Size:
10.256 x 5.000 x 2.500 inches
(260.50 x 127.00 x 63.50 mm)

Weight
5.73 lbs (2.6kg)

FEATURES

- RoHS Compliant
- 1200 Watts Output Power
- High Efficiency up to 93%
- 4000VAC I/O Isolation (2 x MOPP)
- Constant Current Limiting
- Global Control via RS232
- Power OK Signal (Power Good, Logic Low)
- Remote ON/OFF, Remote Sense Functions
- Protection: OLP, OVP, OTP, Fan Failure
- Remote Setting Multiple PSU via RS232, RS485 & I^2C
- Programmable Output Voltage (0~105%)
- Programmable Output Current (0~105%)
- Universal Input Voltage Range: 90~264VAC (127~370VDC)
- Single Outputs Ranging from 12VDC to 60VDC
- Selectable +5V/0.5A or +9V/0.3A Auxiliary Output
- Forced Current Sharing at Parallel Operation
- ANSI/AAMI ES60601-1, TUV EN60601-1: 2006, IEC60601-1 Medical Approvals

DESCRIPTION

The PSME1200 series of medical AC/DC switching power supplies provides 1200 Watts of output power in a 10.256" x 5.000" x 2.500" enclosed case. This series consists of single output models ranging from 12VDC to 60VDC with a universal input voltage range of 90~264VAC (127~370VDC). Standard features include high efficiency up to 93%, programmable output voltage and output current, remote on/off, and power OK signal. This series also has over temperature, over voltage, and over load protection. These supplies also feature a low leakage current of less than 300µA (earth) and less than 100µA (patient) at 264VAC and are designed to withstand 4000VAC input to output isolation (2 x MOPP). All models are RoHS compliant and have ANSI/AAMI ES60601-1, TUV EN60601-1: 2006, and IEC60601-1 medical approvals.

MODEL SELECTION TABLE

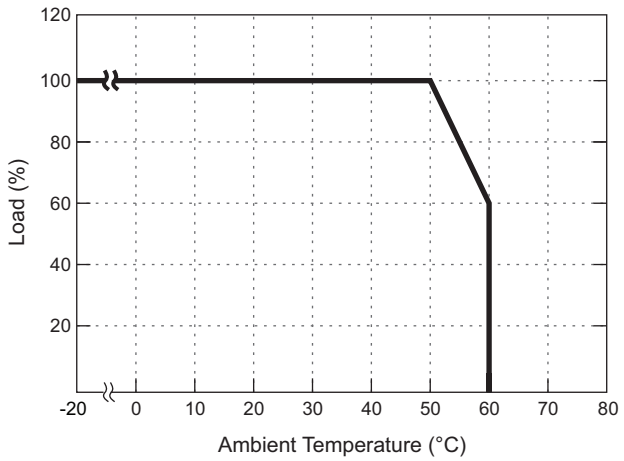
Model Number	Input Voltage [2]	Output Voltage	Output Current	Line Regulation	Load Regulation	Output Power	Ripple & Noise [1]	Efficiency
PSME-1200-12	90~264 VAC (127~370 VDC)	12 VDC	100A	±1.0%	±1.0	1200W	120mVp-p	89%
PSME-1200-15		15 VDC	80A	±1.0%	±1.0	1200W	150mVp-p	90%
PSME-1200-24		24 VDC	50A	±1.0%	±1.0	1200W	150mVp-p	91%
PSME-1200-30		30 VDC	40A	±1.0%	±1.0	1200W	150mVp-p	92%
PSME-1200-36		36 VDC	33.4A	±1.0%	±1.0	1202.4W	150mVp-p	92%
PSME-1200-48		48 VDC	25A	±1.0%	±1.0	1200W	150mVp-p	93%
PSME-1200-60		60 VDC	20A	±1.0%	±1.0	1200W	150mVp-p	93%

NOTES

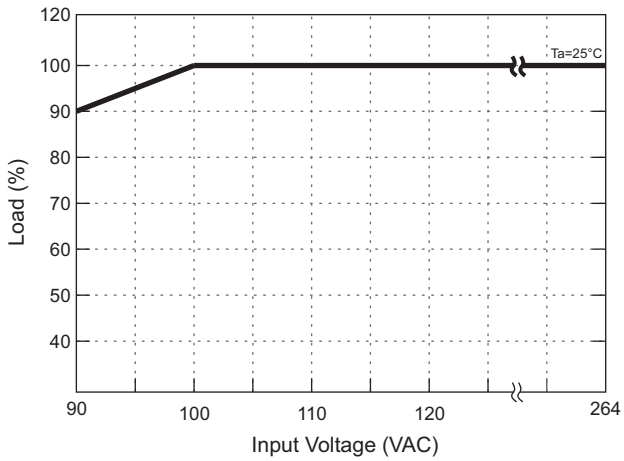
1. Ripple & noise is measured at 20MHz limited bandwidth and using a 12" twisted pair-wire terminated with a 0.1µF & 47µF capacitors in parallel.
2. For voltages near the low end of the input voltage range, see the derating curve for the power supply output rating.
3. When in parallel operation only one unit might operate if the total output load is less than 5% of the rated load condition.
4. The power supply is considered a component which will be installed into final equipment. The final equipment must be re-confirmed that it still meets EMC directives.

DERATING CURVES

Load vs Ambient Temperature



Load vs Input Voltage

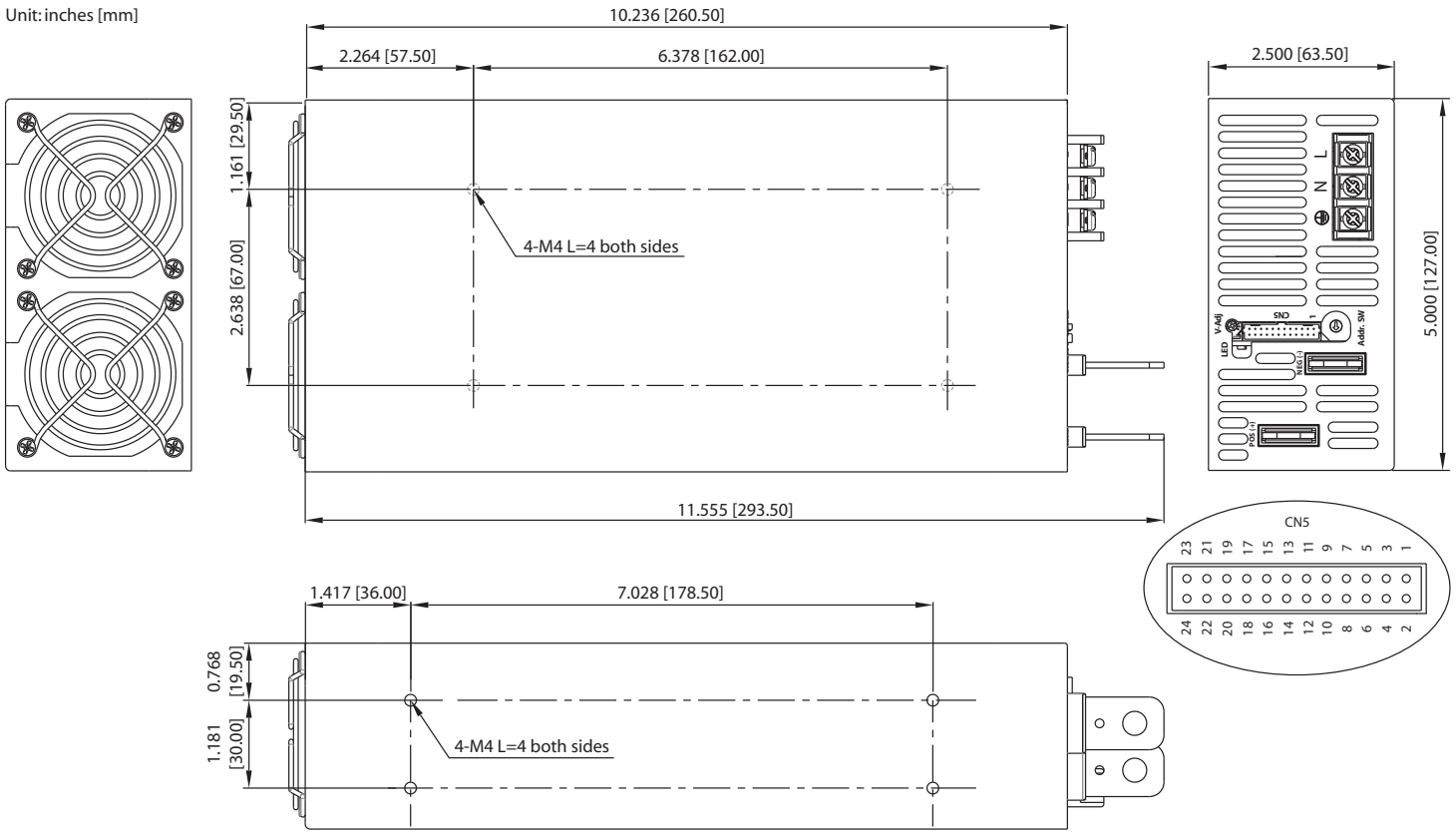


SPECIFICATIONS: PSME1200 SERIES

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION		TEST CONDITIONS		Min	Typ	Max	Unit
INPUT SPECIFICATIONS							
Input Voltage (See Note 2)		AC input voltage range		90		264	VAC
		DC input voltage range		127		370	VDC
Input Frequency				47		63	Hz
AC Current		At 115VAC and full load			14.5		A
		At 230VAC and full load			6		
Inrush Current		At 115VAC and cold start			30		A
		At 230VAC and cold start			45		
Power Factor		At 115VAC and full load		0.99			
		At 230VAC and full load		0.95			
OUTPUT SPECIFICATIONS							
Output Voltage				See Table			
Voltage Tolerance		Includes set-up tolerance, line regulation, and load regulation		-2.0		+2.0	%
Voltage Adjustability		Typical adjustment by potentiometer (VR1)		-5.0		+5.0	%
Line Regulation		Low Line to High Line		-1.0		+1.0	%
Load Regulation		0% to 100% full load		-1.0		+1.0	%
Output Power				See Table			
Output Current				See Table			
Ripple & Noise (20MHz BW)		Measured with 0.1µF and 47µF capacitors in parallel		See Table			
Hold-up Time		At 230VAC and full load		16			ms
Setup Time		full load			800		ms
Rise Time		full load			100		ms
Temperature Coefficient		0~50°C		-0.02		+0.02	%/°C
PROTECTION							
Over Voltage Protection (see page 7)		Protection type: latch-style. Recovery after reset AC power ON or inhibit		Variable OVP, 120%±7% Vout			
Over Load Protection		Protection type: constant current limit		105% rated output power			
Over Temperature Protection		Protection type: shut down o/p voltage; auto-recovery after temp. goes down		100°C±5°C detect on heatsink of sec. side			
GENERAL SPECIFICATIONS							
Efficiency				See Table			
Isolation Voltage	Input to Output	2 x MOPP	Test is done without enclosure	4000			VAC
	Input to FG			1800			
	Output to FG			500			
Isolation Resistance	Input to Output	500VDC		100			MΩ
	Input to FG	500VDC		100			
	Output to FG	500VDC		100			
Leakage Current	Earth	At 264VAC				300	µA
	Patient	At 264VAC				100	
FUNCTIONS							
Auxiliary Power				Selectable +5V/0.5A or +9V/0.3A aux. output			
Remote ON/OFF Control (see page 4)		Isolated from output		By external switch			
Power OK Signal		Sink Current: 20mA max.; Drain Voltage: 40V max.		Open drain signal low when PSU turns on			
Output Voltage Trim				0		105	%Vo
Output Current Trim				0		105	%Io
Parallel Operation (Current Sharing)				See page 5			
ENVIRONMENTAL SPECIFICATIONS							
Operating Temperature		See derating curve		-20		+60	°C
Storage Temperature				-40		+85	°C
Operating Humidity		Non-condensing		20		90	% RH
Storage Humidity				10		95	% RH
Cooling				Load and temperature control fan			
Vibration		10~500Hz, 2G 10 min./1 cycle, period for 60 min. each along X, Y, Z axes. Certified IEC60068-2-6-2007; IEC60068-2-64-2008					
PHYSICAL SPECIFICATIONS							
Weight				5.73 lbs (2.6kg)			
Dimensions (W x H x D)		10.256 x 5.000 x 2.500 inches (260.50 x 127.00 x 63.50 mm)					
SAFETY & EMC (See Note 4)							
Safety Approvals		UL/cUL (ANSI/AAMI ES60601-1; CAN / CSA-C22.2 No.60601-1); NFPA 99; TUV (EN60601-1; IEC60601-1); MOPP approval					
EMI (Conduction & Radiation)				EN55011			
Harmonic Current				EN61000-3-2; EN61000-3-3			
EMS Immunity				EN60601-1-2; IEC61000-4-2, 3, 4, 5, 6, 8, 11			

MECHANICAL DRAWING



AC Input Terminal	
Pin	Function
1	ACL
2	ACN
3	⏚

Control Pin Number Assignment (CN5): JST S24B-PHDSS or Equivalent					
Pin	Function	Description	Pin	Function	Description
1	NC	For RS232 Receiver Function	13	EN+	Inhibit ON/OFF (+)
2	NC	For RS232 Transmission Function	14	AUX	+5V/0.5A or +9V/0.3A Auxiliary Power
3	AUX	+5V/0.5A or +9V/0.3A Auxiliary Power	15	EN-	Inhibit ON/OFF (-)
4	GND	Ground	16	GND	Ground
5	SCL	Serial Clock used in the I^2C Interface	17	PAR	Parallel Operation Current Sharing
6	SDA	Serial Data used in the I^2C Interface	18	VSET	AUX Output Set
7	AUX	+5V/0.5A or +9V/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

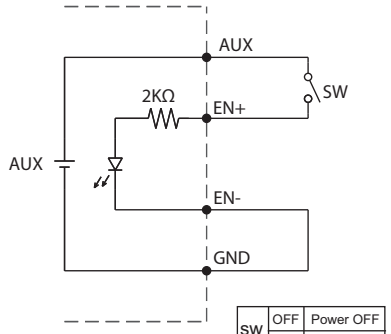
LED STATUS

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 RS232 or I^2C command to control output current and voltage

REMOTE ON/OFF

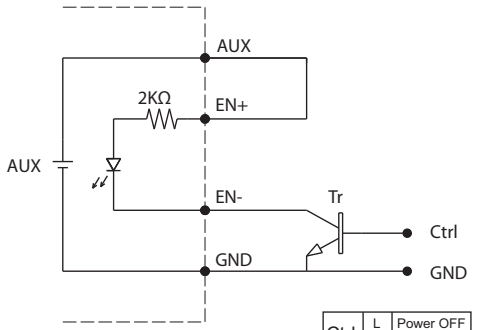
(1) Using Internal 5V Auxiliary Source



SW	OFF	Power OFF
	ON	Power ON

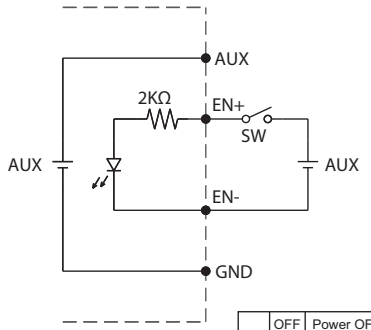
Default setting

(2) ON/OFF Control by NPN Transistor



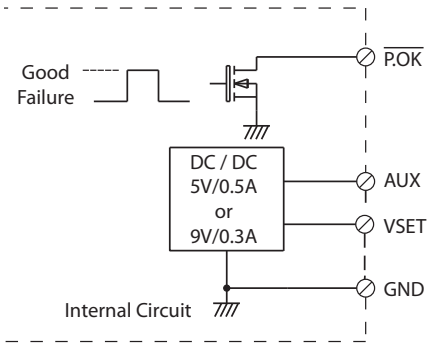
Ctrl	L	Power OFF
	H	Power ON

(3) Using External Voltage Source



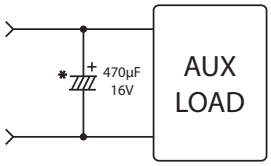
SW	OFF	Power OFF
	ON	Power ON

POWER OK SIGNAL



AUX and P.OK Signal

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

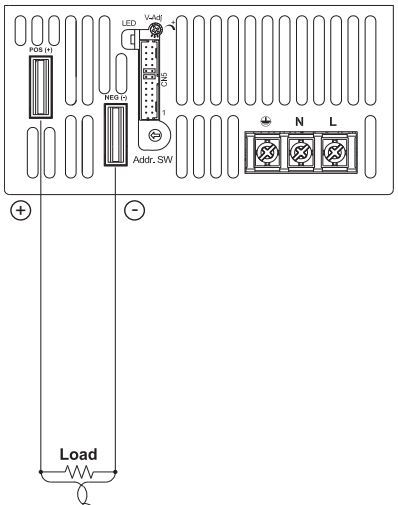


* The grounding of "AUX" power should be connected to "GND" port. If "V-" is connected as Grounding make sure to short the "GND" and "V-" ports.

VSET	Open (Default Setting)	5V
	Short to GND	9V

REMOTE SENSE

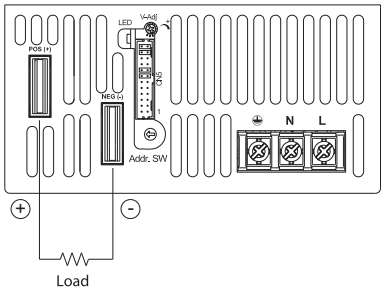
1) Remote Sense



CN5

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

2) Local Sense (Default Setting)

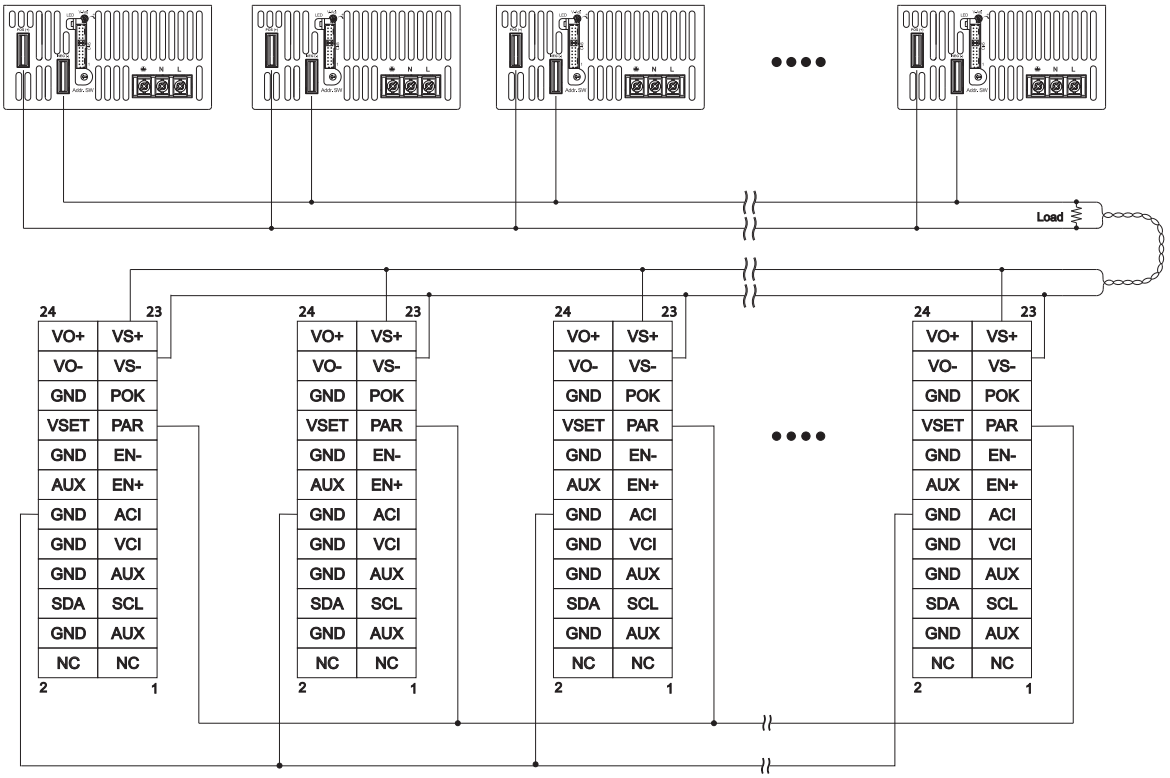


CN5

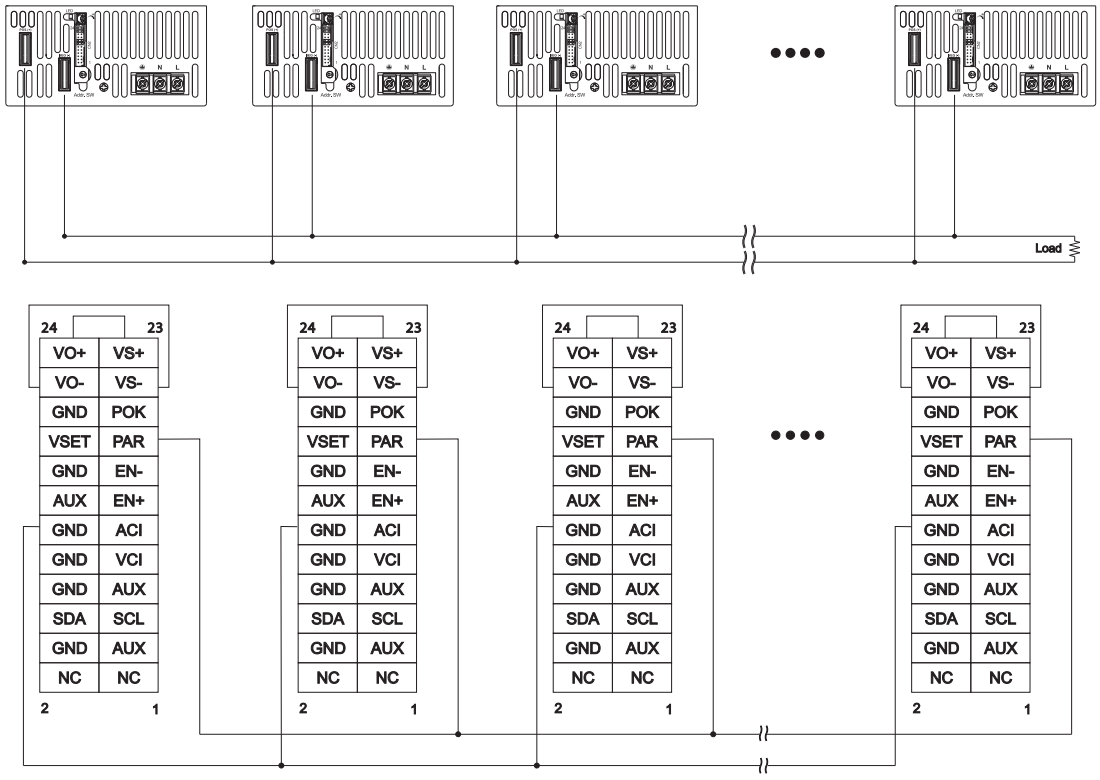
24	23
VO+	VS+
VO-	VS-
GND	POK
VSET	PAR
GND	EN+
AUX	EN+
GND	ACI
GND	VCI
GND	AUX
SDA	SCL
GND	AUX
NC	NC
2	1

CURRENT SHARING

3) Current Sharing with Remote Sense



4) Current Sharing with Local Sensing

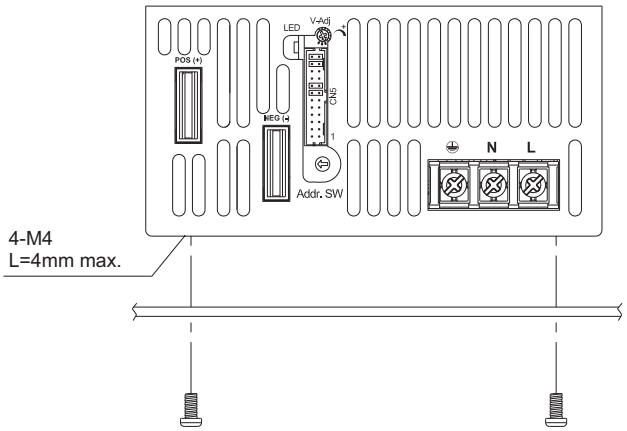


INSTALLATION INSTRUCTIONS

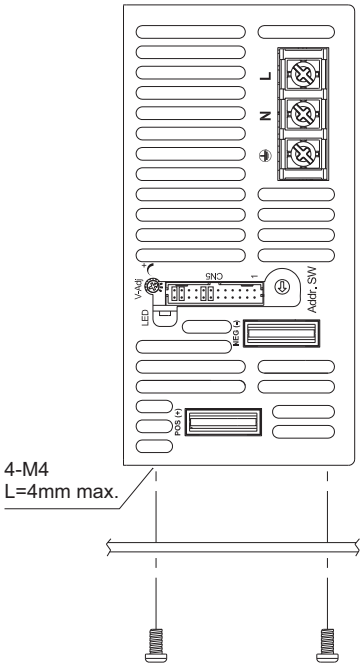
1. Mounting Directions

1-1 Recommended Standard Mounting Methods

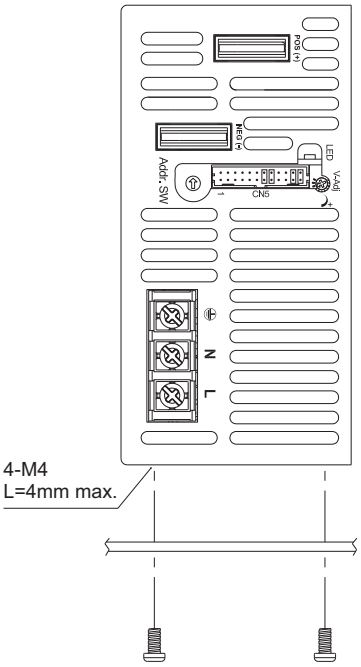
(a)



(b)



(c)

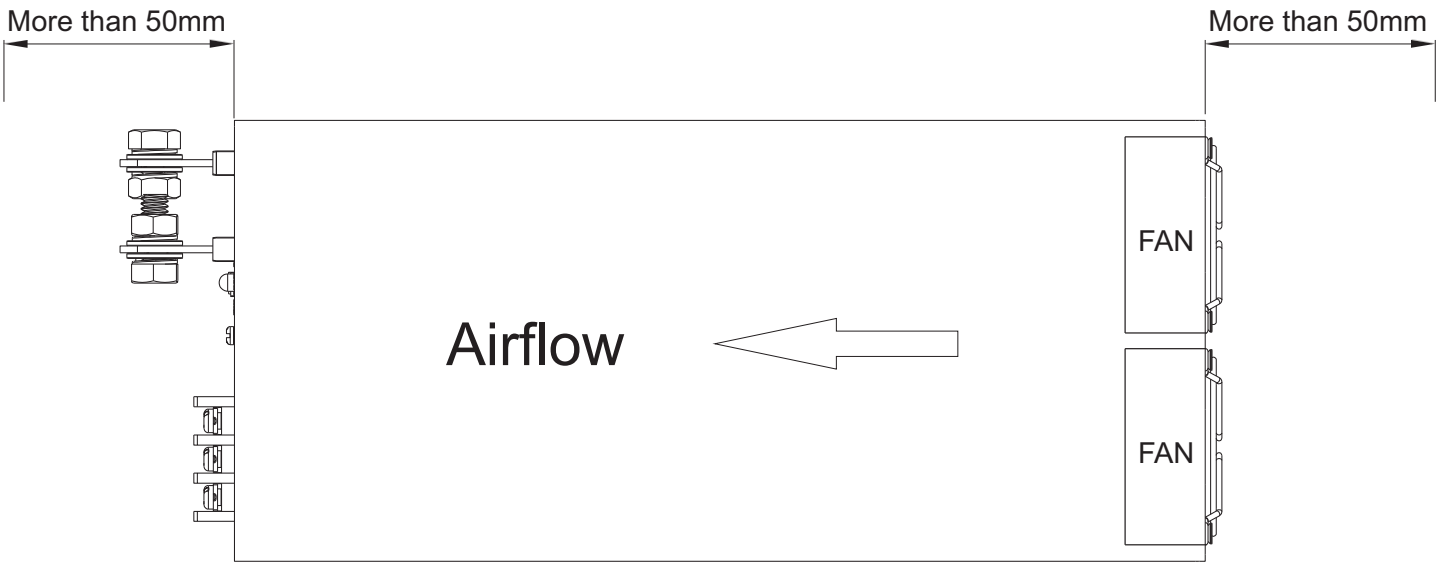


2. Mounting Method

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

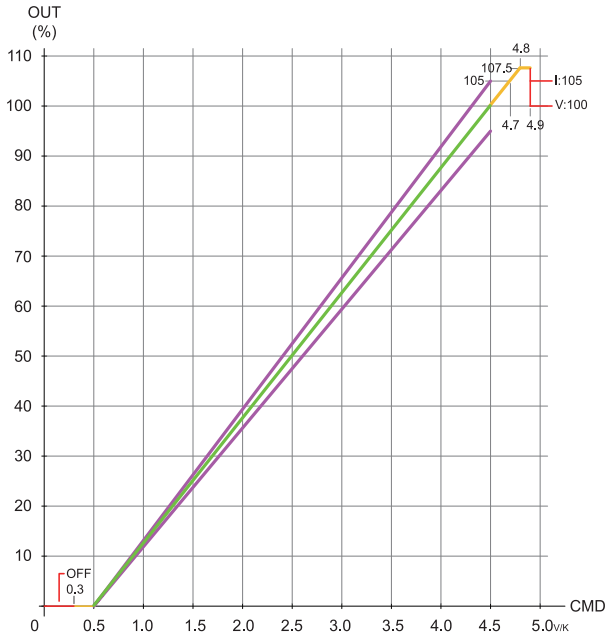
2-2 The maximum allowable penetration for the screw is 4mm. Incomplete threading should not be penetrated.

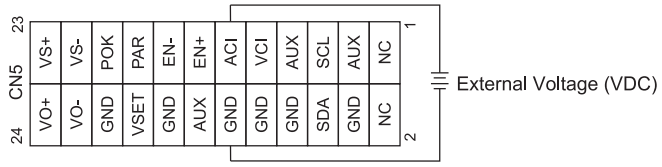
2-3 Recommended torque of mounting screw: M4 screw: 1.27N • m (13.0kgf • cm)



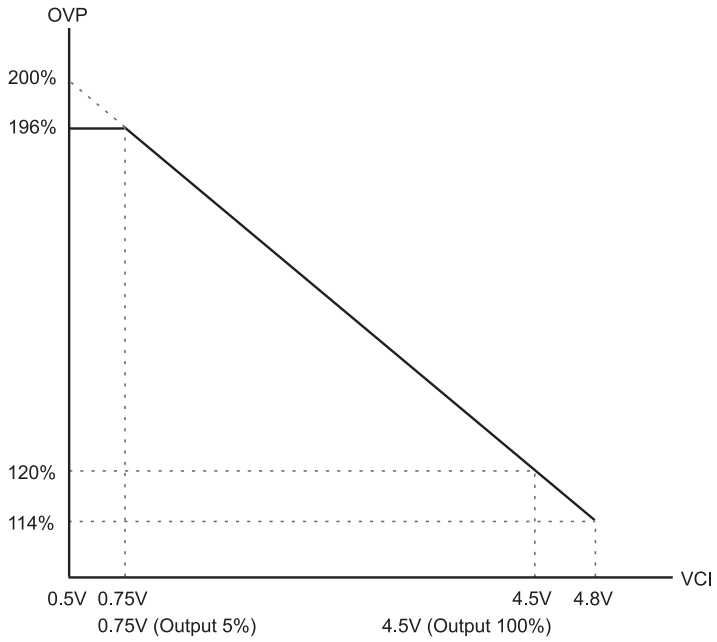
CURVES

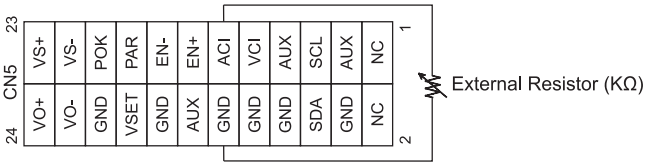
CMD vs Output Curve

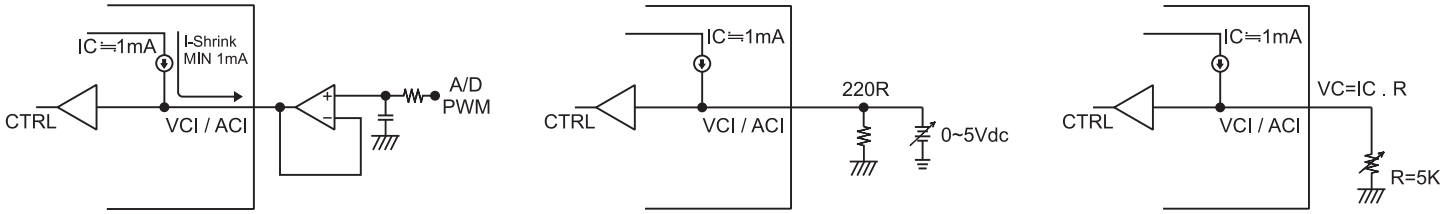




VCI vs OVP Curve







COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001-2008 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

Phone: ☎(603)778-2300
Toll Free: ☎(888)597-9255
Fax: ☎(603)778-9797
E-mail: sales@wallindustries.com
Web: www.wallindustries.com
Address: 37 Industrial Drive
Exeter, NH 03833