

EXMS 4509

FLAME PROOF STARTER



Mechanical Data

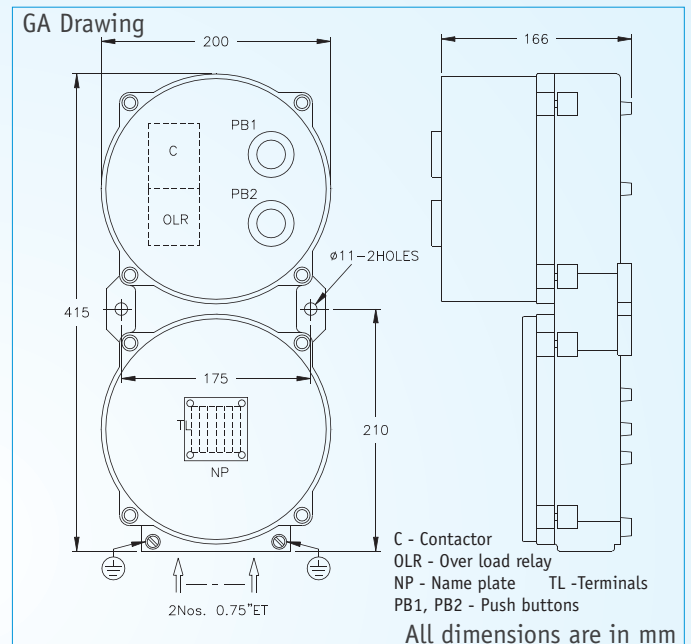
Material	: Aluminium LM6
Weight	: 7.5 Kg (Approx.,)
Dimension	: 415 x 200 x 127 mm
Main Chamber	: ϕ 180 x 105
Terminal Chamber	: ϕ 180 x 75
IP 65 as per IS	: 13947/93 / IEC 60529 / 1987
Finish	: Anti corrosive epoxy powder coated
Cable Entry	: 3 * 0.5" NPT / 3 * 0.75"ET/NPT/BSP OR 3 * M20 / M25
Mounting	: Wall mounting
Gasket	: Neoprene
Hardware	: Stainless Steel (SS-304)
Temp. Class	: T6

Electrical Data

Terminals	: 6 nos. of Nylon/PP 10mm ² / 6mm ² / 4mm ² terminals possible
Max. Cable Size	: 3 x 10 mm ²
Contactors Rating	: 16 A
Voltage (V)	: 415 V, 50 Hz AC
Overload Relay	: Refer Chart P1
Push Buttons	: 1 NO Start; 1 NC Stop
Earthing	: External : 2 Nos - M6 Internal : 1 No - M5

Description

Explosion Proof - Weather Proof Motor starter with an integral terminal chamber. The main chamber has ample space to house DOL Starters Direct On line starter 0.5HP - 10 HP, 3 phase, 415V ac The contactor is wired to clipon type terminals in the terminal chamber through sealed cable bushings. The push button actuator is spring loaded to ensure positive contact with the control element. The covers are provided with 'O' ring gaskets for weather proof protection.



Type of protection	Flame Proof - Exd
Area Classification	Zone 1 & 2
Gas Groups	Group I, II A ,II B
Apparatus Standard	IS-2148:2004(IEC 60079-1/2001)
CIMFR Certificate No.	CIMFR/TC/SR/H290
Approvals	CCE,BIS

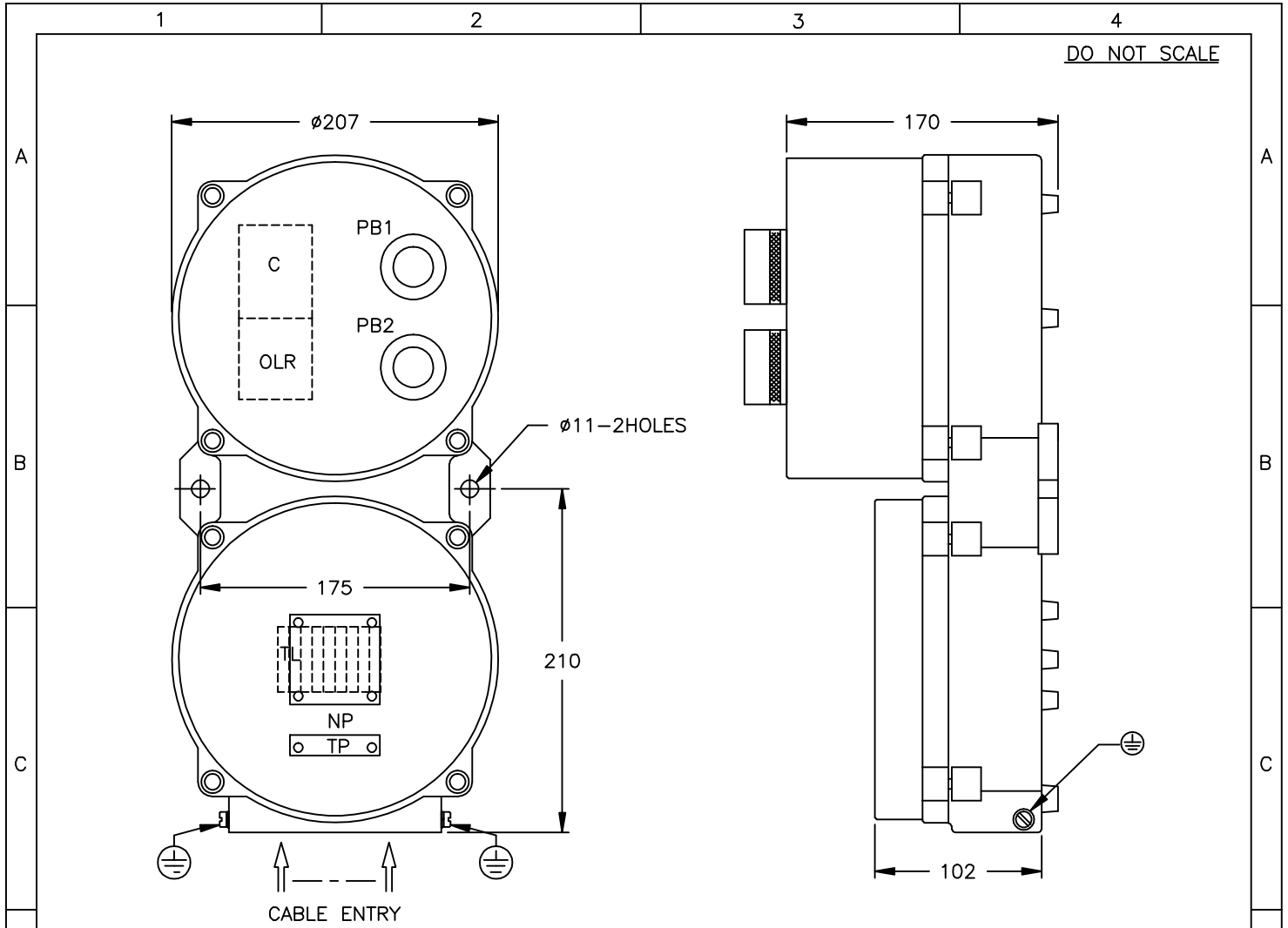
Chart P1

Electrical Data - Direct On line Starter

Motor Ratings		Full load Current (Amps)	Switch Ratings (Amps)	Fuse Ratings (Amps)	Contactor (AC3) (Amps)	Overload relay Range	Cable Size		Terminals	
HP	KW						Incoming/ Out going	Incoming/ Out going		
1	0.75	1.9 A	16 A	6 A	9/16 A	1.4 - 2 A	3 x 4 mm ²		6 Nos 4 mm ²	
2	1.5	3.7 A	16 A	10 A	16 A	2.5 - 2 A	3 x 4 mm ²		6 Nos 4 mm ²	
3	2.2	4.8 A	16 A	10 A	16 A	3.5 - 5 A	3 x 4 mm ²		6 Nos 4 mm ²	
5	3.7	7.8 A	32 A	20 A	16 A	6.5 - 9.5A	3 x 6 mm ²		6 Nos 6 mm ²	
7.5	5.5	11.2 A	32 A	25 A	16 A	8.0 -12 A	3 x 6 mm ²		6 Nos 6 mm ²	
10	7.5	15.4 A	32 A	25 A	22 A	11 -16 A	3 x 6 mm ²		6 Nos 6 mm ²	
12.5	9.3	19.0 A	32 A	32 A	22 A	14 -20 A	3 x 10 mm ²		6 Nos 10 mm ²	
15	11	22.0 A	63 A	32 A	30 A	17 -25 A	3 x 16 mm ²		6 Nos 16 mm ²	

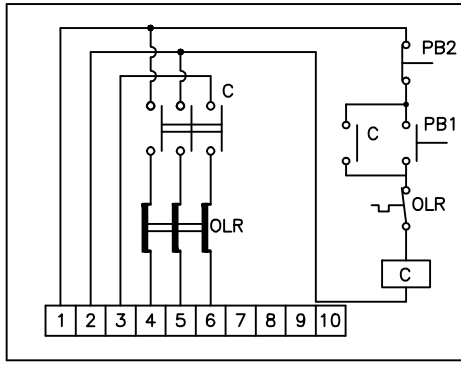
Electrical Data - Star Delta Starter

Motor Ratings		Full load Current (Amps)	Switch Ratings (Amps)	Fuse Ratings (Amps)	Contactor (AC3) (Amps)	Overload relay Range	Cable Size		Terminals	
HP	KW						In coming	Out going	In coming	Out going
15	11	22 A	32 A	32 A	22 A	10 - 16 A	3 x 16	3 x 10	3 x 16	6 x 10
20	15	29 A	63 A	45 A	30 A	14 - 20 A	3 x 16	3 x 10	3 x 16	6 x 10
25	18.5	35 A	63 A	50 A	30 A	18 - 24 A	3 x 25	3 x 16	3 x 25	6 x 16
30	22	40 A	63 A	50 A	30 A	17 - 25 A	3 x 25	3 x 16	3 x 25	6 x 16
35	26	47 A	63 A	63 A	38 A	22 - 32 A	3 x 35	3 x 25	3 x 35	6 x 25
40	30	53 A	125 A	63 A	70 A	22 - 32 A	3 x 50	3 x 35	3 x 50	6 x 35
50	37	65 A	125 A	80 A	70 A	25 - 40 A	3 x 50	3 x 35	3 x 50	6 x 35
60	45	80 A	125 A	100 A	70 A	38 - 63 A	3 x 70	3 x 50	3 x 70	6 x 50
75	55	94 A	125 A	100 A	70 A	38 - 63 A	3 x 70	3 x 50	3 x 70	6 x 50



DO NOT SCALE

HP	OLR RATING in A	KW
0.5	0.8-1.25	0.37
0.8	1.0-1.6	0.55
1.0	1.25-2.0	0.74
1.5	2.0-3.2	1.1
2.0	2.5-4.0	1.47
3.0	3.2-5.0	2.21
5.0	3.2-5.0	3.68
7.5	8.0-12.5	5.15
10	10.0-16.0	7.35



NOTES:

- PB1 - START PUSH BUTTON (GREEN)
- PB2 - STOP PUSH BUTTON (RED)
- PUSH BUTTON ELEMENT RATING 10A 415V AC (1N0+1NC)
- C - CONTACTOR, 415V AC (REFER CHART)
- OLR - OVER LOAD RELAY (REFER CHART)
- TL - 10NOS. 4SQ.MM TERMINALS (PHOENIX MAKE)
- NP - NAME & WARNING PLATE (SS)
- TP - TAG PLATE (PERSPEX)
- EARTHING - 2Nos. EXTERNAL & 1No. INTERNAL
- HARDWARE - SS304

ALL DIMENSIONS ARE IN MM.

E	CUSTOMER :		TITLE :			
			EXPLOSIONPROOF DOL STARTER			
F	CONSULTANT :		CAT No. : EXMS-4509			
	PROJECT :		CLASSIFICATION : Exd IIA, IIB IP65 ZONE 1&2			
F	P.O.No. :		WT.:7.5KGS (APPROX.)	MATL.:AL. LM-6	ITEM No.:	QTY.:
	FINISH : EPOXY POWDER COATED LIGHT GREY (SHADE-631) OF IS:5		TOLERANCE: ±5mm.		FOR APPROVAL	
		SCALE N.T.S.				
F	CMRI : CMRS/TC/1284, DT:23.10.92	IS:13346/04 (IEC:60079-0/00)	NAME	DATE	SHEET 1 OF 1	
	CCE : R1(1)136/BALIGA/12-XVIII DT:24.12.2004	IS:2148/04 (IEC:60079-1/01)	REV-1			
	BIS : CM/L-0364341	IS:12063/87 (IEC:60529/89)	REV-2		DRG. NO. QEEXMS4509	
	Baliga Lighting Equipments Private Limited, KOVILAMBAKKAM, CHENNAI-600117, INDIA.		DRN R.M	10.01.09	REV	0
			CHKD			
			APPD			



केन्द्रीय खनन एवं ईंधन अनुसंधान संस्थान

(वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद)
बरवा रोड, धनबाद - 826 001, झारखण्ड, भारत



ADDITIONAL FIRST COPY

Central Institute of Mining and Fuel Research

Formerly : Central Mining Research Institute
(Council of Scientific & Industrial Research)
BARWA ROAD, DHANBAD-826 001, JHARKHAND, INDIA

REGISTERED POST/COURIER SERVICE

No. CIMFR/TC/SR/H290
I.D. No. 961/07

Dated: 21st July, 2008
CODE NO. FLP/204B/08

To,
M/s. BALIGA LIGHTING EQUIPMENTS PRIVATE LIMITED,
389, Medavakkam Road,
Kovilambakkam,
CHENNAI-600 117, India

Sub: Supplementary Testing for **REVALIDATION** as per IS: 2148- 2004 (IEC 60079-1/2001) of your **Flameproof-cum-Weatherproof enclosure for Direct-on-Line Starter**, designated by **Cat. No. EXMS-4509** for application in Gas Groups: IIA & IIB atmospheres only.

- **Report on (REVALIDATION)**

Your Ref. No. CMRI/6/210/IIB, dated: 27/12/2007

Dear Sir,

Please find enclosed the **Supplementary Test Report** for **REVALIDATION** of the above sample as per IS: 2148-2004.

The above apparatus was earlier certified as per IS: 2148-1981 vide then CMRS Certificate No. CMRS/TC/1284, dated: 23.10.1992 mentioned in the schedule of this report.

Charges of ~~Rs. 8,584/-~~ ^{7012/-} ~~(Rupees Eight thousand Five hundred eighty four)~~ ^{seven} ~~only~~ ^{twelve} including applicable service charges involved towards the testing/issuing the schedule have been adjusted against the advance deposit made by you.

Kindly arrange to collect the sample within 90 days from the date of receipt of this letter failing which CIMFR would dispose off the sample by public auction without any further NOTICE to you.

Kindly acknowledge receipt.

Thanking you,

Yours faithfully,


(G. M. PRASAD)

HEAD OF THE DEPARTMENT
TESTING CELL

Encl.: As above
Supplementary Report for Revalidation in Triplicate
Copy to: 1. Head, Flame & Explosion Lab.
2. Bill Section.

1 of 5