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1.0 SCOPE

This specification covers the technical requirements of design, manufacture, testing at manufacturer's works, packing, forwarding, supply and unloading of **Three-phase LT Distribution Box** at site/ stores complete with all accessories for efficient and trouble free-operation.

It is not the intent to specify completely herein all the details of tech 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 manner acceptable to TPSODL, who will interpret themeanings 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.

2.0 APPLICABLE STANDARDS:

The equipment covered by this specification shall conform to the requirements stated in latest edition of relevant IS/IEC/ other applicable standards and shall conform to the statutory authorities.

S. No.	Standards	Description
1	IS14772 - 2000	General requirements for enclosures for accessories for household and similar fixed electrical installations
2	IS 8623 - 1993 (Part 1and 2)	Specification for low-voltage switchgear and control gear (Part 1 and Part 2) assemblies Part 2-Particular requirements for bus bar trunking systems.
3	IS 11731 - 1986 (Part-2)	Methods of test for determination of Flammability of solid electrical insulating materials when exposed to an igniting source. Part-2-Vertical specimen method
4	IS 11000 - 1984	Fire hazard testing
5	IS 13411 - 1992	Glass Reinforced polyester dough moulding Compounds
6	IS 4249	Classification and methods of tests for non-ignitable and self-extinguishing properties of solid electrical insulating materials.
7	IS 2500 - 2000 (Part-1)	Sampling procedure for inspection by attributes (part 1) sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection.
8	IEC 60695	Glow Wire Test at 960 Deg. C
9	UL 1059	Standard for terminal blocks-Terminal blocks up to 1500V
10	UL 94	Tests for Flammability of Plastic Materials for parts in devices and appliances
11	UL 746-C	Standard Polymeric Materials-use in Electrical equipment evaluations
12	IEC 61238 -1: 2003	Compression and mechanical connectors for power cable part 1: Test methods and requirements

3.0 CLIMATIC CONDITIONS OF THE INSTALLATION:

The material shall be suitable for following climatic conditions,

1. Maximum altitude above sea level
1,000m
2. Maximum ambient air temperature 50°C
3. Maximum daily average ambient air temperature

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35°C
4. Minimum ambient air temperature 0°C
5. Maximum relative humidity 95%
6. Average number of thunderstorm days per annum (isokeraunic level) 70
7. Average number of rainy days per annum
120
8. Average annual rainfall
150cm
9. Earthquakes of an intensity in horizontal direction - equivalent to seismic acceleration of 0.3g
10. Earthquakes of an intensity in vertical direction - equivalent to seismic acceleration of 0.15g
(g being acceleration due to gravity)
11 .Wind velocity: 300 km/hr, 200 km/hr and 160 km/hr.

Environmentally, some of the regions, where the work will take place includes coastal areas, subject to high relative humidity, which can give rise to condensation. Onshore winds will frequently be salt laden. On occasions, the combination of salt and condensation may create pollution conditions for outdoor insulators. Some places are in heavily industrial polluted areas.
Therefore, Outdoor material and equipment shall be designed and protected for use in exposed, heavily polluted, salty, corrosive and humid coastal atmosphere.
The design of equipment and accessories shall be suitable to withstand seismic forces corresponding to an acceleration of 0.1 g.

4.0 GENERAL TECHNICAL REQUIREMENTS

FOR THREE PHASE LT DISTRIBUTION BOXES

S. No.	DESCRIPTION	REQUIREMENT
1	Type of Box	Three phase, Four wire, 10 Ways
2	Application	Outdoor
3	No. of Incoming	1
4	No. of Outgoing	9 (8 Nos. of Single phase and 1 no. of Three Phase)
5	Incoming cable size	1 no. of 4C X 50 sq. mm XLPE armoured, 1.1kV
6	Outgoing cable size	2CX16 sq. mm –6 Nos., 2CX25 sq.mm – 2 Nos. & 4CX25 sq. mm – 1 No. (XLPE armoured, 1.1kV)
7	Number of bus bar sets	3 Nos. (Phase) of 5 way each 1 No. (Neutral) of 11 way
8	Degree of Ingress Protection	IP 55
9	Dielectric withstand for the box	5kV for 1 min
10	Flammability requirement	V0
11	Box Material	Virgin Polycarbonate
12	Colour of the box	Opaque
13	Thickness of the box	2 mm
14	Gaskets	EPDM rubber (ethylene propylene diene monomer)
15	**Bus Bar**	
15.1	Rated voltage	415V
15.2	System voltage	1.1 kV

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		15.3	System frequency	50 Hz
		15.4	Rated current of the Bus bar	350 A
		15.5	Number of Bus Bar Sets	3 (Three phase) + 1 Neutral
		15.6	Bus Bar Material	Aluminium
		15.7	Current Density (Max.)	1 A/sq. mm
		15.8	Temperature rise	Maximum permissible temperature rise for the bus-bar and terminals shall 45°C and 70°C respectively at ambient temperature (not exceeding 50°C). For incoming terminal of each bus-bar, the test shall be conducted at 350A. For outgoing terminals of each bus-bar, the test-current shall be 72A at three terminals and 120A at one terminal. Testing to be conducted up to a time period until maximum temperature reaches and gets constant. After getting constant rise, further it should be checked up to 1 hour at same current loading. During terminal testing, minimum two adjacent terminals to be checked at a time.
		15.9	Short Time withstand current for bus bar	3kA for 1 sec
		15.10	Material of insulation for mounting bus bar (Bus bar support)	In built with Bus-bar housing of Virgin Polycarbonate
		15.11	Clearance between phases	Min. 25 mm
		15.12	Clearance between phase to neutral	Min. 50 mm
		16	Weight of the box (with tolerance)	To be given by bidder
		17	Whether Recyclable Material	Mandatory
		18	Lid-stoppers	The lid-stoppers should have provision for holding the lid at 3 number of distinct positions
5.0	**GENERAL CONSTRUCTIONS**			
5.1	**Enclosure**	The enclosure shall be weather proof, tamper proof and shall be made of injection moulded reinforced Polycarbonate material with Vo grade fire retardant, self-extinguishing, UV stabilize, recyclable and Anti oxidation properties with minimum 2mm of thickness. The enclosure shall be of adequate strength, unbreakable and shall be made in two piece (base and cover). The enclosure and cover shall be opaque. Enclosures cover shall open by 120 degree on the top of the enclosureand a suitable polycarbonate hinge support shall be provided at both end of the inner side of the box to hold cover at three distinct positions when it is in open condition. In the joints, fixed parts shall be properly riveted to the cover base and cylindrical play shall be provided on the cover to ensure smooth opening of the boxes. The Incoming and Outgoing cables should be connected to the bus bar using T type insulated Allen bolt and key (as mentioned in the spares & accessories clause). The enclosure base should have holes to accommodate incoming cables and outgoing cables with appropriate plastic glands. The incoming and outgoing holes shall be covered with rubber grommet to avoid water ingress inside the box.			

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5.2	**Bus Bar**	The Bus bars meeting the requirement of aforesaid current rating and maximum current density shall be provided in identical pairs for Phase as well as for neutral as mentioned in specification. Polycarbonate supports suitable for fixing the bus-bars at base shall be provided at the ends of Bus Bar casings. The Bus bar housings shall be arranged and mounted at a suitable height and stepped angle so that providing new connections is easy and can be done without much bending of the cables. The Bus- bar's adaptor shall be mounted through two screws and further riveted at both the end. Colors of the adaptors shall be Red, Yellow and Blue for the phases and Black for Neutral. The Bus Bar block should have 2 nos. of Screws in each terminal for proper tightening with cable conductor. The bus-bar's adaptor material shall be virgin polycarbonate/nylon grade, fire retardant self-extinguishing. The bus-bar's adaptor material shall not damage due to temperature rise during entire operational period on continuous load. Anticorrosion compound shall be provided with each box for protectingbare aluminum conductor near contact area of terminal. The Bus-bar shall be split type and the distance between the bus-bars shall be min 25 mm with the phase separator of FRP material. <u>Completely insulated Bus-bar for Terminations</u> The arrangement shall be completely insulated bus-bar with T type insulated Allen key type arrangement having uniform torque during cable connection into the bus-bar. The bus bar shall be of Aluminium. The insulated bus bar connectors are covered with virgin polycarbonate plastic material. There should be split bus bars connectors for multiple connections. Additional screws shall be supplied with these bus-bars by the bidder. Bus-bar mounting should be with double nut arrangement to avoid breaking during cable connection.
5.3	**Sealing of Box**	For the enclosure, the gasket shall be made up of Ethylene-Propylene-Diene Rubber and shall be provided all around the cover. The box shall be provided with a safety key made of PA 6.6 (Nylon) to ensure theft proof locking arrangement. The Key shall be identical for all the boxes. The box locking screw should be made of stainless steel or plating finished steel. Addition to lock and key arrangement the box shall be provided with two U-shaped latches of approx. size 25 mm on bottom side of the box. The latch shall be GS (Galvanized Steel) with minimum thickness of 1.2mm. The latch shall be provided along with suitable clamp assembly in base as well as cover, such that these are fully covered by the latch after closing. The clamps along with the latch shall be provided with a sealing hole on both the sides such as top provide a thru sealing arrangement on both the corners of the door opening in the assembly. There must be an additional push-fit lock which requires key for opening but closes automatically once the lid is closed under the effect of gravity or by pushing.
5.4	**Earthing connector**	Earthing studs are to be connected with the gland plate properly with an U-shaped, 2mm thick (minimum) GI base plate to ensure safe earthing arrangement for the incoming and outgoing cable. The earthing base plate should be symmetrical at both the sides. There must be 4 numbers of hot-dip galvanized M8 size earthing bolts (2 on each side) of 40 mm length (min.) each, connected to this earthing base plate. The 2 earthing bolts on each side must be 50 mm (minimum) away from one-another. The earthing connector should be sufficient to carry the fault current. Earthing points on the outside of the box, to be connected with double washer and double nut of suitable size for proper earthing. Green coloured thin metallic sticker having earthing symbol marked, to be provided at both ends of the box.
5.5	**Mounting Arrangement**	Boxes shall be provided with mounting arrangement suitable for installation on PCC poles by using high strength Stainless Steel Strap with 20mm x 0.7mm thickness. The arrangement shall be such that the strap runs behind the box and holds the box properly with pole. The nuts and bolts used in the mounting must be hot-dip galvanized.

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6.0 NAME PLATE & MARKING

The distribution box shall be provided with clearly visible and effective embossing; indelibly and distinctly marked with all essential particulars as per relevant standards along with the following:

a) Manufacturer's name
b) RC No. and RO/P.O. No. with associated date.
c) Embossing word- 'PROPERTY OF TPSODL'
d) Serial number / Batch Number
e) Voltage and Current Rating of the Bus Bar.
f) Guarantee Period
g) Danger-sign engraved and a weather-proof, large yellow coloured danger-sign sticker of triangular shape, pasted on the external surface of the cover
h) Every 4 LT Distribution boxes must be serially marked as:
DB-<space for writing a number (1, 2, 3, 4)> in bold and font size of 40 (min.)

7.0 TESTS

All routine, acceptance & type tests shall be carried out in accordance with the relevant IS/IEC. All routine & acceptance tests shall be witnessed by the purchaser/his authorized representative. All the components shall also be type tested as per the relevant standards. Following tests shall be necessarily conducted on the LT Distribution box in addition to others specified in IS/IEC standards

7.1 Type Tests For the Box:

S. No.	Tests/ Standard	Requirements
1.	Protection against electric shock (IS:14772 -2000)	Enclosure shall be so designed that when they are mounted as for normal use, the live parts of any correctly installed accessories or any partsof these accessories which may become livedue to a fault shall not be accessible.
2.	Provision for earthing (IS:14772 -2000)	Enclosure shall be provided with a facility for permanent and reliable connection to earthing
3.	Resistance to ageing, humid conditions, Ingress of solid objects and to harmful ingress of water (IS:14772 -2000)	**Resistance to Ageing:** Enclosure shall be kept in a heating cabinet with temp 70 ± 2 °C for 7 days as per IS. After completion of the test, the enclosure shall not show any cracks. **Humid conditions:** Enclosure shall be kept in a cabinet with humidity between 91 to 95 % for 7 days as per IS. After completion of the test, enclosure shall not show any damage. **Resistance against ingress of solid objects and to harmful ingress of water:** Enclosure shall be subjected to test for degree of protection (IP 55) as per IS 12063.
4.	Mechanical strength/Impact Resistance Test (IS:14772 -2000)/(UL: 746C)	The sample shall be subjected to Impact resistance test as per the respective standards and shall not show occurrence of any of the following: 1. Making uninsulated live parts accessible to contact 2. Producing a condition that might affect the mechanical performance of the enclosure 3. Producing a condition that would increase the

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				likelihood of an electric shock
		4.	Resistance to heat /Ball Pressure Test (IS:14772 -2000)	The test shall be made on a sample in a heating cabinet at a temp of 125 ±2˚C for 1hr per IS. After completion of test , the diameter of theimpression caused by the ball shall be measured and should not exceed 2 mm.
		5.	Resistance to Abnormal heat and fire / Glow wire test (IS:14772-2000)	Parts of insulating materials which might be exposed to thermal stresses due to electric effects shall not be affected by abnormal heat and by fire. The compliance shall be checked by means of the glow wire test performed at 960°C, according to IS 11000 (Part 2/sec1) with no flame and glowing.
		6.	Resistance to Tracking (IS 14772-2000)	The sample when tested as per clause no 17 of IS: 14772, shall show no flashover after completion of the Test.
		7.	Flammability test (IS:11731(Part II)-1986)/UL:94)	The sample shall comply to flammability requirements of category FV0 as per respective standards.
		8.	Test for self-extinguishing property (IS:4249-1967)	The sample when tested as per clause 3.5.1 of IS 4249, shall comply to the specified requirements.
		9.	Verification of Die-electric properties (IS:8623 (Part I)-1993)	The enclosure shall be tested as per clause no 8.2.2 of IS 8623 (Part 1), with test voltage of 5kV for 1 minute and withstand it satisfactorily.
		10.	UV Light Exposure (UL-746C)	The sample when exposed to UV light as per the defined test method, shall comply to following a) **Physical Properties**: The average value of physical properties after the UV light exposure shall not be lower than 70% of its initial value (without UV aging) i.e. the variation shall not be more than 30%. **b) Flammability Test:** After the UV light exposure, the flammability requirement of FV0 shall remain unchanged**.** c) **Flexural Strength:** After the UV light exposure, Flexural strength shall not be lower than 70% of its initial value (without UV aging) i.e. the variation shall not bemore than 30%.
7.2	**Type Tests For Bus Bar**	**For Bus Bar:**		

SNo.	Test / Standard	Requirements

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		1	Verification of temperature Rise test (IS:8623 Part-1 Cl. No. 8.2.1)	Maximum permissible temperature rise for the bus-bar and terminals shall be 45°C and 70°C respectively.
		2	Verification of Dielectric Strength (IS:8623 Part-1 Cl. No. 8.2.2)	The test voltage at the moment of application shall not exceed 50% of the 3.5kV and it shall then be increased steadily within a few seconds to the full value and maintained for 1 minute. There shall be no flash over at the bus bars.
		3	Short circuit withstand Strength. (IS:8623 Part-1 Cl. No. 8.2.3)	The assemblies shall be rated for prospective short circuit current of 3kA for 1 second.
		4	Verification of Clearance and Creepage distance. (IS:8623 Part-1 Cl. No. 8.2.5)	The clearance and creepage distance shall comply with dielectric properties, abnormal conditions such as short circuit, which shall not reduce the distance between bus-bars and connection.
		5	Mechanical Operations (IS:8623 Part-1 Cl. No. 8.2.6)	The number of operating cycles shall be 50
		6	Tab Pull out Test (UL1059)	The male tab block employing quick-connect terminals shall be subjected to a direct, in line pull along the axis of the tab. The force of 89N pull shall be applied on the terminal block mounted as in service condition and this shall be with stood satisfactorily.
		7	Heat cycle Test (UL 1059)	Current of 150% of rated current is to be passed through the connection for 84 ON periods of 3.5 hours, each followed by a ½ hour OFF period as specified in the standard, temperature rise for the last ON period shall not be more than 5deg C higher than the first ON period.

7.3	**Routine tests (For Boxes and Bus Bar):**	Below Routine test to be conducted: **a)** Marking **b)** Visual Examination and Dimensions **c)** Protection against electric shock **d)** Provision for earthing **e)** Test for self-extinguishing properties
7.4	**Acceptance tests**	Following tests shall be performed as per the sampling plan defined in the Cl. No. 10 of the IS 2500 for ever offered lot size. **<u>For Polycarbonate Boxes:</u>** The below mentioned tests are to be checked at manufacturing site of BA: a) Marking b) Visual Examination and Dimensions c) Provision for earthing d) Flammability test e) Test for Self Extinguishing Property **<u>For Aluminium Bus Bar:</u>**

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		This test can be conducted during inspection, at manufacturing site: a) Temperature Rise Test as mentioned in this technical specification b) Verification of Dielectric Properties of moulded casing of bus bar, as mentioned in this technical specification c) Glow Wire Test at 960°C of moulded casing of bus bar. Note- For destructive testing, only 02 units to be checked per lot.
8.0	**TYPE TEST CERTIFICATE:**	The bidder shall furnish the type test certificates for the tests as mentioned above as per the corresponding standards. All the tests shall be conducted at CPRI/ERDA/National Test House/EQDC as per the relevant standards. Type tests should have been conducted in certified Test laboratories during the period not exceeding 5 years from the date of opening the bid. In the event of any discrepancy in the test reports, i.e. any test report not acceptable, same shall be carried out without any cost implication to the Purchaser.
9.0	**PRE- DESPATCH INSPECTION:**	Equipment shall be subject to inspection by a duly authorized representative of the Purchaser. Inspection may be made at any stage of manufacture at the option of the purchaser and the equipment if found unsatisfactory as to workmanship or material, the same is liable to rejection. Bidder shall grant free access to the places of manufacture to the Purchaser's representatives at all times when the work is in progress. Inspection by the Purchaser or it's authorized representatives shall not relieve the supplier of his obligation of furnishing equipment in accordance with the specifications. Copy of this report shall be sent to Plant Engineering Group. Material shall be dispatched after specific MDCC (Material Dispatch Clearance Certificate) is issued by the Purchaser. Following documents shall be sent along with material: a) Test reports b) MDCC issued by Purchaser c) Invoice in duplicate d) Packing list e) Drawings & catalogue f) Guarantee / Warrantee card g) Delivery Challan h) Other Documents (as applicable)
10.0	**INSPECTION AFTER RECEIPT AT STORE:**	The material received at the Purchaser store shall be inspected for acceptance and shall be liable for rejection, if found different from the reports of the pre-dispatch inspection.
11.0	**GUARANTEE:**	Bidder shall stand guarantee towards design, materials, workmanship & quality of process / manufacturing of items under this contract for due and intended performance of the same, as an integrated product delivered under this contract. In the event any defect is found by the purchaser up to a period of at least 60 months from the date of commissioning or 66 months from the date of last supplies made under the contract whichever is later, Bidder shall be liable to undertake to replace/rectify such defects at its own costs, within mutually agreed time frame, and to the entire satisfaction of the Company, failing which the purchaser will be at liberty to get it replaced/rectified at bidder's risks and costs and recover all such expenses plus the Company's own charges (@ 20% of expenses incurred), from the bidder or from the " Security cum Performance Deposit" as the case may be. Bidder shall further be responsible for free replacement for another period of THREE years from the end of the guarantee period for any 'Latent Defects' if noticed and reported by the purchaser.
12.0	**PACKING:**	Bidder shall ensure that all the equipment covered under this specification shall be prepared for rail/road transport in a manner so as to protect the equipment from damage in transit. The material used for packing shall be environmentally friendly.

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13.0	**SAMPLE:**	**1. Tender Sample:** Bidders are required to send two numbers of the tender sample of LT Distribution boxes to TPSODL MMG Office, as a part of their technical bid submission. **2. Pre-manufacturing Sample:** BA(s) shall submit two numbers of the pre-manufacturing sample of LT Distribution boxes (after incorporating all the improvements asked in the technical evaluation) to TPSODL MMG Office, within 4 days of receipt of RC/PO.
14.0	**TRAINING**	NA
15.0	**QUALITY CONTROL:**	The bidder shall submit with the offer Quality assurance plan indicating the various stages of inspection, the tests and checks which will be carried out on the material of construction, components during manufacture and bought out items and fully assembled component and equipment after finishing. As part of the plan, a schedulefor stage and final inspection within the parameters of the delivery schedule shall be furnished. The Purchaser's engineer or its nominated representative shall have free access to the manufacturer's/sub-supplier's works to carry out inspections.
16.0	**MINIMUM TESTING FACILITIES:**	Bidder shall have adequate in house testing facilities for carrying out all routine tests, acceptance tests as per Indian /International standards.
17.0	**MANUFACTURING ACTIVITIES:**	The successful bidder will have to submit the bar chart for various manufacturing activities clearly elaborating each stage, with quantity. This bar chart should be in line with the Quality assurance plan submitted with the offer. This bar chart will have to be submitted within 15 days from the release of the order.
18.0	**SPARES, ACCESSORIES AND TOOLS :**	1. Allen key made of Chrome vanadium Steel having good hardened HRC of 4 MM hexagon tip. It must have a length of 200 mm, excluding the handle portion. The metallic part of Allen key should be properly insulated with an insulating sleeve. One such allen key must be provided with every 20 boxes of a lot. 2. A set of 12 nos. of Yellow coloured rubber cable ferrules must be provided for each box, in a paper/cardboard packet. There shall be one such set for each of the four kinds of distinctly marked LTDBs as **DB1**, **DB2**, **DB3** and **DB4**. Every lot must have equal numbers of **DB1**, **DB2**, **DB3** and **DB4** marked LT Distribution boxes. 12 numbers of ferrules in a set, must be marked via engraving with Black ink as: **a. For DB-1:** **i. DB1-R1, DB1-R2, DB1-R3, DB1-R4** **ii. DB1-Y1, DB1-Y2, DB1-Y3, DB1-Y4** **iii. DB1-B1, DB1-B2, DB1-B3, DB1-B4** **b. For DB-2:** **i. DB2-R1, DB2-R2, DB2-R3, DB2-R4** **ii. DB2-Y1, DB2-Y2, DB2-Y3, DB2-Y4** **iii. DB2-B1, DB2-B2, DB2-B3, DB2-B4** **c. For DB-3:** **i. DB3-R1, DB3-R2, DB3-R3, DB3-R4** **ii. DB3-Y1, DB3-Y2, DB3-Y3, DB3-Y4** **iii. DB3-B1, DB3-B2, DB3-B3, DB3-B4**

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d. For DB-4:
i. DB4-R1, DB4-R2, DB4-R3, DB4-R4
ii. DB4-Y1, DB4-Y2, DB4-Y3, DB4-Y4
iii. DB4-B1, DB4-B2, DB4-B3, DB4-B4

19.0 DRAWINGS:

After the award of the contract, soft copies of following drawings, drawn to scale, describing the equipment in detail shall be forwarded for approval.

S. No.	Description	For Approval	For Review Information	Final Submission
1	Technical Parameters	√		√
2	General Arrangement drawings (with name-plate markings)	√		√
3	Bus bar arrangement	√		√
4	Single Line diagram and wiring diagram	√		√
5	Manual/Catalogues		√	√
6	Transport/ Shipping dimension drawing		√	√
7	QA &QC Plan	√	√	√
8	Routine, Acceptance and Type Test Certificates	√	√	√

Bidder shall subsequently provide soft copy of all the drawings, GTP and data-sheet of Polycarbonate material for the final approval of TPSODL, before mass manufacturing. All the documents & drawings shall be in English language.

20.0 GUARANTEED TECHNICAL PARTICULARS:

Clause–wise compliance to this specification

21.0 SCHEDULES OF DEVIATIONS

SCHEDULE OF DEVIATIONS:
(TO BE ENCLOSED WITH BID)

All deviations from this specification shall be set out by the Bidders, clause by Clause in this schedule. Unless specifically mentioned in this Schedule, the tender shall be deemed to confirm the Purchaser's specifications:

S. No.	Clause No.	Details of deviation with justification

We confirm that there are no deviations apart from those detailed above.

Seal of the Company:

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ANNEXURE I
Tests to be carried out during pre-dispatch inspection

Following tests shall be performed as per the sampling plan defined in the Cl. No. 10 of the IS 2500 for ever offered lot size.

For Polycarbonate Boxes:

The below mentioned tests are to be checked at manufacturing site of BA:

a) Marking
b) Visual Examination and Dimensions
c) Provision for earthing
d) Flammability test
e) Test for Self Extinguishing Property

For Aluminium Bus Bar:

This test can be conducted during inspection, at manufacturing site:

d) Temperature Rise Test as mentioned in this technical specification
e) Verification of Dielectric Properties of moulded casing of bus bar, as mentioned in this technical specification
f) Glow Wire Test at 950°C of moulded casing of bus bar.

Note- For destructive testing, only 02 units to be checked per lot.

ANNEXURE II: ILLUSTRATIVE PHOTOGRAPHS OF BUS-BAR FOR TERMINAL

BOTTOM VIEW

BACK VIEW

FRONT VIEW BLUE PHASE

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FRONT VIEW YELLOW PHASE

FRONT VIEW RED PHASE

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