at full load			
<b>INPUT</b>	VOLTAGE RANGE Note.4	90 ~ 305VAC 250 ~ 431VDC		
	FREQUENCY RANGE	47 ~ 63Hz		
	POWER FACTOR (Typ.)	PF>0.99/115VAC, PF>0.95/230VAC, PF>0.93/277VAC at full load		
	EFFICIENCY (Typ.)	95.5%		
	AC CURRENT (Typ.)	13.3A / 115VAC 11A / 230VAC 9.3A / 277VAC		
	INRUSH CURRENT (Typ.)	Cold start 60A/230VAC		
<b>PROTECTION</b>	OVERLOAD	105 ~ 115% rated output power Protection type : Constant current limiting, unit will shutdown after 5 sec. re-power on to recover		
	OVER VOLTAGE	59 ~ 69.1V Protection type : Shut down O/P voltage, re-power on to recover		
	OVER TEMPERATURE	Shut down O/P voltage, recovers automatically after temperature goes down		
<b>FUNCTION</b>	OUTPUT VOLTAGE PROGRAMMABLE(PV) Note 5	Adjustment of output voltage is allowable to 50 ~ 120% of nominal output voltage Please refer to the Function Manual		
	OUTPUT CURRENT PROGRAMMABLE(PC) Note 5	Adjustment of constant current level is allowable to 20 ~ 100% of rated current Please refer to the Function Manual		
	REMOTE ON/OFF CONTROL	Power ON : Short circuit Power OFF : Open circuit		
	AUXILIARY POWER	12V@0.5A tolerance±10%, ripple 150mVp-p		
<b>ENVIRONMENT</b>	DC-OK SIGNAL	The TTL signal out, PSU turn on = 4.5 ~ 5.5V ; PSU turn off = -0.5 ~ 0.5V. Please refer to the Function Manual		
	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")		
	WORKING HUMIDITY	20 ~ 95% RH non-condensing		
	STORAGE TEMP., HUMIDITY	-40 ~ +85°C, 10 ~ 95% RH non-condensing		
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)		
<b>SAFETY &amp; EMC (Note.7)</b>	VIBRATION	20 ~ 500Hz, 10G 12min./1cycle, period for 72min. each along X, Y, Z axes		
	SAFETY STANDARDS	UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved; design refers to BS EN/EN61558-1, BS EN/EN60335-1(by request)		
	WITHSTAND VOLTAGE Note 6	OVC III I/P-O/P: 6KVDC I/P-FG:4KVDC O/P-FG:4KVDC		
	ISOLATION RESISTANCE Note 6	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25°C / 70%RH		
	EMC EMISSION	Parameter	Standard	Test Level / Note
		Conducted	BS EN/EN55032 (CISPR32)	Class B
		Radiated	BS EN/EN55032 (CISPR32)	Class A
		Harmonic Current	BS EN/EN61000-3-2	Class A
	Voltage Flicker	BS EN/EN61000-3-3	-----	
	EMC IMMUNITY	Parameter	Standard	Test Level / Note
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air ; Level 2, 4KV contact
Radiated		BS EN/EN61000-4-3	Level 3	
EFT / Burst		BS EN/EN61000-4-4	Level 3	
Surge		BS EN/EN61000-6-2	2KV/Line-Line 4KV/Line-Earth	
Conducted		BS EN/EN61000-4-6	Level 3	
Magnetic Field		BS EN/EN61000-4-8	Level 4	
Voltage Dips and Interruptions		BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods	
<b>OTHERS</b>	MTBF	478K hrs min. Telcordia SR-332 (Bellcore) ; 44.8K hrs min. MIL-HDBK-217F (25°C)		
	DIMENSION	375*280*88mm (L*W*H), without mounting plate		
	PACKING	12.5Kg; 1pcs/13.5Kg/1.33CUFT		
<b>NOTE</b>	<p>1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</p> <p>2. Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf &amp; 47uf parallel capacitor.</p> <p>3. Tolerance includes set up tolerance, line regulation and load regulation.</p> <p>4. Derating may be needed under low input voltages. Please check the derating curve for more details.</p> <p>5. SVR function is disabled during PV/PC programming operation.</p> <p>6. During withstandards voltage and isolation resistance testing, the screw "A" shall be temporarily removed, and shall be installed back after the testing.</p> <p>7. The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 1100mm*650mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</p> <p>8. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</p> <p>9. This series meets the typical life expectancy of &gt; 55,000 hours of operation when Tcase, particularly (Tc) point (or TMP, per DLC), is about 80°C or less.</p> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>			

**SPECIFICATION FOR CHARGER (Option function)**

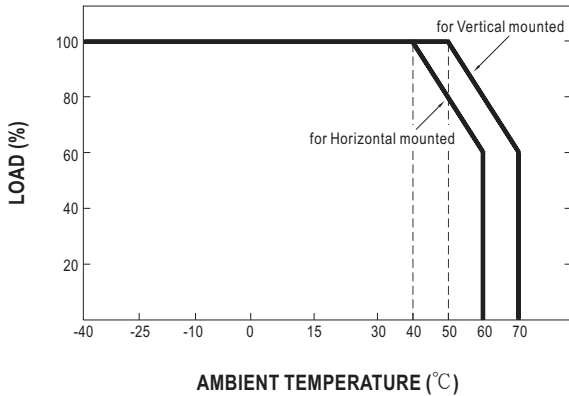
<b>MODEL</b>		HEP-2300-55 □ □		
<b>OUTPUT</b>	<b>BOOST CHARGE VOLTAGE</b> V <sub>boost</sub>	57.6V		
	<b>FLOAT CHARGE VOLTAGE</b> V <sub>float</sub>	55.2V		
	<b>RECOMMENDED BATTERY CAPACITY</b> (AMP HOURS)(Note 2)	120 ~ 400AH		
	<b>BATTERY TYPE</b>	Open & Sealed Lead Acid		
	<b>OUTPUT CURRENT (max.)</b>	40A		
<b>INPUT</b>	<b>VOLTAGE RANGE</b> Note 3	90 ~ 305VAC	250 ~ 431VDC	
	<b>FREQUENCY RANGE</b>	47 ~ 63Hz		
	<b>POWER FACTOR (Typ.)</b>	PF>0.99/115VAC, PF>0.95/230VAC, PF>0.93/277VAC at full load		
	<b>EFFICIENCY (Typ.)</b>	95.5%		
	<b>AC CURRENT (Typ.)</b>	13.3A / 115VAC	11A / 230VAC	9.3A / 277VAC
	<b>INRUSH CURRENT(Typ.)</b>	Cold start 60A at 230VAC		
	<b>LEAKAGE CURRENT</b>	<1.8mA Peak / 240VAC	<2mA Peak / 277VAC	
<b>PROTECTION</b>	<b>SHORT CIRCUIT</b>	Constant current limiting, unit will shutdown after 5 sec, re-power on to recover.		
	<b>OVER VOLTAGE</b>	59 ~ 69.1V	Protection type : Shut down O/P voltage, re-power on to recover	
	<b>OVER TEMPERATURE</b>	Shut down O/P voltage, recovers automatically after temperature goes down		
<b>FUNCTION</b>	<b>REMOTE ON/OFF CONTROL</b>	Power ON : Short circuit    Power OFF : Open circuit		
	<b>AUXILIARY POWER</b>	12V @ 0.5A tolerance ±10%, ripple=150mVp-p		
	<b>DC-OK SIGNAL</b>	The TTL signal out, PSU turn on = 4.5 ~ 5.5V ; PSU turn off = -0.5 ~ 0.5V. Please refer to the Function Manual.		
<b>ENVIRONMENT</b>	<b>WORKING TEMP.</b>	-40 ~ +70°C (Refer to "Derating Curve")		
	<b>WORKING HUMIDITY</b>	20 ~ 95% RH non-condensing		
	<b>STORAGE TEMP., HUMIDITY</b>	-40 ~ +80°C, 10 ~ 95% RH non-condensing		
	<b>TEMP. COEFFICIENT</b>	±0.03%/°C (0 ~ 50°C)		
	<b>VIBRATION</b>	20 ~ 500Hz, 10G 12min./1cycle, period for 72min. each along X, Y, Z axes		
<b>SAFETY &amp; EMC (Note.5)</b>	<b>SAFETY STANDARDS</b>	UL62368-1, TUV BS EN/EN62368-1, EAC TP TC 004 approved; design refers to BS EN/EN61558-1, BS EN/EN60335-1(by request)		
	<b>WITHSTAND VOLTAGE</b> Note 4	OVC III I/P-O/P: 6KVDC    I/P-FG:4KVDC    O/P-FG:4KVDC		
	<b>ISOLATION RESISTANCE</b> Note 4	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/500VDC/25°C / 70%RH		
	<b>EMC EMISSION</b>	<b>Parameter</b>	<b>Standard</b>	<b>Test Level / Note</b>
		Conducted	BS EN/EN55032 (CISPR32)	Class B
		Radiated	BS EN/EN55032 (CISPR32)	Class A
		Harmonic Current	BS EN/EN61000-3-2	Class A
		Voltage Flicker	BS EN/EN61000-3-3	----
	<b>EMC IMMUNITY</b>	BS EN/EN55024, BS EN/EN61000-6-2		
		<b>Parameter</b>	<b>Standard</b>	<b>Test Level / Note</b>
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air ; Level 2, 4KV contact
		Radiated	BS EN/EN61000-4-3	Level 3
		EFT / Burst	BS EN/EN61000-4-4	Level 3
Surge		BS EN/EN61000-6-2	2KV/Line-Line 4KV/Line-Earth	
Conducted		BS EN/EN61000-4-6	Level 3	
Magnetic Field		BS EN/EN61000-4-8	Level 4	
Voltage Dips and Interruptions	BS EN/EN61000-4-11	>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods		
<b>OTHERS</b>	<b>MTBF</b>	478K hrs min.    Telcordia SR-332 (Bellcore) ; 44.8K hrs min.    MIL-HDBK-217F (25°C)		
	<b>DIMENSION</b>	375*280*88mm (L*W*H), without mounting plate		
	<b>PACKING</b>	12.5Kg;1pcs/13.5Kg/1.33CUFT		
<b>NOTE</b>	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>This is Mean Well's suggested range. Please consult your battery manufacturer for their suggestions about maximum charging current limitation.</li> <li>Derating may be needed under low input voltages. Please check the derating curve for more details.</li> <li>During withstands voltage and isolation resistance testing, the screw "A" shall be temporarily removed, and shall be installed back after the testing.</li> <li>The power supply is considered a component which will be installed into a final equipment. All the EMC tests are been executed by mounting the unit on a 1100mm*650mm metal plate with 1mm of thickness. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on <a href="http://www.meanwell.com">http://www.meanwell.com</a>)</li> <li>The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).</li> <li>This series meets the typical life expectancy of &gt; 55,000 hours of operation when Tcase, particularly (Tc) point (or Tmp, per DLC), is about 80°C or less.</li> </ol> <p>※ Product Liability Disclaimer : For detailed information, please refer to <a href="https://www.meanwell.com/serviceDisclaimer.aspx">https://www.meanwell.com/serviceDisclaimer.aspx</a></p>			

## ■ BLOCK DIAGRAM

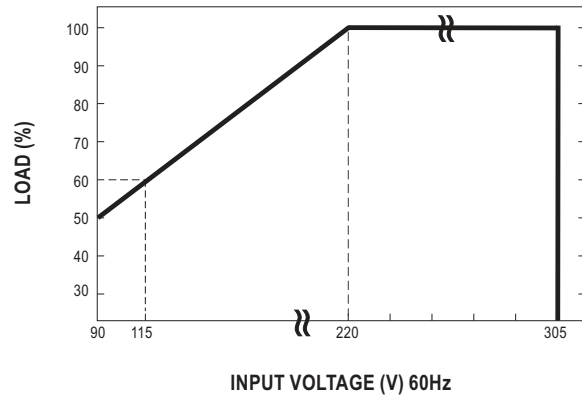
PFC fosc : 80KHz  
PWM fosc : 52KHz



## ■ DERATING CURVE



## ■ STATIC CHARACTERISTICS



## ■ TABLE OF FUNCTION

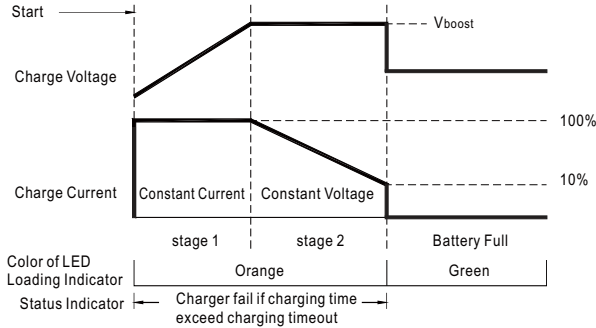
I/O TYPE	Function type	Power Supply Function	Charging Function	PV/PC Programmable	PMBus Protocol	CANBus Protocol	MOD RS-485	LED Indicator	Remote On/Off	DC-OK Signal	Temperature Compensation	12V/0.5A Aux. output	AC Fail	T-Alarm OK Signal
Terminal type	Blank	V(default)	V	V		V		V	V	V	V	V		
	PM	V(default)	V	V	V			V	V	V	V	V		
Wiring type	Blank	V(default)		V				V		V		V		
	PM	V(default)	V		V			V		V		V		
	CAN	V(default)	V			V		V		V		V		
Harness connector	Blank	V(default)	V			V		V	V	V		V	V	V
	PM	V(default)	V		V			V	V	V		V	V	V
	MOD	V(default)	V				V	V	V	V		V	V	V

## FUNCTION MANUAL

### 1. Charging Curve

- ※ By default, the HEP-2300 operates in power supply mode, and it can be configured to charger mode by PMBus, CANBus, MODBus, or SBP-001.
- ※ By factory default, this charger performs the default curve which can be programmed via PMBus, CANBus and MODBus.
- ※ To accommodate the parameters of the charging curve, SBP-001, the smart battery charging programmer designed by MEAN WELL, and a personal computer are needed. Please contact MEAN WELL for details.

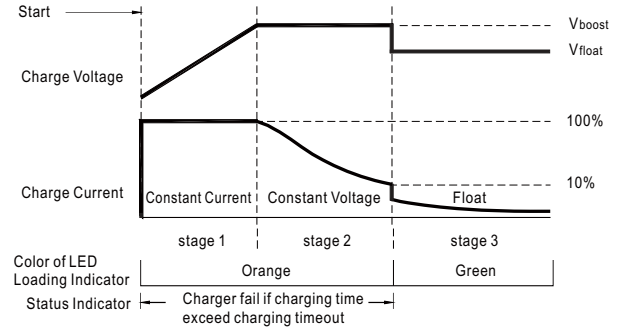
#### ※ 2 stage charging curve



State	HEP-2300-55
Constant Current	40A
Vboost	57.6V

◎ Suitable for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese).

#### ※ 3 stage charging curve (default)



State	HEP-2300-55
Constant Current	40A
Vboost	57.6V
Vfloat	55.2V

◎ Suitable for lead-acid batteries (flooded, Gel and AGM) and Li-ion batteries (lithium iron and lithium manganese).

### 2. Front Panel LED Indicators & Corresponding Signal at Function Pins

#### ※ LED Status Indicators

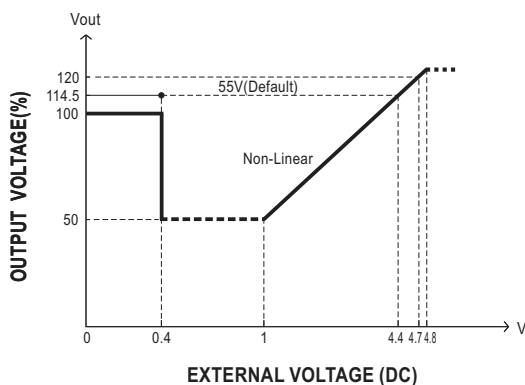
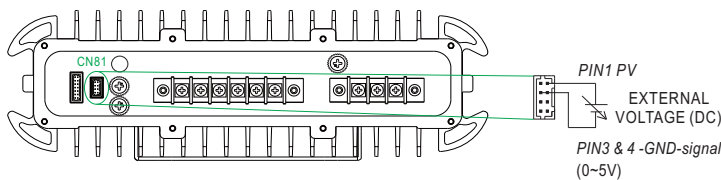
LED	Description
● Green	The power supply functions normally.
● Red	Abnormal status (Over temperature protection, Over load protection)
● Red (Flashing)	The LED will flash with the red light when the internal temperature reaches 95°C; under this condition, the unit still operates normally without entering OTP. (In the meantime, an alarm signal will be sent out through the PMBus/CANBus/MODBus interface.)

#### ※ LED Status Indicators (for Charger)

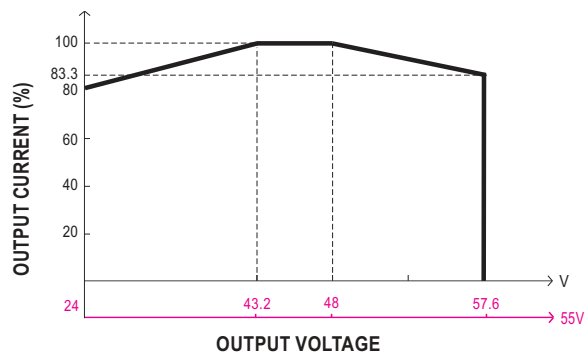
LED	Description
● Green	Float (stage 3)
● Orange	Charging (stage 1 or stage 2)
● Red	Abnormal status (Over temperature protection, Over load protection, Charging timeout.)
● Red (Flashing)	The LED will flash with the red light when the internal temperature reaches 95°C; under this condition, the unit still operates normally without entering OTP. (In the meantime, an alarm signal will be sent out through the PMBus/CANBus/MODBus interface.)

### 3. Output Voltage Programming (or, PV / remote voltage programming / remote adjust / margin programming / dynamic voltage trim)

- ※ In addition to the adjustment via the built-in potentiometer, the output voltage can be trimmed by applying EXTERNAL VOLTAGE.



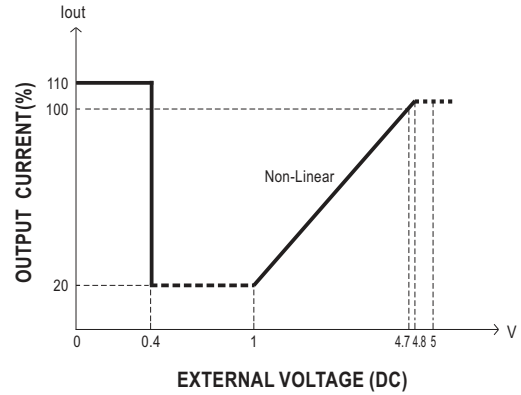
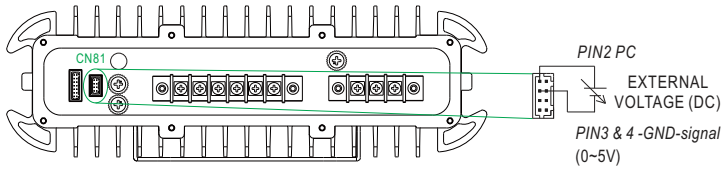
◎ The 100% output voltage is 48V.



◎ The rated current should change with the Output Voltage Programming accordingly.

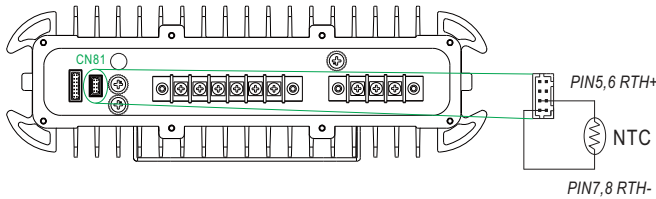
#### 4. Output Current Programming (or, PC / remote current programming / dynamic current trim)

※ The output current can be trimmed to 20~100% of the rated current by applying EXTERNAL VOLTAGE.



- ⊙ The 100% output current is rated current.
- ⊙ Maximum operation current <100% is recommended.
- ⊙ When external voltage <0.4V the 100% output current will be default current.

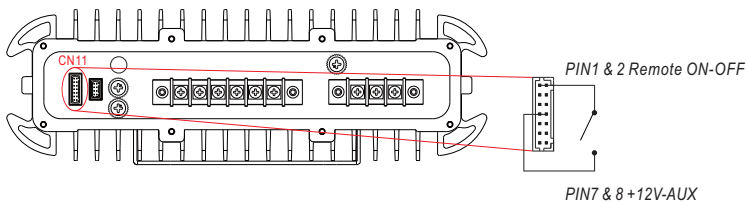
#### 5. Temperature Compensation



- ⊙ To exploit the temperature compensation function, please attach the temperature sensor, NTC, which is enclosed with the charger, to the battery or the battery's vicinity.
- ⊙ The charger is able to work normally without the NTC.

#### 6. Remote ON-OFF Control

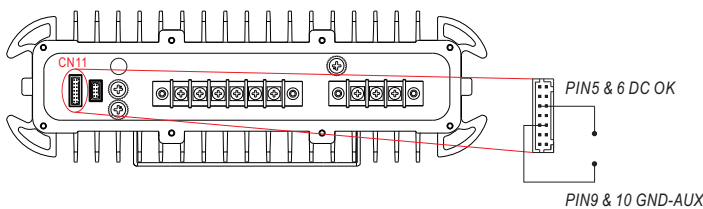
The power supply can be turned ON/OFF individually or along with other units in parallel by using the "Remote ON-OFF" function.



Remote ON-OFF	Power Supply Status
Short circuit	ON
Open circuit	OFF

#### 7. DC-OK Signal

DC-OK signal is a TTL level signal. The maximum source current is 10mA and the maximum external voltage is 5.5V.



DC-OK signal	Power Supply Status
"High" >4.4~5.5V	ON
"Low" <-0.5~0.5V	OFF

#### 8. CANBus Communication Interface

HEP-2300 supports CANBus CAN 2.0B with maximum 250KHz bus speed, allowing information reading, status monitoring, output trimming, etc. For details, please refer to the User's Manual.

#### 9. AC FAIL SIGNAL

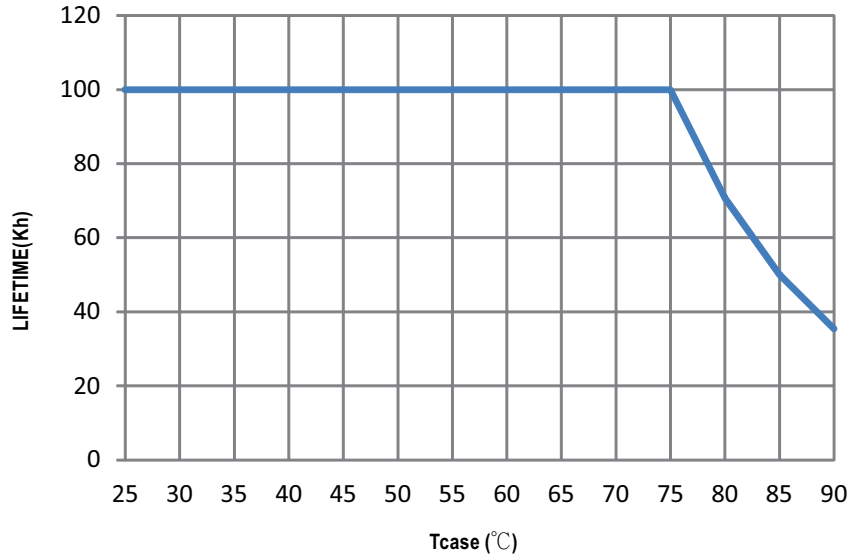
Dry contact output, Open: alarm; Closed: normal.

#### 10. OTP SIGNAL

Dry contact output, Open: normal; Closed: alarm.



■ LIFETIME

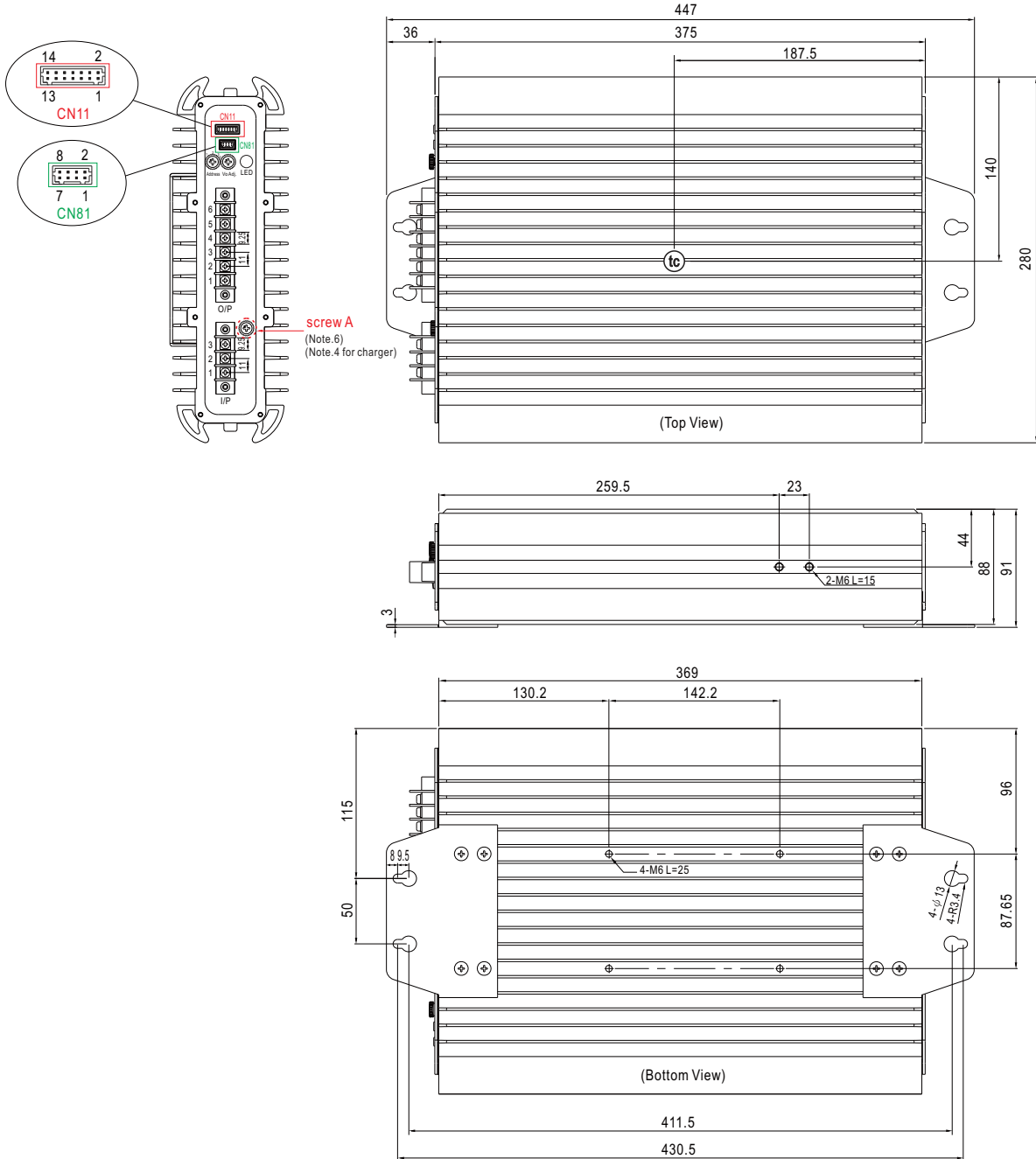


## MECHANICAL SPECIFICATION

※Blank-Type (Terminal type)

Case No. 293A

Unit:mm



- ※ Output voltage current level can be adjusted through internal potentiometer.(Vo Adj.)  
(Can access by removing the rubber stopper on the case.)
- ※ PMBus interface address selection.(Address)

AC Input Terminal Pin No. Assignment

Pin No.	Assignment
1	FG (⊖)
2	AC/L
3	AC/N

DC Output Terminal Pin No. Assignment

Pin No.	Assignment
1,2,3	+V
4,5,6	-V



※Control Pin No. Assignment(CN81) : JST S8B-PHDKS-B or equivalent

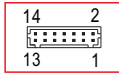


Mating Housing	JST PHDR-8VS or equivalent
Terminal	JST SPHD-001T-P0.5 or equivalent

Pin No.	Function	Description
1	PV	Connection for output voltage programming. (Note)
2	PC	Connection for constant current level programming. (Note)
3,4	GND (Signal)	Negative output voltage signal.
5,6	RTH+	Temperature sensor(NTC, 5KOhm) comes along with the charger can be connected to the unit to allow temperature compensation of the charging voltage.
7,8	RTH-	

Note: Non-isolated signal, referenced to [GND(signal)].

※Control Pin No. Assignment(CN11) : JST S14B-PHDKS-B or equivalent

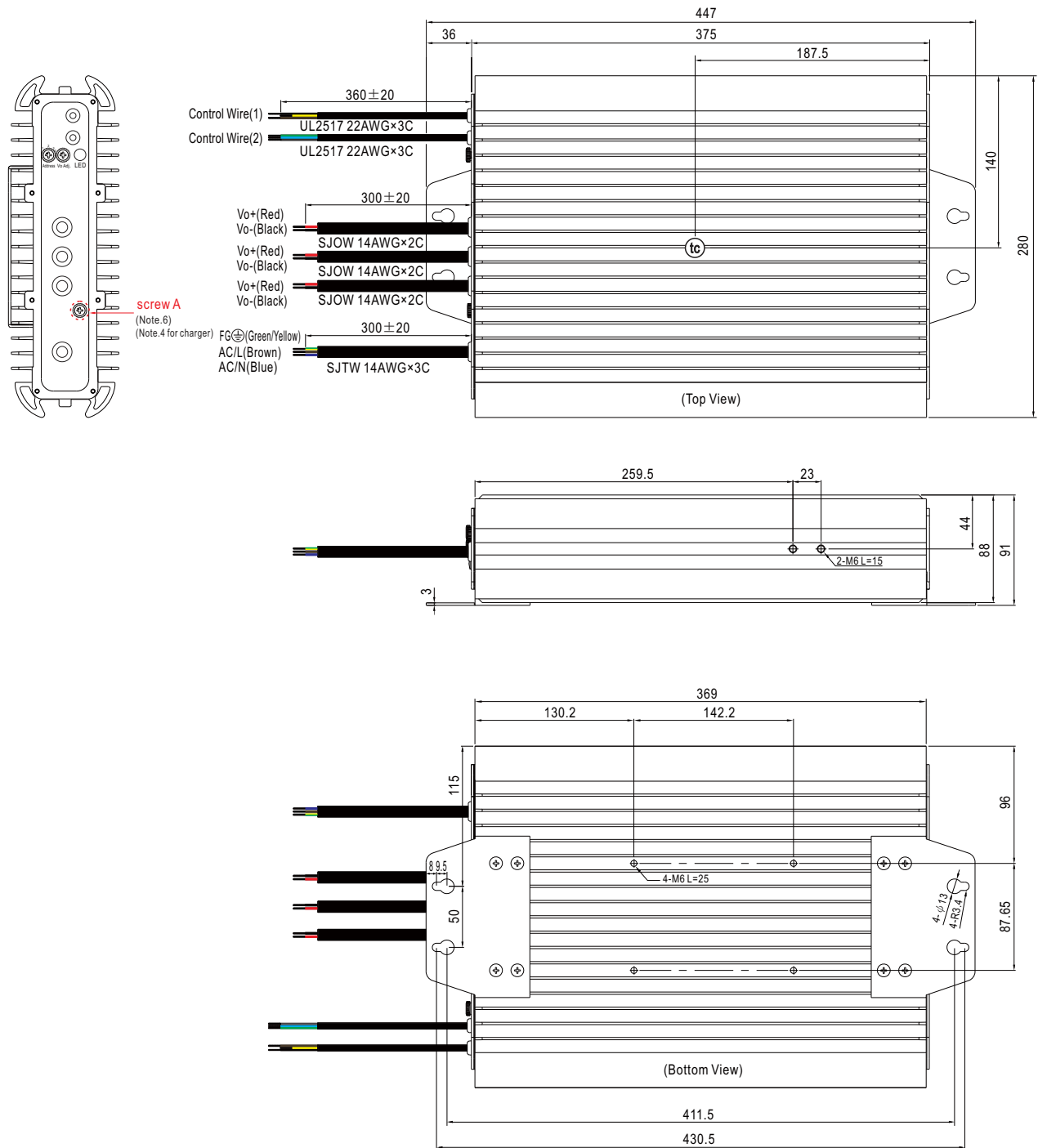


Mating Housing	JST PHDR-14VS or equivalent
Terminal	JST SPHD-001T-P0.5 or equivalent

Pin No.	Function	Description
1,2	Remote ON-OFF	The unit can turn the output ON/OFF by dry contact between Remote ON/OFF and +12V-AUX. (Note) Short (10.8 ~ 13.2V) : Power ON ; Open(0 ~ 0.5V) : Power OFF ; The maximum input voltage is 13.2V
3,4,13,14	NC	-----
5,6	DC-OK	Low (-0.5 ~ 0.5V) : When $V_{out} \leq 77\% \pm 6\%$ at power mode. $V_{out} \leq 66\% \pm 6\%$ at charger mode. High (4.4 ~ 5.5V) : When $V_{out} \geq 80\% \pm 6\%$ at power mode. $V_{out} \geq 67\% \pm 6\%$ at charger mode. The maximum sourcing current is 10mA and only for output. (Note)
7,8	+12V-AUX	Auxiliary voltage output, 10.8~13.2V, referenced to GND-AUX (pin9 & 10). The maximum load current is 0.5A. This output is not controlled by "Remote ON-OFF".
9,10	GND-AUX	Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).
11	SDA	For PMBus model: Serial Data used in the PMBus interface. (Note)
	CANH	For CANBus model: Data line used in CANBus interface. (Note)
12	SCL	For PMBus model: Serial Clock used in the PMBus interface. (Note)
	CANL	For CANBus model: Data line used in CANBus interface. (Note)

Note: Isolated signal, referenced to GND-AUX.

※W-Type (Wiring type)



※Control Wire Assigment(1) : UL2517 22AWG×3C

Color	Function	Description
Brown	DC-OK	Low (0 ~ 0.5V) : When $V_{out} \leq 77\% \pm 6\%$ at power mode. $V_{out} \leq 66\% \pm 6\%$ at charger mode. High (4.4 ~ 5.5V) : When $V_{out} \geq 80\% \pm 6\%$ at power mode. $V_{out} \geq 67\% \pm 6\%$ at charger mode. The maximum sourcing current is 10mA and only for output.(Note.2)
Yellow	+12V-AUX	Auxiliary voltage output, 10.8~13.2V, referenced to GND-AUX. The maximum load current is 0.5A.
Black	GND-AUX	Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).

Note1: Non-isolated signal, referenced to [GND(signal)].

Note2: Isolated signal, referenced to GND-AUX (GND for CANBus and PMBus protocol).



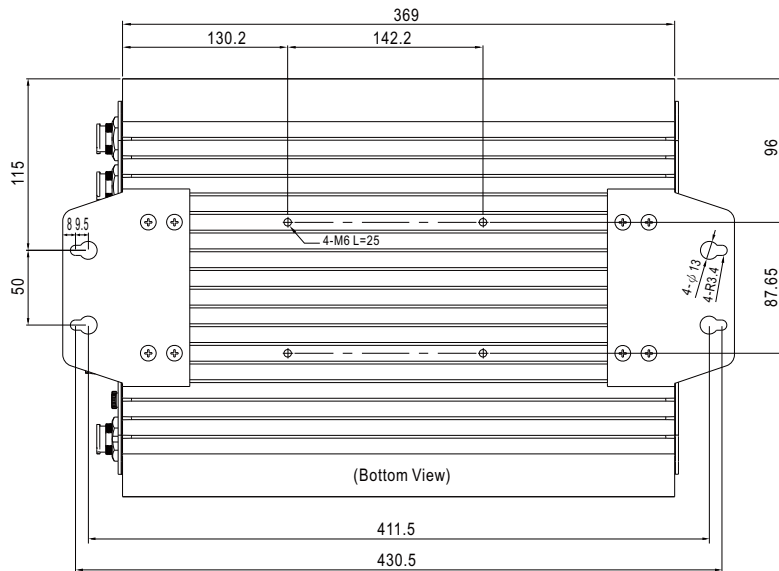
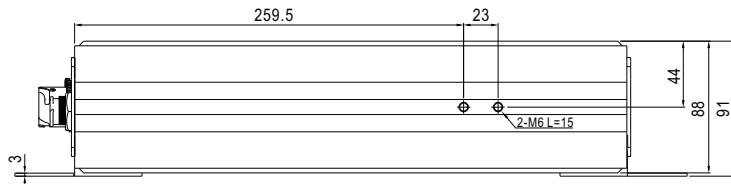
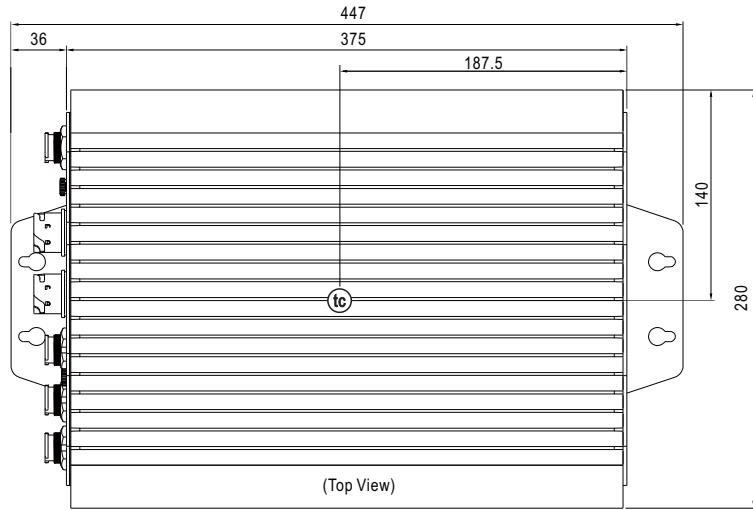
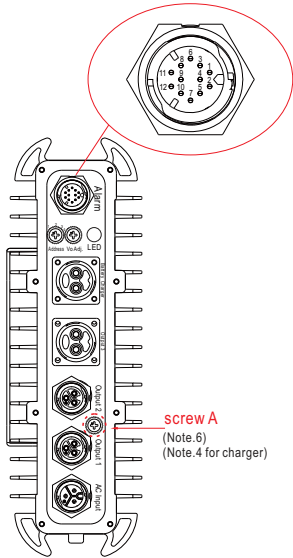
※ Control Wire Assigment(2) : UL2517 22AWG×3C for Blank

Color	Function	Description
Green	PV	Connection for output voltage programming.(Note.1)
Blue	PC	Connection for constant current level programming.(Note.1)
White	GND (Signal)	Negative output voltage signal.(PV/PC GND)

※Control Wire Assigment(2) : UL2517 22AWG×3C for PM/CANBus Function

Color	Function	Description
Green	SDA	For PMBus model: Serial Data used in the PMBus interface. (Note.2)
	CANH	For CANBus model: Data line used in CANBus interface. (Note.2)
Blue	SCL	For PMBus model: Serial Clock used in the PMBus interface. (Note.2)
	CANL	For CANBus model: Data line used in CANBus interface. (Note.2)
White	GND-AUX	Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).

※H-Type (Harness connector type)



AC Input



Max. 20A

Output 1



Max. 20A

Output 2



Max. 20A

Output 3



Max. 50A

Battery Charger



Max. 50A

AC Input Pin No. Assignment :

ALTW CC-03PMMS-QC800P or equivalent

Pin No.	Assignment	Mating connector
1	AC/L	CC-03BFFA-QL8APP or equivalent
2	FG $\oplus$	
3	AC/N	

DC Output 1,2 Pin No. Assignment :

ALTW CC-03PMFS-QC800P or equivalent

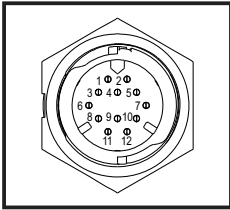
Pin No.	Assignment	Mating connector
1,3	+V	CC-03BFMA-QL8APP or equivalent
2	-V	

DC Output 3, Battery Charger Pin No. Assignment :

ALTW PWM-02RMFS-TS7001 or equivalent

Pin No.	Assignment	Mating connector
1	+V	PWM-02BFMB-TL7001 or equivalent
2	-V	

※Control Pin No. Assignment : ALTW CD-12PMMS-QC8001 or equivalent



Mating connector CD-12BFFA-QL8AP0 or equivalent

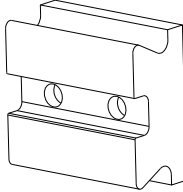

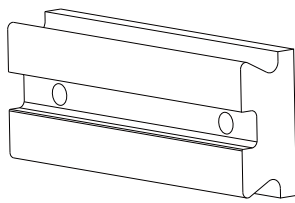

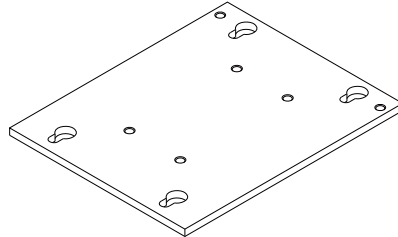

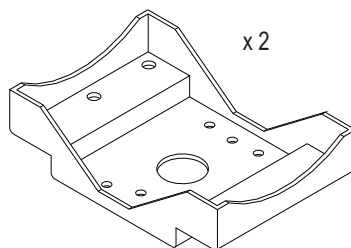

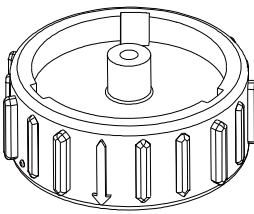
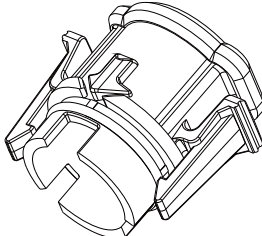
Alarm and signal

Pin No.	Function	Description
1	DC-OK-GND	Dry contact output. Open: alarm, Closed: normal.
2	Remote ON-OFF	The unit can turn the output OFF by dry contact between OFF and GND-AUX.(Note) Short (10.8 ~ 13.2V) : Power ON ; Open(0 ~ 0.5V) : Power OFF ; The maximum input voltage is 13.2V
3	DC-OK	Dry contact output. Open: alarm, Closed: normal. Relay contact rating(maximum) is 30V/1A resistive.
4	+12V-AUX	Auxiliary voltage output, 10.8~13.2V, referenced to GND-AUX (pin9 & 10). The maximum load current is 0.5A. This output is not controlled by "Remote ON-OFF".
5,7	GND-AUX	Auxiliary voltage output GND. The signal return is isolated from the output terminals (+V & -V).
6	AC Fail-GND	Dry contact output, Open: alarm; Closed: normal.
8	AC Fail	Dry contact output, Open: alarm; Closed: normal. Relay contact rating(maximum) is 30V/1A resistive.
9	T-Alarm-GND	Dry contact output, Open: normal; Closed: alarm. (OTP signal)
10	SDA	For PMBus model: Serial Data used in the PMBus interface. (Note)
	CANH	For CANBus model: Data line used in CANBus interface. (Note)
	Data +	For RS-485 model: Data +.
11	T-Alarm	Dry contact output, Open: normal; Closed: alarm. (OTP signal) Relay contact rating(maximum) is 30V/1A resistive.
12	SCL	For PMBus model: Serial Clock used in the PMBus interface. (Note)
	CANL	For CANBus model: Data line used in CANBus interface. (Note)
	Data -	For RS-485 model: Data -.

Note: Isolated signal, referenced to GND-AUX.

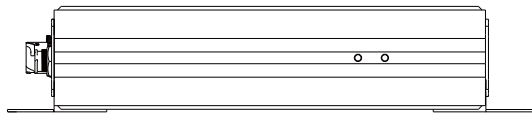
■ Accessory List

※ Optional equipment

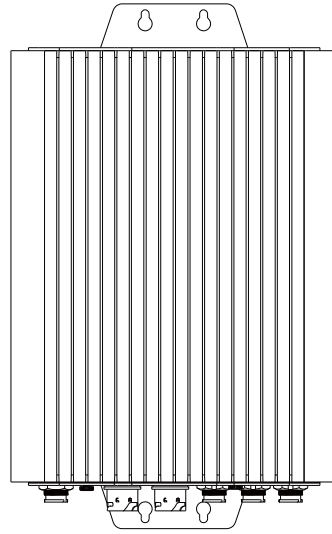
MW's Order No.		Item	Quantity
PGG2BKT-001 (For housing side)	①	 +  M6 L=16*2	1
PGG2BKT-002 (For pole side)	②	 +  M6 L=16*2	1
PGG2BKT-003	③	 +  M6 L=25*4	1
PGG2BKT-004	④	 x2 +  M6 L=12*4	1
PFF1ZAHB-A0025(A)	⑤	 Waterproof connector cap for AC, output 1/2 and alarm signal.	1
PFF1CAP-WACMQMA1(B)	⑥	 Waterproof connector cap for output 3 and Battery charger.	1

## ■ Mounting Methods

### 1. Mounting plate (Standard type)



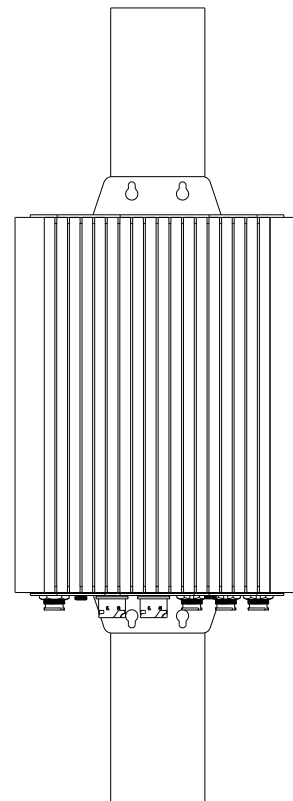
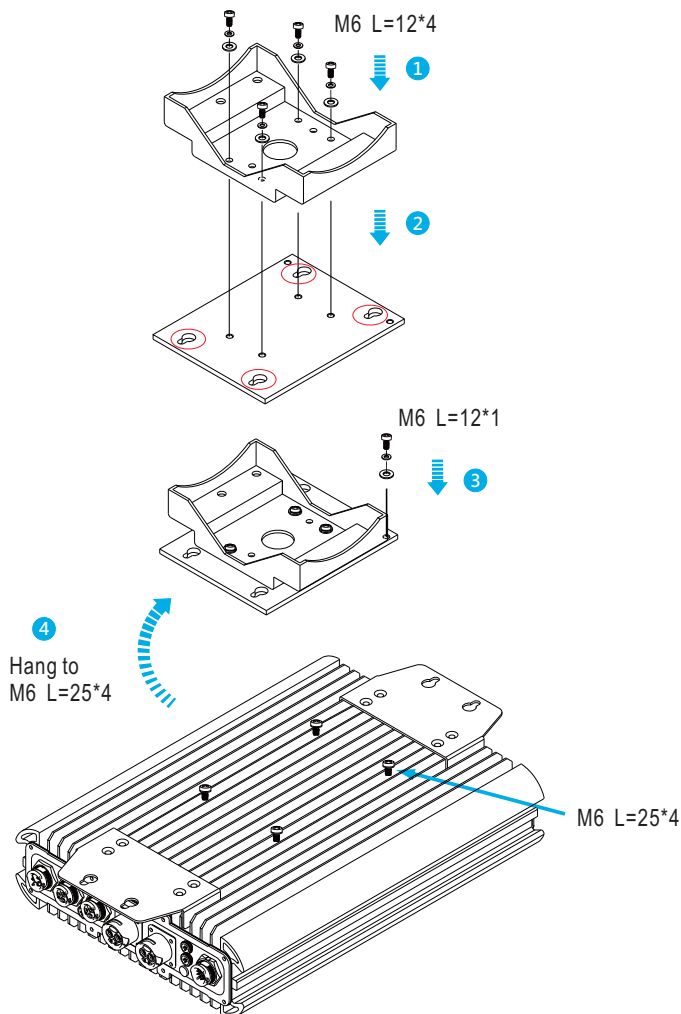
Horizontal mounted



Vertical mounted

### 2. Pole mounted with a bracket kit (Optional type)

◎ Rear mounted (Optional Bracket Part No: PGG2BKT-003、PGG2BKT-004)



© Side mounted (Optional Bracket part No.: PGG2BKT-001、PGG2BKT-002、PGG2BKT-004)

