

## **TECHNICAL SPECIFICATION FOR THE LT Single feeder Distribution Boxes (SMC)**

### **1. SCOPE:-**

The specification covers the design, manufacture, testing at manufacturer's works, supply and delivery at destination stores of LT Distribution Boxes made out of SMC material as per IS 13410 suitable for operation 433 Volt ,3 phase four wire AC ,50 HZ system & require to be installed at the secondary terminals of distribution Transformer upto 63 KVA transformer .

It is not the intent to specify completely herein all the details of the design and construction of material. However the material shall conform in all respects to high standards of engineering, design and workmanship and shall be capable of performing in continuous commercial operation, in a manner acceptable to the purchaser, who will interpret the meanings of drawings and specification and shall have the power to reject any work or material which, in his judgment is not in accordance therewith. The offered material shall be complete with all components necessary for their effective and trouble free operation. Such, components shall be deemed to be within the scope of Bidder's supply irrespective of whether those are specifically brought out in this specification and/or the commercial order or not.

### **2. LT DISTRIBUTION BOXES (SMC):-**

The LT Distribution box shall be weather proof made out of sheet moulded compound (SMC) with flame retardant properties. It shall not melt up to 400 deg c as per IS 13360. It shall also be capable of withstanding temperatures (150°C) of boiling water for 5 minutes continuously without distortion or softening

The dimensions of the LT Distribution box shall be (minimum) 480 mm (L) X 210 mm (B) X 345 mm (H) (as per drawings-annexure) made out of sheet moulding compound material (Fiber glass reinforced polyester) to IS-13410:1992 – Thickness of box shall be minimum 2 mm. Two lowers shall be provided for ventilation and provision of 4 nos. 38 mm dia holes on either side for IC and OG Ckt. All the holes are to be provided with suitable PVC glands. 6 nos. holes of dia 25 mm shall be provided on doors for ventilation

Doors are to be provided for the box with concealed hinges . 1 no. pad lock ; 2 nos. magnets lock as locking arrangements. 1 no. SMC mounting plate shall be fitted inside the box with GI Bolts & Nuts etc.

3 nos. 100A, 500V knife type porcelain fuse units of best quality with isolating mechanism of porcelain size 210 mm length & 70 mm width with extension strip of 25 mm X 3 mm copper along with 2 nos. fixing bolts (½"X 1¼" & nuts with washers). All copper parts made out of 25 x 3 mm copper strip with tin coated and all screws and bolts and nuts are GI

2 Nos. MS Flat, 200x50x6 mm pieces in full length shall be mounted at the back of the Box and 2 Nos. MS Flat from inside with larger holes for better grip to facilitate fixing of the whole box to the D.P. Structure

All iron parts of the box should be painted with two coats of red oxide paint of best quality. The box shall be with good workmanship.

Busbars to be positioned with bottom one turned towards lower, middle one straight, top one turned towards upper to maintain clearances of in coming cables.

### **3. GUARANTEED TECHNICAL PARTICULARS.:**

Technical particulars shall be guaranteed and a statement of guaranteed technical particulars shall be furnished in the format along with the bid.

### **4. DRAWINGS & LEAFLETS:**

Before proceeding with the manufacture of the material, the drawings shall be submitted by this office. Three sets of drawings showing details of your offer should be furnished along with the tender.

## **5. DEVIATION FROM SPECIFICATION:**

Usually no deviation from specification will be considered. If the tenderer wishes to deviate from this specification in any respect he shall explain fully the reason thereof for the departure otherwise the requirements of this specification will be deemed to be accepted in every respect.

## **6. TESTS AND TEST CERTIFICATES:**

The tests shall be carried out as per relevant IS for both SMC box and Fuse Unite before dispatch and the test certificates shall be furnished for approval.

## **7. GUARANTEE:**

The distribution box should be guaranteed for satisfactory operation for a period of 5 years from the date of receipt at destination stores by the consignee in good condition. During the guarantee period if the distribution box while in its normal operation is found defective, it shall be replaced by the supplier with a new distribution box free of cost within 15 days of its intimation. If the distribution box is not replaced within 30 days of intimation the supplier should note that the guarantee period will be extended to that extent by the number of days delayed for replacement with new distribution box. If the bidder does not replace within 60 days the cost of the distribution box will be recovered from the existing bills / future bills/ bank guarantee available with APEPDCL. For the purpose of ensuring five years guarantee the manufacturer may provide his seal to the distribution box at manufacturer's premises and dispatch in sealed condition after inspection by the APEPDCL's representatives.

## **8. INSPECTION:**

The inspection may be carried out by the purchaser at any stage of manufacturer. The manufacturer shall grant free access to the purchaser's representative at a reasonable time when the work is in progress. Inspection and acceptance of any equipment under this specification by the purchaser shall not relieve the supplier of his obligation of furnishing the equipment in accordance with the specification and shall not prevent subsequent rejection if the equipment is found to be defective.

All acceptance tests and inspection shall be made at the place of manufacturer unless otherwise especially agreed upon by the Bidder and purchaser at the time of purchase. The bidder shall afford the inspector representing the purchaser all reasonable facilities without charge, to satisfy him that the equipment is being furnished in accordance with this specification.

The supplier shall keep the purchaser informed in advance, about the manufacturing programme so that arrangements can be made for inspection.

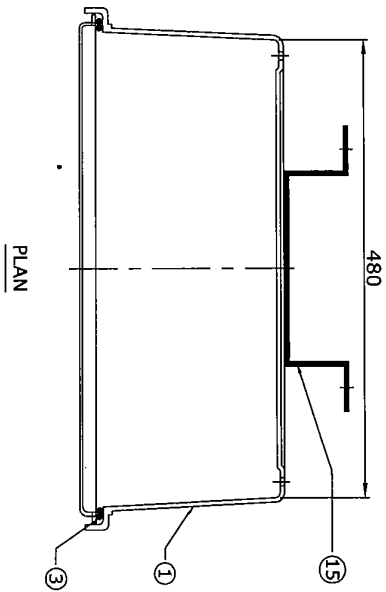
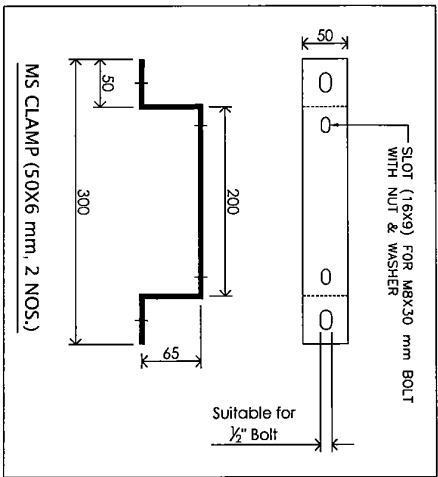
The purchaser reserves the right to insist for witnessing the acceptance/routine testing of the bought out items. The supplier shall give 15 days for local supply / 30 days in case of foreign supply advance intimation to enable the purchaser to depute his representative for witnessing the acceptance and routine tests.

## **9. SAMPLES:**

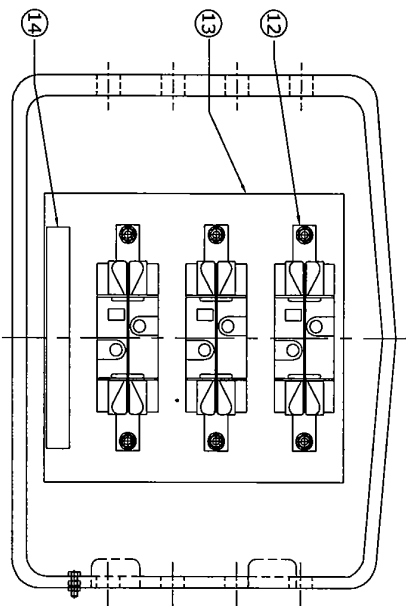
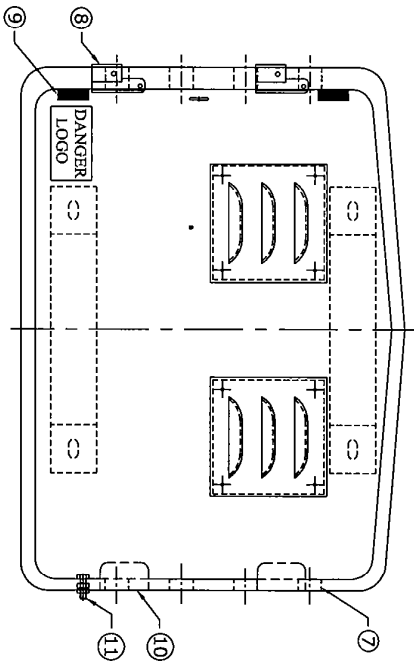
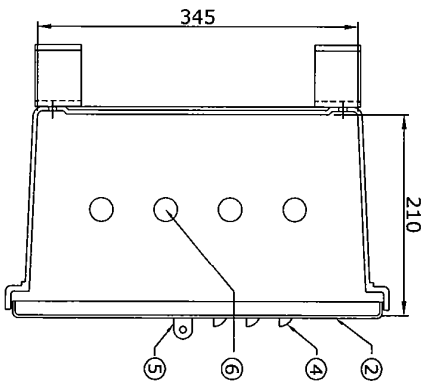
One number non returnable distribution box as per specification has to supplied along with the tender.

**10. MARKING:**

- a) The Name plate shall be adequate weather and corrosion proof and should be fitted in a position where it can be visible in normal service and installation.
- b) The name plate shall be marked with the following
  - a. Name of manufacturer
  - b. Name of the product
  - c. EPDCL Purchase Order Number & Date
  - d. Manufacturers month & Year
  - e. EPDCL logo shall be embossed on plate.
  - f. ISI Mark



- NOTES :-
- (1) MADE OUT OF (THERMOSETTING P. ASTIC) SHEET MOULDING COMPOUND BY THE PROCESS OF HOT PRESS COMPRESSION MOULDING CONFIRMING TO IS : 13410.
  - (2) SMC BASE OR DOOR SHALL NOT SOFTEN OR BEND ON HEATING.
  - (3) DOOR FITTED TO BASE BY CONCEALED HINGES.
  - (4) DIMENSIONS :  
INSIDE :- H=345mm, W=480mm, D=210mm.
  - (5) COLOUR :- OFF WHITE



SR. NO.	DESCRIPTION	QTY.
1	BASE (SMC)	1
2	FRONT DOOR (SMC)	1
3	RUBBER GASKET	1
4	LOUVERS FOR VENTILATION	2
5	PAD LOCK	1
6	I/C CABLE ENTRY HOLES WITH GLAND (Ø38 mm)	4
7	O/C CABLE EXIT HOLES WITH GLAND (Ø38 mm)	4
8	DOOR CLOSING CLAMP WITH HOLE FOR WIRE SEAL	2
9	MAGNETIC LOCKS	2
10	CONCEALED HINGES	2
11	EARTHING BOLT - M6 x 20mm	1
12	100A, 500V KNIFE TYPE PORCELAIN FUSE	3
13	SMC SHEET - 6 mm FOR FUSE MOUNTING	1
14	NEUTRAL PLATE (25x5 mm2)	1
15	M.S. CLAMP (50x6 mm)	2

TITLE :- SMC LT DISTRIBUTION BOX

**GUARANTEED TECHNICAL PARTICULARS FOR LT SMC DISTRIBUTION BOX**  
**(Horizontal)**

Sl.No	Particulars	Detailed Particulars	Offered
1	Material	SMC	
2	Grade of Material	SMC IS 13410 – 1992	
3	Thickness of base/door(Min)	2.0 mm SMC	
4	Properties of Material of Construction of Distribution Box		
	(a) Heat Deflection Temperature (Ref: std. IS : 13411)	150 Deg C	
	(b) Exposure to flame (Ref: std, IS : 4249)	Self extinguishing	
	(c) Melting Property (Ref : std. IS : 13360)	Does not melt	
5	Clear inside dimensions of Meter Box		
	a) Height	345 mm	
	b) Length	480 mm	
	c) Depth	210 mm	
6	Ventilation	2 Nos. of Lowers on front door & 6 nos. holes of dia 25 mm shall be provided on doors for ventilation	
7	Earthing Arrangement		
	a) No. of earth bolts	1 No.	
	b) Material of earthing bolts	GI	
	c) Size of earth Bolt	Dia : 6 mm x2.5 long	
9	Facility for lock	1No. padlock & 2 Nos. door magnet to be Provided	
10	Colour of Meter Box	Off White / Grey	
11	Suitable for out door installation	Yes.	
14	Hinges	Concealed Hinge	
15	Pole Mounting arrangement	2 Nos. M.S. Flats, size 200x50x6 mm thick provided on back side of box & 2 Nos MS Flat from inside with larger holes for better grip	
16	Cable entry Exit arrangement.		
	a)Incoming	4 Nos. 38 Dia Polymeric glands Provided on both side	
	b) Outgoing.		
17	Porcelain fuse base (confirming to IS)	100A 500V porcelain fuse units of best quality with isolating mechanism (knife type) of porcelain size 210 mm length & 70 mm width with extension strip of 25 mm X 3 mm copper along with 2 nos. fixing bolts (1/2"X 1 1/4" & nuts with washers). All copper parts made out of 25 x 3 mm copper strip with tin coated and all screws and bolts and nuts are GI	
18	Al. busbar for neutral link	1 No. 25 x 5 mm	
19	Fuse Mounting arrangement	1 Nos. 6 mm, SMC Mounting plate.	