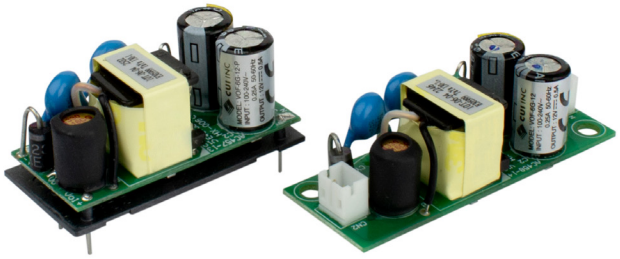
SERIES: VOF-6G | **DESCRIPTION:** INTERNAL AC-DC POWER SUPPLY

FEATURES

- universal input 90 ~ 264 Vac
- high efficiency up to 83%
- compact size (1.56 x 0.76 inch)
- low no load power consumption (<0.075 W)
- certified to IEC/EN/UL 62368-1
- designed to meet IEC/EN 60335-1
- operating temperature -40 ~ 80°C (with derating)
- class II
- over voltage (OVC II & OVC III) and short-circuit protection
- operating altitude 5,000 m
- CISPR/FCC Class B

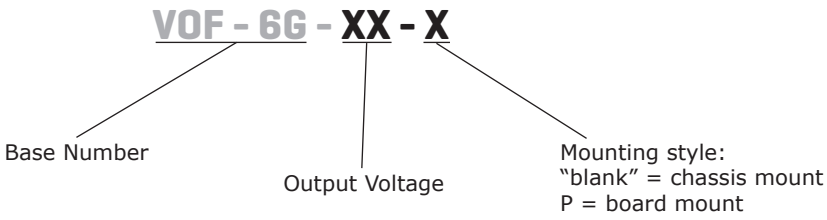


MODEL

MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] max (mVp-p)	efficiency[2] typ (%)
VOF-6G-3	3.3	1.50	4.95	100	75
VOF-6G-5	5	1.20	6.0	100	78
VOF-6G-9	9	0.67	6.0	100	81
VOF-6G-12	12	0.50	6.0	120	81
VOF-6G-15	15	0.40	6.0	150	81
VOF-6G-24	24	0.25	6.0	240	83

Notes: 1. Ripple & noise are measured at 20 MHz BW with 0.1 µF ceramic capacitor and a 10 µF electrolytic capacitor
2. Typical efficiency at 230 Vac and full load at 25°C.
3. Unless otherwise specified, all indicators in this manual are measured at Ta=25 °C, humidity<75% RH, nominal input voltage, and output rated load.

PART NUMBER KEY



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INPUT

parameter	conditions/description	min	typ	max	units
voltage[4]	ac input dc input	90 120	100~240	264 370	Vac Vdc
frequency		47	50~60	63	Hz
current	at full load, 100 Vac			0.25	A
inrush current	at 240 Vac, cold start at 25°C			90	A
leakage current				0.25	mA
no load power consumption				0.075	W

Notes: 4. The safety approvals only apply to the ac input.

OUTPUT

parameter	conditions/description	min	typ	max	units
capacitive load	3.3 Vdc output model 5 Vdc output model 9 Vdc output model 12 Vdc output model 15 Vdc output model 24 Vdc output model			1,500 1,200 670 500 400 250	µF µF µF µF µF µF
output voltage accuracy	3.3 Vdc output model 5 & 9 Vdc output model 12, 15 & 24 Vdc output model			±6 ±5 ±3	% % %
line regulation	low line to high line			±1	%
load regulation	10% ~ 100% load 3.3 Vdc output model 5 & 9 Vdc output model 12, 15 & 24 Vdc output model			 ±6 ±5 ±3	 % % %
hold-up time	at 115 Vac		12		ms
switching frequency		30		70	kHz

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over current protection	auto recovery, hiccup	110		200	%
over voltage protection	auto recovery, hiccup 3.3 & 5 Vdc output model 9 Vdc output model 12 Vdc output model 15 Vdc output model 24 Vdc output model	 6.45 10.5 14.3 17.1 28.5		 7.14 12.1 15.8 19.5 31.5	 Vdc Vdc Vdc Vdc Vdc
short circuit protection	auto recovery				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, for 1 minute			4,300	Vac
safety approvals	certified to 62368-1: IEC, EN, UL designed to meet 60335-1: IEC, EN				
safety class[5]	Class II (to be determined at end product), IEC/EN/UL 62368-1				
EMC emmision	EN 55032:2015+A1:2020, EN 55032:2015+A11:2020 EN 61000-6-3:2021, Class B				
conducted disturbance	EN 55032:2015+A1:2020, EN 55032:2015+A11:2020 EN 61000-6-3:2021, Class B				
radiated disturbances	EN 55032:2015+A1:2020, EN 55032:2015+A11:2020 EN 61000-6-3:2021, Class B				
harmonic current emissions	EN 61000-3-2:2019+A1:2021				

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SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
voltage fluctuations & flicker	EN 61000-3-3:2013+A2:2021				
EMC immunity	EN 55035:2017+A11:2020, EN 61000-6-1:2019, EN 61000-6-2:2019, IEC 61000-4-2,3,4,5,6,11				
ESD	IEC 61000-4-2:2008, Air Discharge: ±8 kV, Contact Discharge: ±4 kV, perf. Criteria A				
radiated immunity	IEC 61000-4-3:2020, perf. Criteria A				
EFT/burst	IEC 61000-4-4:2012, ±1.0 kV, ±2 kV, perf. Criteria A				
surge	IEC 61000-4-5:2014+A1:2017, L-N: ±0.5 kV, ±1 kV, perf. Criteria A				
conducted disturbance	IEC 61000-4-6:2013+COR1:2015, perf. Criteria A				
voltage dips	IEC 61000-4-11:2020, Dip: 30% Reduction, Dip >95% Reduction, perf. Criteria A				
voltage interruptions	IEC 61000-4-11:2020, >95% Reduction, perf. Criteria B				
MTBF	MIL-HDBK-217F at 25°C			1,120,000	hours
RoHS	yes				

Notes: 5. The UL 623681-1 standard is Ed. 2.0.

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature		-40		80	°C
storage temperature		-40		85	°C
storage humidity	non-condensing	0		93	%
operating altitude	IEC/EN/UL 62368-1 OVC II IEC 62368-1 OVC III			5,000 2,000	m m

MECHANICAL

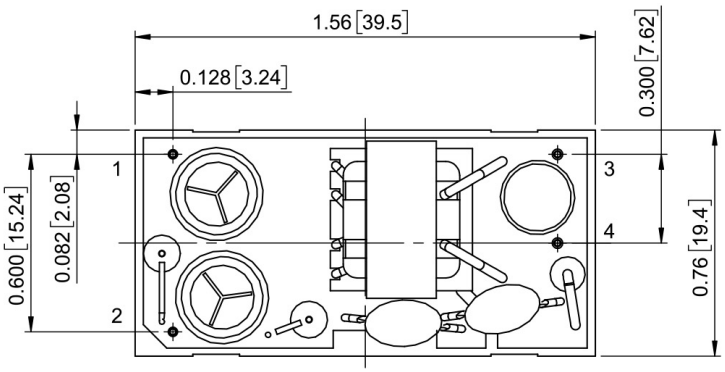
parameter	conditions/description	min	typ	max	units
dimensions	board mount: 1.56 x 0.76 x 0.72 [39.5 x 19.4 x 18.3 mm] chassis mount: 1.95 x 0.73 x 0.689 [49.5 x 18.5 x 17.50 mm]				inch inch
weight	board mount chassis mount		11 12		g g

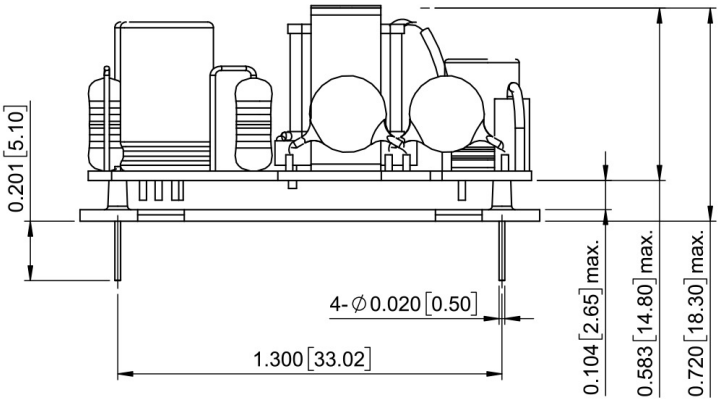
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MECHANICAL DRAWING

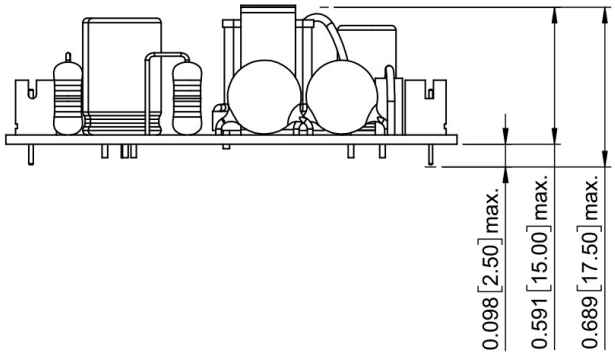
Board mount
units: inch [mm]
tolerance: inch: x.xx=±0.03, x.xxx=±0.020
mm: x.x=±0.7, x.xx=±0.50

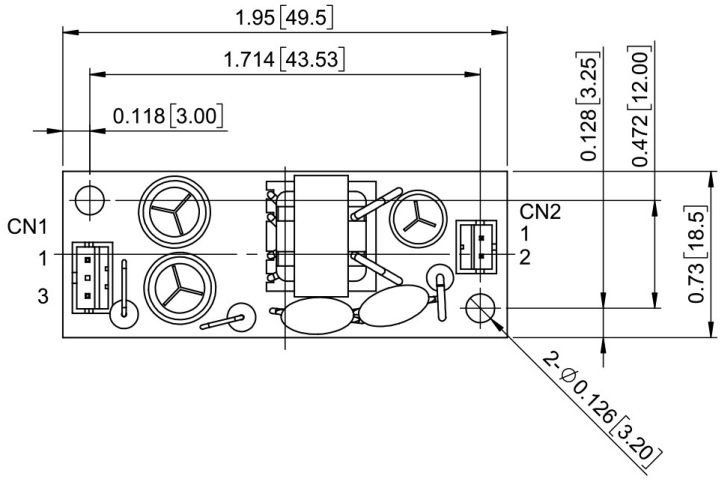
PIN CONNECTIONS	
PIN	Function
1	AC(N)
2	AC(L)
3	+Vo
4	-Vo





Chassis mount
units: inch [mm]
tolerance: inch: x.xx=±0.03, x.xxx=±0.020
mm: x.x=±0.7, x.xx=±0.50





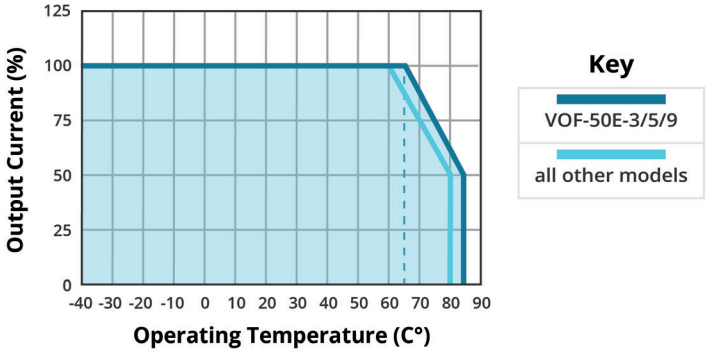
AC Input Connector (CN1): JST B3B-PH-K-S(LF)(SN) or equivalent			
PIN CONNECTIONS		Mating Housing	Terminal
PIN	Function		
1	AC(N)	TKP PHR-3 or equivalent	TKP SPH-002T-P0.5L or equivalent
2	-		
3	AC(L)		

DC Output Connector (CN2): JST B2B-PH-K-S(LF)(SN) or equivalent			
PIN CONNECTIONS		Mating Housing	Terminal
PIN	Function		
1	+Vo	TKP PHR-2 or equivalent	TKP SPH-002T-P0.5L or equivalent
2	-Vo		

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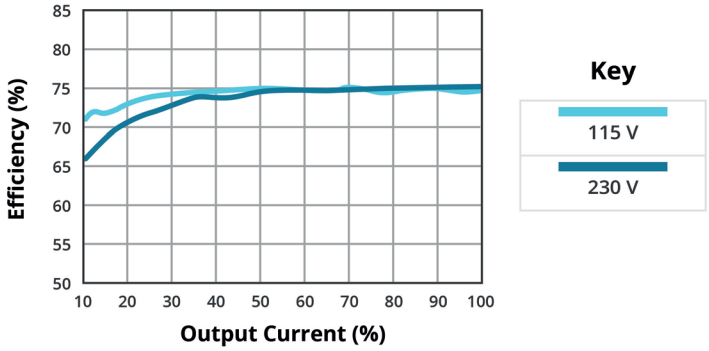
DERATING CURVE

TEMPERATURE DERATING CURVE (natural convection)

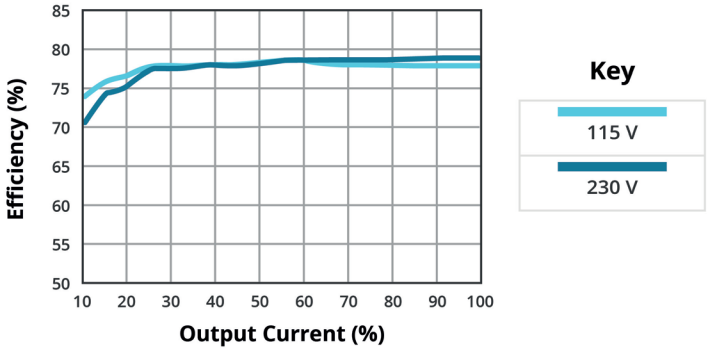


EFFICIENCY CURVES

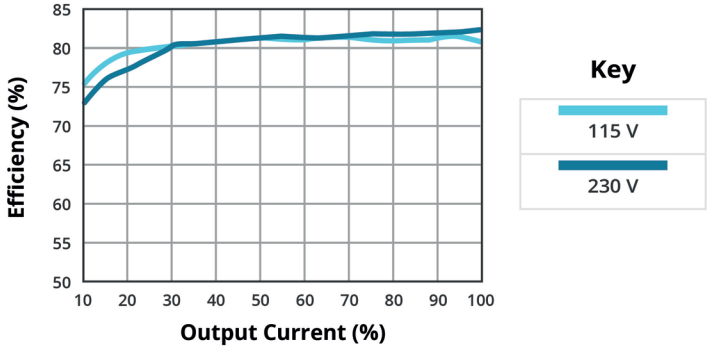
EFFICIENCY VS OUTPUT LOAD (VOF-6G-3)



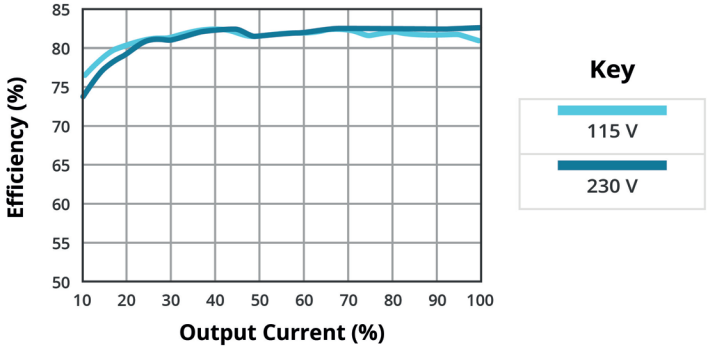
EFFICIENCY VS OUTPUT LOAD (VOF-6G-5)



EFFICIENCY VS OUTPUT LOAD (VOF-6G-9)

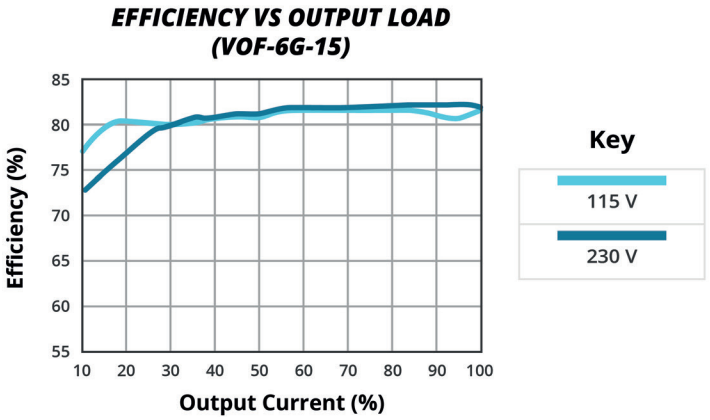


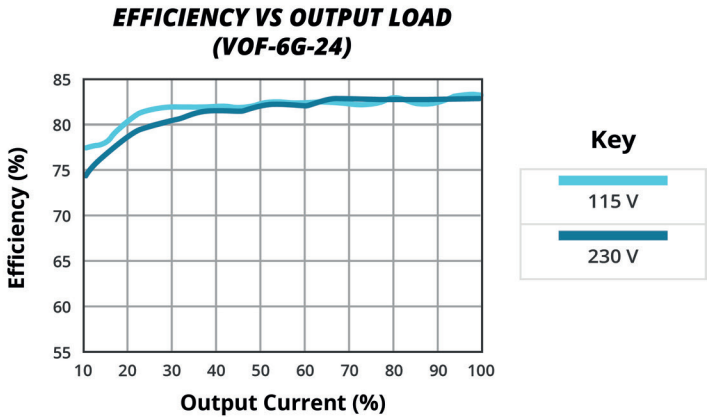
EFFICIENCY VS OUTPUT LOAD (VOF-6G-12)



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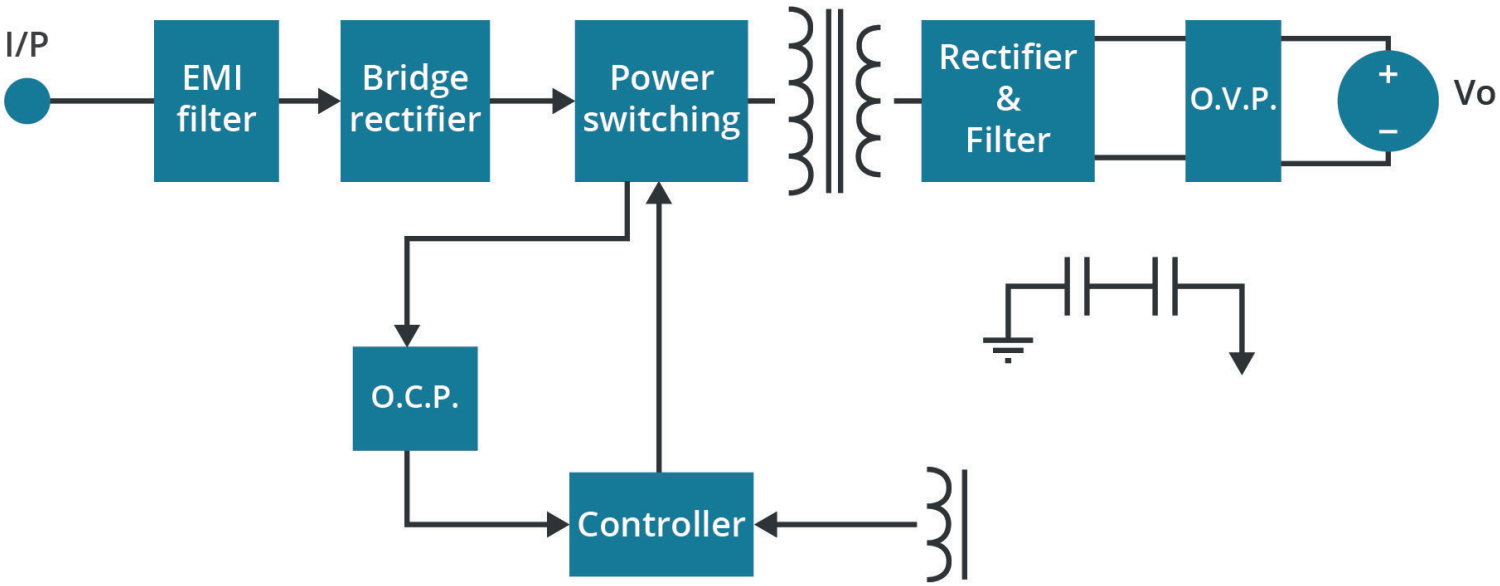
EFFICIENCY CURVES (CONTINUED)





ELECTRICAL BLOCK DIAGRAM

Figure 1



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REVISION HISTORY

rev.	description	date
1.0	initial release	07/22/2025
1.01	dimensions corrected	10/10/2025

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

CUI INC
a bel group

15575 SW Sequoia Pkwy #100
Portland, OR 97224
800.275.4899

Fax 503.612.2383
Belfuse.com
powersupport@belf.com

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SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
voltage fluctuations & flicker	EN 61000-3-3:2013+A2:2021				
EMC immunity	EN 55035:2017+A11:2020, EN 61000-6-1:2019, EN 61000-6-2:2019, IEC 61000-4-2,3,4,5,6,11				
ESD	IEC 61000-4-2:2008, Air Discharge: ±8 kV, Contact Discharge: ±4 kV, perf. Criteria A				
EFT/burst	IEC 61000-4-4:2012, ±1.0 kV, ±2 kV, perf. Criteria A				
surge	IEC 61000-4-5:2014+A1:2017, L-N: ±0.5 kV, ±1 kV, perf. Criteria A				
conducted disturbance	IEC 61000-4-6:2013+COR1:2015, perf. Criteria A				
voltage dips	IEC 61000-4-11:2020, Dip: 30% Reduction, Dip >95% Reduction, perf. Criteria A				
voltage interruptions	IEC 61000-4-11:2020, >95% Reduction, perf. Criteria B				
MTBF	MIL-HDBK-217F at 25°C			1,120,000	hours
RoHS	yes				

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature		-40		80	°C
storage temperature		-40		85	°C
storage humidity	non-condensing	0		93	%
operating altitude	IEC/EN/UL 62368-1 OVC II			5,000	m

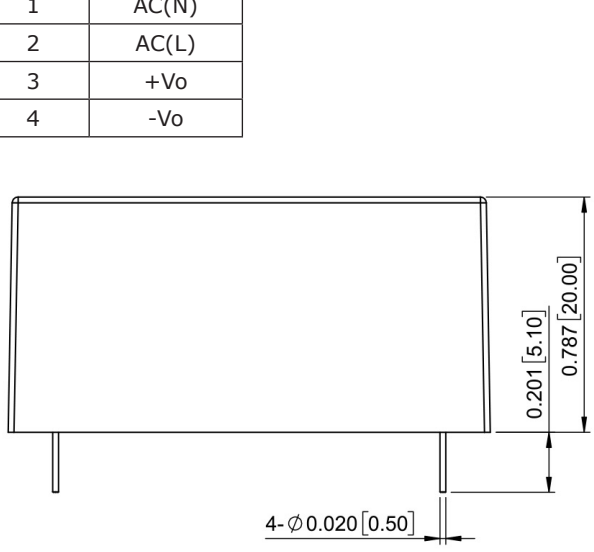
MECHANICAL

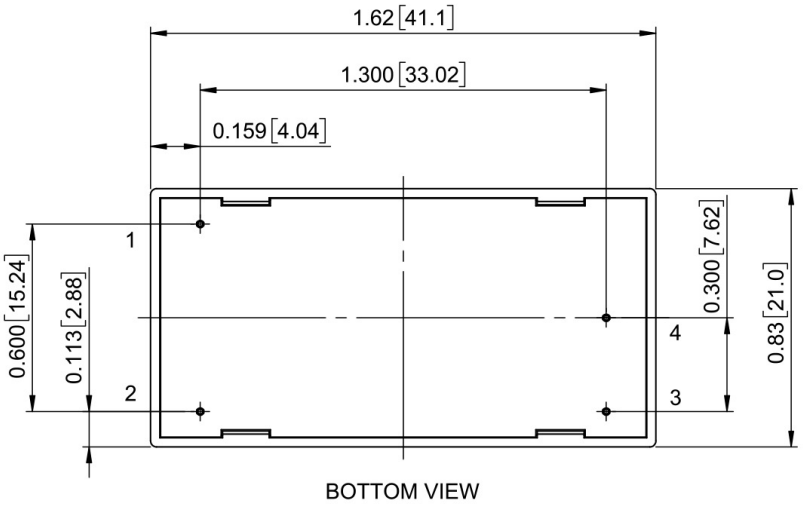
parameter	conditions/description	min	typ	max	units
dimensions	1.620 x 0.830 x 0.787 [41.1x21.0x20.00 mm]				inch
weight			30		g

MECHANICAL DRAWING

units: inch [mm]
tolerance: inch: x.xx=±0.03, x.xxx=±0.020
mm: x.x=±0.7, x.xx=±0.50

PIN CONNECTIONS	
PIN	Function
1	AC(N)
2	AC(L)
3	+Vo
4	-Vo





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