

KEEN OCEAN INDUSTRIAL LTD.

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84-92 Chai Wan Kok Street, Tsuen Wan, N.T., Hong Kong

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SPECIFICATION FOR APPROVAL

CUSTOMER : GALLIEN TECHNOLOGY
PRODUCT : TOROIDAL TRANSFORMER
DESCRIPTION : I/P: AC 120V 60Hz
OUR MODEL : TTO-17005-00
CUSTOMER MODEL : 080-0004-B

Keen Ocean Engineering Department

Date of Issue : 27-MAY-2008

Drawn by :

Checked by :

Approved by :

HX

MAY.27,2008

LIU

MAY.27,2008

ZSH

MAY.27,2008

Please kindly sign back for approval.

Accepted by Customer :

Signed and chopped



KEEN OCEAN INDUSTRIAL LTD.

ELECTRICAL PROPERTIES				
OUR MODEL : TTO-17005-00 CUST. MODEL : 080-0004-B STANDARD : **** WEIGHT : 4.2 KGS				
PRIMARY	NO.	TAP.NO.	VOLTAGE	EXCITING CURRENT OPEN CIRCUIT
	P	1-2	AC 120V 60Hz	95 mA MAX
SECONDARY	NO.	TAP.NO.	OPEN CIRCUIT	LOADING VOLTAGE
			VOLTAGE +/- 5%	+/- 5%
	S1	3-4-5	AC 53.9V-0-53.9V	LOADING AC 50.5V-0-50.5V
		9-10	DC ±76.5V	LOADING DC ±59.6V 4A
	S2	6-7-8	AC 49.7V-0-49.7V	LOADING AC 46.9V-0-46.9V
		11-12	DC ±70.5V	LOADING DC ±54.5V 2A
RATED CONTINUOUS OUTPUT POWER				*****
INSULATION RESISTANCE	PRIMARY - SECONDARY			100M OHM @ DC 500V
DIELECTRIC STRENGTH	PRIMARY - SECONDARY			AC 4000V 5mA 1 MINUTE
	PRIMARY - PRIMARY			****
	SECONDARY-SECONDARY			****
TEMPERATURE RISE	LOADING 327VA(AC) AC 52.3V-0-52.3V 2.2A AC 48.4V-0-48.4V 1.0A			70 Cmax AT Ta = 25C

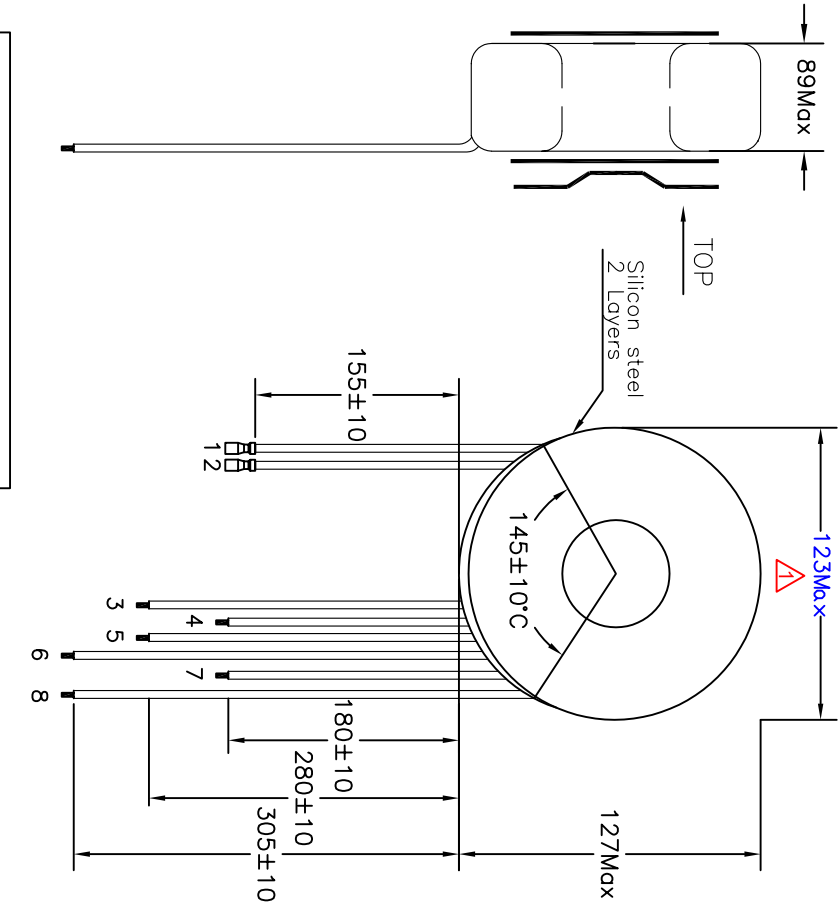
PROTECTIVE DEVICE	
PRIMARY	S06 110 DEG.C THERMAL PROTECTOR (250V/10A)
SECONDARY	****

LEAD OUT			
LEAD NO.	TYPE	LENGTH	STRIP
1	UL 1617-AWG#16 (RED)	155 ± 10 mm	CONNECTED TO TERMINAL
2	UL 1617-AWG#16 (BROWN)	155 ± 10 mm	
3,5	UL 1015-AWG#16 (BLUE)	280 ± 10 mm	8 ± 2 mm
4,7	UL 1015-AWG#16 (BLACK)	180 ± 10 mm	8 ± 2 mm
6,8	UL 1015-AWG#16 (GREEN)	305 ± 10 mm	8 ± 2 mm

MOUNTING	
STEEL DISHED WASHER	I.D.: 8.5 ± 0.5 mm O.D.: 85 ± 1.0 mm THK.: 1.0 ± 0.2 mm 1PCS (BLACK)
NEOPRENE WASHER	I.D.: 8.5 ± 0.5 mm O.D.: 87 ± 1.0 mm THK.: 1.0 ± 0.2 mm 2PCS
SCREW & NUT	M8X95 1SET (BLACK)

PHYSICAL DIMENSION

TOP VIEW

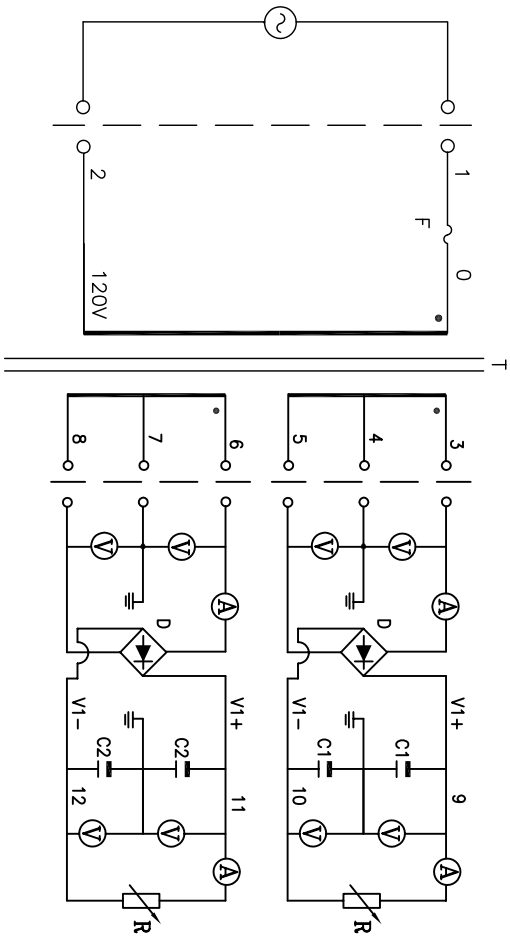


PRIMARY CONNECTOR
Terminal:092-0062-0(1~2)
OR STO-61T-250N
OR FDFD5-250

SCHEMATIC DIAGRAM

LABELS:

- T - TRANSFORMER
- A - AMMETER
- V - VOLTMEETER
- R - RHEOSTAT
- F -Thermal Protector
- C - CAPACITOR
- C1 - 3000uF/100V
- C2 - 940uF/63V



AC INPUT 120V 60Hz OUTPUTS REFER TO SPEC.

3rd ANGLE PROJECTION	DO NOT SCALE	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN MILLIMETRES	TOLERANCE : LINEAR ± 1 mm ANGULAR ± 0.5°
KEEN OCEAN INDUSTRIAL LTD.			
MODEL NAME: TOROIDAL TRANSFORMER			
REF. NO: TTO-17005-00			

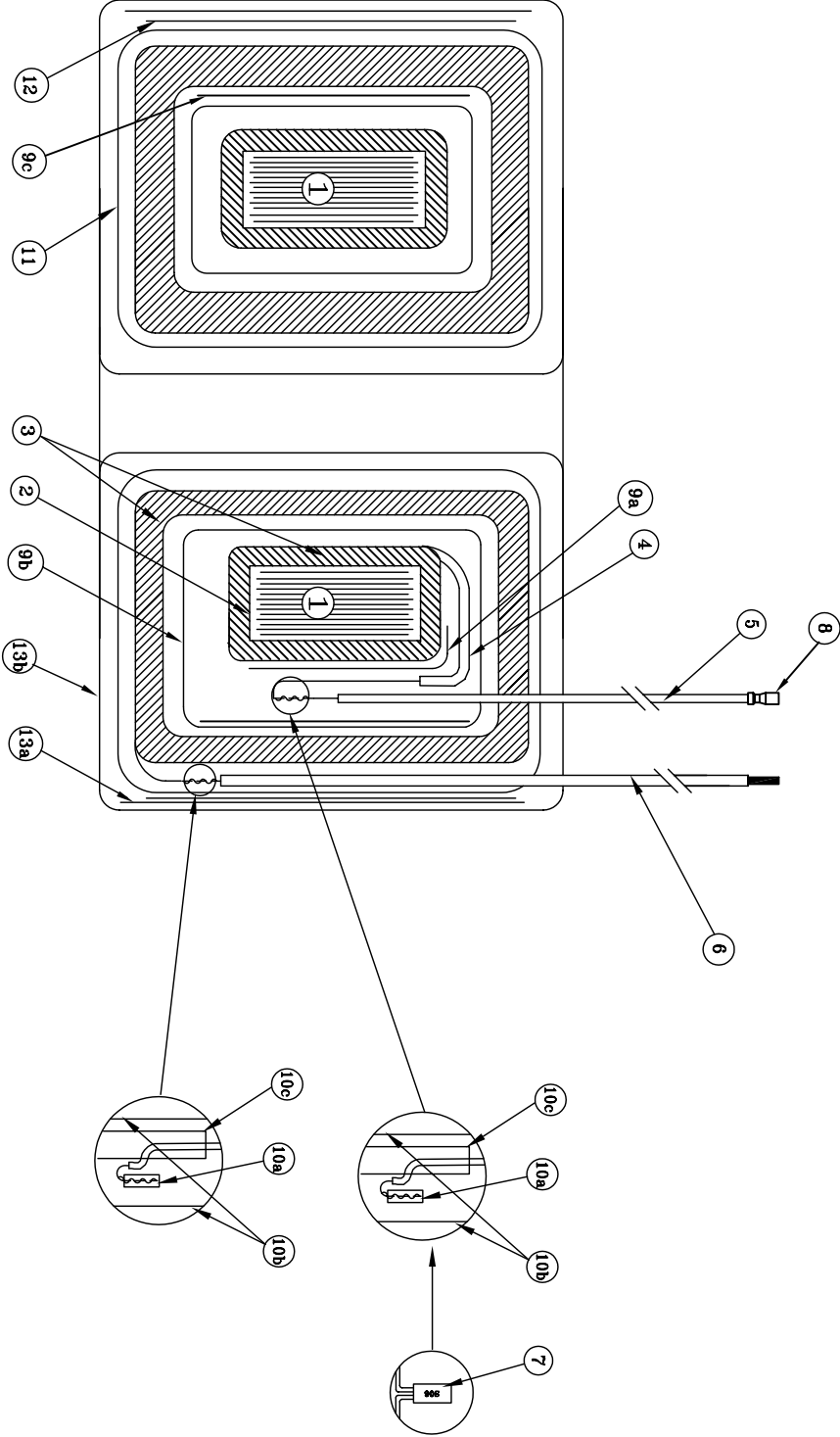
KEEN OCEAN INDUSTRIAL LTD.

OUR MODEL: TTO-17005-00

MATERIAL LIST				
	MATERIAL	DESCRIPTION	STANDARD	MANUFACTURERS / SUPPLIERS
1	Core	Silicon Steel Thickness : 0.23~0.35mm		Leicong Ind. Corp. Taiwan or equivalent
2	Insulation between Core and primary Winding	1P802 Polyester tape Thickness : 0.05mm 2 Layers Polyethylene Terephthalate (PETP) Film Type EL MYLAR Thickness : 0.125mm 2 Layers	UL:E126174 UL:E93687	P.LEO & CO(B C) Ltd. or equivalent EI Dupont De Nemours & Co.,Inc. Electronics Dept.Mylar Polyester Film or equivalent
3	Magnet Wire (Primary & Secondary)	Polyurethane Basecoat With Polyamide Topcoat(UAWN/U) MW-28C Thermal Endurance Class B (130Deg.C) or Polyurethane Basecoat With Polyamide Topcoat(UAWN/U) MW-80C Thermal Endurance Class F (155Deg.C) Primary 2xdia 1.0mm Secondary a).2xdia0.9mm; b) dia1.0mm	UL:E142108 UL:E201757	Pacific-Thai Electric Wire & Cable Co.,Ltd. or equivalent Pacific Electric Wire&Cable(shenzhen)Co.,Ltd. or equivalent
4	Crossover Insulation	PVC TUBE 2P300 300V 105Deg.C	UL:E58072	P.LEO & CO(B C) Ltd. or equivalent
5	Primary Leads	UL-1617 AWG #16 VW-1 600V 105Deg.C	UL:E166138	Jet Power Connector Co.Ltd. or equivalent
6	Secondary Leads	UL-1015 AWG #16VW-1 600V 105Deg.C	UL:E166138	Jet Power Connector Co.Ltd. or equivalent
7	Primary Thermal Protector	Type: S06 110 Deg.C (250V/10A)	UL:E54326	Thermik or equivalent
8	Primary Connector	Terminal: P/N: 09-0062-0 or STO-61T-250N or FDFD5-250	UL:E70188	Molex Inc or equivalent J.S.T. Mfg. Co., Ltd. or equivalent KST
9	Insulation between Primary Winding and Secondary Winding	a).1P802 Polyester tape Thickness : 0.05mm 3 Layers b).Polyethylene Terephthalate (PETP) Film Type EL MYLAR Thickness : 0.05mm 6 Layers c).1P802 Polyester tape Thickness : 0.05mm 2 Layers	UL:E126174 UL:E93687 UL:E126174	P.LEO & CO(B C) Ltd. or equivalent EI Dupont De Nemours & Co.,Inc. Electronics Dept.Mylar Polyester Film or equivalent P.LEO & CO(B C) Ltd. or equivalent
10	Insulation of all Leads Connections (Primary & Secondary)	a).PVC TUBE 2P300 300V 105Deg.C b).1P802 Polyester tape Thickness : 0.05mm 3 Layers c). Polyethylene Terephthalate (PET) Film Type: MO21 Thickness: 0.25mm	UL:E58072 UL:E126174 UL:E93687	P.LEO & CO(B C) Ltd. or equivalent P.LEO & CO(B C) Ltd. or equivalent Dupont Teijin Films U S L P or equivalent
11	Insulation between Secondary and Outer shielding	Polyethylene Terephthalate (PETP) Film Type EL MYLAR Thickness : 0.05mm 3 Layers	UL:E93687	EI Dupont De Nemours & Co.,Inc. Electronics Dept.Mylar Polyester Film or equivalent
12	Outer shielding	Silicon Steel Thickness : 0.23~0.35mm 2 Layers		Leicong Ind. Corp. Taiwan or equivalent
13	Outer Insulation	a).1P802 Polyester tape Thickness : 0.05mm 2 Layers b).Polyethylene Terephthalate (PETP) Film Type EL MYLAR Thickness : 0.05mm 4 Layers	UL:E126174 UL:E93687	P.LEO & CO(B C) Ltd. or equivalent EI Dupont De Nemours & Co.,Inc. Electronics Dept.Mylar Polyester Film or equivalent

CONSTRUCTION SKETCH

REVISIONS			
ISSUE	DESCRIPTION	REV. BY	APPROVED BY
		DATE	



3rd ANGLE
PROJECTION

DO NOT SCALE

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN MILLIMETRES
TOLERANCE : LINEAR ± 1 mm
ANGULAR $\pm 0.5^\circ$

KEEN OCEAN INDUSTRIAL LTD.

MODEL NAME:
TOROIDAL TRANSFORMER

MATERIAL:	SIGNATURE:	DATE:
FINISH:	DRAWN: PAN	SEP.19.2007
SCALE: N.T.S	CHECKED: LIU	SEP.19.2007
PAGE: 5/6	APPROVED: ZSH	SEP.19.2007
CUST. REF 080-0004-B	REF. NO: TTO-17005-00	

KEEN OCEAN INDUSTRIAL LTD.

OUR MODEL: TTO-17005-00

LABEL

Keen Ocean Toroidal Transformer

Model No.: TTO-17005-00 Cust.Ref.: 080-0004-B

Input: AC 0---120V ~60Hz RED---BRN

WI.110Deg.C Thermal Protector [38/07]

Website: www.keenoocean.com.hk

Gallien-Krueger
080-0004-B

SAMPLE DEVIATION

NO	DESCRIPTION	DATE
1	Primary lead UL 1617 AWG #16VW-1 RED is replaced by WHITE temporarily.	2007.09.19

REVISION

[illegible]