SERIES: PSK-150 | **DESCRIPTION:** INTERNAL AC-DC POWER SUPPLY

FEATURES

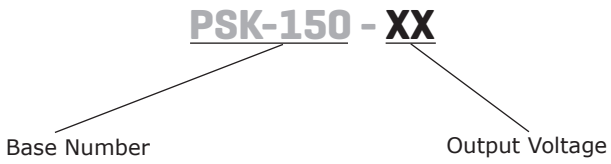
- EN 60601 3.1 certified
- 4,000 Vac isolation
- 2 MOPP
- adjustable output voltage
- power factor > 90%
- Class I or Class II



MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency[2] typ (%)
PSK-150-12	12	12.50	150	120	93.0
PSK-150-24	24	6.25	150	240	93.5
PSK-150-48	48	3.12	150	480	93.5

Note: 1. Ripple and noise are measured at 20 MHz BW with 47 uF aluminum electrolytic capacitor and 0.1 uF ceramic capacitor on the output.
2. At 230 Vac after 30 minutes of operation.

PART NUMBER KEY



Please read our datasheet & drawing disclaimer here.

INPUT

parameter	conditions/description	min	typ	max	units
voltage	(see derating curve)	90		264	Vac
frequency		47		63	Hz
current	at 115 Vac at 230 Vac			2.5 1.25	A A
inrush current	at 115 Vac at 230 Vac			45 90	A A
leakage current	at 264 Vac			0.1	mA
power factor	at 230 Vac, full load	0.9			
no load power consumption				0.5	W

OUTPUT

parameter	conditions/description	min	typ	max	units
capacitive load	12 Vdc output 24 Vdc output 48 Vdc output			6,000 2,000 330	µF µF µF
initial set point accuracy	at full load		±2		%
line regulation			±1		%
load regulation	0%~100% load		±1		%
hold-up time	at 115 Vac, 90% output		10		ms
temperature coefficient			±0.05		%/°C
adjustability			±5		%
remote ON/OFF	ON: tie pin 4 (REM) to pin 6 (-Vo) or leave floating OFF: apply +5 Vdc to pin 4 (REM) with respect to pin 6 (-Vo)				

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	auto recovery				
over current protection	auto recovery, hiccup				
short circuit protection	level 1 (nominal): continuous, auto recovery level 2 (instantaneous high current): latch				
over temperature protection	auto recovery				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output	4,000 5,656			Vac Vdc
	input to PE ground	2,000 2,828			Vac Vdc
	output to PE ground	1,500 2,121			Vac Vdc
safety approvals	certified to 60601: IEC/EN/UL				
safety class	Class I (with PE) and Class II (without PE)				
conducted emission	EN 55011 Class B				
radiated emissions	EN 55011 Class I Class B / Class II Class A				
ESD	IEC/EN61000-4-2				
radiated immunity	IEC/EN61000-4-3				
EFT/burst	IEC/EN61000-4-4				
surge	IEC/EN61000-4-5				

SAFETY & COMPLIANCE (CONTINUED)

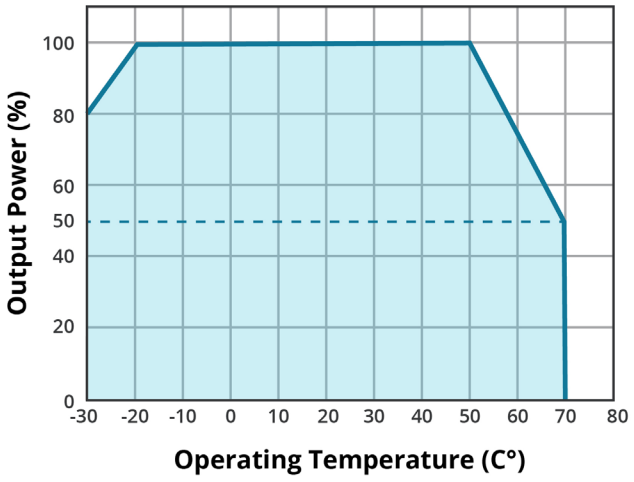
conducted immunity	IEC/EN61000-4-6				
voltage dips and interruption	IEC/EN61000-4-11				
MTBF	per MIL-HDBK-217F at 25 °C		250,000		hours
RoHS	yes				

ENVIRONMENTAL

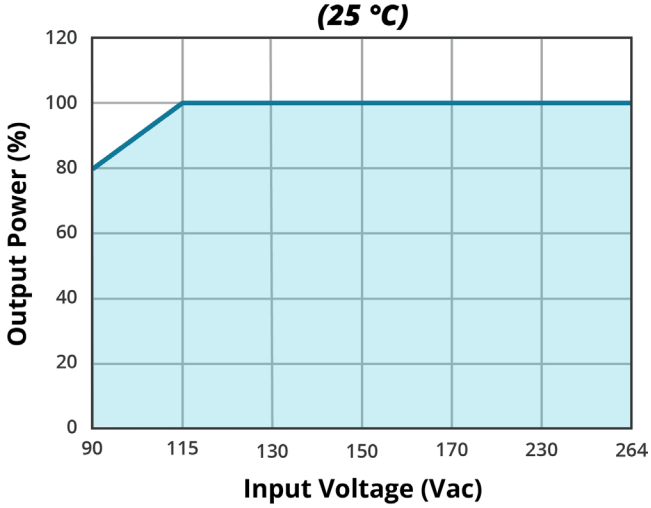
parameter	conditions/description	min	typ	max	units
operating temperature	(see derating curve)	-30		70	°C
storage temperature		-30		85	°C
storage humidity		0		95	%

DERATING CURVES

TEMPERATURE DERATING CURVE



INPUT VOLTAGE DERATING CURVE (25 °C)



MECHANICAL

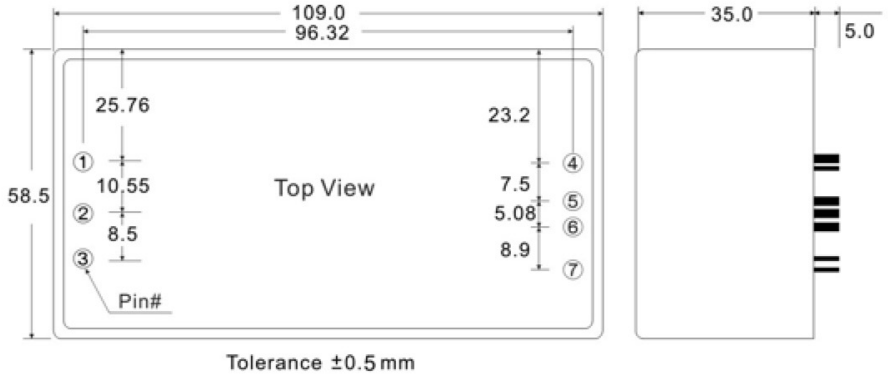
parameter	conditions/description	min	typ	max	units
dimensions	109.0 x 58.5 x 35.0				mm
weight			365		g
cooling	natural convection				

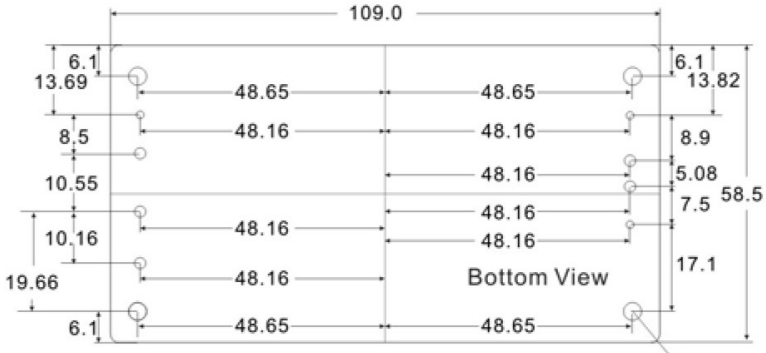
MECHANICAL DRAWING

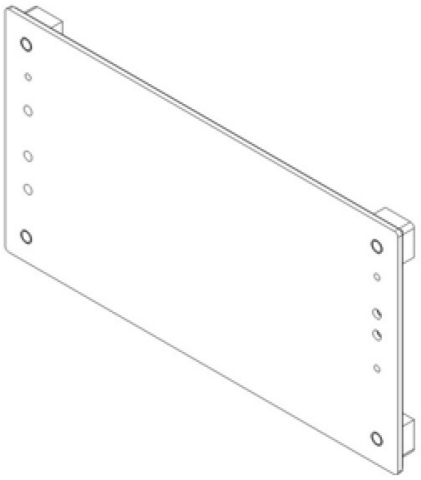
units: mm
general tolerance: ±0.5

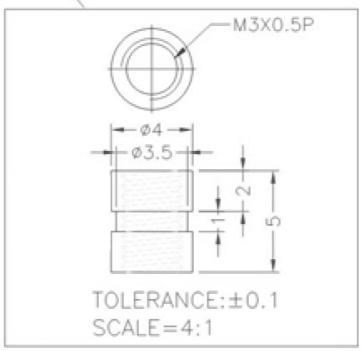
PIN CONNECTIONS	
PIN	Function
1	AC (N)
2	AC (L)
3	⏚
4	ON/OFF
5	+Vo
6	-Vo
7	Trim

Note: If the Remote ON/OFF function (pin 4) is not required, tie directly to -Vo (pin 6) or leave floating/open.



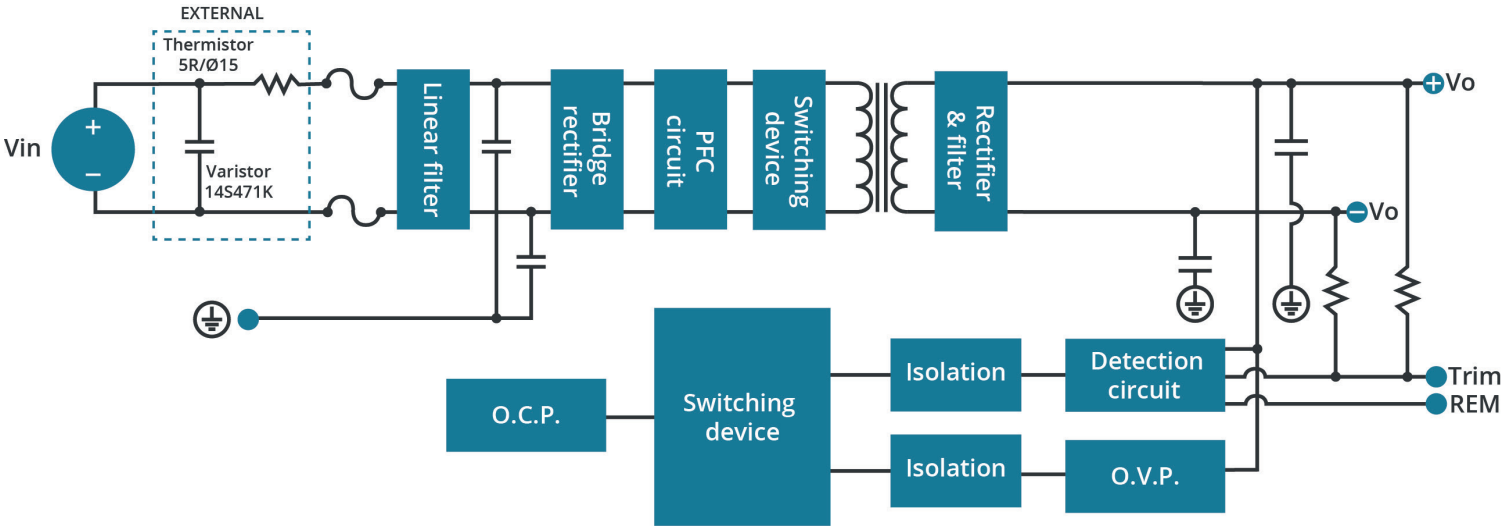






BLOCK DIAGRAM

Figure 1

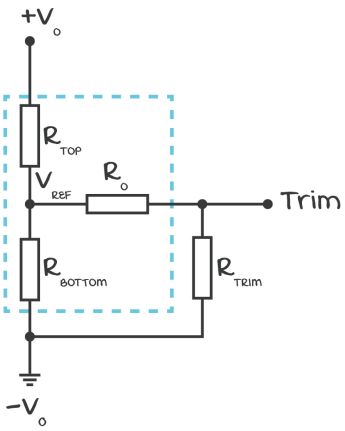


APPLICATION NOTES

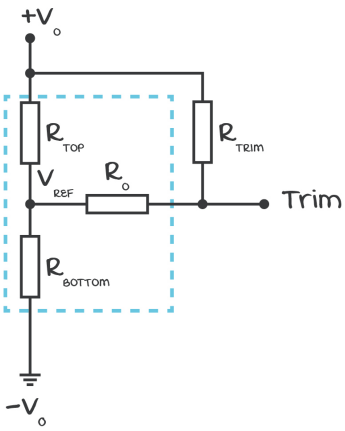
Table 1

Part no.	Trim^{Up}	-Vo	Trim^{Down}	+Vo
PSK-150-12	5% / 0%	34KΩ ~ 10MΩ	0% / -5%	10MΩ ~ 106KΩ
PSK-150-24	5% / 0%	37.4KΩ ~ 10MΩ	0% / -5%	10MΩ ~ 270KΩ
PSK-150-48	5% / 0%	38KΩ ~ 10MΩ	0% / -5%	10MΩ ~ 640KΩ

Trim up



Trim down



REVISION HISTORY

rev.	description	date
1.0	initial release	12/17/2021
1.01	adjustability updated, medical icon added	04/07/2022
1.02	mechanical drawing updated	07/18/2022

The revision history provided is for informational purposes only and is believed to be accurate.

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