

 Enriching Lives	THE TATA POWER COMPANY LIMITED Kalinganagar CPP1 Project	 TP0004-V010-00-M10-E1-001 REV E Page 1 of 6
	Kirloskar Brothers Ltd.	

3 X 67.5 MW Gas Based Captive Power Plant (CPP-1) for Tata Steel at Kalinganagar, Odisha

THE TATA POWER COMPANY LIMITED
 PROJECT ENGINEERING DEPARTMENT

APPROVAL STATUS

✓	Approved
II	Approved subject to incorporation of comments as marked. Resubmit for formal approval.
III	Not Approved. Incorporate Comments as marked. Resubmit for review/approval.
IV	Retained for information/Resubmit after review and incorporation of comments.

Document Title: GA Drawing for CW Pumps Motor

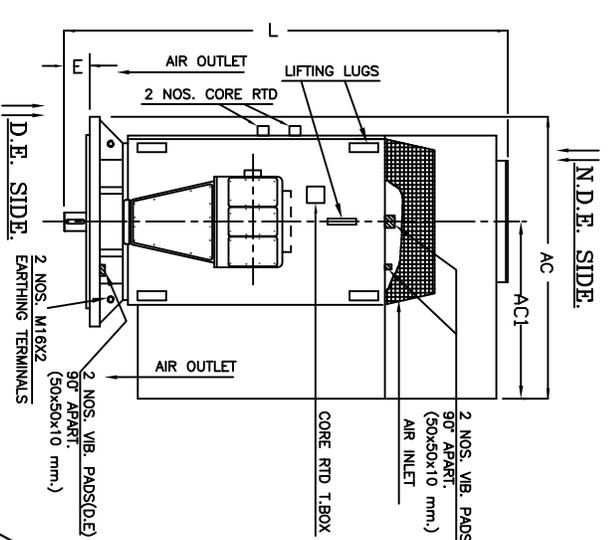
Document No: TP0004-V010-00-M10-E1-001 REV E

Approved by
 30/08/13

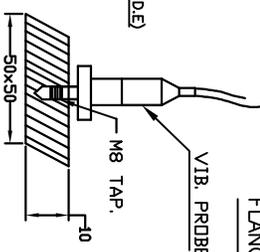
[Signature]
 K. Anwar

Revision	Date	Description	Checked By Approvals approved by		
			Prepared By	Checked By	Approved By
A	12-02-2013	Issued For Review & Comment	Prasad /SS	CP	KSR
B	30-04-2013	Issued For Review & Comment	Prasad /SS	CP	KSR
C	09-07-2013	Issued For Review & Comment	Prasad /SS	CP	KSR
D	31-07-2013	Issued For Review & Comment	Prasad /SS	CP	KSR
E	23-08-2013	Issued For Review & Comment	Subhash /SS	CP	KSR

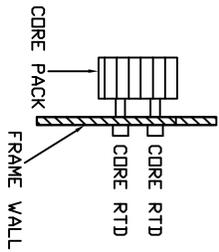
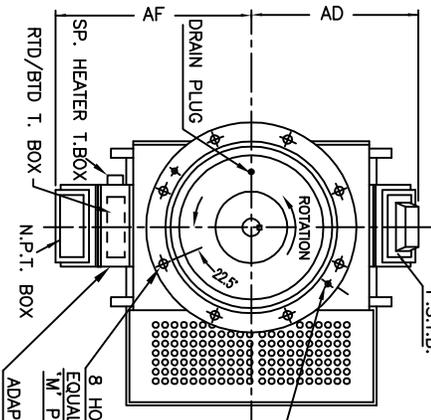
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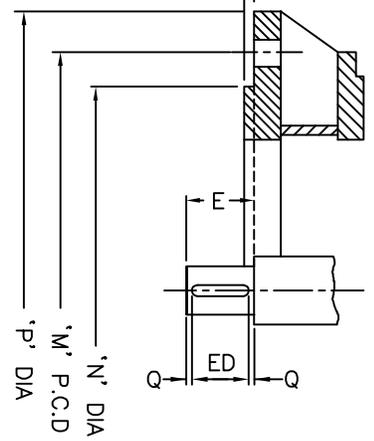
VIEW OF VIB. PROBE MOUNTING.



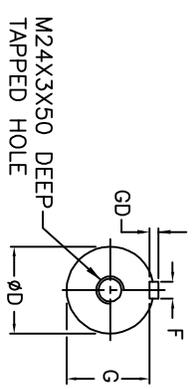
AFTER ALIGNING THE MOTOR, TWO HOLES ARE TO BE DRILLED & REMAIED FOR DOWELLING.



FLANGE AND SHAFT SECTION



NOTE:
MOTOR BEARING SYSTEM IS SUITABLE TO TAKE ITS OWN ROTOR WEIGHT ONLY.



FLANGE DESIGN	AC	AC1	AD	AF	ØD	E	ED	Q	M	P	N	T	S	G	GD	F	L	
F1080B	1925	1350	950	1100	120	±0.025	210	190	110	1080	1150	1000	6	28	109	18	32	2900
	MAX.	MAX.	MAX.	MAX.	NOM.	TOL.			±1		±0.028	MAX.			-0.2		MAX.	

ROTATION : UNI-DIRECTIONAL-ANTI CLOCKWISE LOOKING FROM MOTOR DRIVE END.

FRAME	RATING	POLE	VOLTAGE/Ph./Hz	ACCESSORIES
DOV450U	720 KW	8	6.6KV/3Ph/50HZ	1. 1 NO. P.S.T.B. & 1 NO. N.P.T. BOX.(NON P.S.T.B.) 2. 12 NOS. RTD Pt.100-SIMPLEX TYPE 3. 2 NOS. BTD Pt.100-DUPLEX TYPE 4. 2 NOS. CORE RTD Pt.100-DUPLEX TYPE 5. 1 NO. HEATER T. BOX WITH 2 NOS. SPACE HEATERS.
ENCLOSURE	MOUNTING	WEIGHT	PAINT SHADE	
CAQ4 / IP55	V1	6000 KG.	SHADE 631 OF IS:5	

CUSTOMER : K.B.I.
A/C : TATA POWER CO. Ltd.
APPLICATION : PUMP
COUPLING : DIRECT/FLEXIBLE

REV.	CHK'D.	P.D./28.08.13	REV.	CHK'D.	P.D./12.08.13	REV.	CHK'D.	P.D./23.07.13	REV.	CHK'D.	P.D./27.05.13	REV.	CHK'D.	P.D./12.03.13
05	APPV'D.	G.M/28.08.13	04	APPV'D.	G.M/12.08.13	03	APPV'D.	G.M/23.07.13	02	APPV'D.	G.M/27.05.13	01	APPV'D.	G.M/12.03.13
CORE RTD ADDED.														
N.D.E. VIB. PAD ADDED. VIEW OF VIB. PROBE MOUNTING SHOWN.														
APPLICATION/COUPLING ADDED.														
VIB. PAD ADDED.														

REV.	CHK'D.	P.D./30.08.13	REV.	CHK'D.	P.D./30.08.13
06	APPV'D.	G.M/30.08.13	01	APPV'D.	G.M/12.03.13
CORE RTD T.BOX ADDED					
REF. SO. NO. U620416					
GEN. TOLERANCE					
SCALE					
M.T.S.					
DRAWING NO. A3C18323-078					
REV. NO. 06					



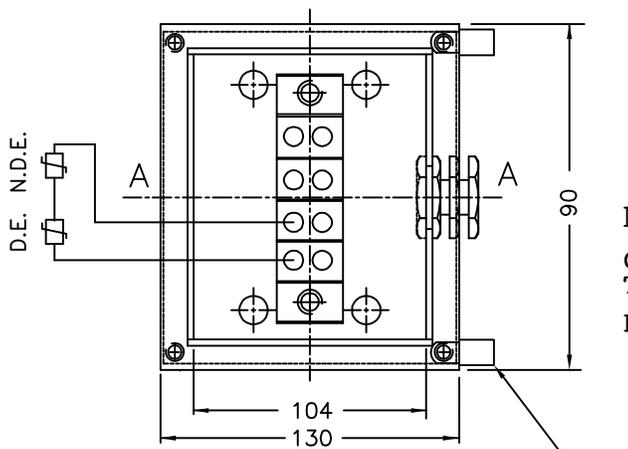
Marathon Electric Motors (India) Ltd.
AEI WORKS, 1, TARATALA ROAD,
KOLKATA-700024, INDIA

OUTLINE DRAWING OF FLANGE MOUNTED
VERTICAL C.A.C.A. HT. MOTOR.

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REV.	CHK'D. APPV'D.								

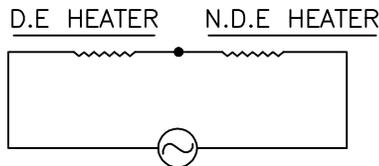
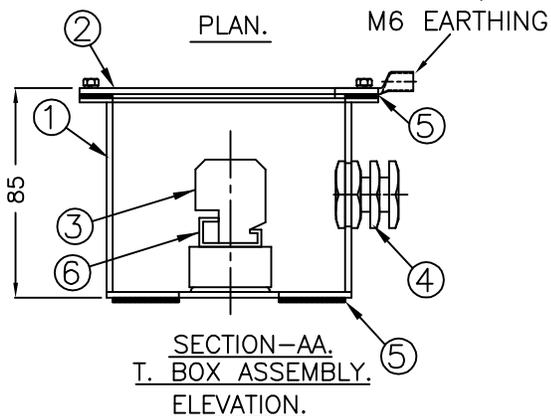
ALL DIMENSIONS ARE IN MM UNLESS STATED OTHERWISE
CONNECTION & ASSEMBLY DRAWING



NOTE :-

CONNECT 1 - ϕ ,240V, 50 Hz. SUPPLY TO EITHER OF THE TERMINALS.

DEGREE OF PROTECTION : IP55



SUPPLY: 1 & 4
CONNECTION DIAGRAM

6	CHANNEL	M.S
5	GASKET	NEO-PRENE-3 THK.
4	DOUBLE COMPRESSION GLAND 2C x 2.5 SQ. mm	BRASS NICKLE PLATED
3	TERMINAL BLOCK (WITH SPARE TERMINALS)2.5 Sq.mm.	NYLON
2	COVER.	M.S. 2 THK.
1	TERMINAL BOX.	M.S. 2 THK.

G4	G3	G2	G1	PT. NO.	DESCRIPTION	MATERIAL SPEC. DRAWING NO.
QUANTITY						

REF. DRG.  Marathon Electric Motors (India) Ltd.
AEI WORKS, 1, TARATALA ROAD,
KOLKATA-700024, INDIA
A Regal Beloit Company

HEATER TERMINAL BOX ASSLY. & CONNECTION DIAGRAM

GEN. TOLERANCE	DRAWN	RANJAN.C	18.06.2013	DRAWING NO.	REV NO.
	TRACED	---	---	A4C 14150-001	00
SCALE	CHECKED	P.DAS	18.06.2013		
N.T.S	APPV'D	S.DUTTA	18.06.2013		

NETAI/T.BOX/A4C 14150-001_ATLASCOPCO (R)

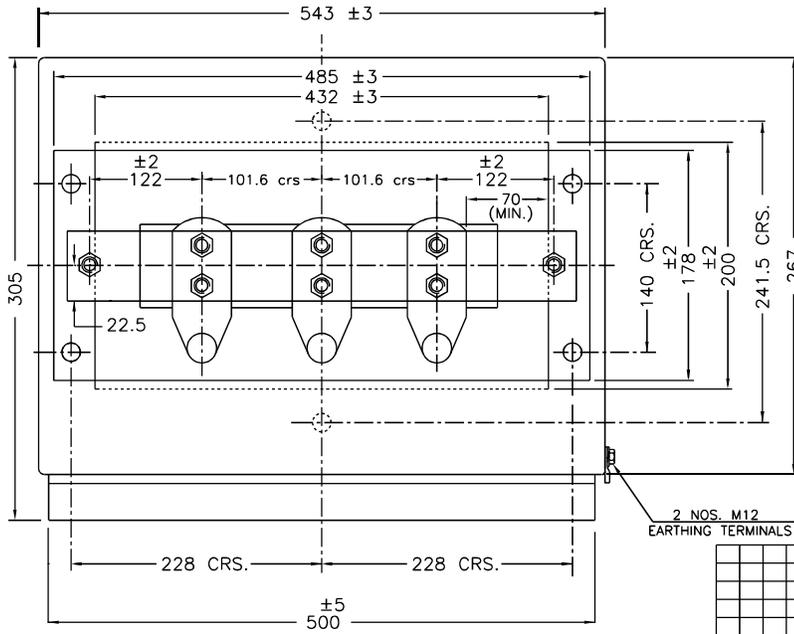
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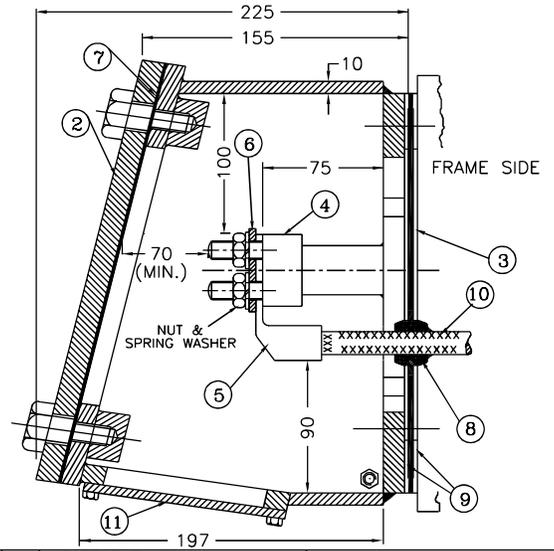
DRAWING NO.
A3C 13903

REV.
02

ALL DIMENSIONS ARE IN mm.
IF IN DOUBT, PLEASE ASK DESIGN DEPT.



DEGREE OF PROTECTION : IP-55



11	ADAPTOR PLATE	M.S.
10	CABLE	CSP/SILICON
9	GASKETS (BOTTOM)	NEOPRENE
8	GROMET	NEOPRENE
7	GASKETS (TOP)	NEOPRENE
6	SHORTING LINK (38 x 6)	CD PLTD. CU BAR
5	MOTOR THIMBLE	COPPER
4	TERMINAL BAR	EPOXY (MOULDED)
3	SEALING PLATE	FRP
2	COVER (543x267x10 THK.)	M.S.
1	TERMINAL BOX	M.S.

Q4	Q3	Q2	Q1	PT. NO.	DESCRIPTION	MATERIAL SPEC. DRAWING NO.
REF. DRG.					Marathon Electric A Regal Beloit Company	Marathon Electric Motors (India) Ltd. AEI WORKS, 1, TARATALA ROAD, KOLKATA-700024, INDIA

NEUTRALPOINT TERMINAL BOX

REV.	CHK'D.	APPV.D.	REV.	CHK'D.	APPV.D.	REV.	CHK'D.	APPV.D.	REV.	CHK'D.	APPV.D.	REV.	CHK'D.	APPV.D.	REV.	CHK'D.	APPV.D.
						02			01			01					
										DRG. CORRECTED AS PER COMPONENT DRG.		2 NOS. M12 EARTHING TERMINALS SHOWN					

GEN. TOLERANCE	DRAWN	P.DAS	24.12.2007	DRAWING NO.	REV. NO.
SCALE	NTS.	TRACED	---		
		CHECKED	P.LAHIRI	24.12.2007	
		APPV'D	G.MONDAL	24.12.2007	
				A3C 13903	02

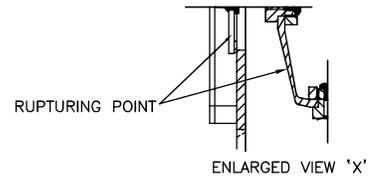
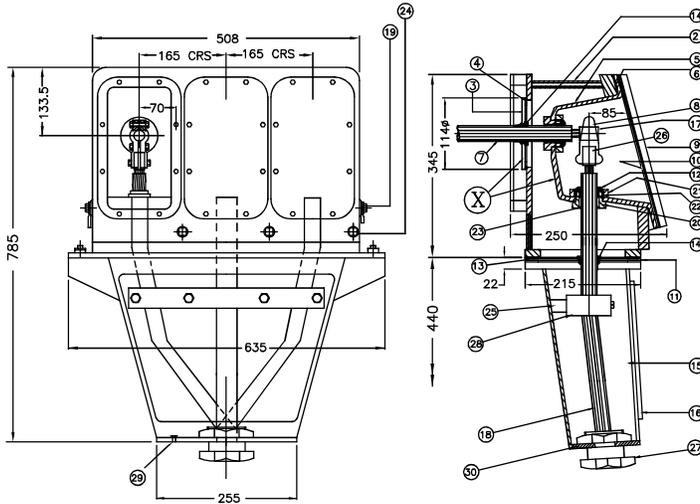
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pranob/HT/mukul/ABC/H13903.dwg

(R)

DRAWING NO. REV. V.
A3C 13780-013 03

ALL DIMENSIONS ARE IN mm.
IF IN DOUBT, PLEASE ASK DESIGN DEPT.



NOTE :-

1. T.BOX IS SUITABLE FOR FAULT LEVEL OF 500MVA FOR 6.6KV (FOR 0.25 SECS)
2. PROVISION OF EARTHING TERMINATION ON THE BOX GIVEN-REF. ITEM NO.19
3. DEGREE OF PROTECTION IP55.
4. TERMINAL BOX IS SUITABLE TO RATED IN STAPS OF 180°
5. DOUBLE COMP. GLAND IS SUITABLE FOR 185 Sq.mm. CABLE.

QTY	PT. NO.	DESCRIPTION	MATERIAL SPEC. DRAWING NO.
1	30	GLAND PLATE	M.S, 3 mm THK.
1	29	DRAIN PLUG(M6)	STAINLESS STEEL
1	28	CABLE SUPPORT	FRP
1	27	DOUBLE COMPRESSION CABLE GLAND	NICKEL CHROMIUM PLATED BRASS CABLE GLANDS.
3	26	THIMBLE(CUSTOMER CABLE)	COPPER TIN PLATED
1	25	BOSS	M.S.
3	24	DESICCATOR & HUMIDITY INDICATOR	M.S. PLATED
3	23	GLAND WASHER	NYLON
3	22	GLAND BUSH	NEOPRINE
3	21	RING NUT	NYLON
3	20	GLAND BODY	NYLON
1	19	2 NOS. EARTHING TERMINAL M12 WITH THIMBLE	M.S
1	18	CUSTOMER CABLE	1 x 3C x 185 Sq.mm, AL. XLPE
3	17	FERRULE(MOTOR CABLE)	COPPER TIN PLATED
1	16	SLG. CHAMBER COVER PLATE	M.S.
1	15	SEALING CHAMBER	M.S.
3	14	GROMMET	NEOPRENE
1	13	TERMINAL SEALING PLATE	FRP
3	12	GLAND NUT	NYLON
1	11	GASKET FOR SLG. CHAMBER	NEOPRENE
3	10	EPOXY LINING ON TERMINAL COVER	EPOXY
3	9	TERMINAL COVER	M.S.
3	8	CABLE CLAMP	TINNED COPPER
1	7	CABLE (MOTOR)	CSP/SILICON CABLE
3	6	GASKET FOR LID	NEOPRENE
3	5	JOINT BOX	EPOXY MOULDED
1	4	GASKET FOR SLG. PLATE	NEOPRENE
1	3	SEALING PLATE (ROUND)	FRP
1	2	TERMINAL BOX	M.S.
1	1	P.S.T.B. ASSLY.	

QTY	PT. NO.	DESCRIPTION	MATERIAL SPEC. DRAWING NO.
REF. DRG.		Marathon Electric	Marathon Electric Motors (India) Ltd.
A3C 13780-003		A Regal Beloit Company	AEI WORKS, 1, TARATALA ROAD, KOLKATA-700024, INDIA

REV.	CHK'D.	APPV.D.	REV.	CHK'D.	APPV.D.	REV.	CHK'D.	APPV.D.	REV.	CHK'D.	APPV.D.
			03			02			01		
			PT. 19 CORRECTED.			GLAND PLATE THK. ADDED.			COMMENTS ADDED.		

ASSLY. DRG. OF PHASE SEGREGATED TERMINAL BOX.

GEN. TOLERANCE	DRAWN	N.DAS	05.02.2008	DRAWING NO.	REV NO.
SCALE NTS.	TRACED			A3C 13780-013	03
	CHECKED	P.DAS	05.02.2008		
	APPV'D	G.MONDAL	05.02.2008		

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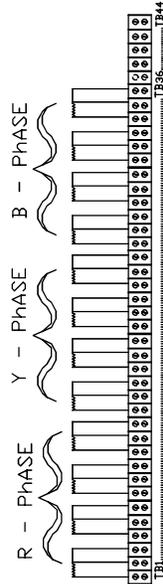
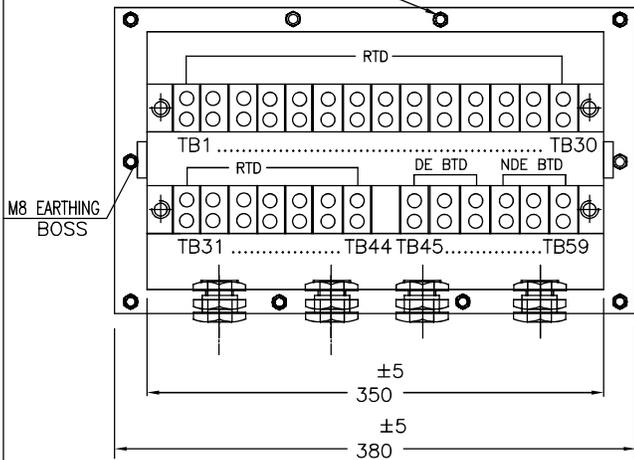
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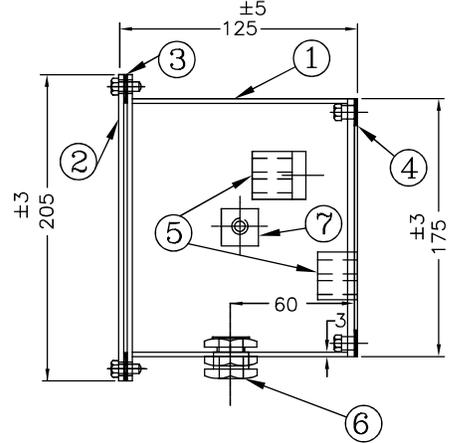
DRAWING NO. REV.
A4C 18243-RTD-BTD 03

10 NOS. M6 X 20 LG. SCREW.

ALL DIMENSIONS ARE IN mm.



CONNECTION DIAGRAM FOR RTD



OUT GOING RTD CABLE - 12 TRIAD x 1.0 SQ. mm CONTROL CABLE
OUT GOING BTd CABLE - 6 TRIAD x 1.0 SQ. mm CONTROL CABLE

D.E. BRG. N.D.E. BRG.

DEGREE OF PROTECTION OF T. BOX - IP55

20% SPARE TERMINALS PROVIDED.

TEMP. SET POINTS.
WINDING RTD : ALARM-120°C
TRIP-130°C
BRG. RTD : ALARM-95°C
TRIP-100°C



CONNECTION DIAGRAM FOR BTd

2	7	EARTING POINT	M8 WITH THIMBLE.
4	6	DOUBLE COMP. GLAND	BRASS Ni-Cr PLATED(SUITABLE FOR 26 m DIA CABLE)
5	5	TERMINAL BLOCK (2.5 Sq.mm TERMINALS)	PHENOLIC BONDED INSULATOR
1	4	GASKET BOTTOM	NEOPRENE
1	3	GASKET TOP	NEOPRENE
1	2	BOX COVER(END PLATE/CLAMP-M6 BOLE)	M.S. 3 THK.
1	1	RTD/BTd TERMINAL BOX	M.S.

Q4	Q3	Q2	Q1	PT. NO.	DESCRIPTION	MATERIAL SPEC. DRAWING NO.
FDR. INT. REF. REF. DRG. G 15261-1					Marathon Electric Motors (India) Ltd. AEI WORKS, 1, TARATALA ROAD, KOLKATA-700024, INDIA	

REV.	CHK'D.	APPV'D.	REV.	CHK'D.	APPV'D.	REV.	CHK'D.	P.D./08.05.12	APPV'D.	REV.	CHK'D.	P.D./01.03.12	APPV'D.	REV.	CHK'D.	P.D./01.03.12	APPV'D.
			03			02				01							
			TB MARKING CHANGED.			PT. 7 ADDED. TEMP. SET POINT ADDED.			CUSTOMER DETAILS ADDED.								

ARRANGEMENT OF RTD & BTd T.BOX

GEN. TOLERANCE	DRAWN	R.CHAUDHURI	20.05.2011	DRAWING NO.	REV. NO.
SCALE	TRACED			A4C 18243-RTD-BTD	03
NTS.	CHECKED	P.DAS	20.05.2011		
	APPV'D	G.MONDAL	20.05.2011		

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/PRANAB/A3C/A4C 18243-RTD-BTD

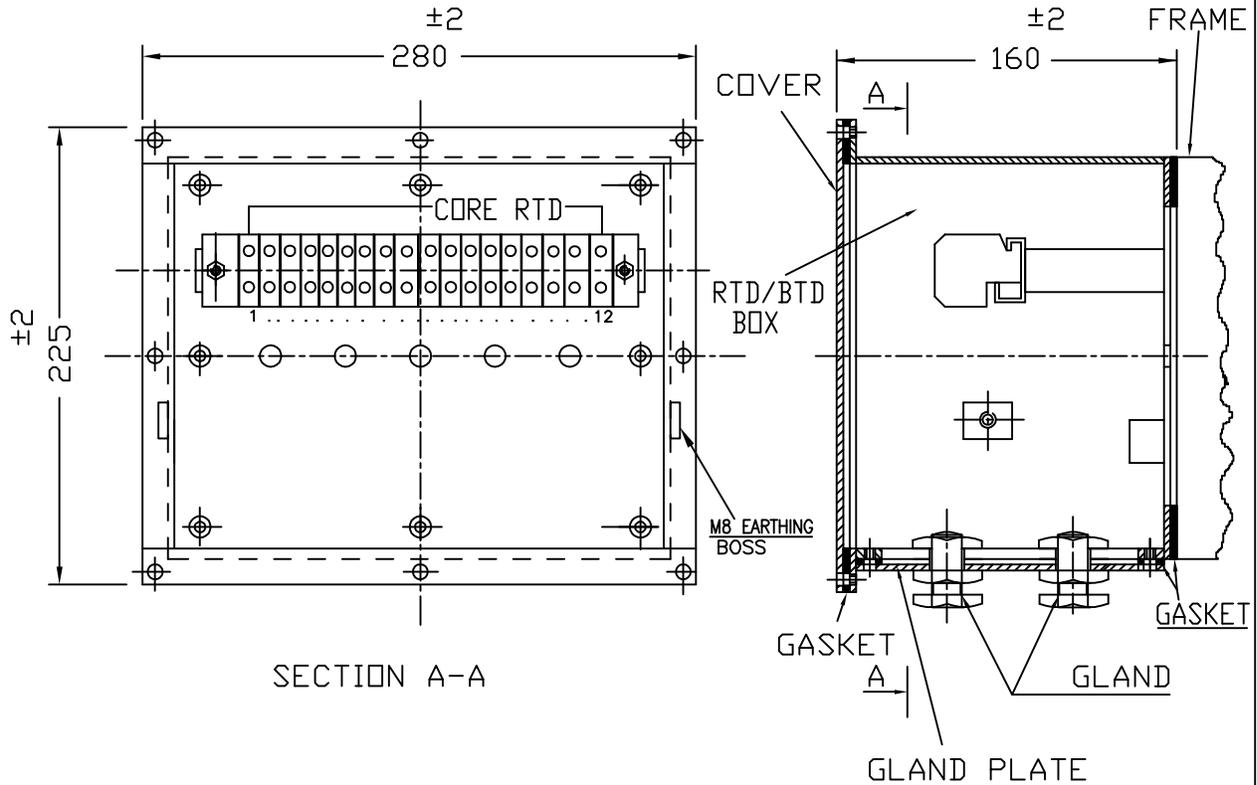
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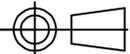
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REV.	CHK'D.	REV.	CHK'D.	REV.	CHK'D.	REV.	CHK'D.
	APPV'D.		APPV'D.		APPV'D.		APPV'D.

ALL DIMENSIONS ARE IN MM UNLESS STATED OTHERWISE

DEGREE OF PROTECTION - IP55.



				01	RTD/BTD ARRANGEMENT	ASSEMBLY
G4	G3	G2	G1	PT. NO.	DESCRIPTION	MATERIAL SPEC. DRAWING NO.
QUANTITY						
REF. DRG. A3C 17591				Marathon Electric Motors (India) Ltd. AEI WORKS, 1, TARATALA ROAD, KOLKATA-700024, INDIA		
SECTIONAL ASSLY. FOR CORE RTD ARRANGEMENT						
GEN. TOLERANCE		DRAWN	RANJAN.C	30.08.2013	DRAWING NO.	
		TRACED	---	---		
SCALE NTS.		CHECKED	P.DAS	30.08.2013	A4C 17591A	
		APPV'D	S.DUTTA	30.08.2013		