Size: 4.79in x 2.76in x 4.88in (121.6mm x 70mm x 124mm)

FEATURES

- Universal AC Input Range of 85~264VAC (130~350VDC)
- Built-In Active PFC
- Built-In Current Sharing Function and Current Limiting Circuit
- High Efficiency
- Supports 1+1 or N+1 Redundant System (Suggested to Use Redundancy Modules)
- Easy Fuse Tripping due to High Overload Current
- Over Load, Over Voltage, Over Temperature, and Short Circuit Protection
- 150% (720W) Peak Load Capacity
- Built-In DC OK Relay Contact
- Can be Installed on TS-35/7.5 or TS-35/15
- Suitable for Critical Applications
- 100% Full Load Burn-In Test
- UL508, UL60950, and EN60950 Safety Approvals

DESCRIPTION

The PSDG-480 series of AC/DC DIN rail offers up to 480 watts of output power (720 watts at peak load capacity) in an ultra-slim 4.79” x 2.76” x 4.88” package. This series consists of single output models with a universal input voltage range of 85~264VAC and high efficiency. Each model in this series features built-in active PFC, current sharing function, DC OK relay contact, and current limiting circuit, as well as over load, over voltage, over temperature, and short circuit protection. This series can be installed on TS-35/7.5 or TS-35/15, supports 1+1 or N+1 redundant systems, and has easy fuse tripping due to a high overload current. The PSDG-480 series has UL508, UL60950, and EN60950 safety approvals and has been 100% full load burn-in tested. Please contact factory for order details.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Current		Ripple & Noise		Voltage ADJ. Range	Output Power		Efficiency
			Min Load	Max Load	0~70ºC	-25ºC		Typical	Peak Load	
PSDG-480-24	85~264VAC (130~350VDC)	24V	0A	20A	≤240mV	≤480mV	24~48V	480W	720W	93.8%
PSDG-480-48		48V	0A	10A	≤480mV	≤480mV	48~56V	480W	720W	93.8%

SPECIFICATIONS

All specifications are based on 25°C Ambient Temp, Rated Input, and Rated Load 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 Range		85		264	VAC
		130		350	VDC
Frequency Range		47		63	Hz
AC Current	@100VAC			6.0	A
	@230VAC			3.0	
Inrush Current	@110VAC, Cold Start		<20		A
	@230VAC, Cold Start		<40		
Power Factor	@110VAC		0.99		
	@230VAC		0.95		
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy			±3.0		%
Line Regulation			±0.5		%
Load Regulation			±1.0		%
Voltage Adjustment Range	24V Model	24		28	V
	48V Model	48		56	
Output Power		See Table			
Output Current		See Table			
Ripple & Noise		See Table			
Hold Up Time	@230VAC Input, Full Load			3	S
Set-Up Time	@230VAC		≥20		mS
Overshot and Undershoot				5.0	%
Temperature Coefficient			±0.03		%/ºC

SPECIFICATIONS

All specifications are based on 25°C Ambient Temp, Rated Input, and Rated Load unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
PROTECTION					
Short Circuit Protection	Long-Term Mode	Automatic Recovery			
Over Load Protection	Constant current limiting for some time (150% of rated current, lasts 3S) then PS will stop working for 7S. After 7S, if the load is ≤ rated current, PS will work normally. Automatic recovery.	110		150	% Rated Current
Over Voltage Protection	24V Model, Constant Voltage, Automatic Recovery	28.8		33	V
	48V Model, Constant Voltage, Automatic Recovery	58		63	
Over Temperature Protection	Detect on temperature controller, shut down O/P, Automatic Recovery after temperature goes down	115±5ºC			
ENVIRONMENTAL SPECIFICATIONS					
Operating Ambient Temperature		-25		70	ºC
Storage Temperature		-40		85	ºC
Operating Humidity	Non-Condensing	20		90	%RH
Storage Humidity	Non-Condensing	5		95	%RH
MTBF	MIL-HDBK-217F, 25ºC, Full Load	300,000			Hours
GENERAL SPECIFICATIONS					
Efficiency		See Table			
Withstand Voltage	Primary to Secondary	3.0KVac, 10mA			
	Primary to PG	2.5KVac, 10mA			
	Secondary to PG	0.5KVac, 10mA			
	Output to DC OK	0.5KVac, 1mA			
Isolation Resistance			10		MΩ
Leakage Current	Input to Output Input to PG			0.25 3.5	mA
Power Boost	% of Rated Current		150		%
Parallel Function		Supported			
DC-OK	V ON	When output voltage is up to 90% of rated output voltage			
	V OFF	When output voltage is down to 80% of rated output voltage			
DC-OK Relay Contact Rating		Max 30V/1A or 60V/0.3A or 30VAC/0.3A Resistive Load			
PHYSICAL SPECIFICATIONS					
Weight		2.87lbs (1300g)			
Dimensions (L x W x H)		4.79in x 2.76in x 4.88in (121.6mm x 70mm x 124mm)			
Packing		10pcs/CTN, 13Kgs/CTN, 0.04cbm			
Cooling		Free Air Convection			
SAFETY CHARACTERISTICS					
Safety Approvals	UL508(3), UL60950(3), EN60950				
EMC Emission	EN 55022 EN55024 FCC Part 15				Class B
EMC Immunity	Compliance to EN61000-3-2				Class A
EMC Immunity	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11; Heavy Industry Level				

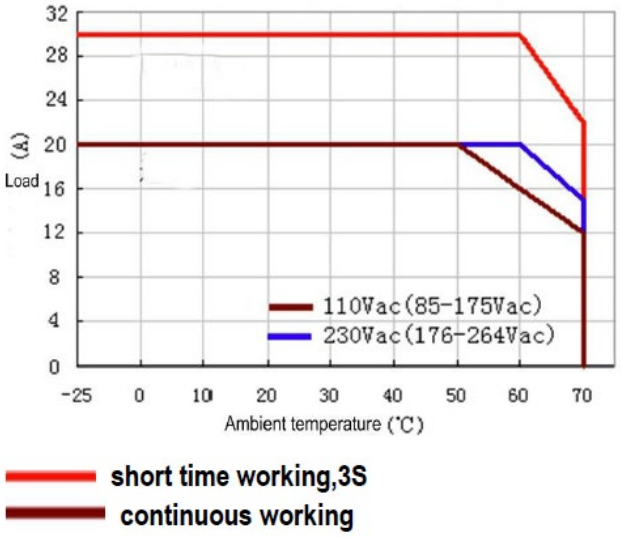
NOTES

1. Measured at 20MHz of bandwidth by using a 12” twisted pair-wire terminated with a 0.1uF & 10uF parallel capacitor.
2. This 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. Contact factory for more information.
3. This product is Listed to applicable standards and requirements by UL.

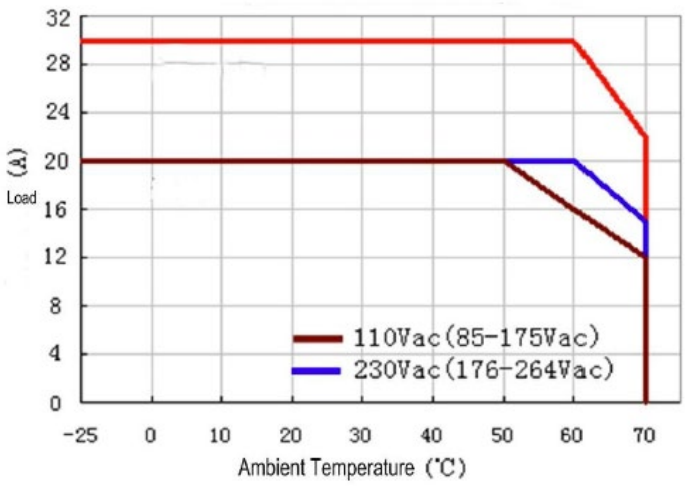
**Due to advances in technology, specifications subject to change without notice.*

DERATING CURVES

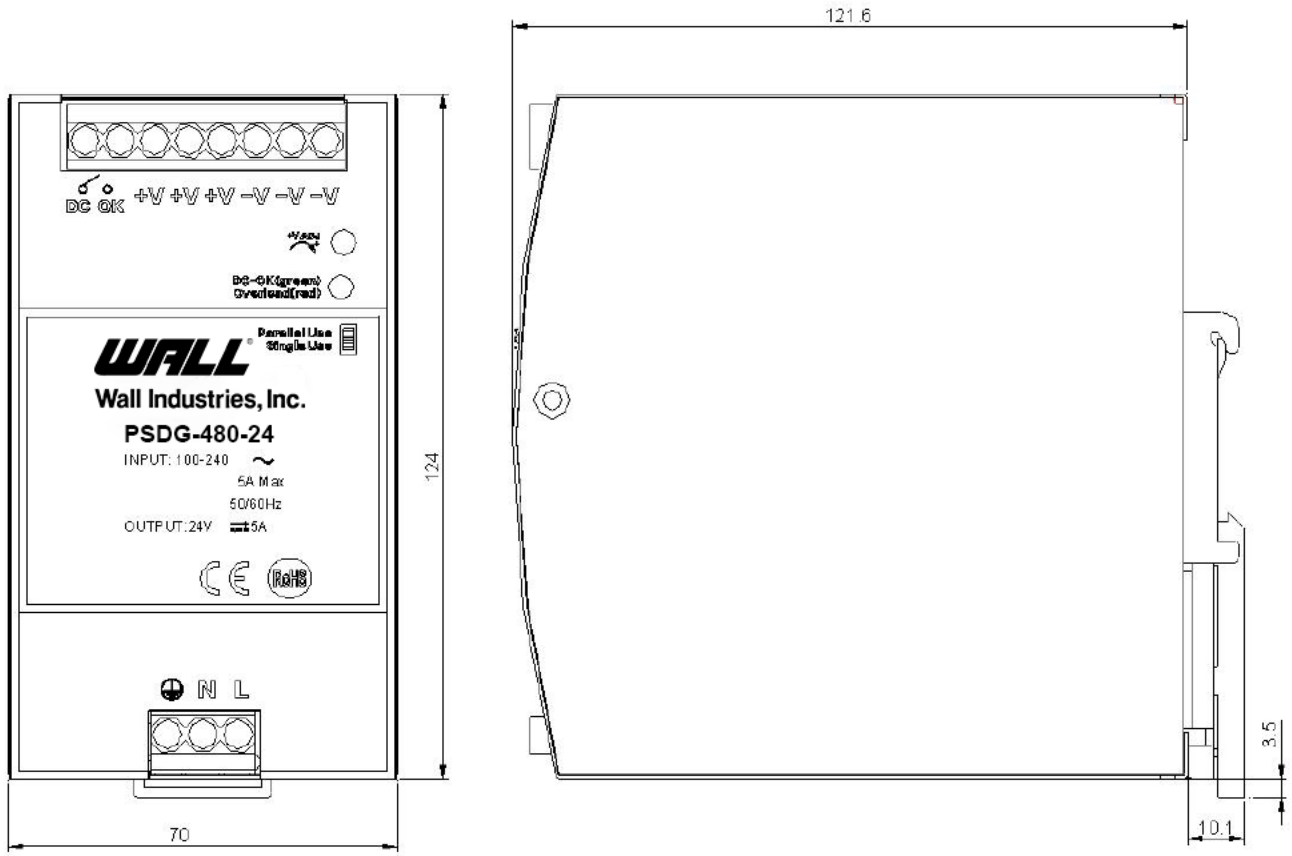
PSDG-480-24
Output Current vs. Ambient Temp.



PSDG-480-48
Output Current vs. Ambient Temp



MECHANICAL DRAWINGS



BLOCK INSTALLATION

AC Terminal Blocks Installation Information

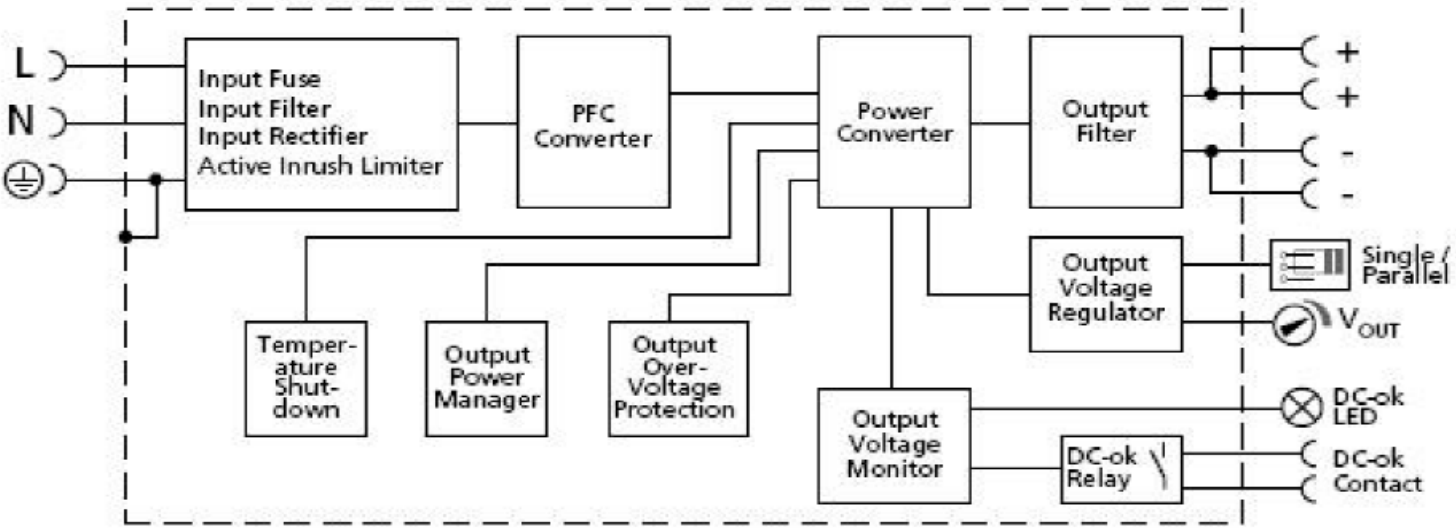
Terminal No.	Function	Specs
1	PG	6.35mm, 3pin screw terminal blocks
2	N	
3	L	

DC Terminal Blocks Installation Information

Terminal No.	Function	Specs
1	DC	6.35mm, 3pin screw terminal blocks
2	OK	
3~5	V+	
6~8	V-	

	AC/DC Terminal
Type	Screw Terminal Blocks
Solid Wire	0.5-6mm^2
Strand Wire	0.5-4mm^2
Wire Spec	AWG20-10 (PG wire>18AWG)
Max Wire Diameter	2.8mm
Recommended Stripping Length	7mm
Screwdriver	3.5mm Straight or Cross Screwdriver
Recommended Torque	1NM

BLOCK DIAGRAM

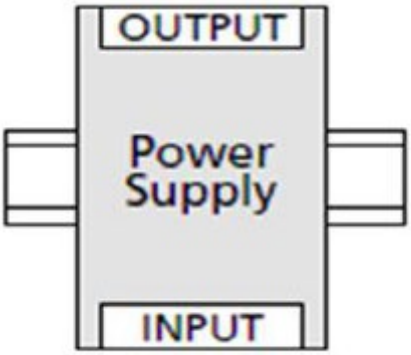


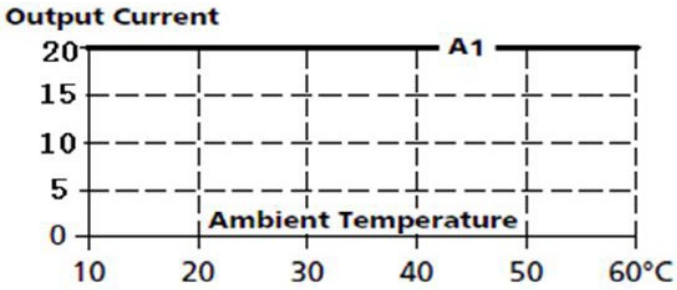
MOUNTING METHOD INSTRUCTION

A1 is recommended output current
A2 is the allowed max output current (PSU lifetime is around half of A1)
Below curves are tested under 230VAC(179~264VAC), when 110VAC input (85~175VAC), all derating points drop 10ºC

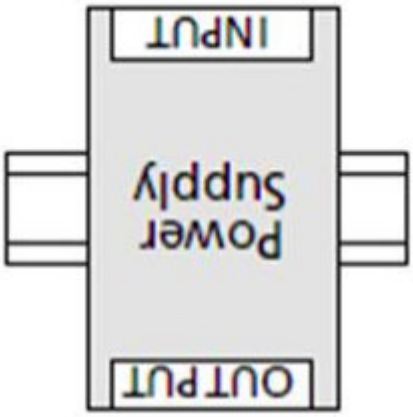
PSDG-480-24

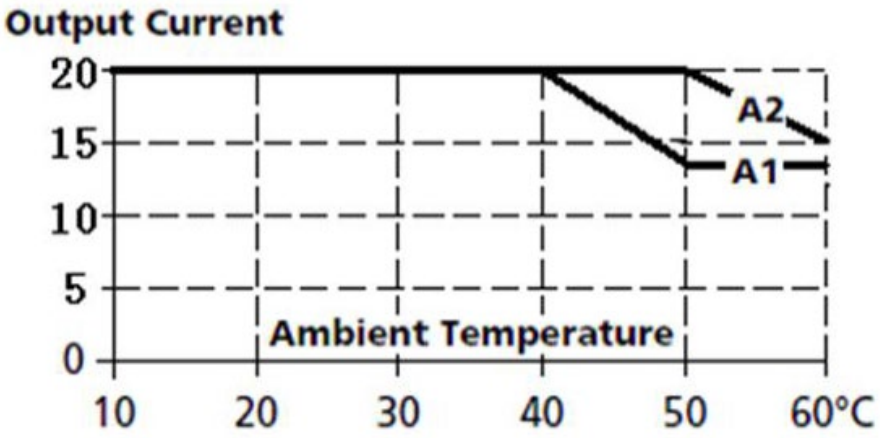
Mounting A



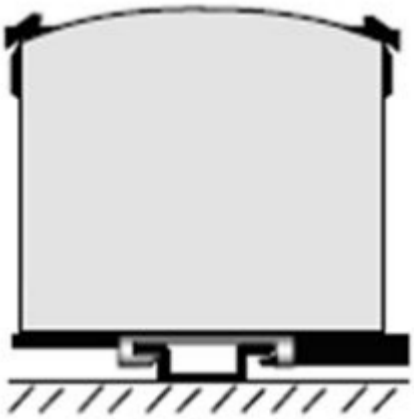


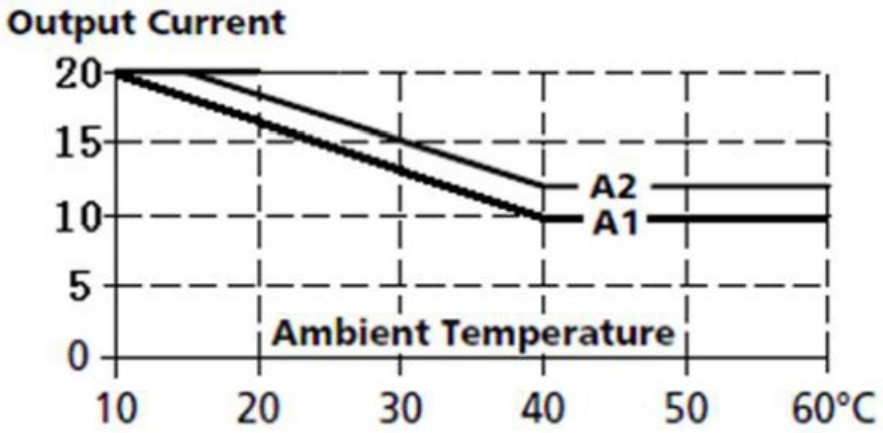
Mounting B



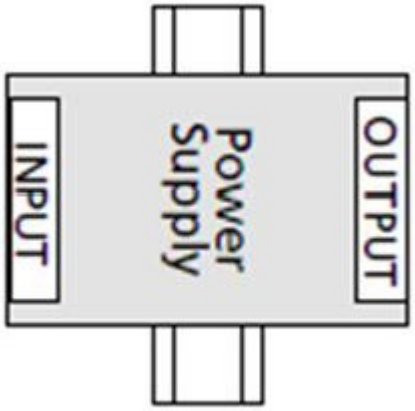


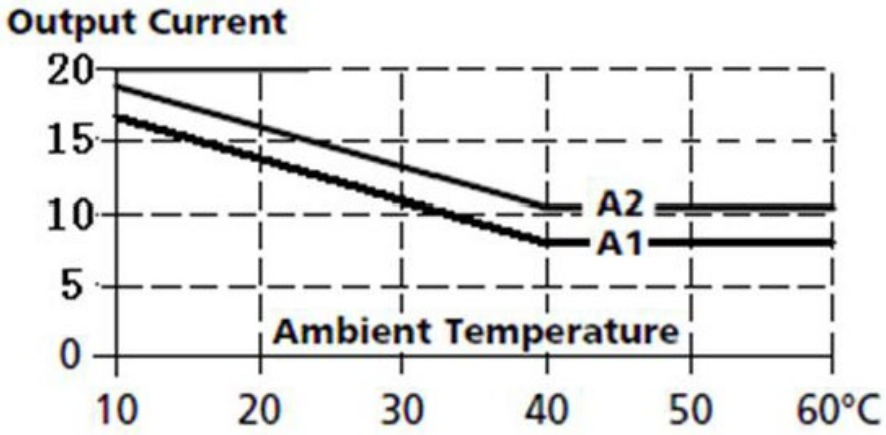
Mounting C



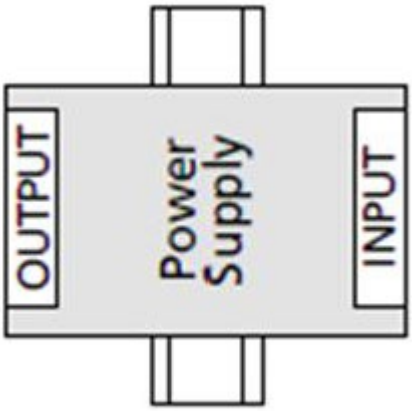


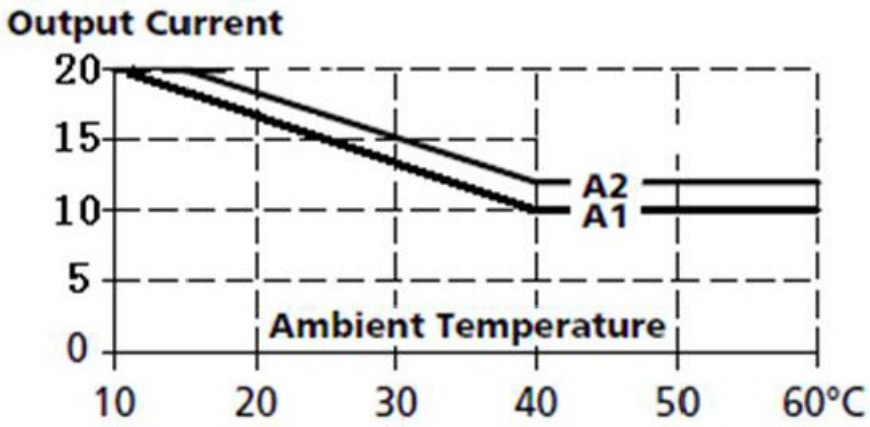
Mounting D





Mounting E





MOUNTING METHOD INSTRUCTION

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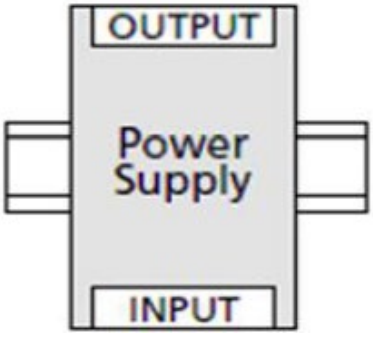
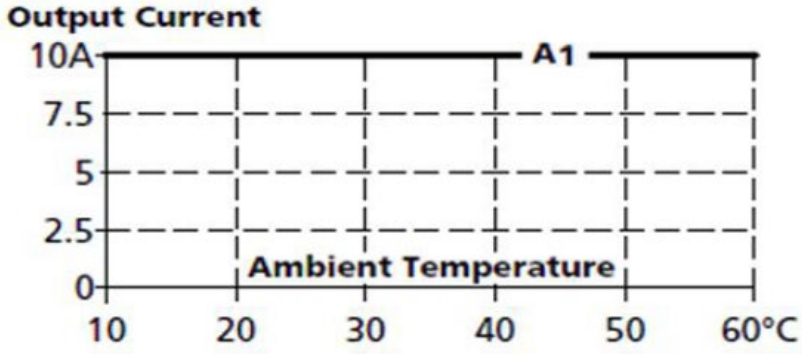
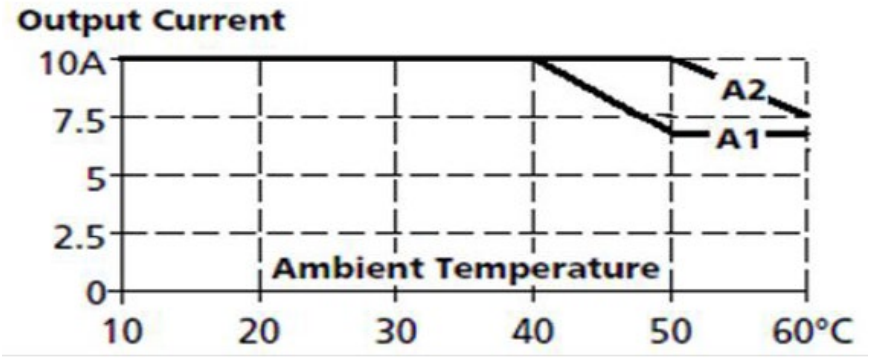
PSDG-480-48

Mounting A

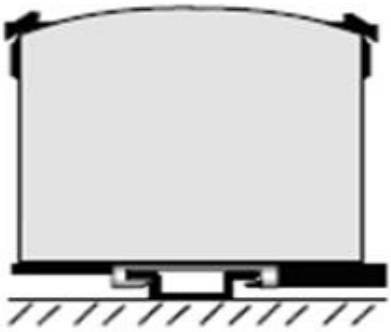


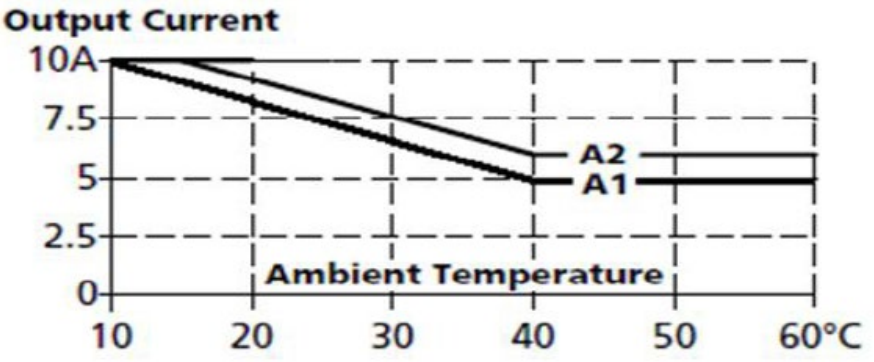


Mounting B

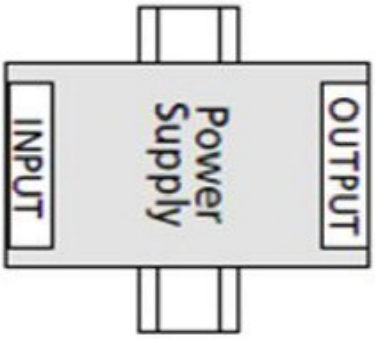


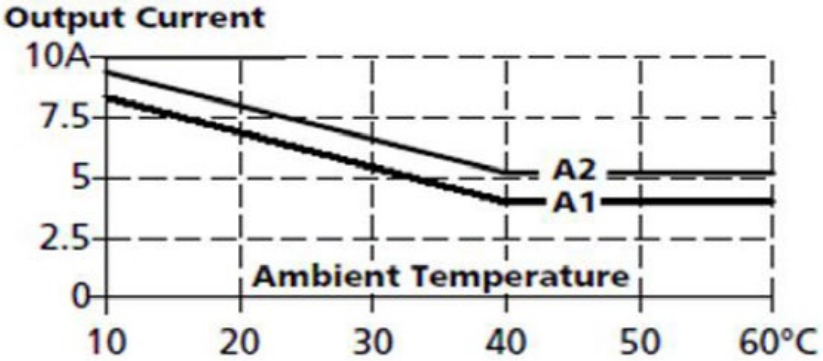
Mounting C



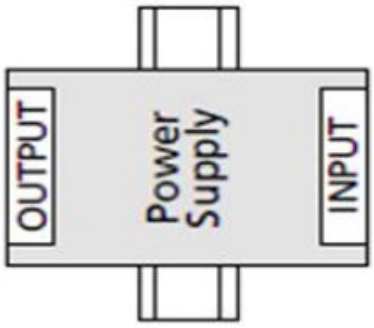


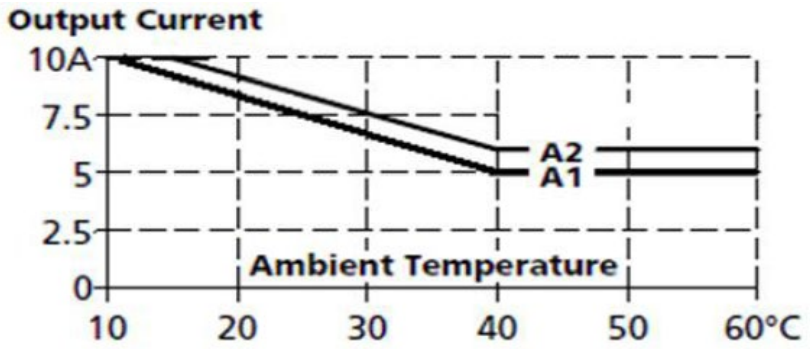
Mounting D





Mounting E





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: 2015 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:

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