



EKARAT ENGINEERING PUBLIC CO., LTD.
BANGKOK THAILAND.

CONTENTS

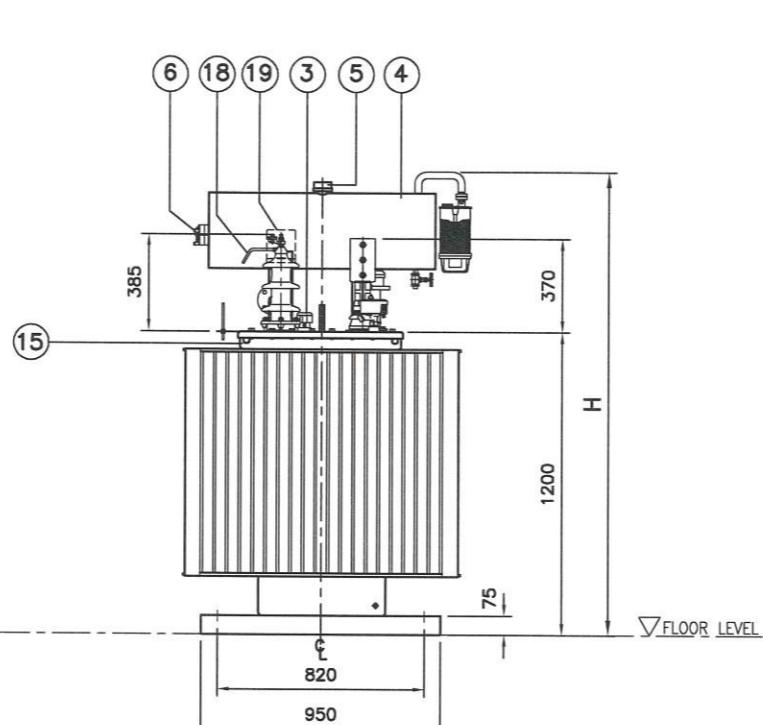
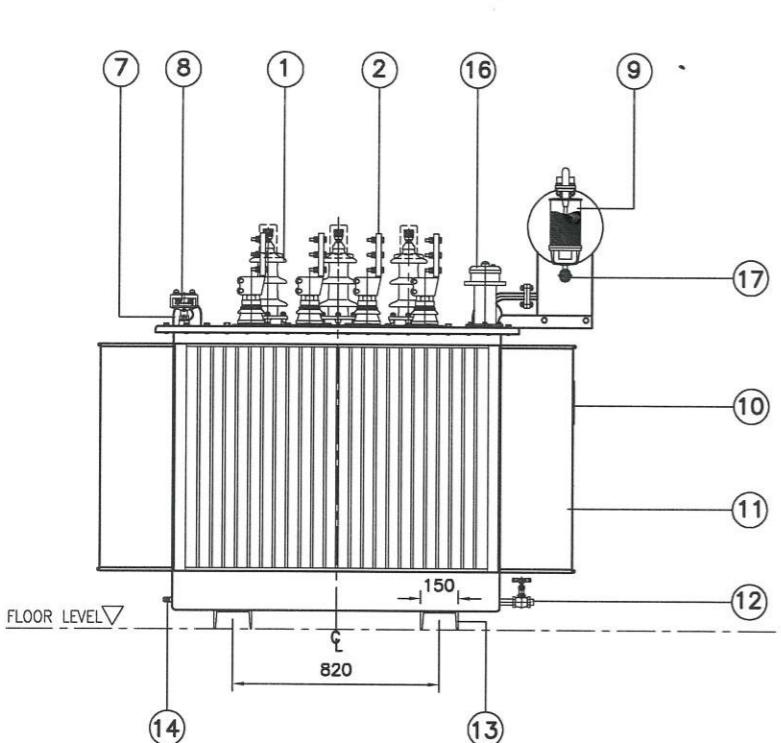
LIST OF DRAWING

CHAPTER	DESCRIPTION	PAGE
0	CONTENTS	1-1
1	OUTLINE DRAWING Tr. 1000 kVA. 3Ph. Dyn11 22000 – 400/230 V.	
	TYPE: CONSERVATOR	1-1
2	TRANSFORMER BASE	1-1
3	NAMEPLATE WITH CONNECTION DIAGRAM Dyn11	1-1

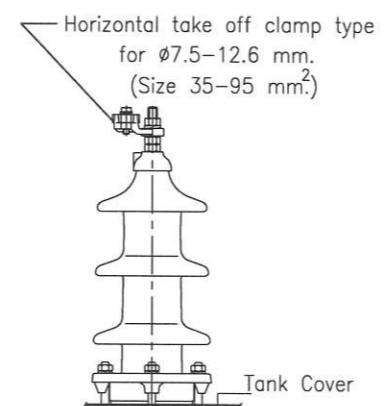
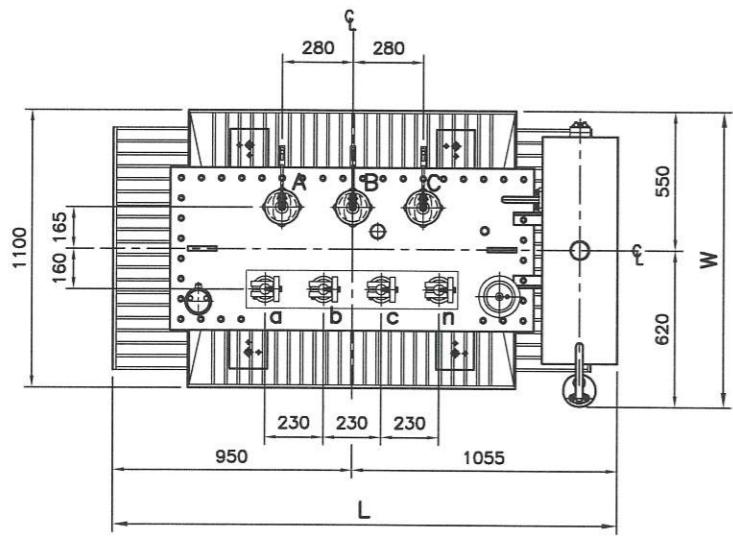
LIST OF ACCESSORIES

CHAPTER	DESCRIPTION	MODEL/TYPE	DWG.NO. OR CAT.NO.
1	HIGH VOLTAGE BUSHING	DT 20 Nf 250 DIN 42531	RDHVB24311
2	HV. TERMINAL CONNECTOR	35-95 sqmm.	RDHTC10000
3	BIRD GUARD CAP	ø115	RDBGCO0001
4	LOW VOLTAGE BUSHING	DT 2000 DIN 42530,EE-STD.1T	RDLVB12002
5	HV. TERMINAL CONNECTOR	2000 A. No.15	RDLTC20214
6	MAGNETIC OIL LEVEL GAUGES	IML 80	RDOLG08003
7	THERMOMETER WITH CONTACTS	VIAT/122-23	RDTMMVIA01
8	DEHYDRATING BREATHER SILICAGEL	1 KG.	RDBSG03001
9	TAP CHANGER	335.20/A,EM3-GM02	RDTCHEM302
10	EARTH TERMINAL	For cable 35-70 sq.mm.	RDERTM1000
11	GLOBE VALVE (Oil sampling and drain valve)	1"	RDVAV15002
	Oil sampling valve	1/2"	
12	PRESSURE RELIEF VALVE	T50 Without Switch	RDPSR30601

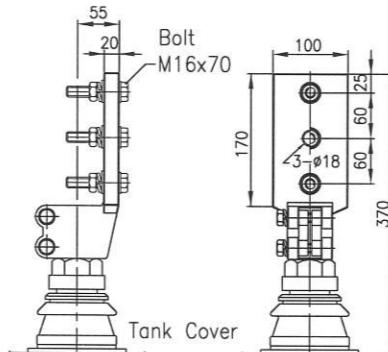
	NAME	FINAL DRAWING Tr. 1000 kVA. 3 Ph. Dyn11 22000 – 400/230 V. TYPE: CONSERVATOR	EFF. DATE:	24 JAN 2020
DRN. BY	I.TN 23/01/20		S/O	CHAPTER 0
CHK. BY	P.NP 24/01/20		DESIGN NO. 51410022A6	PAGE 1
APP. BY	K.THAWORN	EKARAT ENGINEERING PUBLIC CO., LTD.	A 4	DWG. NO. 51410022A6
				REV. 0



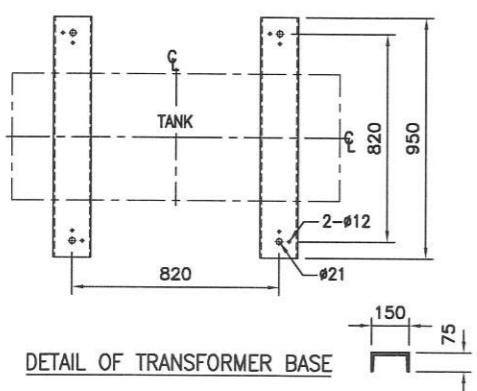
No.	DESCRIPTION	Qty.
1	HV. BUSHING W/TERMINAL CONNECTOR	3
2	LV. BUSHING W/TERMINAL CONNECTOR	4
3	TAP CHANGER	1
4	CONSERVATOR TANK	1
5	OIL FILLING CAP	1
6	MAGNETIC OIL LEVEL GAUGE	1
7	LIFTING EYES FOR LIFTING TRANSFORMER	2
8	THERMOMETER W/CONTACTS	1
9	DEHYDRATING BREATHER SILICAGEL	1
10	NAMEPLATE W/CONNECTION DIAGRAM	1
11	CORRUGATED TANK	1
12	OIL SAMPLING AND DRAIN VALVE	1
13	SKID BASE	2
14	EARTH TERMINAL	1
15	LUGS FOR LATCHING FOR TRANSPORTATION	4
16	PRESSURE RELIEF VALVE	1
17	OIL SAMPLING VALVE	1
18	ARCING HORN	3
19	BIRD GUARD CAP	3



DETAIL OF HV. BUSHING TERMINAL
DT 20 Nf 250 DIN 42531 / CLAMP TYPE

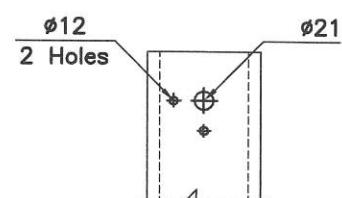
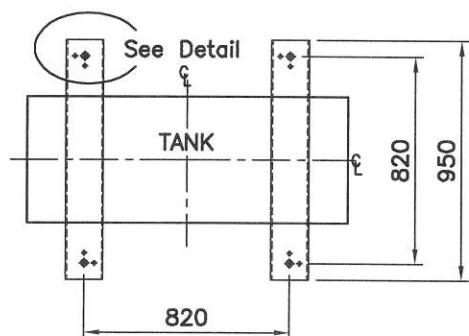
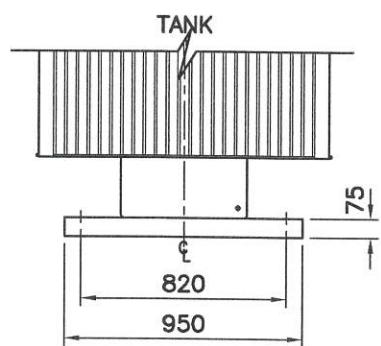
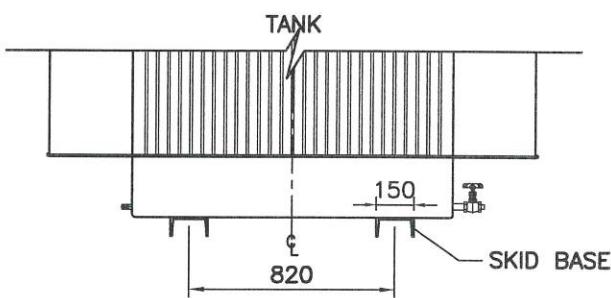


DETAIL OF LV. BUSHING TERMINAL
DT 2000 DIN 42530 / BAR 2000 A. No.15



DETAIL OF TRANSFORMER BASE

Dimension in millimetres			Total wt. (kgs.)	Oil (L)	GUARANTEED DATA	
H	L	W			IEC60076	
1835	2005	1170	2955	735	NO LOAD LOSS 1600 W. + 15%	
DESIGN NO. 51410022A6			LOAD LOSS AT 75 °C 13500 W. + 15%		TOTAL LOSS 15100 W. + 10%	
S/O NO.			IMPEDANCE AT 75 °C 6.00 % ± 10%		OIL TEMP. RISE 60 K + 0%	
APP. BY K.THAWORN			RAL 7036		WINDING TEMP. RISE 65 K + 0%	
DRN. BY I.TN 23/01/20			OUTLINE DRAWING Tr. 1000 kVA. 3 Ph. Dyn11 22000 - 400/230 V.		EFF. DATE: 24 JAN 2020	
CHK. BY P.NP 24/01/20			TYPE: CONSERVATOR		Symbol ISO Dimension in mm.	
APP. BY K.THAWORN			SCALE 1 : 30		CHAPTER 1	
			DWG. NO. 51410022A6		PAGE 1	
			A/EKARAT ENGINEERING PUBLIC CO.,LTD.		REV. 0	



Detail

	NAME	TITLE: TRANSFORMER BASE	EFF. DATE:	24 JAN 2020
DRN. BY	I.TN 23/01/20		Symbol ISO Dimension in mm.	CHAPTER 2
CHK. BY	P.NP 24/01/20		SCALE N.T.S.	PAGE 1
APP. BY	K.THAWORN	EKARAT ENGINEERING PUBLIC CO.,LTD.	A DWG. NO. 51410022A6	REV. 0



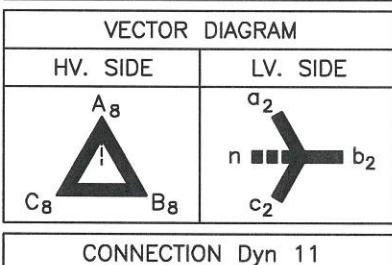
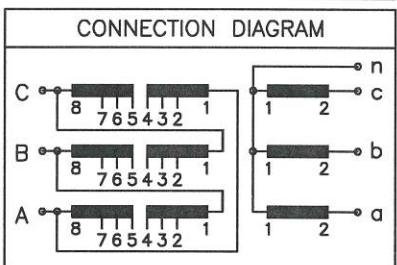
EKARAT ENGINEERING PUBLIC COMPANY LIMITED
BANGKOK, THAILAND

THREE PHASE - OIL IMMersed - OUTDOOR USED TRANSFORMER

KVA.	1000	W/O No.	
PHASE	3	FREQUENCY	50 Hz
TYPE	ONAN	CLASS	A
PRI. VOLT.	22000	SEC. VOLT.	400/230
PRI. AMP.	26.24	SEC. AMP.	1443.38
PERCENT IMP.		OIL TEMP. RISE	60 K
OIL QTY.(L)		DRAIN OIL QTY.(L)	
TOTAL WT.(kg)		LIFTING WT.(kg)	
		DATE	

HV. SIDE		
POS.	CONNECT.	VOLTAGE
1	5 - 4	23100
2	5 - 3	22550
3	6 - 3	22000
4	6 - 2	21450
5	7 - 2	20900

LV. SIDE	
TERMINAL	VOLTAGE
a To b	
b To c	400
c To a	
a b c To n	230



ITEM CODE 51410022A6

CONTRACT No.



SER. No.

0706055015

5

105

5

115

5

Remark 1. Percent imp., Oil Qty. and Total wt. shall be filled after test

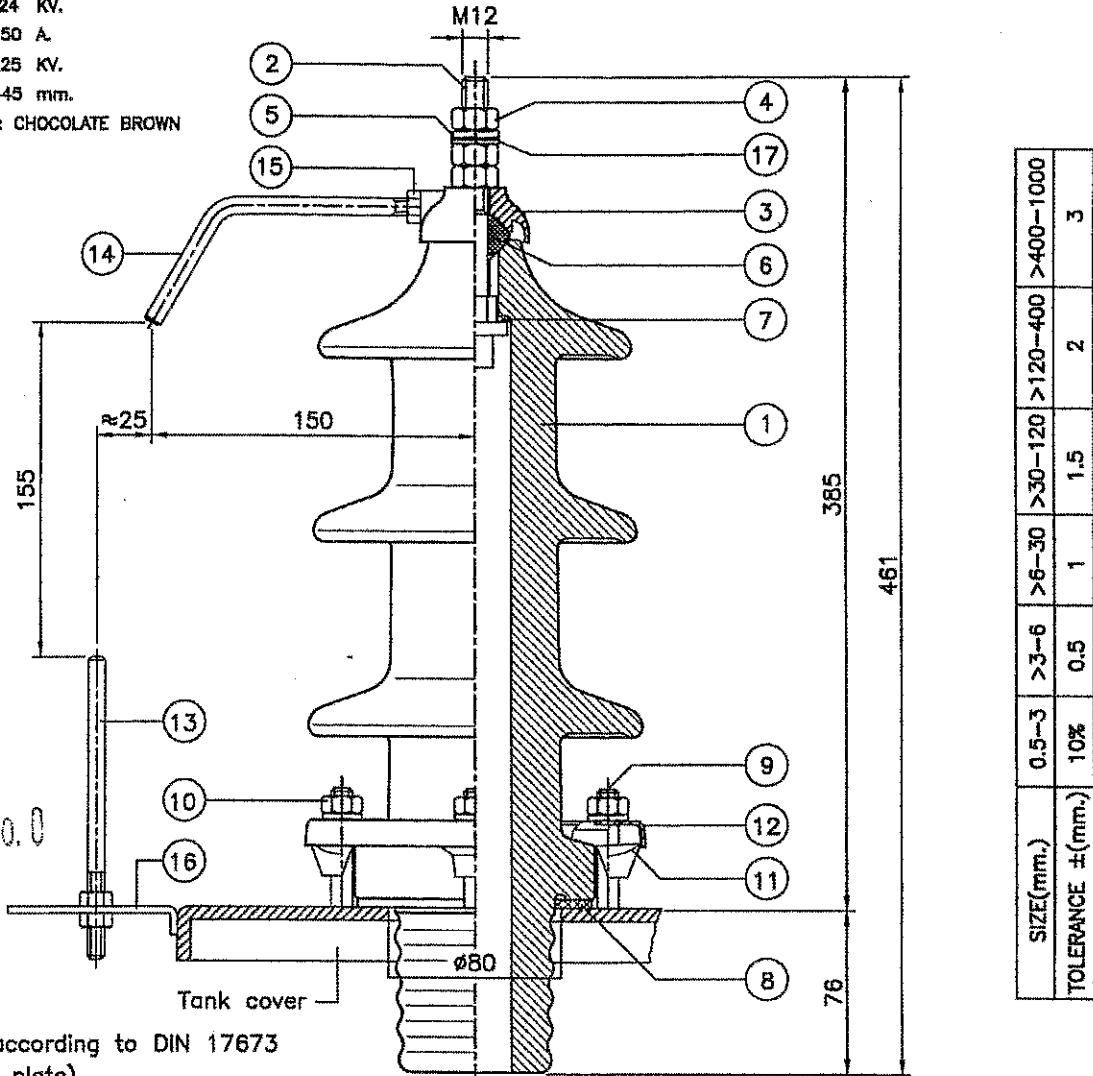
2. Drain oil Dty. is applied for the manufacturer only.

If the oil volume is drained after first oil
filling by the manufacturer.

3. Material – Stainless steel (Thickness 0.9 mm.)

	NAME	TITLE: NAMEPLATE WITH CONNECTION DIAGRAM Dyn 11	EFF. DATE:	24 JAN 2020
DRN. BY	I.TN 23/01/20			Symbol ISO Dimension in mm.
CHK. BY	P.NP 24/01/20		SCALE N.T.S.	CHAPTER 3
APP. BY	K.THAWORN		A 4	DWG. NO. 51410022A6
				REV. 0

INSULATION CLASS 24 KV.
RATING CURRENT 250 A.
BIL 125 KV.
CREEPAGE DISTANCE 445 mm.
COLOR OF PORCELAIN : CHOCOLATE BROWN

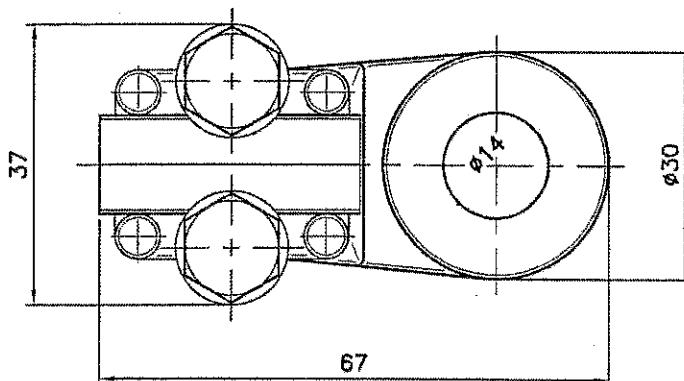
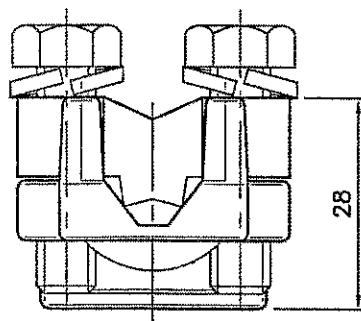
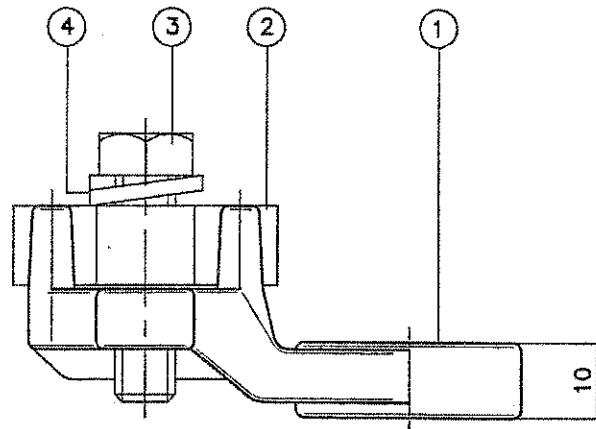


DOCUMENT CONTROL No. 0

Material: * Ms 60 according to DIN 17673
(with tin plate)

NO.	DESCRIPTION	MATERIAL	CAT. OR SPEC.NO.	QTY.
17	Washer Ø12 mm.	Brass with tin plate	RD-T-001.J0009	1
16	Arcing horn base	SPHC	EN-T-003.C1523001	1
15	Hexagon nut M8		RD-T-001.J0001	3
14	Top arcing horn	Brass with tin plate	RD-T-001.F0006	1
13	Bottom arcing horn		RD-T-001.F0006	1
12	Flange ring	USt 1203	RD-T-001.F0005	1
11	Clamping piece	Zinc alloy G-ZnA16 Cu1	RD-T-001.F0007	4
10	Hexagon nut M10 with spring washer	Steel with zinc plate	RD-T-001.J0001	4
9	Stud bolt M10x55	SS 400	RD-T-001.J0012	4
8	Gasket No.7		RD-T-001.I0001	1
7	Flat gasket	NBR	RD-T-001.I0001	1
6	Sealing ring No.2		RD-T-001.I0001	1
5	Spring washer Ø12 mm.	Stainless OR Steel with zinc plate	RD-T-001.J0007	1
4	Hexagon nut M12	Brass with tin plate	RD-T-001.J0001	3
3	Cap		RD-T-001.F0004	1
2	Connecting bolt	*	RD-T-001.F0003	1
1	Insulator DT 20 Nf 250 DIN 42531	Porcelain clay	RD-T-001.F0002	1

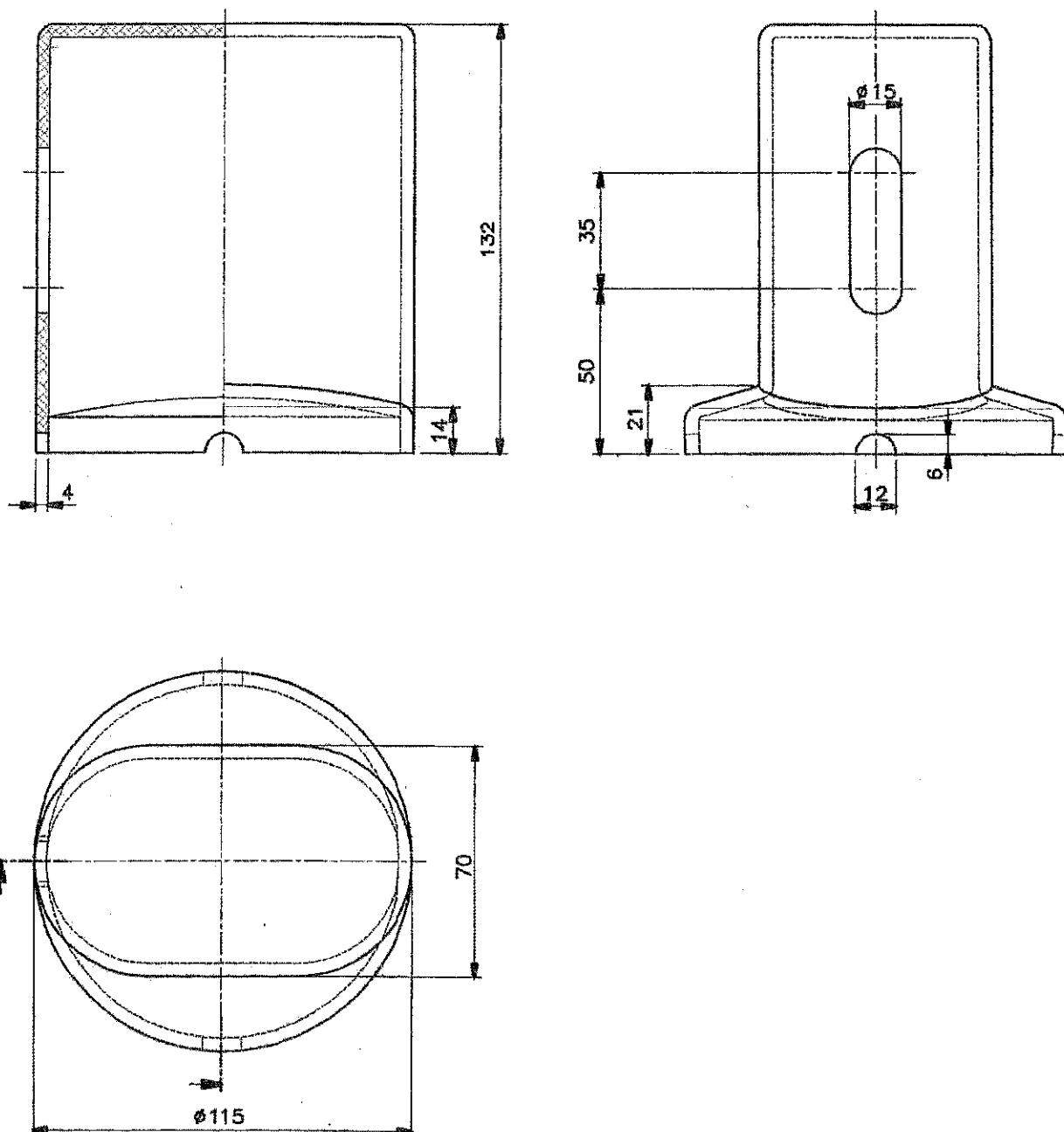
DRN. BY	NAME C.N.T 7/11/13	TITLE: HIGH VOLTAGE BUSHING	EFF. DATE: 7 NOV 2013	
CHK. BY	P.P.N 7/11/13		Symbol ISO Dimension in millimetres	
APP. BY	J. CHINACHIN	EKARAT ENGINEERING PUBLIC CO.,LTD.	SCALE: 1 : 3.5	PAGE 1/1
		A EKARAT	A 4	CAT. NO. RDHVB24311 REV. 3



Note : Horizontal take off clamp type
For $\phi 7.5\text{--}12.6$ mm. (Size 35 -- 95 mm.²)

SIZE(mm.)	0.5 -- 3	>3 -- 6	>6 -- 30	>30 -- 120	>120 -- 400
TOLERANCE \pm (mm.)	10%	0.5	1	1.5	2

4	Spring washer $\phi 8$	Stainless steel	-	2
3	Bolt M8x30		-	2
2	Connector clamp 100 A.	Brass with tin plate	RD-T-001.G0002	1
1	Connector 100 A.		RD-T-001.G0002	1
NO.	DESCRIPTION	MATERIAL	CAT. OR SPEC. NO.	QTY.
	NAME	TITLE: TERMINAL CONNECTOR	EFF. DATE: 22 AUG 2016	
DRN. BY	C.PW 22/08/11			Symbol ISO Dimension in millimetres
CHK. BY	P.PN 22/08/18		SCALE: 1 : 1	PAGE 1/1
APP. BY	K.THAWORN		A 4	CAT. NO. RDHTC10000 REV. 5

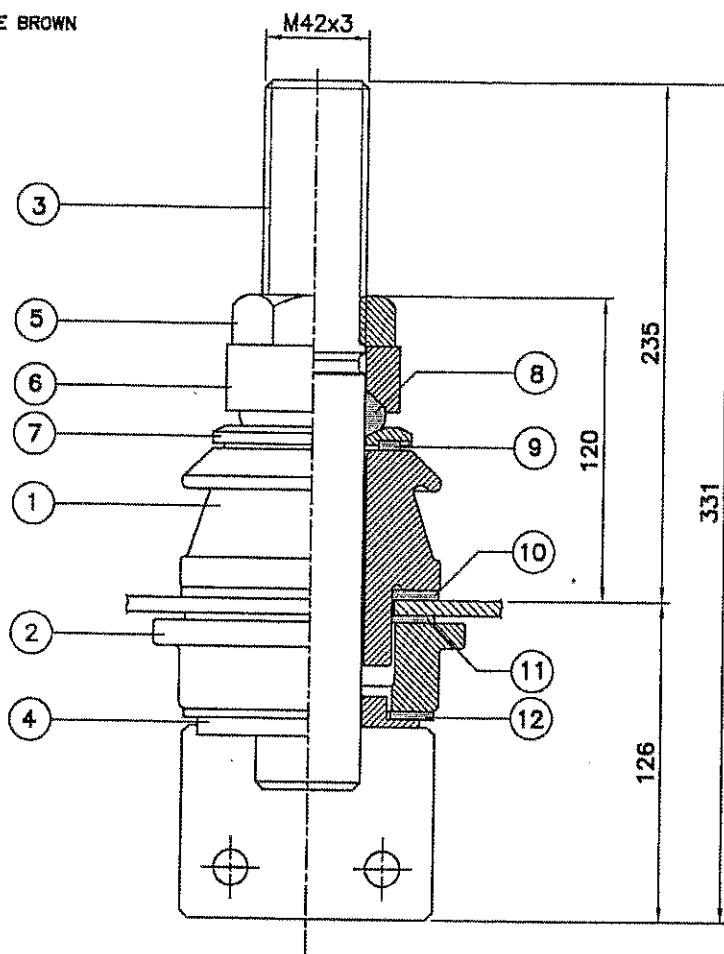


DOCUMENT CONTROL No. 0

Material : EPDM Thickness 4 mm.

	NAME	TITLE: BIRD GUARD CAP	EFF. DATE: - 9 AUG 2002,	
DRN. BY:	Var 6/8/2002		 Symbol ISO  Dimension in millimetres	
CHK. BY:	6/8/2002		SCALE: 1 : 2	PAGE 1/1
APP. BY:	6/8/2002	EKARAT ENGINEERING PUBLIC CO.,LTD.	A 4	CAT. NO. RDBG00001 REV. 0

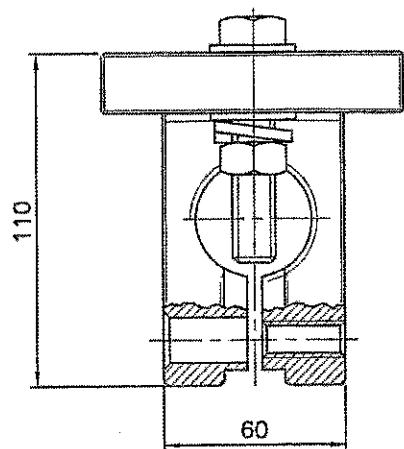
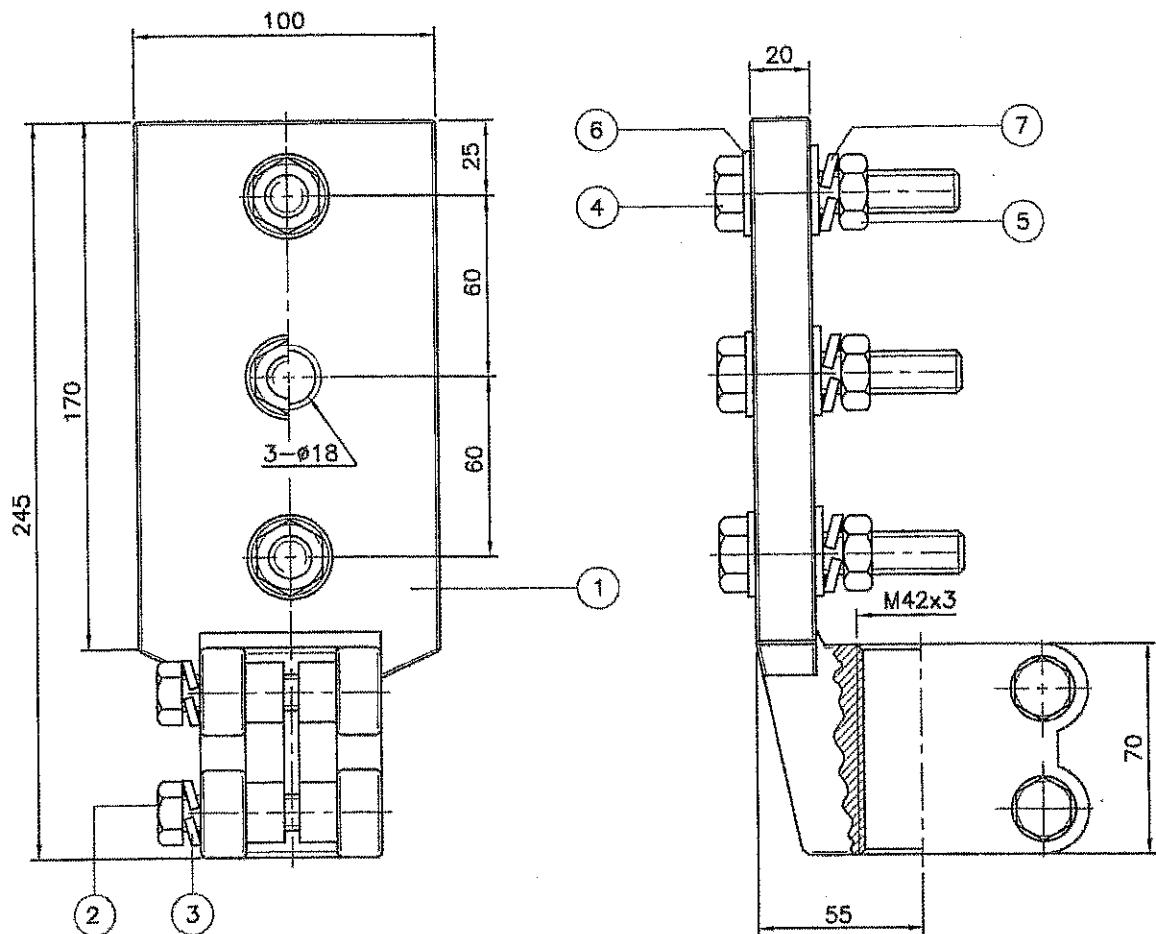
INSULATION CLASS 1 KV.
 RATING CURRENT 2000 A.
 BIL 30 KV.
 CREEPAGE DISTANCE 75 mm.
 COLOR OF PORCELAIN : CHOCOLATE BROWN



DRAWING CONTROL NO. 0

SIZE(mm.)	0.5-3	>3-6	>6-30	>30-120	>120-400	>400-1000
TOLERANCE ±(mm.)	10%	0.5	1	2	2.5	3

12	Packing washer	Press board	RD-T-001.J0001	1	
11	Sealing washer		RD-T-001.J0001	1	
10	Flat gasket		RD-T-001.J0001	1	
9	Packing ring		RD-T-001.J0001	1	
8	Sealing ring		RD-T-001.J0001	1	
7	Plain washer		RD-T-001.J0002	1	
6	Plain washer	Brass with tin plate	RD-T-001.J0003	1	
5	Hexagon nut M42		RD-T-001.J0001	1	
4	Locking bushing	Brass	RD-T-001.F0020	1	
3	Connecting bolt M42	Copper	RD-T-001.F0021	1	
2	Bottom insulator DT 2000 DIN42530,EE-STD.1T		RD-T-001.F0032	1	
1	Top insulator DT 2000 DIN 42530,EE-STD.1T	Porcelain clay	RD-T-001.F0032	1	
NO.	DESCRIPTION	MATERIAL	CAT. OR SPEC. NO.	QTY.	
	NAME	TITLE: LOW VOLTAGE BUSHING	EFF. DATE: 23 AUG 2016		
DRN. BY	C. PN 23/08/16			Symbol ISO	
CHK. BY	P. PN 23/08/16			Dimension in millimetres	
APP. BY	K. THAVORN	EKARAT ENGINEERING PUBLIC CO.,LTD.	SCALE: N.T.S.	PAGE 1/1	
		A 4	CAT. NO. RDLVB12002	REV. 0	

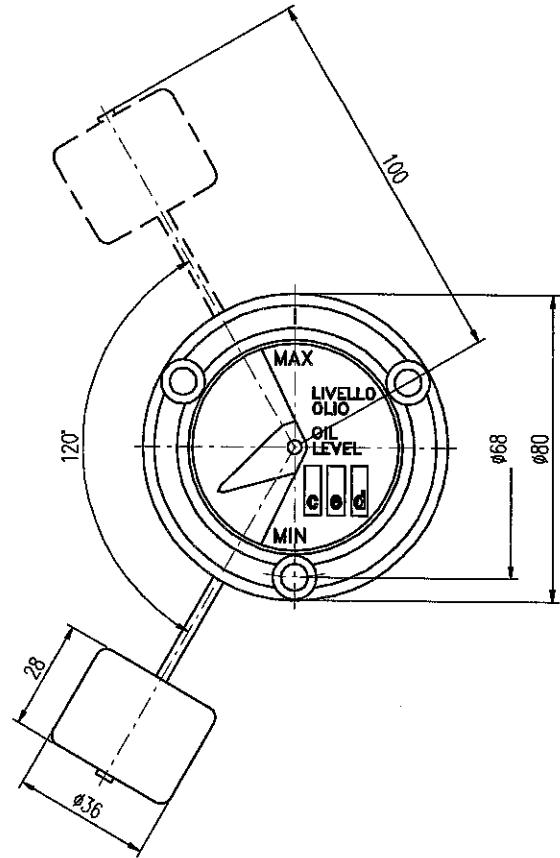
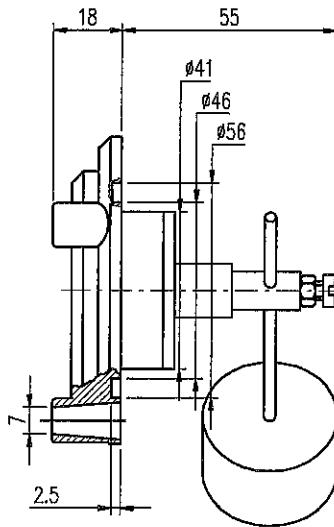


DOCUMENT CONTROL NO. 0

SIZE(mm.)	0.5-3	>3-6	>6-30	>30-120	>120-400
TOLERANCE ±(mm.)	10%	0.5	1	1.5	2

NO.	DESCRIPTION	MATERIAL	CAT. OR SPEC NO.	QTY.
7	Spring washer Ø16			3
6	Washer Ø16			6
5	Nut M16			3
4	Bolt M16x70			3
3	Spring washer Ø12			2
2	Bolt M12x60			2
1	Connector 2000 A. No.15	Brass with tin plate	RD-T-001.S0031	1
NO.	DESCRIPTION	MATERIAL	CAT. OR SPEC NO.	QTY.
	NAME	TITLE: TERMINAL CONNECTOR	EFF. DATE: 28 JUN 2008	
DRN. BY	C.V.R 28/06/08		Symbol ISO Dimension in millimetres	
CHK. BY			SCALE: 1 : 2.5	PAGE 1/1
APP. BY	K. CHINAKORN	EKARAT ENGINEERING PUBLIC CO.,LTD.	A 4	CAT. NO. RDLTC20214 REV. 0

CATALOG NO.	EFF. DATE	REV.	PAGE
RDOLG08003	24 OCT 2018	0	1/1



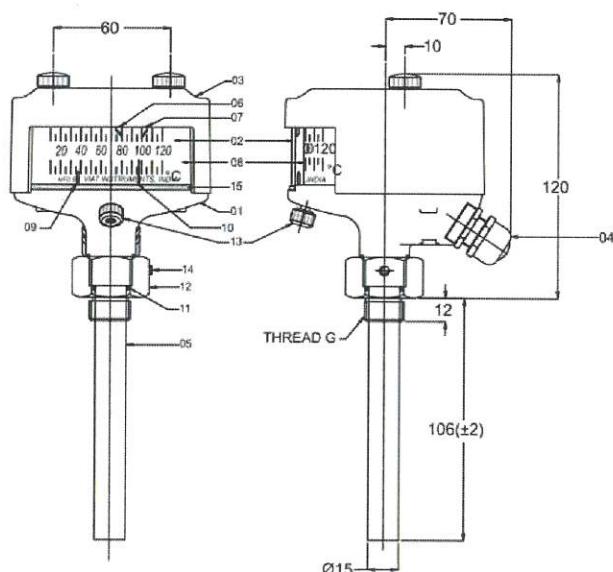
Mounting hole on the conservator $\varnothing 40^{+2}_{-0}$
Max diameter conservator 400 mm

CATALOG NO.	EFF. DATE	REV.
RDTMMVIA01	31 OCT 2019	3

Item No. 1002030001 Thermometer with contact

BI-METAL THERMOMETER

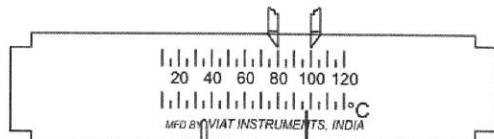
With Maximum Pointer, Alarm and Trip Contact. Vertical Mounting



PART NO	DESCRIPTION	MATERIAL
01	BODY	ALUMINUM PDC (POWDER COATED)
02	WINDOW	ACRYLIC UV PROTECTED
03	CASE	ALUMINUM ALLOY (POWDER COATED)
04	GLAND FOR FITTING (PG 16)	BRASS / POLYIMIDE
05	STEM	BRASS
06	BLUE (MIN.) TEMPERATURE SET POINTER	STAINLESS STEEL
07	YELLOW (MAX.) TEMPERATURE SET POINTER	STAINLESS STEEL
08	INDICATING SCALE (White Marking With Black Background)	ALUMINIUM
09	WHITE POINTER FOR TEMP. INDICATING	BRASS
10	MAX INDICATING POINTER (COLOR- RED)	STAINLESS STEEL
11	'O' RING	NITRILE BUTADIENE
12	HEX. ADAPTER	ALUMINIUM (ANODIZED)
13	SET KNOB	BRASS
14	GRUB SCREW	STAINLESS STEEL
15	FLAT RING	NEOPRENE

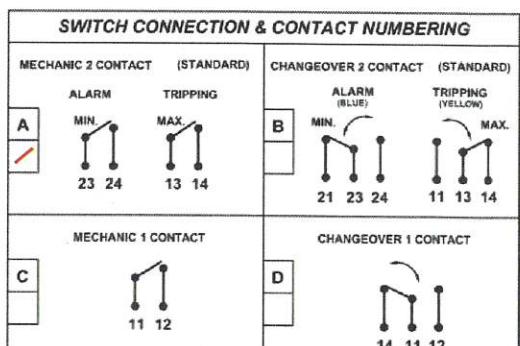
FEATURES

- Available in G 1/2", 3/4" & 1" threading size.
- All Aluminium / Brass body & construction.
- Clear visibility of maximum pointer, temperature needle, alarm and trip contacts setting.
- Easy to mount.
- Optional single contact model.
- Much more economical than conventional type dial thermometers.
- 0° - 120°C scale.



Scale

MODEL NO.	THREAD (G)	CHANGE OVER CONTACT
122-21	G 1/2" (ISO: 228)	2
122-22	G 3/4" (ISO: 228)	2
122-23	G 1" (ISO: 228)	2
122-11	G 1/2" (ISO: 228)	1
122-12	G 3/4" (ISO: 228)	1
122-13	G 1" (ISO: 228)	1



Technical Specifications

Operating range : 0° - 120°C (other range on request)

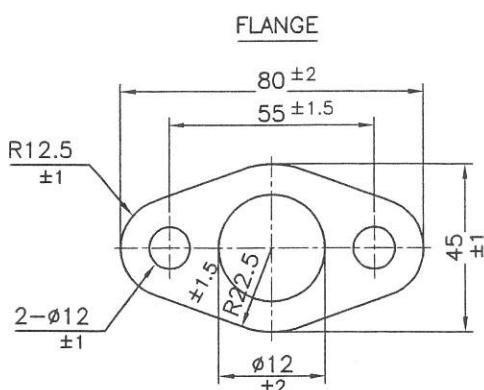
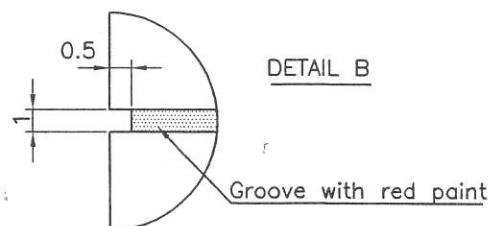
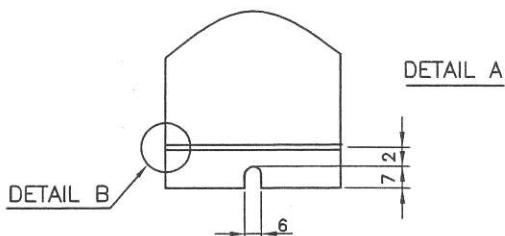
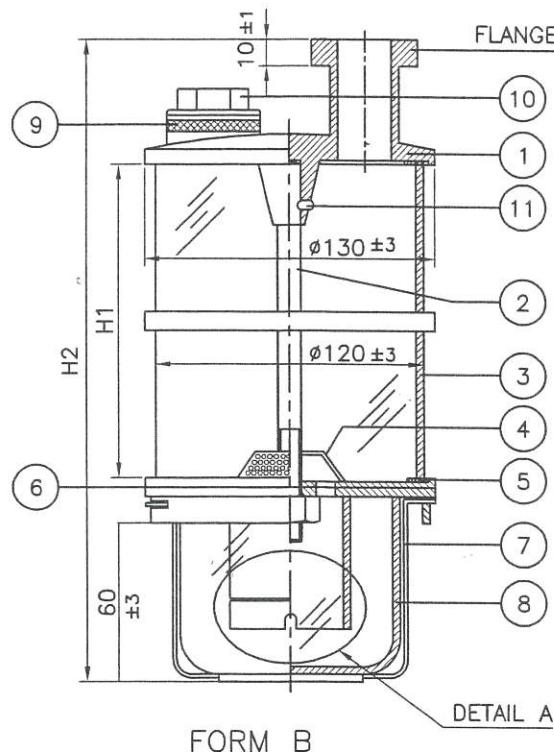
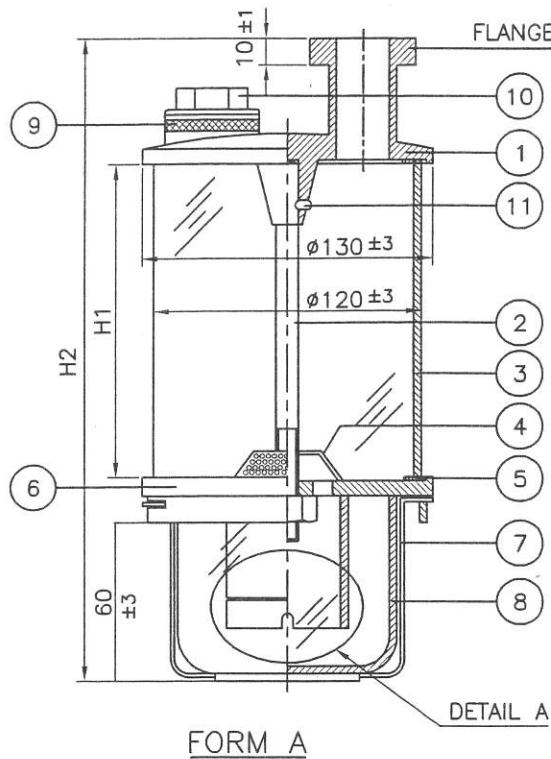
Mounting : G 1/2", 3/4" or 1"

Accuracy : ±5°C

Switch rating : 5 Amps 250V AC 5 Amps 24 V DC

Protection Class: IP 55

Insulation : 2KV for 1Minute



DOCUMENT CONTROL No. 0

No.	Description	MATERIAL	QTY.	TREATMENT
1	UPPER PART	ALUMINIUM	1	—
2	BOLT	ST37	1	ZINC PLATING
3	CYLINDER	GLASS	1	—
4	PERFORATED PLATE	SPHC	1	—
5	SEAL	RUBBER	1	—
6	LOWER PART	ALUMINIUM	1	—
7	SPRING CLAMP	SPRING PLATE	1	—
8	OIL CUP	PLASTIC	1	—
9	SEAL	RUBBER	1	—
10	PLUG IN	ALUMINIUM	1	—
11	SPRING PIN	STD	1	—

Item	Description	H1	H2	FORM
0647100000	DEHYDRATING BREATHER SILICAGEL SIZE 1/2 kg.	90 ± 3	215 ± 5	A
0647200000	DEHYDRATING BREATHER SILICAGEL SIZE 1 kg.	190 ± 3	310 ± 5	
0647500000	DEHYDRATING BREATHER SILICAGEL SIZE 3 kg.	400 ± 4	520 ± 5	

Scale —

Symbol ISO



Dimension in mm.

CATALOG NO.	EFF. DATE	REV.	PAGE
RDBSG03001	10 JUL 2012	2	1/1

COMMUTATORI
A VUOTO
SERIE "3"

Caratteristiche principali di questa serie di commutatori sono la rapidità di montaggio, la sicurezza e precisione della manovra, l'adattabilità allo spessore del coperchio del trasformatore. Possono essere impiegati sia in olio minerale che in liquido siliconico. Sono bloccati sotto il coperchio del trasformatore per mezzo del supporto. Nel montaggio il commutatore si autoregola in base allo spessore del coperchio del trasformatore. La tenuta dell'olio è garantita da guarnizioni O-ring. Nel catalogo sono rappresentati i commutatori e gli accessori standard normalmente utilizzati, ma è possibile soddisfare eventuali richieste di commutatori speciali.

I contatti fissi sono in rame con i seguenti diametri interni:
 $\varnothing = 2,1$ mm per 10 A nominali,
 $\varnothing = 3,2$ mm per 30 A nominali,
 $\varnothing = 5,2$ mm per 60 A nominali.

Commutazione

Le operazioni di manovra sono molto semplici e rapide e vanno sempre eseguite col trasformatore fuori tensione. Per commutare è sufficiente alzare la manopola ruotandola fino a far coincidere il numero di posizione desiderato con la freccia e di rilasciarla.

OFF LOAD
TAP CHANGERS
"3" SERIES

The main characteristics of this new series of tap changers are the speed of installation, the safe and exact switch commutation, self adjustment to the different thickness of the transformer cover. These units may be used with mineral oil or silicon liquid. They are fixed below the transformer cover by a support. There is no need for washers during assembly because the tap changer adjusts itself according to the thickness of the transformer tank. Oil tightness is provided by O-rings. The catalogue illustrates normally used tap changers and standard accessories. Special tap changers may be designed to meet special requirements.

The fixed contacts are made of copper with the diameters:
 $\varnothing = 2,1$ mm for 10 A rated,
 $\varnothing = 3,2$ mm for 30 A rated,
 $\varnothing = 5,2$ mm for 60 A rated.

Commutation

Tap changing procedures are very quick and simple. They must be performed with de-energized transformer in a no-load state. To switch, just lift the knob, rotating it until the desired position number coincides with the arrow and release the knob.

AUSSPANNUNG
UMSCHALTERN
SERIE "3"

Haupteigenschaften dieser Schalterreihe, Rasche Montage, Sichere und genaue Bewegung, Anpassungsfähigkeit an die Kastendicke. Die Schalter können sowohl in Mineralöl als auch in Silikonflüssigkeit eingesetzt werden. Sie werden mit Hilfe der Halterung unter dem Transformatordeckel. Bei der Montage sind keine Unterlegscheiben nötig, da sich der Schalter je nach Kastendicke selbst einstellt. Die Dichtigkeit wird von O-Ring-Dichtungen gewährleistet. Im Katalog sind die normalerweise verwendeten Standardschalter und Zubehörteile dargestellt. Es können aber auch eventuelle Anfragen nach Spezialschaltern zufriedengestellt werden.

Die Fixkontakte sind aus Kupfer und haben Innendurchmesser:
 $\varnothing = 2,1$ mm für 10 A Nennwert,
 $\varnothing = 3,2$ mm für 30 A Nennwert,
 $\varnothing = 5,2$ mm für 60 A Nennwert.

Schaltvorgänge

Die Schaltvorgänge sind sehr einfach und schnell und werden stets bei leerlaufendem Transformatort durchgeführt. Zum Umschalten muß der Griff abgehoben und dann bis die gewünschte Zahl oder das gewünschte Zeichen mit dem Pfeil der Scheibe übereinstimmt nur so weit gedreht werden, dann loslassen

Specifiche tecniche		Technical specifications		Technische Daten	
Tensione nominale Rated Voltage Nennspannung	Tensione max Max Voltage Höchstspannung	Frequenza ind. / Industrial freq. / Betriebsfrequenz	50/60 Hz	Impulso / Pulse / Impulse	1,2/50 µs
20kV 30kV	24kV 36kV		50kV 70kV		125kV 170kV

Prove

La ELETTRON MAULE SRL è azienda certificata ISO 9001:2008 e prevede nelle proprie procedure interne prove e controlli di routine necessarie a garantire un prodotto sicuro, affidabile e di qualità. Sono state eseguite le seguenti prove di tipo in accordo alle norme 60214-1 presso laboratori accreditati, la verifica della tenuta alla corrente di cortocircuito, la verifica dei limiti di sovratemperatura, prova di tenuta a frequenza industriale.

Test

ELETTRON MAULE SRL, a company with ISO 9001:2008 certification, has internal procedures that include all the tests necessary to guarantee a safe, reliable and quality product. The following tests have been carried out at accredited labs in accordance with 60214-1 Standards short circuit current test, temperature rise of contacts test, dielectric tests

Prüfungen

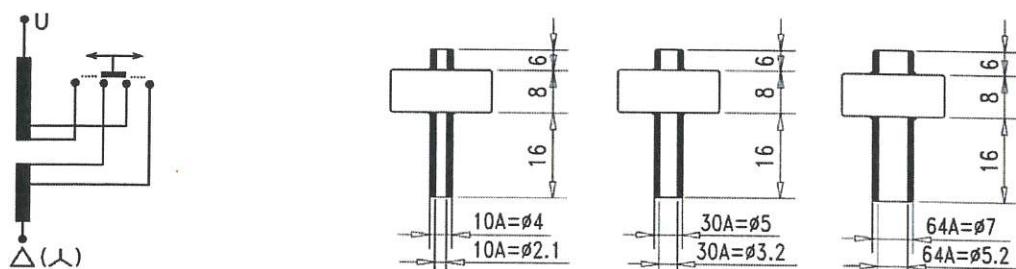
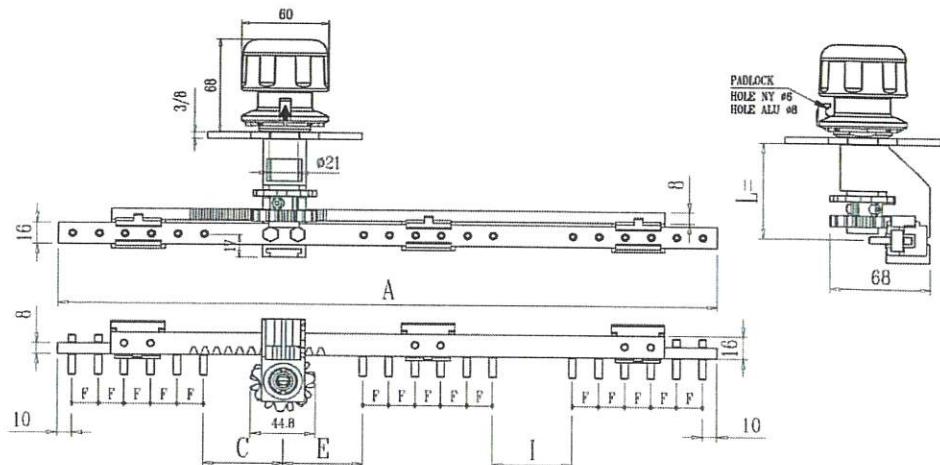
ELETTRON MAULE SRL, ein nach ISO 9001:2008 zertifiziertes Unternehmen, legt in ihren internen Betriebsvorgängen die notwendigen Prüfungen an, um ein sicheres, zuverlässiges Qualitätsprodukt zu garantieren. In den angesehenen-Laboren wurden in Einklang mit den IECNormen 60214-1 folgende Prüfungen durchgeführt Prüfung der Kurzschlußfestigkeit, Prüfung der Überwärmungsgrenzen, Prüfung der Festigkeit bei technischer Frequenz (50 Hz) in Trockenbetrieb.

CATALOG NO.	EFF. DATE	REV.	PAGE
RDTCHEM302	29 AUG 2019	1	1/3

Commutatore trifase
Collegamento a triangolo
2/7 Pos., 20/30 kV, 10/30/64A

Three-phase off-load tap changer
delta-connection
2/7 Pos., 20/30 kV, 10/30/64A

Dreiphasiger Umsteller
Dreieckschaltung
2/7 Pos., 20/30 kV, 10/30/64A



STANDARD L 50 - 70 - 80 - 90 - 100 - 130 - 150 > OUT STANDARD

KV	Codice Code Code	Nº Posizioni Nº of Positions Zhal der Pos	AMPERE	A	A1	B	C	D	E	F	F1	G	I
20	332.20	2	10/30/64	293			55		55	18			55
	333.20	3	10/30/64	347			55		55	18			55
	334.20	4	10/30/64	401			55		55	18			55
	335.20	5	10/30/64	455			55		55	18			55
	336.20	6	10/30/64	509			55		55	18			55
	337.20	7	10/30/64	563			55		55	18			55

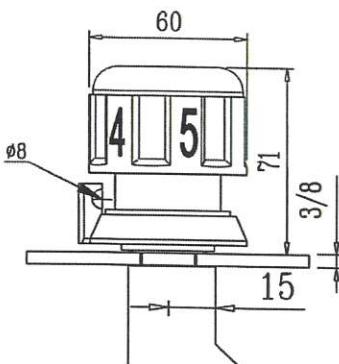
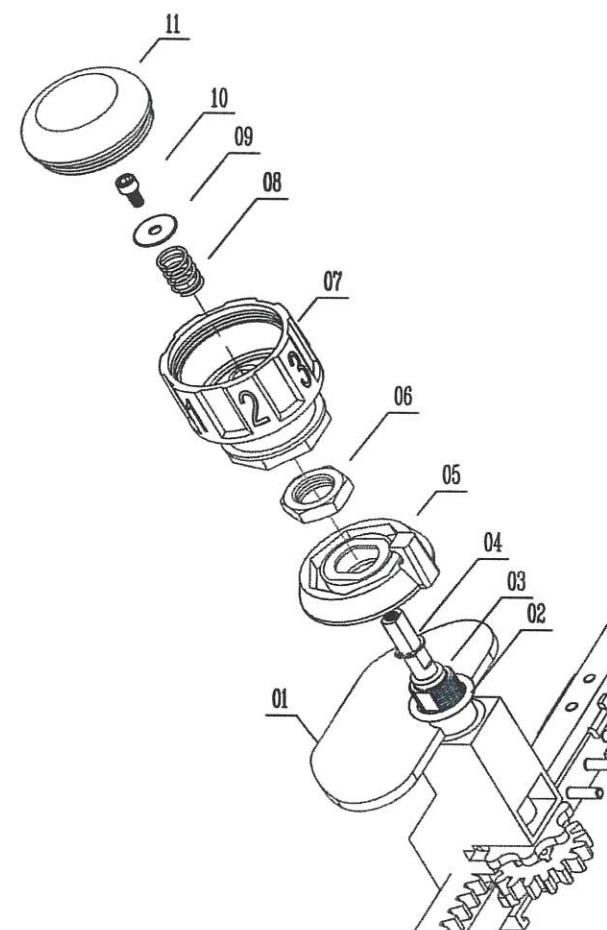
KV	Codice Code Code	Nº Posizioni Nº of Positions Zhal der Pos	AMPERE	A	A1	B	C	D	E	F	F1	G	I
30	342.30	2	10/30/64	368			80		80	18			80
	343.30	3	10/30/64	422			80		80	18			80
	344.30	4	10/30/64	476			80		80	18			80
	345.30	5	10/30/64	530			80		80	18			80
	346.30	6	10/30/64	584			80		80	18			80
	347.30	7	10/30/64	638			80		80	18			80

CATALOG NO.	EFF. DATE	REV.	PAGE
RDTCHEM302	29 AUG 2019	1	2/3

Gruppo di manovra in Alluminio
per commutatori da 30 ÷ 64A
foro coperchio Ø21 mm

Aluminium control set suitable for tap
changer from 30 ÷ 64A
tank cover Ø21mm

Aluminium Schaltaggregat
für Umschalter 30 ÷ 64A
Deckelloch Ø21



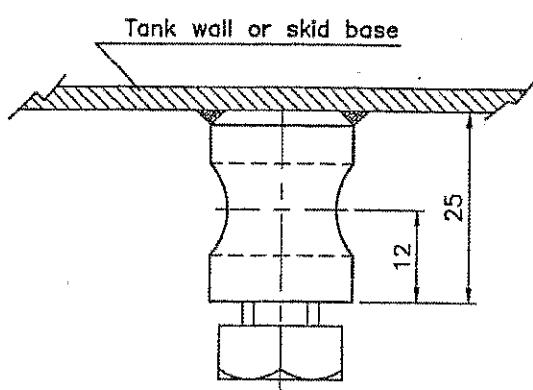
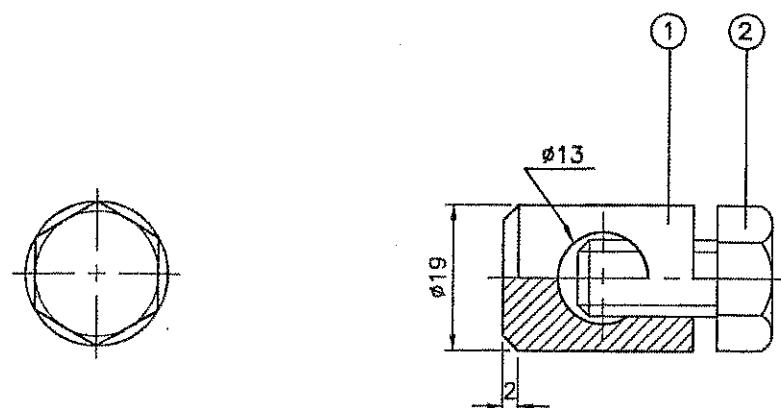
GASKET/OR PECURIAL

NBR OR
►EM3-GM02 -25/+120°C
VITON OR
EM3-GM02/V -15/+200
SILICON OR
EM3-GM02/S -40/+160°C
FLUORO-SILICON
EM3-GM02/F -60/+100°C

EM3-GM02

1	Coperchio del trasformatore	Transformer cover	Transformatordeckel
2	O-Ring in NBR	NBR O-Ring	NBR O-Ring Dichtung
3	N.2 O-Ring in NBR	N. 02 NBR O-Rings gasket	N.2 NBR O-Ring Dichtung
4	Anello seeger	Inox Seeger Ring	Inox Ring Seeger
5	Flangia di posizionamento	Positioning washer	Positionierungsflansch
6	Dado di bloccaggio	Fixing nut	Fixierbolzen mit Mutter
7	Manopola numerata in ALLUM	Alum. knob	Drehknopf
8	Molla	Spring	Feder
9	Rodella	Washer	Unterlegscheibe
10	Vite	Screw	Schraube
11	Coperchio	Plug	Deckel

CATALOG NO.	EFF. DATE	REV.	PAGE
RDTCHEM302	29 AUG 2019	1	3/3



DOCUMENT CONTROL NO. A

Note : Suitable for Copper cable,
Galvanized steel wire strands
Size 35-70 mm.²

NO.	DESCRIPTION		MATERIAL	CAT. OR SPEC. NO.	QTY.
	NAME	TITLE:	EFF. DATE: 01/08/2001		
DRN. BY	C.PW/01/09/15	EARTH TERMINAL			
CHK. BY	P.PN/1/9/15				SCALE: 1 : 1 PAGE 1/1
APP. BY	KITNAWORN	EKARAT ENGINEERING PUBLIC CO.,LTD.			CAT. NO. RDERTM1000 REV. 3

CLASS 150

BRONZE GLOBE VALVE

W.O.G. non-shock 2.07 MPa (300 psi), Saturated steam pressure 1.03 MPa (150 psi)

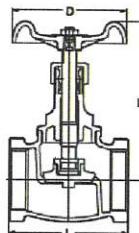


Fig. C

• Threaded end to BS21 (JIS B0203)

Fig. AKC

• Threaded end to ASME B1.20.1



Screwed bonnet, Rising stem,
Threaded ends to BS21 (JIS B0203) or NPT

PRESSURE RELIEF VALVE

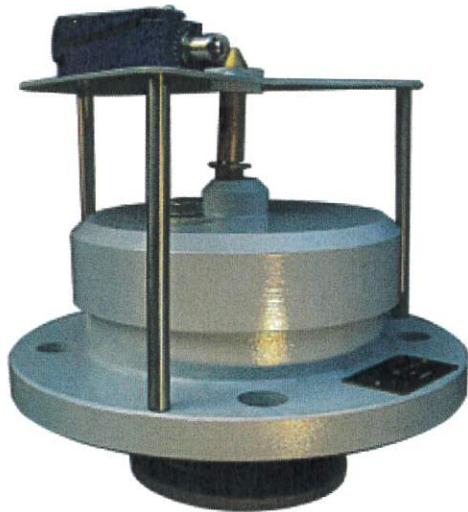
FOR OIL FILLED TRANSFORMER

Type T50 (2") and T80 (3") Model 306 & 307 Series

CATALOG NO.	EFF. DATE	REV.
RDPSR30601	10 JAN 2020	1



►T50 Without Switch



T80 With Switch



T80 With Directional Cover



T50 With Switch and Directional Cover

VIAT

INSTRUMENTS

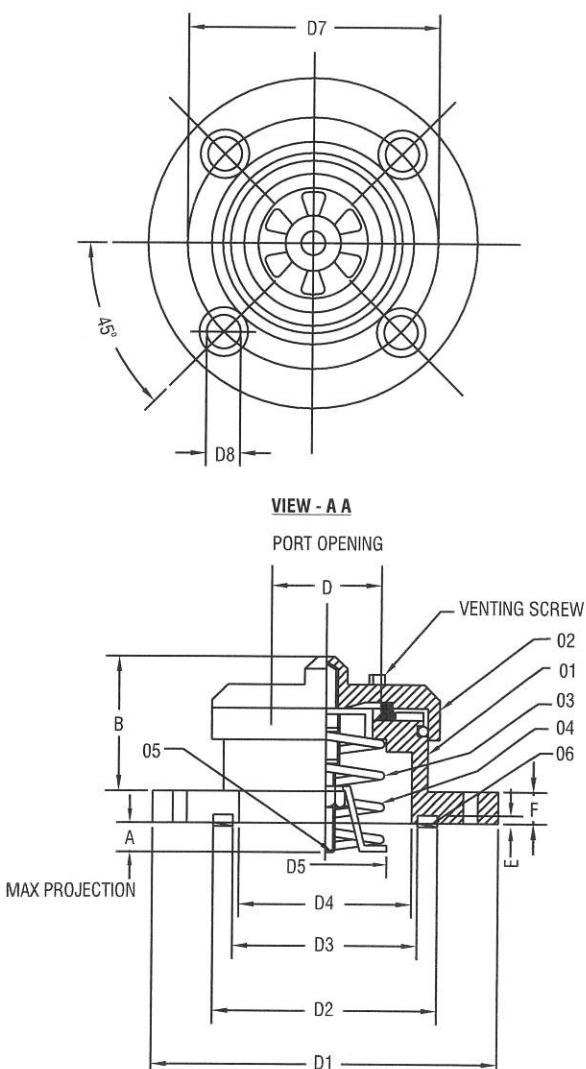
CT306-7R5



FEATURES

- Available in standard factory preset pressure setting between 20 to 70 kPa (3 to 10 PSI).
- Electric Signal Switch optional.
- STAINLESS STEEL directional cover.
- Gas bleed screw in all models.
- Each unit has individual serial number and test certificate with exact value of operating pressure.
- All stainless steel/brass hardware for extreme outdoor conditions.
- Electrostatic powder coated body.
- Operating pressure tolerance of ± 3 kPa for PRV upto 40 kPa, ± 5 kPa for PRV between 40 and 70 kPa.
- Computerised on-line test certificate for operating and resealing pressure for individual units.

PRESSURE RELIEF VALVE WITHOUT SWITCH & DIRECTIONAL COVER



<input type="checkbox"/>	1031220003	PRD.T50 25Kpa No.3062506
<input type="checkbox"/>	1031220004	PRD.T50 50Kpa No.3065001
<input checked="" type="checkbox"/>	1031220005	PRD.T50 30Kpa No.3063001
<input type="checkbox"/>	1031220006	PRD.T50 40Kpa No.3064001

Type	Size	Model No.	Switch	Cover
T50	50	306XX01	NO	NO
T80	80	307XX01	NO	NO

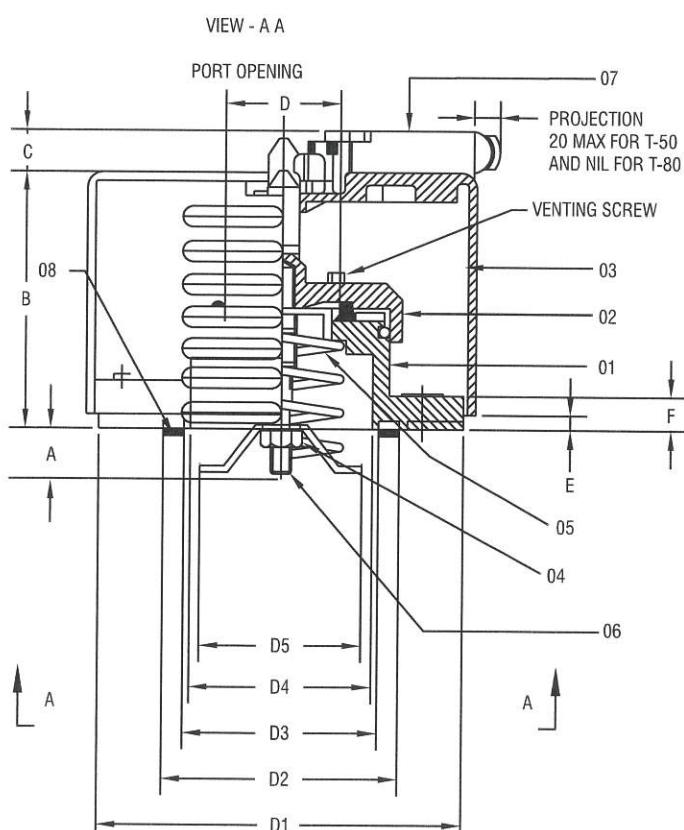
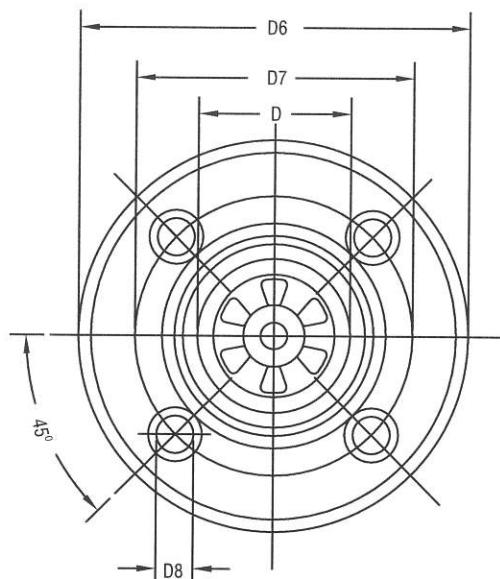
XX — Replace by Operating Pressure in KPA
Example T50 PRD with Switch & SS Cover and
operating pressure 50KPA will be Model No. 3065001

PART NO.	DESCRIPTION	MATERIAL
01	BODY	ALUMINIUM ALLOY
02	SHUTTER	ALUMINIUM ALLOY
03	NUT	BRASS
04	SPRING	SPRING STEEL
05	TIE ROD	BRASS
06	MOUNTING RUBBER RING & ALL RUBBER COMPONENTS	NITRILE NBR

TYPE	DIMENSIONS													
	D	D1	D2	D3	D4	D5	D6	D7	D8	A* Max	B Max	C Max	E	F
T50	50	165	99	85	81	60	NA	125	18	25	78	NA	4	14
T80	80	200	131	117	112	102	NA	160	18	25	103	NA	4	15

* THE DIMENSIONS VARIES WITH SET PRESSURE

PRESSURE RELIEF VALVE WITH SWITCH & DIRECTIONAL COVER



Type	Size	Model No.	Switch	Cover
T50	50	306XX06	YES	YES
T80	80	307XX06	YES	YES

XX — Replace by Operating Pressure in KPA
Example T50 PRD with Switch and SS Cover and operating pressure 50KPA will be Model No. 3065006

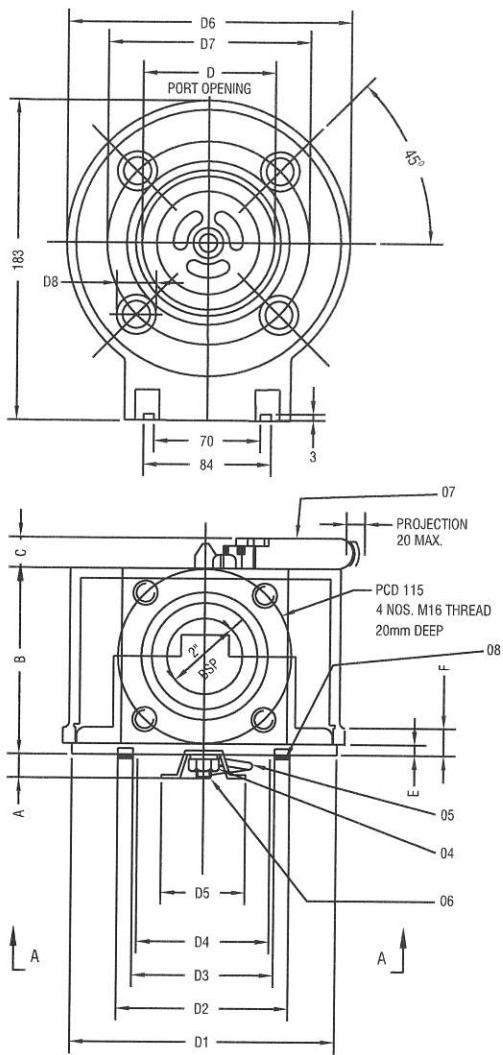
Switch Operation	Specification
 BEFORE OPERATION: Contacts 21 and 22 are closed, contacts 13 and 14 are open. AFTER OPERATION: Contacts 21 and 22 are open, contacts 13 and 14 are closed.	AC 15; A 300 (Ue=240V, Ie=3A)/ DC 13; Q 300 (Ue=250V, Ie=0.27A)

PART NO.	DESCRIPTION	MATERIAL
01	BODY	ALUMINIUM ALLOY
02	SHUTTER	ALUMINIUM ALLOY
03	PROTECTIVE COVER	SPRING STEEL
04	NUT	BRASS
05	SPRING	STAINLESS STEEL
06	TIE ROD	BRASS
07	SWITCH	CONNECTOR THREAD PG 13.5
08	MOUNTING RUBBER RING & ALL RUBBER COMPONENTS	NITRILE NBR

TYPE	DIMENSIONS													
	D	D1	D2	D3	D4	D5	D6	D7	D8	A* Max	B	C	E	F
T50	50	165	99	85	80	60	170	125	18	25	125	30	4	14
T80	80	200	131	117	112	102	205	160	18	25	160	30	4	16

* THE DIMENSIONS VARIES WITH SET PRESSURE

PRESSURE RELIEF VALVE WITH DIRECTIONAL COVER



Type	Size	Model No.	Switch	Cover
T50	50	306XX05	YES	YES

XX — Replace by Operating Pressure in KPA

Example T80 PRD with Switch & Al. Directional Cover and operating pressure 50KPA will be Model No. 3065005

Switch Operation	Specification
 BEFORE OPERATION AFTER OPERATION	AC 15; A 300 (Ue=240V, Ie=3A)/ DC 13; Q 300 (Ue=250V, Ie=0.27A)

PART NO.	DESCRIPTION	MATERIAL
01	BODY	ALUMINIUM ALLOY
02	SHUTTER	ALUMINIUM ALLOY
03	PROTECTIVE COVER	ALUMINIUM DIE CAST
04	NUT	BRASS
05	SPRING	SPRING STEEL
06	TIE ROD	BRASS
07	SWITCH	CONNECTOR THREAD PG 13.5
08	MOUNTING RUBBER RING & ALL RUBBER COMPONENTS	NITRILE NBR

TYPE	DIMENSIONS													
	D	D1	D2	D3	D4	D5	D6	D7	D8	A* Max	B	C* Max	E	F
T50	50	165	99	85	80	60	179	125	18	25	118	30	4	14

* THE DIMENSIONS VARIES WITH SET PRESSURE

WORKING

When pressure in the tank rises, the total force on the area defined by the top gasket on the operating disc also increases. As soon as this force exceeds the load applied by the springs, the operating disc moves slightly upwards. This exposes the transformer pressure to a greater area corresponding to the diameter of side gasket, resulting in sudden increase of force. The disk lifts instantaneously and vents out the excess pressure in the transformer. When the pressure falls to allowable values, the spring forces the disc back to its original position.

MOUNTING

These Pressure Relief Valves should preferably be mounted in the horizontal position.

Due to our policy of continuous product improvement, dimensions and designs are subject to change.



VIAT INSTRUMENTS PVT. LTD.

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