

Features:

- Universal AC input / Full range
- Medical safety approval: ANSI / AAMI ES 60601-1 / TUV EN 60601-1: 2006; IEC 60601-1 / 2xMOPP/BF
- Programmable output Voltage (0% ~ 105%)
- Programmable output Current (0% ~ 105%)
- Constant current limit
- Selectable +5V / 0.5A or +9V / 0.3A auxiliary output
- Global control via RS232
- Forced current sharing at parallel operation
- Remote setting multiple PSU via RS232, 485 & I²C
- Power OK signal (Power good, Logic low)
- Remote ON / OFF, Remote sense function
- Protection: OVP, OLP, OTP, Fan failure



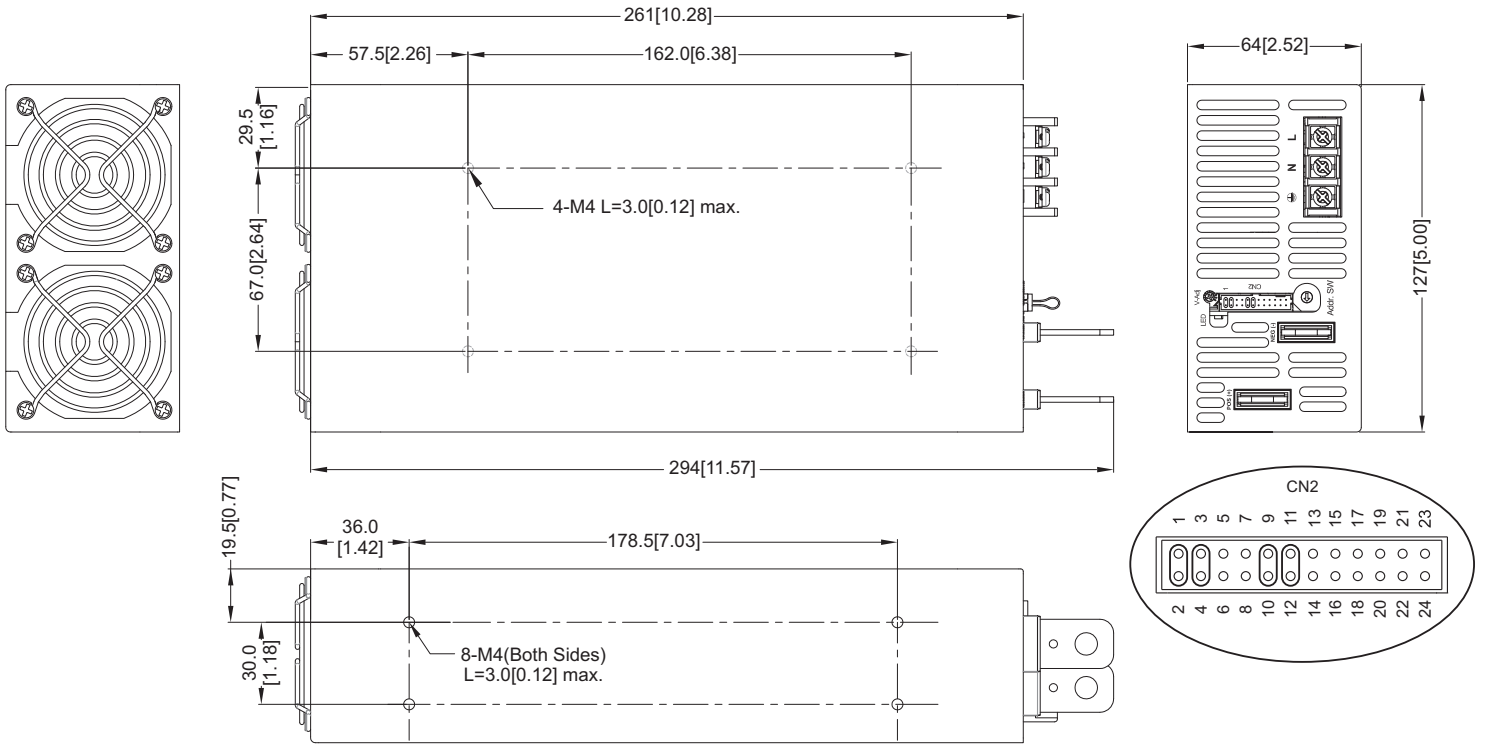
MODEL		ME-1200-12	ME-1200-15	ME-1200-24	ME-1200-30	ME-1200-36	ME-1200-48	ME-1200-60	
Output	DC Voltage Range	12V	15V	24V	30V	36V	48V	60V	
	Rated Current	100A	80A	50A	40A	33.4A	25A	20A	
	Current Range	0 ~ 100A	0 ~ 80A	0 ~ 50A	0 ~ 40A	0 ~ 33.4A	0 ~ 25A	0 ~ 20A	
	Rated Power	1200W							
	Ripple & Noise (Max.)	Note.2	120mVp-p	150mVp-p	240mVp-p	300mVp-p	360mVp-p	480mVp-p	600mVp-p
	Voltage Adj. Range	±5.0% Typical adjustment by potentiometer. (VR1)							
	Voltage Tolerance	Note.3	±2.0%						
	Line Regulation	±1.0%							
	Load Regulation	±1.0%							
	Setup, Rise Time	800ms, 100ms at full load							
Hold Up Time (Min.)	16ms / 230VAC at full load								
Input	Voltage Range	Note.4	90 ~ 264VAC, 127 ~ 370VDC						
	Frequency Range	47 ~ 63Hz							
	Power Factor (Min.)	0.95 / 230VAC, 0.99 / 115VAC at full load							
	Efficiency (Typ.)	89%	90%	91%	92%	92%	93%	93%	
	AC Current (Max.)	14.5A / 115VAC, 6A / 230VAC							
	Inrush Current (Max.)	30A / 115VAC, 45A / 230VAC							
Leakage Current	For Earth < 300uA / 264VAC, For Patient < 100uA / 264VAC								
Protection	Over Load	105 % rated output power, Protection type: Constant current limit							
	Over Voltage	Variable OVP, 120 ± 7% Vout. Refer to VCI VS OVP curve. Protection type: Latch-style (Recovery after reset AC power ON or inhibit)							
	Over Temperature	85 ±5°C detect on NTC, Protection type: Auto recovery after temperature goes down Protection type: Shut down o/p voltage (Recovers automatically after temperature goes down)							
Function	Auxiliary Power	Selectable +5V / 0.5A or +9V / 0.3A auxiliary output							
	Remote ON / OFF Control	Please refer to page 4 (Isolated from output)							
	Power OK Signal	Open drain signal low when PSU turns on, Max. sink current: 20mA, Max. drain voltage: 40V.							
	Output Voltage Trim	Adjustment of output voltage is between 0 ~ 105% of rated output							
	Output Current Trim	Adjustment of output current is between 0 ~ 105% of rated output							
	Parallel (Current Sharing)	Note.5	Please refer to page 5 (8 units max.)						
Environment	Working Temp.	-20 ~ +60°C (Refer to de-rating curve)							
	Working Humidity	20 ~ 90% RH non-condensing							
	Storage Temp. & Humidity	-40 ~ +85°C, 10 ~ 95% RH							
	Temp. Coefficient	±0.02% / °C (0 ~ 50°C)							
	Vibration	10 ~ 500Hz, 2G 10min. / 1cycle, period for 60min. each along X, Y, Z axes Certified IEC60068-2-6-2007; IEC 60068-2-64-2008							
Safety & EMC	Safety Standards	Certified UL / cUL (ANSI / AAMI ES 60601-1; CAN / CSA-C22.2 No.60601-1); NFPA 99 Certified TUV (EN 60601-1; IEC 60601-1); 2xMOPP/BF							
	Withstand Voltage	Note.7	I/P-O/P: 4KVAC, I/P-FG: 1.8KVAC, O/P-FG: 0.5KVAC						
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC							
	EMI Conduction & Radiation	Certified EN 55011							
	Harmonic Current	Certified EN 61000-3-2; EN 61000-3-3:2008							
Other	EMC Immunity	Certified EN 60601-1-2; IEC 61000-4-2, 3, 4, 5, 6, 8, 11							
	MTBF	84K HRS Certified MIL-HDBK-217F							
Other	Cooling	Load and temperature control fan							
	Dimension (WxHxD)	127x64x261mm / 5.00x2.52x10.28 inch							
	Packing	2.6 kg; 6pcs / 16.6kg / 1.86CUFT							

- Note**
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
 2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
 3. Tolerance: includes setup time tolerance, line regulation and load regulation.
 4. De-rating may apply in low input voltage. Please check the de-rating curve for more details.
 5. In parallel connection, maybe only one unit operate if the total output load is less than 5% of rated load condition.
 6. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives.
 7. This test is done without enclosure.

*Note: The specifications are subject to change without notice.

Mechanical Drawings:

Unit:mm / inch



Recommended screw length is measured from the power supply surface

AC Input Terminal Pin No. Assignment

Pin No.	Assignment
1	L
2	N
3	⏏

CN2 Function Description:

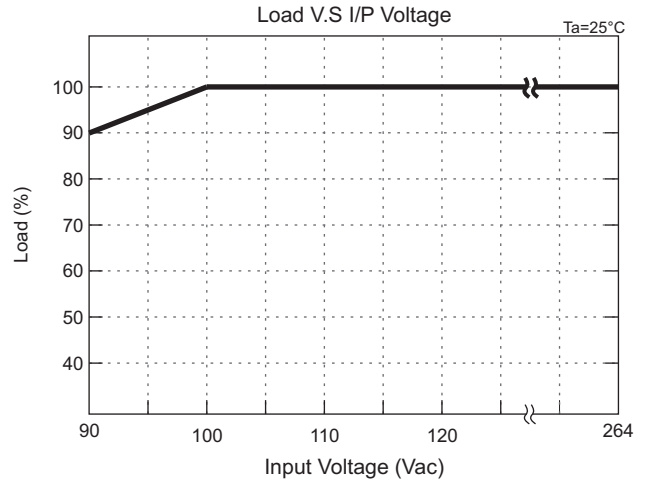
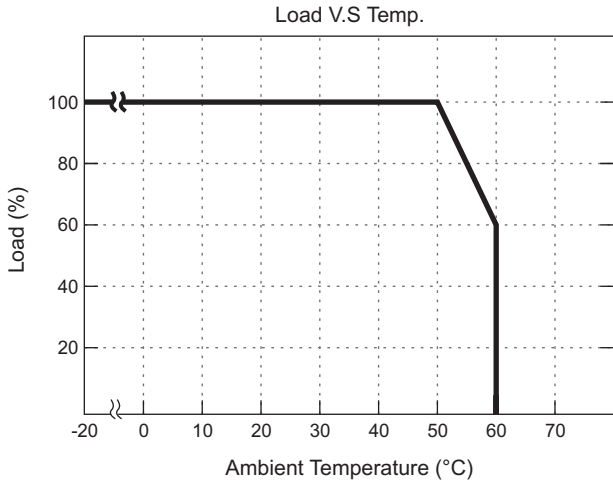
Pin No.	Function	Description	Pin No.	Function	Description	Mating Housing / Contact
1	VS+	Remote sense (+)	13	ACI	I Program	JST PHDR-24VS or equivalent
2	VO+	Positive output voltage	14	GND	Ground	
3	VS-	Remote sense (-)	15	VCI	V Program	
4	VO-	Negative output voltage	16	GND	Ground	
5	POK	Power OK	17	AUX	+5V / 0.5A or +9V / 0.3A Auxiliary power	
6	GND	Ground	18	GND	Ground	
7	PAR	Parallel operation current share	19	SCL	Serial Clock used in the I ² C interface	
8	VSET	Aux output setting	20	SDA	Serial Data used in the I ² C interface	
9	EN-	Inhibit ON/OFF (-)	21	AUX	+5V / 0.5A or +9V / 0.3A Auxiliary power	
10	GND	Ground	22	GND	Ground	
11	EN+	Inhibit ON/OFF (+)	23	NC.	For RS232 Receiver function	
12	AUX	+5V / 0.5A or +9V / 0.3A Auxiliary power	24	NC.	For RS232 Transmission function	

LED Status:

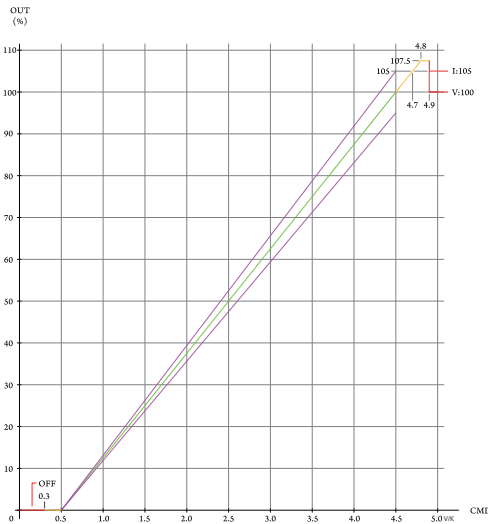
LED	LED Signal	Status
Solid(Green)		Power OK (Local mode)
Solid(Orange)		Power OK (Remote mode)
Slow Blink(Green)		Power Standby
Fast Blink(Red)		Over Voltage Protection (OVP)
Solid(Red)		Over Load Protection (OLP)
Slow Blink(Red)		Over Temperature Protection (OTP)
Intermittent Blink(Red)		Fan Failure
Interlace Blink(Red)		Power Failure

*Local mode : Use ACI/VCI to control output current and voltage.
Remote mode : Use RS-232 or I²C command to control output current and voltage.

De-rating Curve:

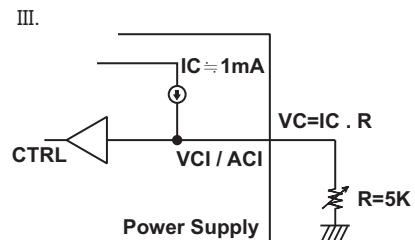
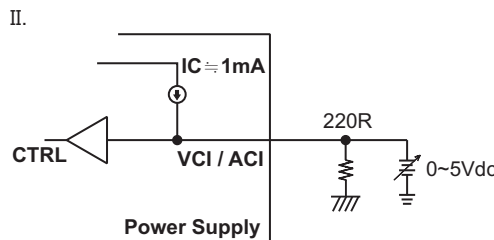
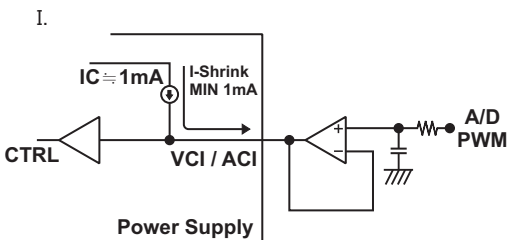
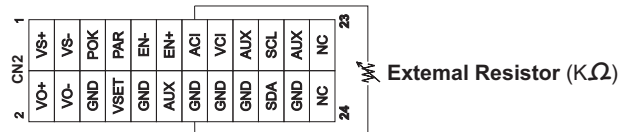
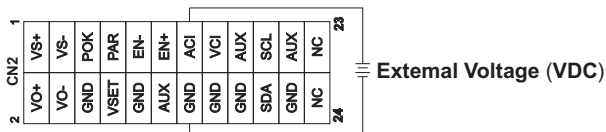
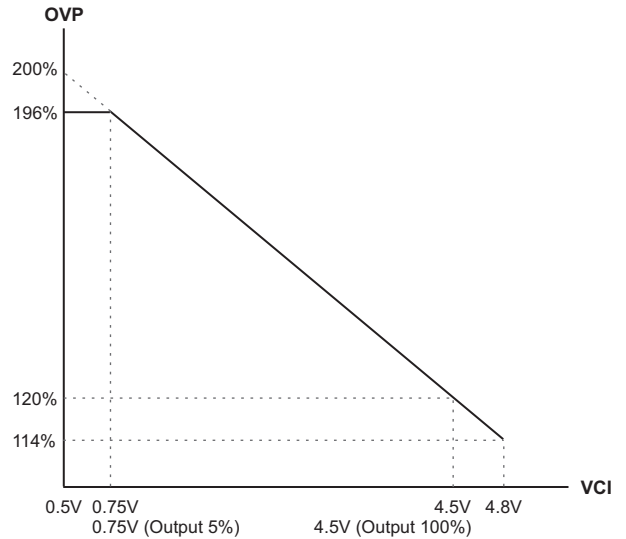


CMD VS Output Curve:



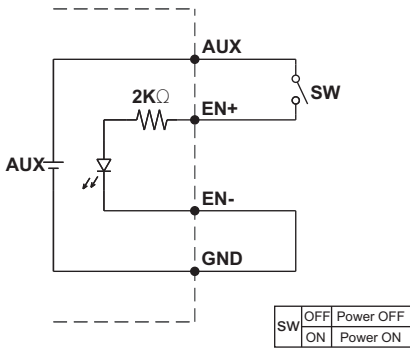
To ensure the power supply output voltage and current could be accurately adjusted, please make sure to adjust the output voltage and current > 10% vs. the rated voltage and current. (e.g. for a 24V unit, please adjust the DC output voltage above 2.4V to ensure accuracy; same applies to the output current)

VCI VS OVP Curve:



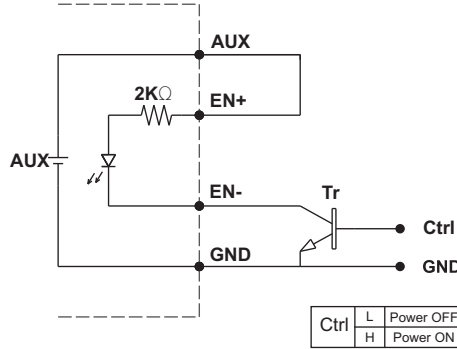
Remote ON/OFF:

(A) Default Setting



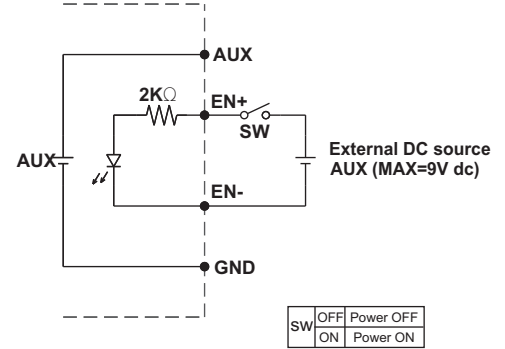
(A) Using internal 5V auxiliary source

(B)



(B) ON / OFF Control by NPN transistor

(C)



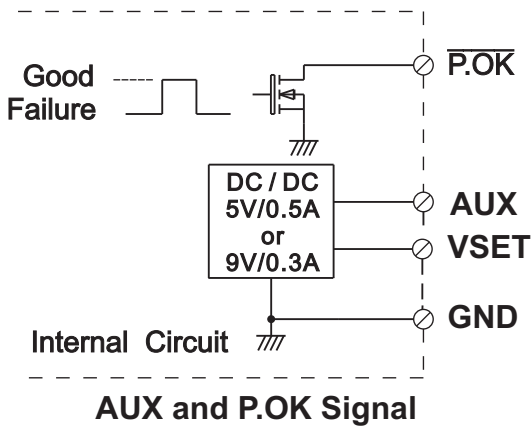
(C) Using external voltage source

GND shown in above diagram is referring to the GND of CN2, not the Grounding from main power(NEG-).

Power OK Signal & Auxiliary Power Setting:

*The grounding of "AUX" power and P.OK signal should be connected to "GND" port. If "VO-" is connected as Grounding, make sure to short the GND and VO- ports.

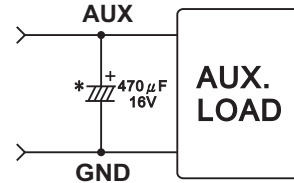
Open drain signal low when PSU turns on, Max. P.OK sink current: 20mA, Max. drain voltage: 40V.



AUX and P.OK Signal

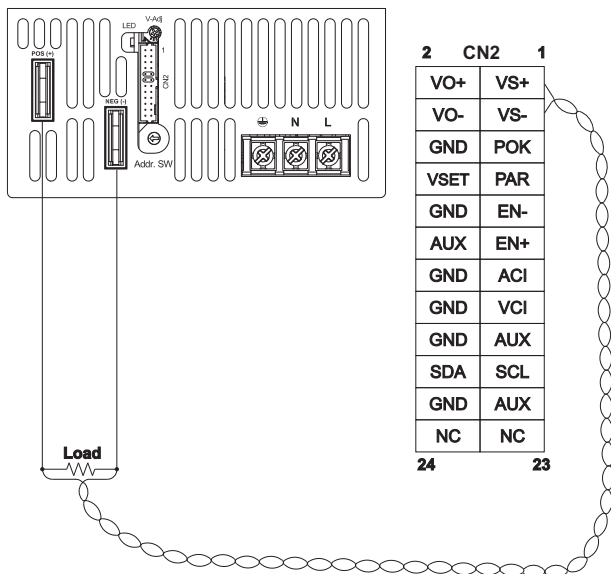
GND shown in above diagram is referring to the GND of CN2, not the Grounding from main power(NEG-).

*Place an additional capacitor to have a better performance of auxiliary power operation.

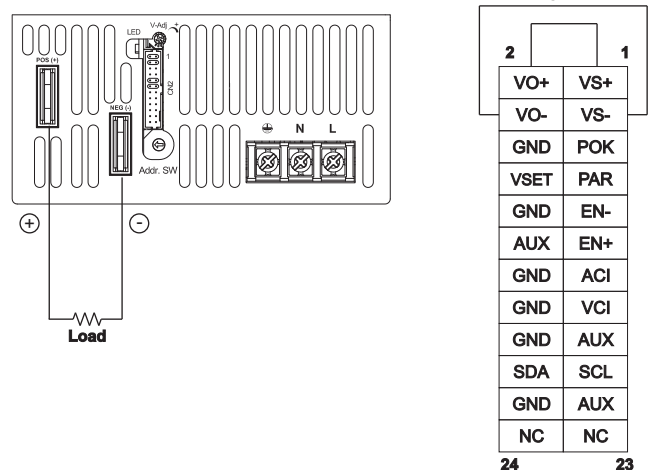


Do NOT exceed 5V/0.5A or 9V/0.3A

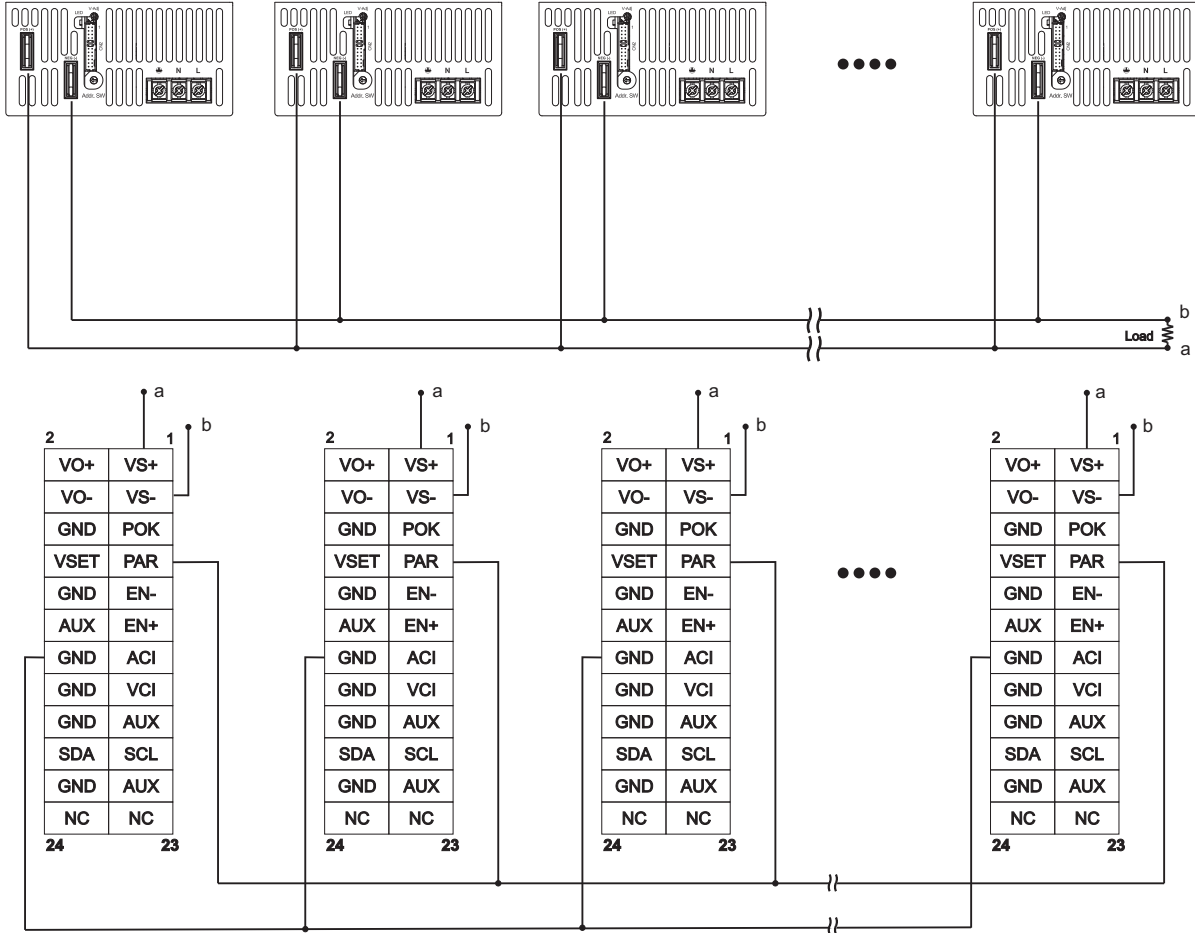
1. Remote Sense



2. Local Sense (Default setting)

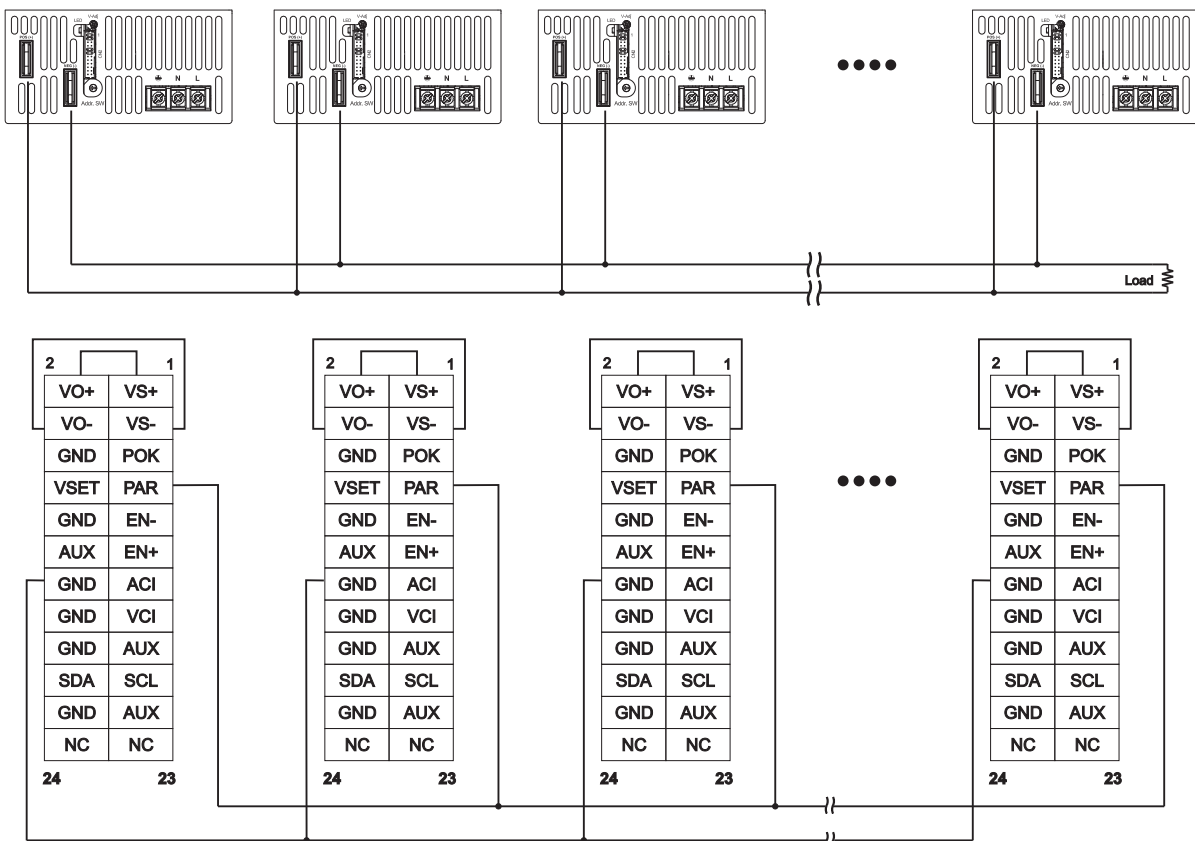


3. Current Sharing with Remote Sensing(Parallel Connection)



Please connect PAR pins together for current sharing function

4. Current Sharing with Local Sensing



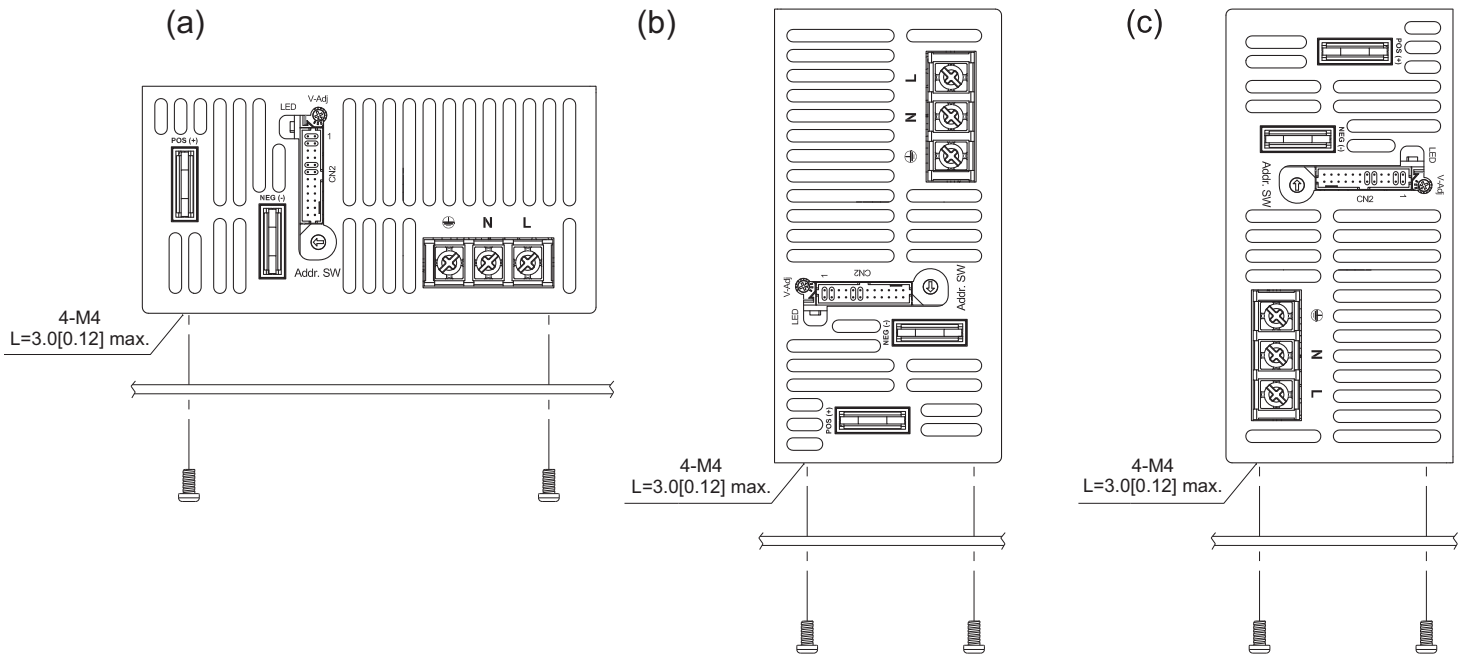
Please connect PAR pins together for current sharing function

*Note: The specifications are subject to change without notice.

Installation Instruction:

1. Mounting Directions

1-1 Recommended standard mounting methods:



Recommended screw length is measured from the power supply surface

2. Mounting Method

2-1 There are ventilating holes on the front and back side panels, do not obstruct; allow 50mm at least for air flow.

2-2 Recommended the torque of mounting screw:
M4 screw: 1.27N • m (13.0kgf • cm)

