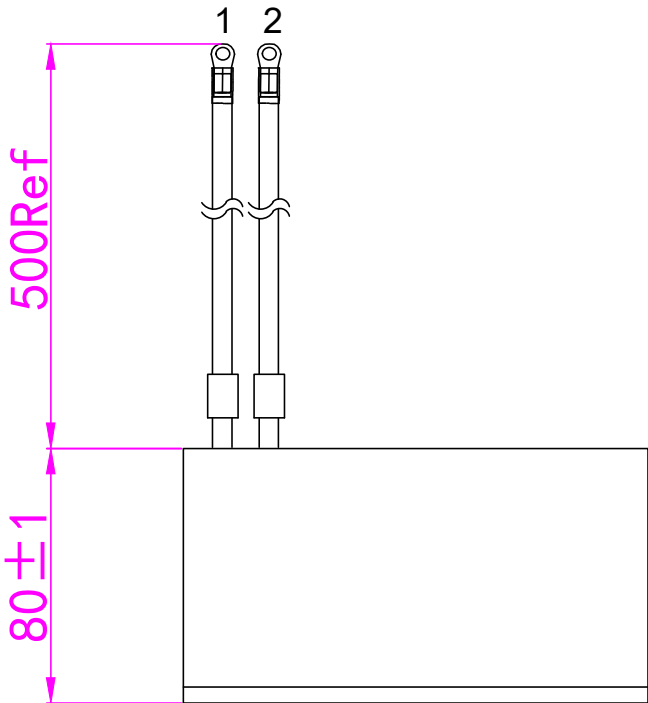


600uH 80Arms Inductor / TL42014R

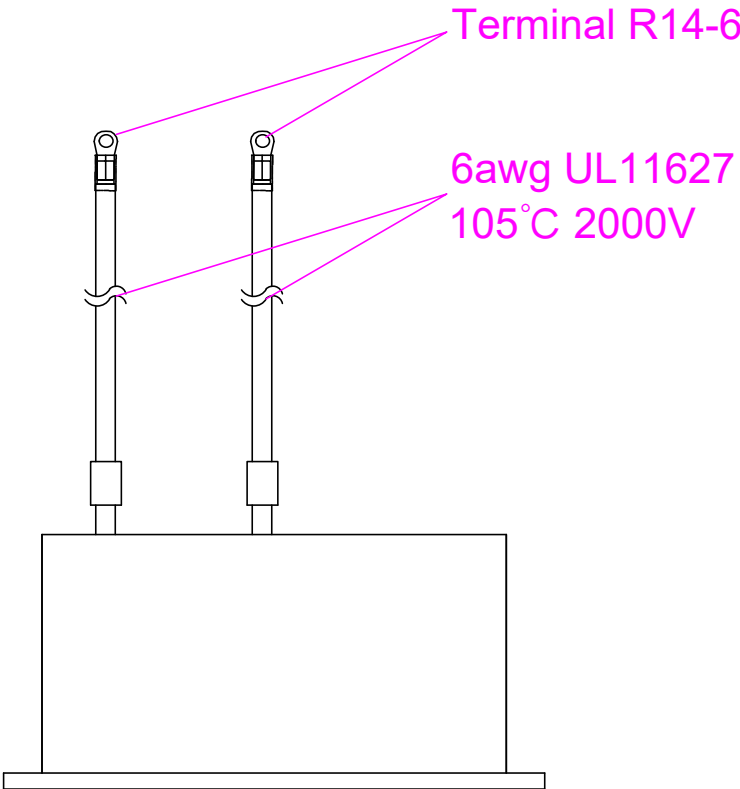


REV	DESCRIPTION	DATE	APPROVED
00	First Release	2023-07-12	Musk
01	Update rated current from 70A to 80A	2023-09-11	Musk

Outline Dimensions(Unit:mm)

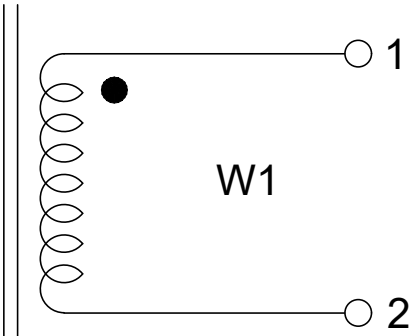


Front View

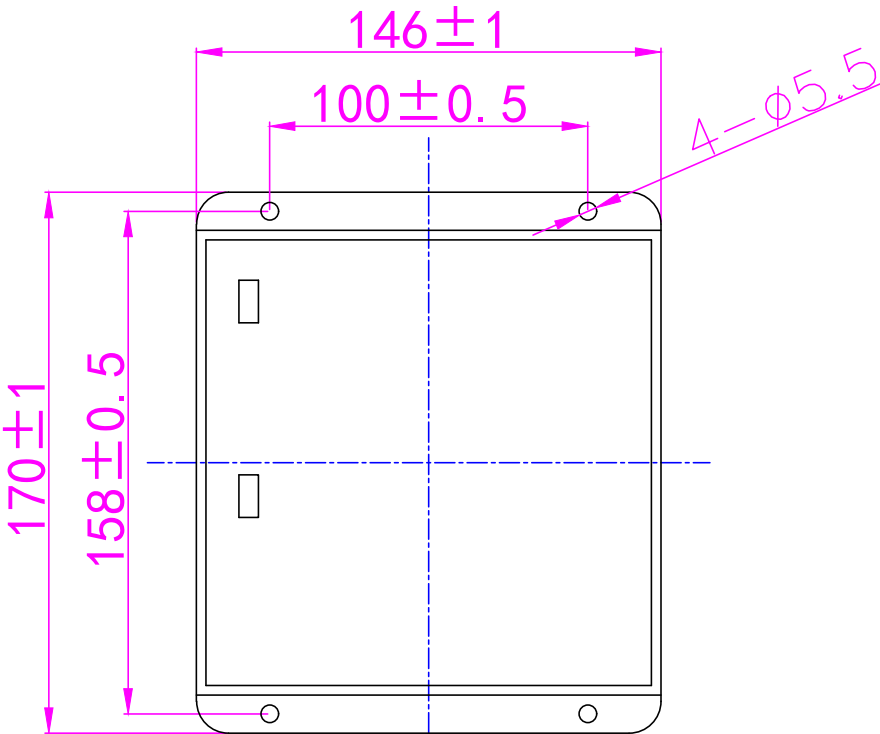


Side View

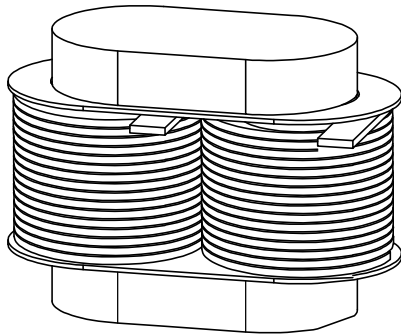
Electronical Schematic:



● Phase



Top View



Internal inductor

Construction:

Constructed with UL rated 130°C (Class B) materials.

 Tolerances unless otherwise specified: (.X)±0.50 (.XX±0.25)	Inductor	
	POWEL P/N	TL42014R
	Customer P/N	

600uH 80Arms Inductor / TL42014R



REV	DESCRIPTION	DATE	APPROVED
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Electrical Characteristics:

No.	Item	Terminal	Technical Data	Test Condition & Instrument
1	Rated current	/	80A	GwInstek APS-7200/7300 HIOKI 3332 FLUKE 106 @ 25°C
2	Peak current	/	115A	
3	Frequency	/	0.9~2.2kHz	
4	Rated Inductance	1-2	700uH±12%	TH2832, 1.8kHz 0.25V 0Adc @ 25°C
			630uH Min	DPG10, 80Adc @ 25°C
			530uH Min	DPG10, 115Adc @ 25°C
5	D.C. Resistance	1-2	15.0 mΩ max	TH2516 @ 25°C
6	Layer Insulation	1-2	No abnormality	TH2882A-5, 2200V @ 25°C
7	Hi-Pot	Wdg - Case Wdg - Core	5mA max	TH9320, 2200VAC 50Hz 60S @ 25°C
8	Total loss	about 60W		
9	Approximate weight	about 8kg		

Winding step:

WDG	Terminal	Wire Gauge	Turns	Tape	Tube	Remarks
W1	1-2	2.0mm*10.0mm SFT-AIW	74 Ref	/	/	Tight winding

List of main material:

No.	Part name	Description	Supplier(or equivalent)	UL Number
1	Core	PHD-026	POCO / RED /CSC	N/A
2	Copper wire	SFT-AIW	WELL ASCENT ELECTRONIC (GANZHOU) CO LTD	E318511
3	Cable wire	UL11627 Awg6	3Q WIRE & CABLE CO LTD	E341104
4	Insulation paper	DMD t0.24	SUI ON INSULATING MATERIALS CO LTD	E230926
5	Base	FR-4	KINGBOARD LAMINATES HOLDINGS LTD	E123995
6	Terminal	R14-6	K.S.TERMINALS INC	N/A
7	Tubing	CB-HTF, CB-SRS	CHANGYUAN ELECTRONICS GROUP CO LTD	E180908
8	Varnish	T-4260(a)	SUI ON INSULATING MATERIALS CO LTD	E228349
9	Potting glue	JD-605	DONGGUAN CITY JIA DI NEW MATERIALS CO LTD	E485392
10	Aluminum case	AL5052	/	N/A

 TOLERANCES UNLESS OTHERWISE SPECIFIED: (.X)±0.50 (.XX±0.25)	Inductor	
	POWEL P/N	TL42014R
	Customer P/N	