



PASCHIM GUJARAT VIJ COMPANY LIMITED

REGD. & CORPORATE OFFICE:- "PASCHIM GUJARAT VIJ SEVA SADAN"

OFF NANA MAVA MAIN ROAD, LAXMINAGAR, RAJKOT-360004

CIN U40102GJ2003SGC042908

Telephone Nos:-0281-2380425/427/2360182

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Tender No. PGVCL/PROC/SMC Fuse Box/845

TECHNICAL SPECIFICATIONS FOR SMC FUSE BOXES SUITABLE TO KITKAT FUSE RATING FOR 100 AMP.

1.0 SCOPE:

This specification covers the design, manufacturing & testing of anti-corrosive, dust proof, rust proof, shock proof, self extinguishing property, resistant to heat, vermin & water proof, Ultra violet Stabilized and pilfer resistant SMC FUSE Boxes made from Thermosetting Plastic i.e Glass Reinforced Polyester Sheet Moulding Compound (SMC) Confirming to IS : 13410 (1992) and attached technical specification, drawing and IS : 14772:2000.

2.0 CONSTRUCTION:

- 2.1 The minimum size of box from inside shall be 700 x 480 x 210 mm.
- 2.2 Fuse Box shall be moulded in a single piece forming the body of the SMC Fuse box with a cover fitted with base by concealed Stainless Steel Strip hinges. The lid/cover shall rest on the collar of the Fuse box base in such a way that any access from outside of the Fuse is not possible. The Stainless steel hinges shall be fitted with the Fuse box body base and covers rigidly, thereby making the Fuse Box pilfer resistant.
- 2.3 The door in closed position should be overlapped in such a manner that no direct entry or access is possible. The SMC Fuse boxes shall be closed by S.S. 'U' Clamp (4 Nos.) of minimum 0.8mm (\pm 0.1mm) thickness for holding and locking of the door with body base. The "U" Clamp shall have 4mm diameter hole through which it is possible to seal the box.
- 2.4 The box should have a Z.P.M.S. Flat ("C" clamp) size 390mmX40mmX 5mm thick (2 Nos.) fixed inside of box & back side of box should have a Z.P.M.S. Flat size 390mmX40mmX 5mm thick (2 Nos.) fixed on body for nut bolt for fuse mounting arrangement provided as shown in the drawing.
- 2.5 The top surface of box shall have little tapering shape towards back of the SMC Fuse box for easy flow of rainwater.
- 2.6 The box should have a Z.P.M.S. Flat size 470mmX40mmX 5mm thick (2 Nos.) top & bottom side in box fixed form inside of box and 4 Nos holes having 7mm diameter shall be provided on back side of Fuse Box for fixing of box on the wall/pole mounting arrangement provided as shown in the drawing.
- 2.7 Cable entry holes (3 Nos.) with SMC Gland plate to suit ϕ 38mm With PVC Gland shall be provided on Top sides of box and exit holes (3 Nos.) of shall be provided on Bottom side with SMC Gland Plate with hole to suit ϕ 38mm With PVC Gland of the box as shown in the revised drawing.
- 2.8 One nos. Earth bolt of 6mm diameter x 25mm length with 2 Nos Nuts and 2 nos. washers and a spring washer shall be provided. The Earthing arrangement shall



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be of M.S. with Zinc passivated. The irremovable Earthing symbol is to be provided near the Earthing bolt.

2.9 The box should have a provided on Suitable Hole for Ventilation (100mmX100mm) with S.S. Jali both side and on door 04 nos. of the box as per revised drawing.

2.10 A fixed Z.P.M.S. Penal Lock (2Nos.) should be provided as shown in the drawing.

2.11 All corners of the SMC Fuse box should be round and not painted ones.

2.12 All metal parts shall be Zinc passivated.

2.13 LED indicator having 220 V AC and $\leq 20\text{mA}$ should be provided on top of the door as per attached drawing.

3 GUARANTEED TECHNICAL PARTICULARS:

Guaranteed Technical particulars are given in enclosed Annexure A and B. Bidder shall submit the data in given Performa.

4 TYPE TEST CERTIFICATE:

4.1 The bidder shall submit type test report as per IS- 14772-2000 & IS-13410:1992 from CIPET, Ahmedabad/ERDA, Baroda along with the offer. Type Test Certificate should not be older than 7 years as on the date of tender opening.

4.2 **ACCEPTANCE TEST:** The acceptance tests as per IS: 14772-2000 shall be carried out on sample box selected as per sampling criteria specified in IS.

5 RAW MATERIALS

The manufacturer has to submit the test certificate for the material used in the lot offered and document for purchase of raw material.

6 FACILITY

The bidder shall have facility to test the box for routine tests and acceptances as per IS-14772: 2000 and IS -13410 at their works. The bidder has to submit list of Machinery & Equipment / Testing instruments etc.

7 INSPECTION AND TESTING

The bidder has to offer the boxes for inspection at his works before dispatch. The manufacture will offer all facilities to inspector without any charge.

8 DESPATCH

The meter boxes shall be so dispatched as to ensure that no damage occurs during transport where they may be subject to rough handling.



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9 TENDER SAMPLE

A sample as per specifications & drawing will have to be submitted.

ANNEXURE - A

GUARANTEED TECHNICAL PARTICULARS FOR SMC FUSE BOX SUITABLE TO KITKAT FUSE RATING FOR 100AMP.

SR. NO.	PARTICULARS	DETAILED PARTICULARS	TO BE OFFERED BY BIDDER
1	Maker's name	To be intimated by the supplier	
2	Material	Glass reinforced polyester sheet Moulding compound	
3	Grade of Material	SMC confirming to IS:13410:1992 Grade S 1	
4	Properties of Material of Construction of Meter Box		
	Flame Retardant test	As per IS-11731 (Min. FV0)	
	Glow wire test at 650°C	As per IS 11000 Part-1/Sec-I	
	Degree of protection	IP-42 as per IS-12063 / 87	
	Fire Retardancy	Self Extinguishing as per IS:4249	
	Heat distortion temp.	180°C (Min) as per IS:13411	
	Dielectric Strength at 90°C in oil	9 KV /mm (Min) as per IS:6262-1971	
	Tensile Strength	50 Mpa(Min) as per Annex-F of IS-8543 (P-4/Sec-I)-1984	
	Flexural strength	155 Mpa (Min) as per Annex-F of IS-13411-1992	
	Izod Impact strength (Notched)	45 KJ/M2 (Min) as per Annex-E of IS: 13410-1991	
5	Inside dimension of Meter Box	To be mentioned by the supplier	
	a. Height	700 mm (min)	
	b. Width	480 mm (min)	
	c. Depth	210 mm (min)	
6	Locking arrangement	For Holding & Locking of door with base Four nos of "U" shaped clamps to be provided with centre "U" Clamp having arrangement for sealing of	



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		box	
7	PGVCL Company Logo shall be Printed on the front side of the box	To be provided on the front side of the box	
8	Manufacturer short name shall be embossed on the front side of the box	To be provided on the front side of the box	
9	Cable entry /Exit holes	Cable entry holes to suit Ø 63mm with PVC Gland provided on left side (1nos.) & Bottom side (2nos.) of the Box.	
10	Kit Kat 100Amp fuse Mounting Arrangement.	As per Tender Drawing.	
11	Wall/Pole Mounting Arrangement	As per Tender Drawing.	
12	Colour of Box	Off White	



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ANNEXURE - B

TESTING

1. Ordered goods should be type tested at NABL approved test house for tests and Parameters given in GTP/IS. The test report of more than 7 years before order date will not be accepted. The test report should be submitted to purchaser before completion of order.
2. Lot wise sampling plan: 1% of the offered lot for test at Sr.no. **A & B** & 1 no. selected randomly from lot for test at Sr.no. **C** for testing at manufacturer's works.

SR. NO.	TEST REQUIREMENT FOR METER BOX	REFERENCE STANDARDS
(a)	Marking	IS:14772
(b)	Dimensions and construction	IS:14772
(c)	Melting Point (To test upto 400 °C)	IS:13360