COTEK

1200W Single Output Power Supply — ME-1200 series

Features :

- Universal AC input with active PFC
- Programmable output Voltage (30% ~ 105%)
- Programmable output Current (40% ~ 105%)
- Medical safety approved
- High efficiency up to 93%
- +5V / 0.5A or +8V/0.3A auxiliary output select by usser
- Intelligent LED indicators
- Forced current sharing at parallel operation
- Built-in I^2C serial data bus
- Power OK signal (Power good, Logic low)
- Remote ON-OFF, Remote sense function
- Protections : OVP, OLP, OTP, Fan failure
- 3 years warranty

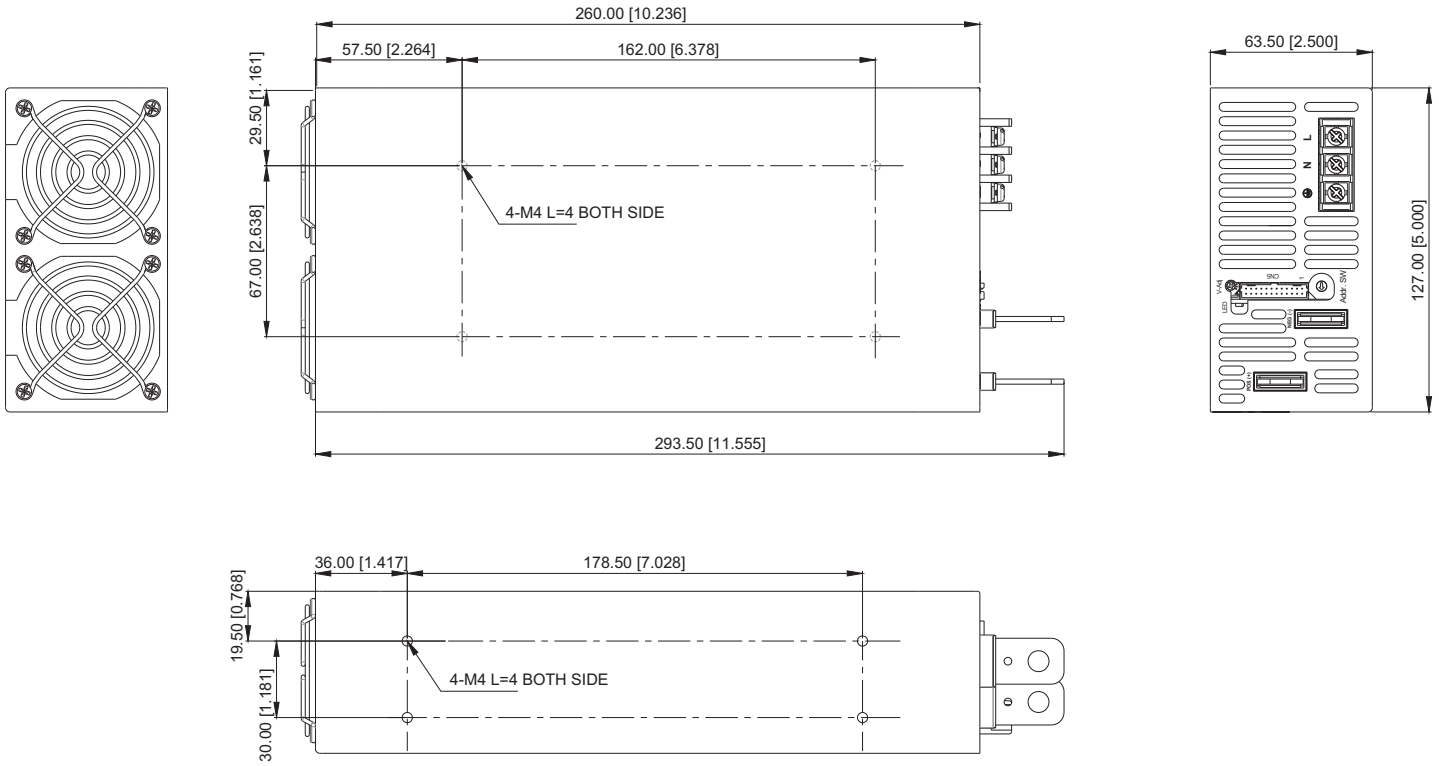
MODEL		ME-1200-12	ME-1200-15	ME-1200-24	ME-1200-30	ME-1200-36	ME-1200-48	ME-1200-60
Output	DC Voltage Range	12V	15V	24V	30V	36V	48V	60V
	Rated Current	100A	80A	50A	40A	33.4A	25A	20A
	Current Range	0~100A	0~80A	0~50A	0~40A	0~33.4A	0~25A	0~20A
	Rated Power	1200W	1200W	1200W	1200W	1200W	1200W	1200W
	Ripple & Noise (Max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-p	150mVp-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 (Typ.)	14ms / 230VAC at full load						
Input	Voltage Range Note.4	90 ~ 264VAC , 127 ~ 370VDC						
	Frequency Range	47 ~ 63Hz						
	Power Factor (Typ.)	0.95 / 230VAC, 0.99 / 115VAC at full load						
	Efficiency (Typ.)	89%	90%	91%	92%	92%	93%	93%
	AC Current (Typ.)	14.5A / 115VAC, 7A / 230VAC						
	Inrush Current (Typ.)	30A / 115VAC, 45A / 230VAC						
	Leakage Current	For Earth < 200uA / 264VAC, For Patient < 100uA / 264VAC						
Protection	Over Load	105 % rated output power, Protection type : Constant current limiting						
	Over Voltage	Variable OVP, 120% ±7% Vout. Protection type: Latch-style (Recovery after reset AC power ON or inhibit)						
		Refer to VCI VS OVP curve						
	Over Temperature	85°C±5°C detect on heat sink of secondary side						
		Protection type: Shut down o/p voltage (Auto recovery after temperature goes down)						
Function	Auxiliary Power	+5V / 0.5A or +8V / 0.3A auxiliary output select by side						
	Remote ON/OFF Control	External switch or NPN Transistor to turn ON / OFF						
	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 30 ~ 105% of rated output						
	Output Current Trim	Adjustment of output current is between 40 ~ 105% of rated output						
	Parallel (Current Sharing) Note.5	Please refer to function						
Environment	Working Temp.	-20 ~ +70°C (Refer to output load de-rating curve)						
	Working Humidity	20 ~ 90% R.H non-condensing						
	Storage Temp., Humidity	-40~+85°C, 10 ~95% R.H						
	Temp. Coefficient	±0.02%/°C (0 ~ 50°C)						
	Vibration	Compliance to IEC 68-2-6, IEC 68-2-64						
Safety & EMC Note.6	Safety Standards	UL 60601-1						
	Withstand Voltage	I/P-O/P: 4KVAC I/P-FG: 2.0KVAC O/P-FG: 0.5KVAC						
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: 100MΩ / 500VDC						
	EMI Conduction & Radiation	Compliance EN55022 (CISPR22) Class B						
	Harmonic Current	Compliance EN61000-3-2,-3						
	EMS Immunity	Compliance EN61000-4-2,3,4,5,6,8,11 ; ENV50204, EN55024, EN61000-6-2,EN61204-3, heavy industry level, criteria A						
Other	Cooling	Controlled by power rating & temperature (Internal ball bearing fan)						
	Dimension (L*W*H)	267x127x63.5 mm / 10.51x5.00x2.50 inch						
	Packing	2 kg ; ???pcs / ???kg / ??? CUFT						
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 set up tolerance, line regulation and load regulation. 4.De-rating may be needed under low input voltages. 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.							

REV. A9
11/11/22
1

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

Mechanical Specification

Unit:mm / inch



AC Input Terminal Pin No. Assignment

Pin No.	Assignment
1	ACL
2	ACN
3	⏚

Control pin number assignment

Pin No.	Assignment	Pin No.	Assignment	Pin No.	Assignment	Pin No.	Assignment	Pin No.	Assignment
1	NC.	6	SDA	11	ACI	16	GND	21	VS-
2	NC.	7	AUX	12	GND	17	PAR	22	VO-
3	AUX	8	GND	13	EN+	18	VSET	23	VS+
4	GND	9	VCI	14	AUX	19	POK	24	VO+
5	SCL	10	GND	15	EN-	20	GND		

Function Description

Pin No.	Function	Description	Pin No.	Function	Description
1	NC.	For RS232 Recever funtion	13	EN+	Inhibit ON/OFF (+)
2	NC.	For RS232 Transmission funtion	14	AUX	+5V / 0.5A,+8V / 0.3A Auxiliary power
3	AUX	+5V / 0.5A,+8V / 0.3A Auxiliary power	15	EN-	Inhibit ON/OFF (-)
4	GND	Ground	16	GND	Ground
5	SCL	Serial Data used in the I²C interface	17	PAR	Parallel operation current share
6	SDA	Serial Data used in the I²C interface	18	VSET	Aux output set
7	AUX	+5V / 0.5A,+8V / 0.3A Auxiliary power	19	POK	Power OK
8	GND	Ground	20	GND	Ground
9	VCI	V Program	21	VS-	Remote sense (-)
10	GND	Ground	22	VO-	Negative output voltage
11	ACI	I Program	23	VS+	Remote sense (+)
12	GND	Ground	24	VO+	Positive output voltage

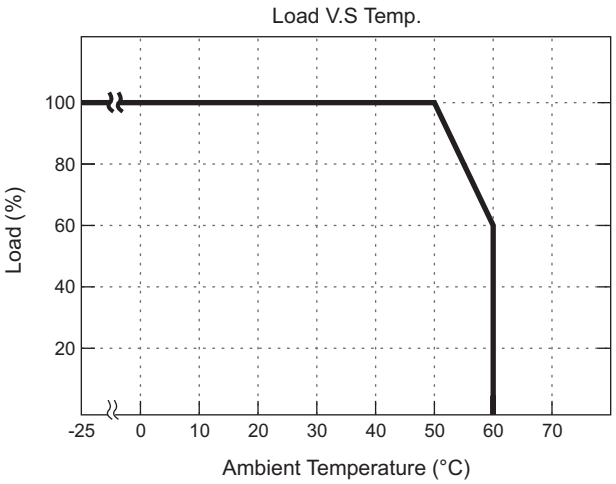
*Note:The specifications are subject to change without notice.

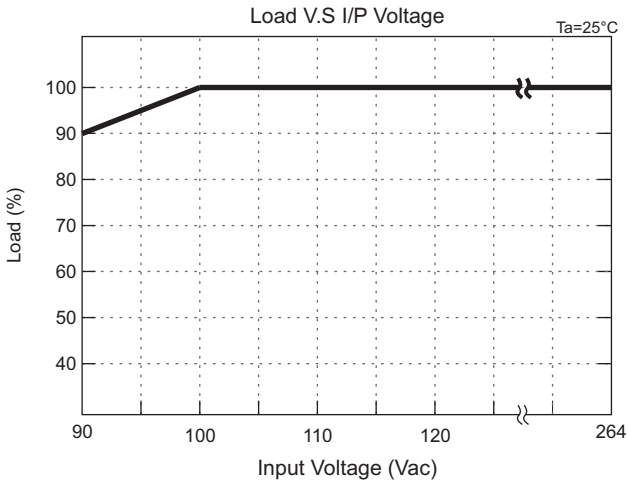
LED Status

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)
		Output Shorted Circuit Protection (SCP)
		Under Voltage Protection (UVP)
Slow Blink(Red)		Over Temperature Protection (OTP)
Intermittent Blink(Red)		Fan Failure
Interlace Blink(Red)		Power Failure

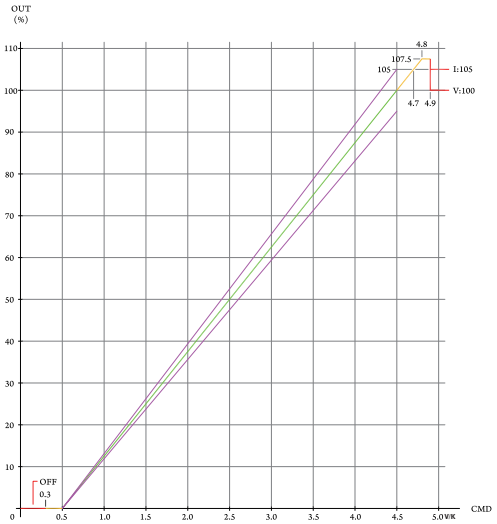
*Local mode : Use ACI/VCI control output current and voltage.
Remote mode : Use RS-232 or I²C command control output current and voltage.

De-rating Curve

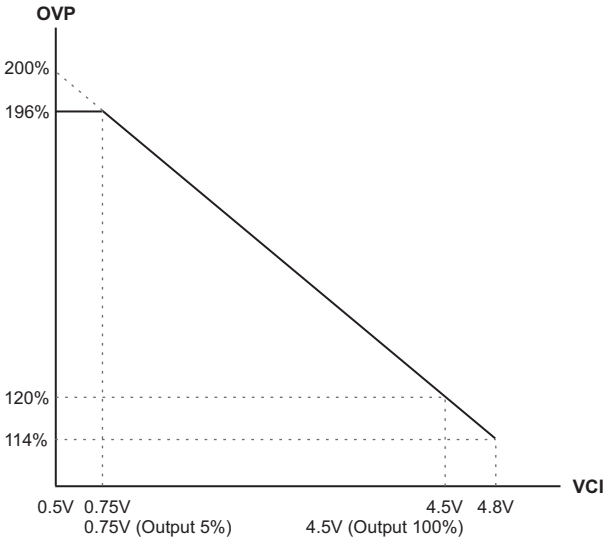


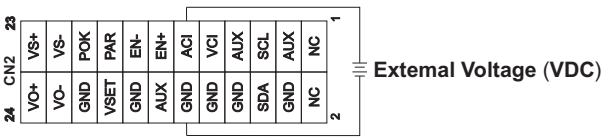


CMD VS Output Curve

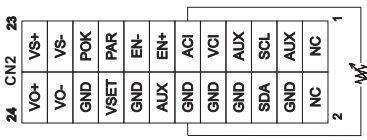


VCI VS OVP Curve

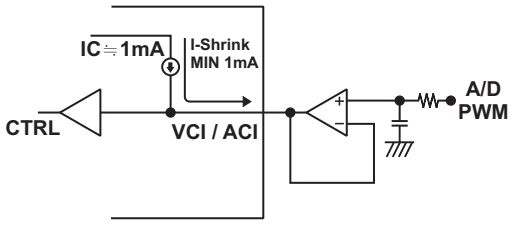


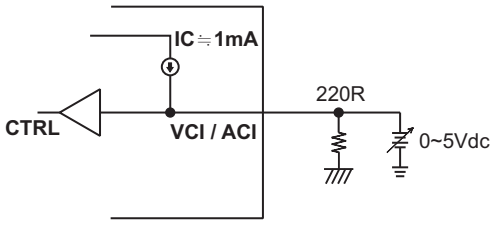


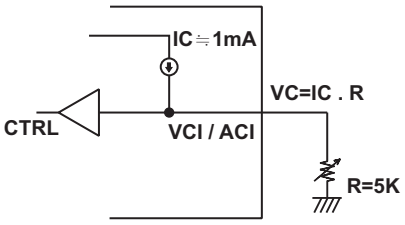
Extemal Voltage (VDC)



Extemal Resistor (KΩ)





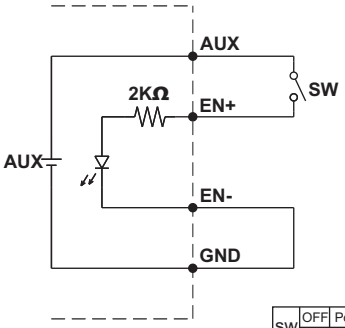


REV. A9
11/11/22
3

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

Remote ON/OFF

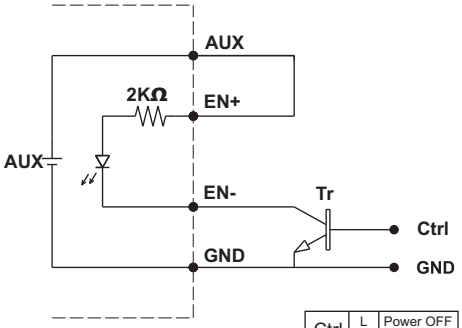
(A) Default Setting



SW	OFF	Power OFF
	ON	Power ON

(A) Using internal 5V auxiliary source

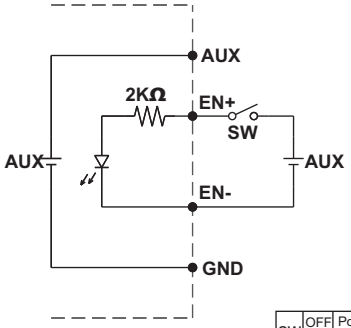
(B)



Ctrl	L	Power OFF
	H	Power ON

(B) ON / OFF Control by NPN transistor

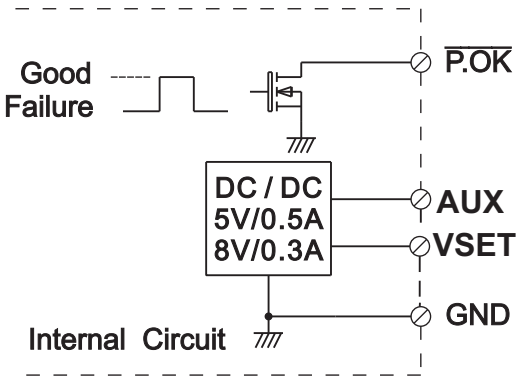
(C)



SW	OFF	Power OFF
	ON	Power ON

(C) Using external voltage source

Power OK Signal



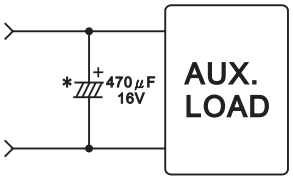
AUX and P.OK Signal

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

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

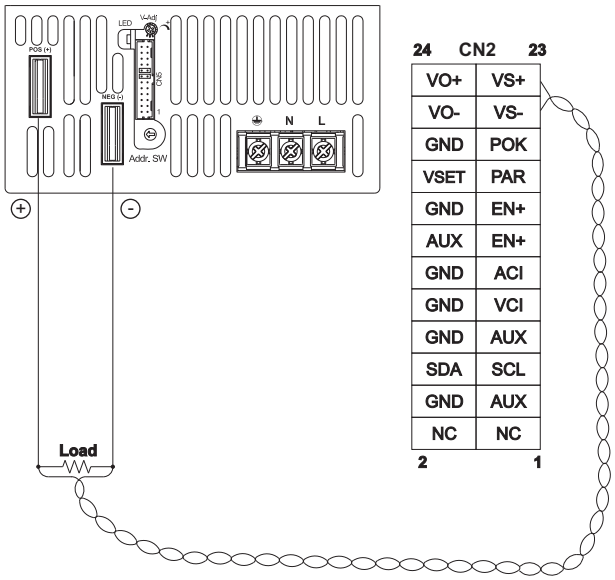
VSET	Open	5V
	Short To GND	8V

(Default Setting)



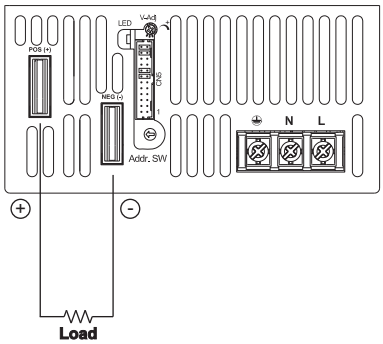
0 . 5 p t

1. Remote Sense



24 CN2 23	
VO+	VS+
VO-	VS-
GND	POK
VSET	PAR
GND	EN+
AUX	EN+
GND	ACI
GND	VCI
GND	AUX
SDA	SCL
GND	AUX
NC	NC
2	1

2. Local Sense (Default setting)

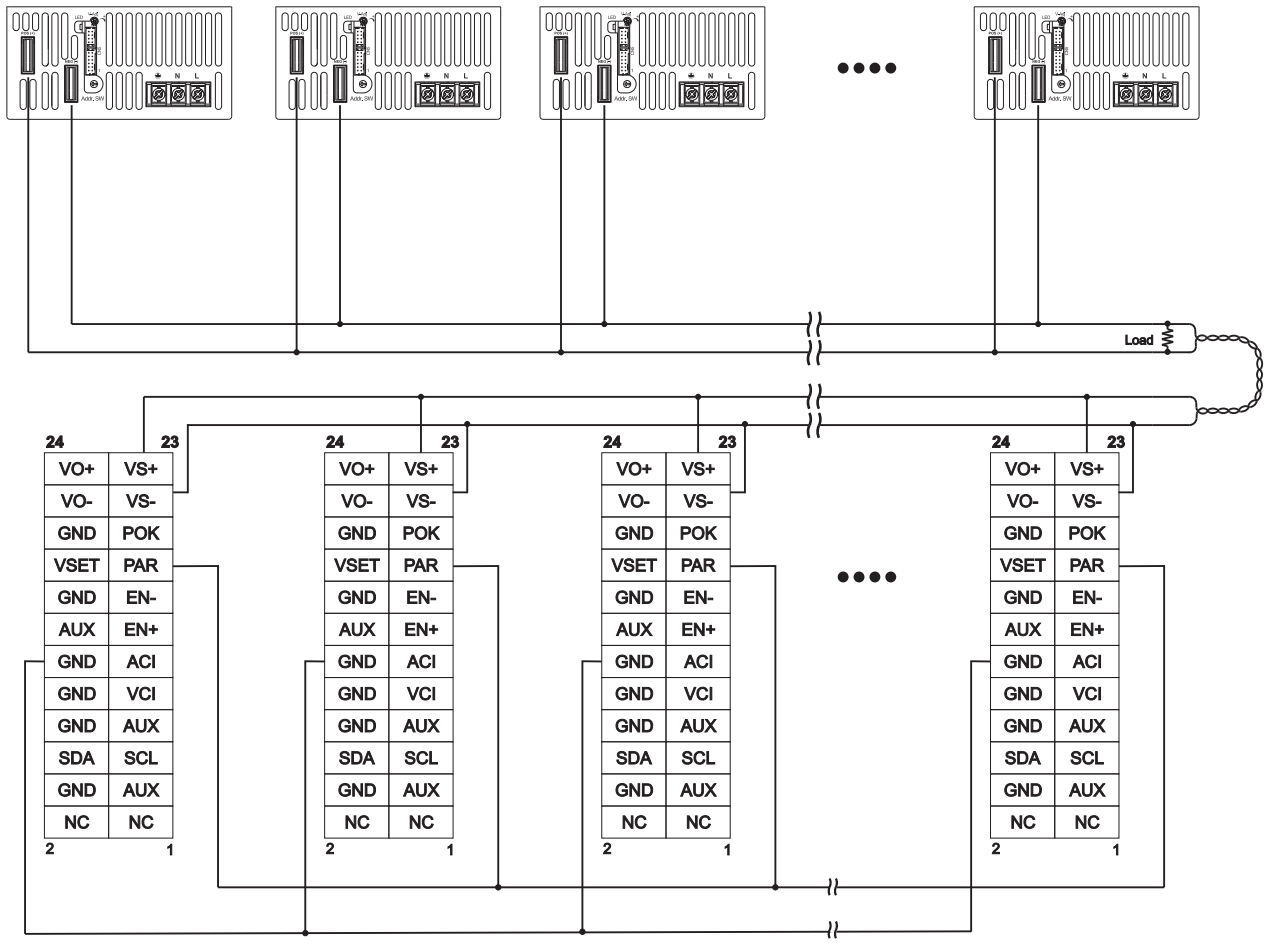


CN2

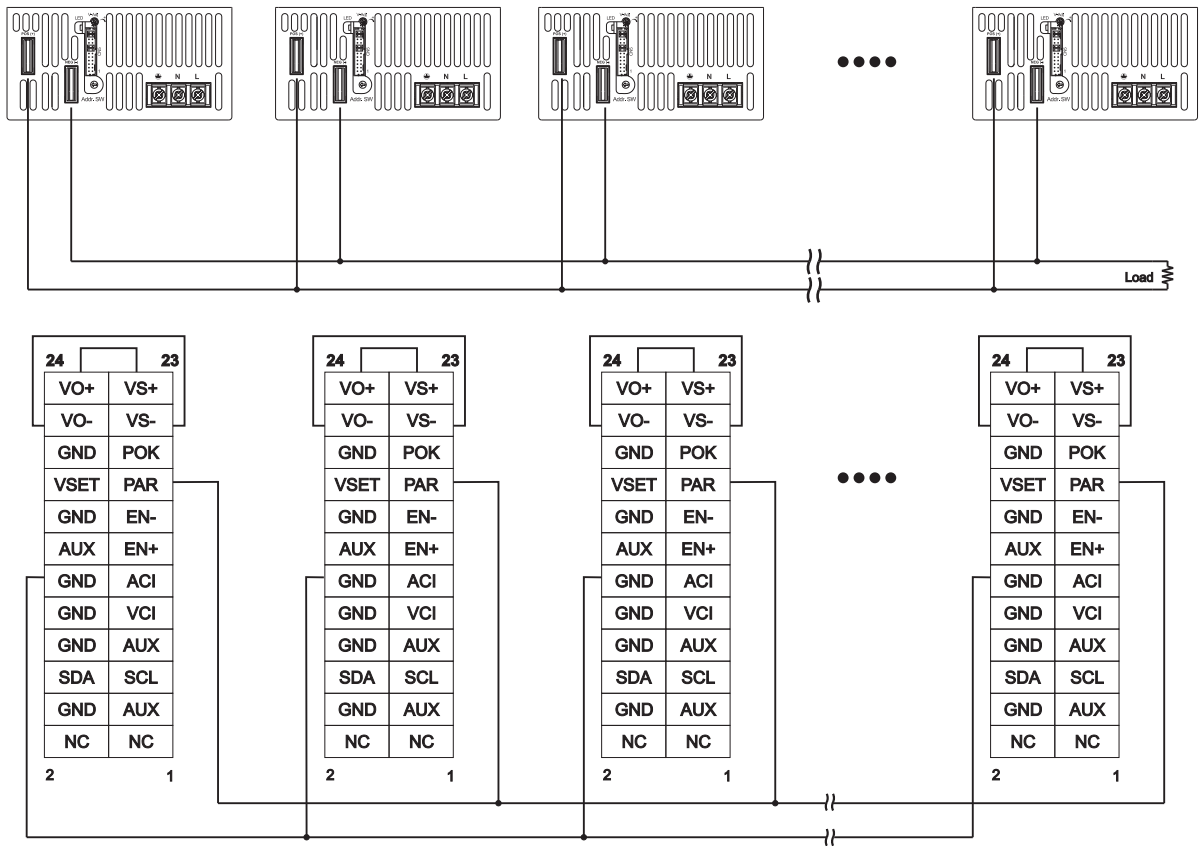
24	23
VO+	VS+
VO-	VS-
GND	POK
VSET	PAR
GND	EN+
AUX	EN+
GND	ACI
GND	VCI
GND	AUX
SDA	SCL
GND	AUX
NC	NC
2	1

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

3. Current Sharing with Remote Sensing



4. Current Sharing with Local Sensing

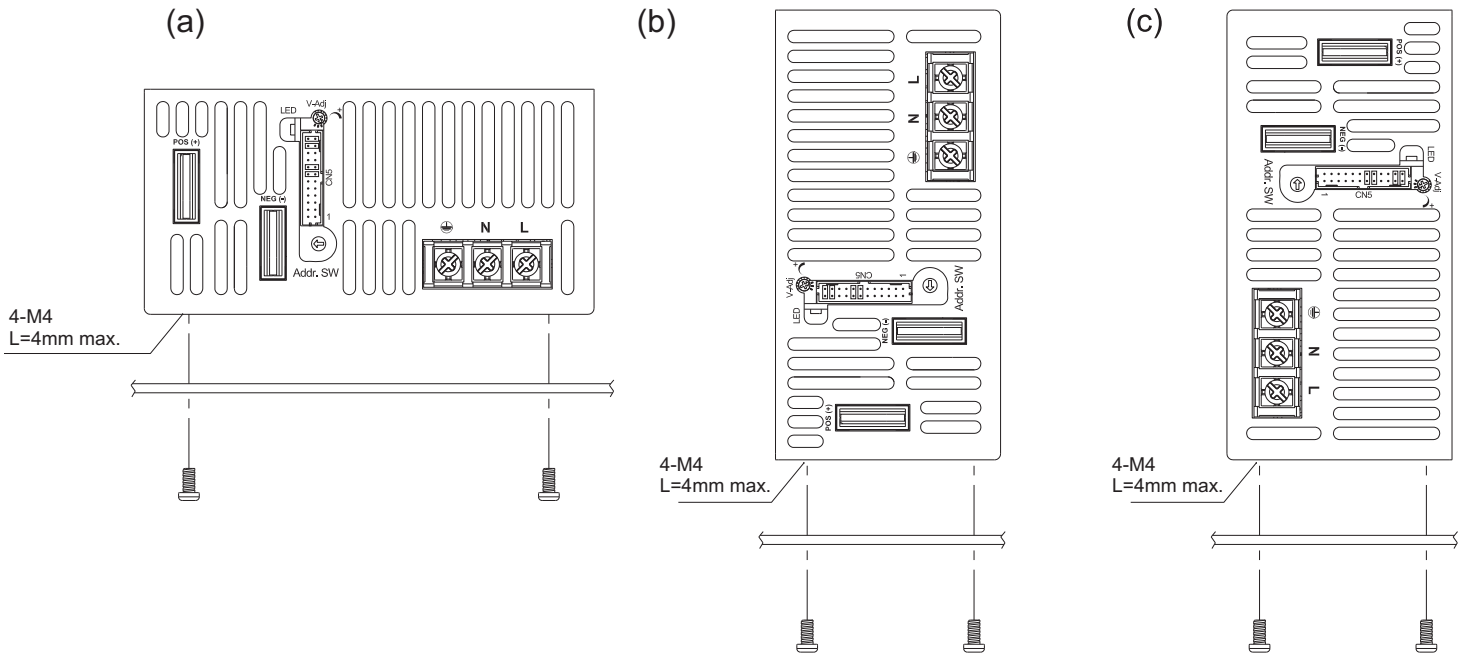


*Note:The specifications are subject to change without notice.

Installation Instruction

1. Mounting Directions

1-1 Recommended standard mounting methods:



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 The Maximum allowable penetration of screw is 4mm. Incomplete threading should not be penetrated.

2-3 Recommended the torque of mounting screw:
M4 screw: 1.27N • m (13.0kgf • cm)