



**GUJARAT ENERGY TRANSMISSION  
CORPORATION LTD.**

**SARADAR PATEL VIDYUT BHAVAN,  
RACE COURSE, BARODA – 390 007.**

**TECHNICAL SPECIFICATION**

**FOR**

**BAY MARSHALLING KIOSK**

**GETCO / E / TS- MACC 2802 / R2 June, 2022**

## **TECHNICAL SPECIFICATIONS FOR BAY MARSHALLING KIOSK**

### **A. CONSTRUCTIONAL DETAILS OF BAY MARSHALLING KIOSK:**

1. Bay Marshaling Kiosks shall be of metal enclosed, outdoor floor mounted, and fixed-standing type.
2. All Bay Marshaling Kiosk, shall be fabricated using suitable mild steel structural sections for pressed and shaped cold-rolled sheet steel of thickness not less than 2.0 mm. Doors and covers shall also be cold rolled sheet steel of thickness not less than 2 mm. Stiffeners shall be provided wherever necessary. Base plate on which cable gland plate is provided shall be of 3 mm. Gland plates shall be of 3 mm HR sheet steel.
3. Surface finish shall be with 7 tank process followed by powder coating. The color shade shall be Light greys shade 631 of IS 5 for exterior and glossy white for interior. Paint thickness shall be 60 to 100 microns.
4. All panel edges and cover / door edges shall be reinforced against distortion by rolling, bending or by the addition of welded reinforcement members. Top cover shall be of rain shade type with at least 25 mm overhang all sides.
5. The complete structures shall be rigid, self-supporting, free from flows, twists and bends. All cut-outs shall be true in shape and devoid of sharp edges.
6. The cubicle shall have concealed hinges with door knob and PAD lock arrangement for locking of both front and rear doors.
7. All kiosks shall be of water, dust and vermin proof construction and shall be provided with a degree of protection of IP: 55.
8. A copper earthing bus of 25X3 mm tinned Cu shall be provided having 5mm  $\Phi$  holes drilled at regular intervals of 50 mm with M4 BRASS bolts & nut.
9. Suitable Cu earthing pad on side surfaces preferably of 50x75x6 mm shall be provided externally for secure connectivity to station earthing grid.
10. Suitable arrangement shall be provided in the earthing bar to connect earth wires (Green, 4 sq.mm flexible copper) from the Terminal Blocks as well as other equipments.
11. The hinged doors shall be earthed through flexible copper braid.

12. Name plate with required details like Type of JB, Project name, Order No, Mfg. details, Property of GETCO etc. shall be provided at the front. Name plates shall be of Aluminium anodized having black background with white engraved letters.
13. The Bay Marshaling Kiosk shall have dimensions as near as 1550 mm (H) (including 300 mm base frame of the size 50 x 50 x 5) x 900mm (W) x 400 mm (D)

## **B. GENERAL REQUIREMENT:**

One nos. of bay Marshaling Kiosk shall be provided for each bay. In addition to the requirements specified elsewhere in the specification, the Bay Marshaling Kiosk shall have two distinct compartments and shall include:

1. One incomer feeder of 415V, 3 phase, 63Amps, AC supply with MCB unit & suitable Terminal blocks (including 20% spare) to connect 3 $\frac{1}{2}$  C x 25/ 4CX10 mm<sup>2</sup> Aluminium cable to be terminated on Aluminium Bus bar of size not less than 25x6 Sq.mm and minimum Eight outgoing feeders of 415V, 3 phase, 16 Amps AC supply controlled by MCB with Terminal blocks (including 20% spare) to connect 4C x 4/2.5 mm<sup>2</sup> copper cable via MCBs shall conform to IEC: 898-1987 and IS: 8828. Indicating lamps for Incoming AC supply.
2. In addition to the above mentioned Terminal blocks, 60 nos. of Disconnecting M4 stud type terminal blocks of 800V, 41A rating suitable for connecting 4 sq. mm copper cable and 150 nos. Non-Disconnecting M4 stud type terminal blocks of 800V, 41A rating suitable for connecting 4/2.5 mm<sup>2</sup> copper cable shall be provided with mounting arrangement, channels, end plates, end locks, PVC wire ways etc. in vertical formation for CT/CVT/PT and other control wiring.
3. There shall be minimum clearance of 125mm between the first row of terminal blocks and the associated cable gland plate. Also the clearance between two rows of terminal blocks edge shall be minimum of 150mm.
4. There shall be the provision for mounting additional Terminal Blocks.
5. Space heater, automatically controlled by thermostats, shall be provided in all the Kiosk for preventing harmful moisture condensation. Necessary isolating switches and fuses shall also be provided including multi pin power socket.

6. Illumination lamp (CFL with fixture) shall be provided along with door operated switch.
7. The bidder shall have to submit Quality Assurance Plan adopted for manufacturing Junction boxes specifying detailed manufacturing process right from raw material to finished product testing. Precaution taken for ensuring usage of quality raw materials and sub- components shall be stated in the quality assurance plan.
8. The bidder shall submit drawing of General Arrangement showing all dimensions - Internal view showing mounting arrangement - Side view & top view, Constructional details, Wiring diagram, Name plate details, Foundation plan, Bill of material etc. with all relevant details for approval.
9. Inspection of the material shall be offered only after successful completion of routine testing at the works. The inspection may be carried out by the purchaser at any stage of manufacture. The successful bidder shall grant free access to the purchaser's representative at a reasonable time when the work is in progress. The purchaser reserves the right to insist for witnessing the acceptance routine testing of bought out items.

**C. TYPE TEST:**

**The following tests from NABL accredited laboratory shall be carried out in accordance with IS:2147 or the latest / amended / up to date IS/IEC. The bidder has to submit the all type test reports as stated hereunder for the offered item along with the technical bid. The type test reports from NABL approved laboratory shall not be older than seven years. Type test reports shall be valid as on the last date of submission of bid.**

**Type test:**

**Degree of Protection IP-55**

**Note:**

1. **In case of non-submission /partial submission or type test reports of which validity is over, bidder shall submit pending type test report/s from NABL accredited laboratory, in the event of an order, before commencement of supply without affecting delivery schedule, free of cost to GETCO. Confirmation for above shall be invariably submitted along with technical bid.**
2. **Type test report shall invariably indicate details like type and size of Gasket material, Door and Gasket profile, GA drawing etc.**

<b>CHECK LIST - BMK</b>					
		<b>Manufacturer :-</b>			
		<b>Rating / Type :-</b>			
<b>Sr. No.</b>		<b>Parameter</b>	<b>Acceptable Design Data</b>	<b>Verification status</b>	<b>Remarks</b>
		Manufacturer			
		Type & Designation if any			
<b>A</b>		<b>Product Specification Sheet</b>			
	1	<i>Constructional details</i>			
		<i>Structural requirement</i>			
		- Outdoor type			
		- Floor mounting			
		- Fixed standing			
		- Metal enclosed			
		- Rigid			
		- Self Supporting			
		- Free from flows/ Twists& bends			
		- Cutout details	True in shape & No sharp Edges.		
		- Number of distinct compartment	2		
	2	Colour Shade & Process	Surface finish shall be with 7 tank process followed by Powder coating & paint thickness shall be of 60 to 100 microns.		
		- Outside	Light Grey as per 631 of IS:5		
		- Inside	Glossy White		
		- Usage of stiffeners	Yes/No		

		- Thickness of CR sheet steel			
		- All sides & cover (mm)	2		
		- Doors(mm)	2		
		- Base Plate (mm)	3		
	3	Gland Plates			
		- Material	HR steel		
		-Thickness (mm)	3		
	4	Reinforcement	All Panel/ cover /Door edges shall be reinforced by rolling, bending by the additional members		
	5	Door Locking Arrangement	Concealed hinges with door knob and PAD lock arrangement for both front and rear door		
	6	Vermin proofing/Protection against Water & Dust			
		- Degree of Protection	IP 55 As per IS 2147		
		- Gaskets			
		- Material	Neoprene / Synthetic Rubber		
		- Size			
		- Gasket Profile drawing			
	7	Earthing Bus			
		- Material	Tinned Cu		
		- Size	25*3 mm strip having 5 mm $\Phi$ holes drilled at 50 mm interval of M4 size.		
		- Hard ware (N/Bs ) Material	Brass		
		- Size of Hardware	M4		

		- Connection to the Bus	with Green , 4 sq. mm flexible copper wire		
		- Door earthing	Shall be earthed through Flexible Cu braid.		
	8	Bus Bar	3-Ph, four wire		
		- Material	Aluminium		
		- Size	25*6 mm strip		
		- Connection from the Bus	4 sq. mm flexible copper wire		
	9	Earthing Pad			
		- Location	shall be on sides of the box		
		- Material	Cu		
		- Dimensions	50*75*6		
	10	Top cover			
		- Type	Rain Shade		
		- Dimensions	At least 25 mm overhanged		
	11	Base frame structure			
		- Dimensions	50*50*5		
		- Height of frame(mm)	300		
	12	Dimension			
		- Height (mm) including the base frame structure height	1550		
		- Width (mm)	900		
		- Depth (mm)	400		
	13	Front View			
		Hinged Doors			
		Door width			
		Door Locking Arrangement	Door knob and PAD lock		

	14	Clearance between Last TB to gland plates(mm)	125		
	15	Clearance between TB to TB of adjacent/Parallel row (mm)	150		
	16	Top View			
		Gland plates			
		Foundation Drawing			
		- Cable cutouts			
		- Foundation Bolt pockets			
	17	Side View			
		Sectional View (showing Inside Arrangement)			
		Earth Bus			
		Arrangement of earthing connection			
	18	Rear View			
		Hinged Doors			
		Door width			
		Door Locking Arrangement	Door knob and PAD lock		
	19	Name Plate			
		Material	Aluminium anodized having black background with white engraved letters.		
		Details of Name Plate			
		- Make			
		- Type of JB			
		- Project Name			
		- Sr. No.			
		- Year Of manufacturing			
		- Weight			



		- A/T No.			
		- Property of GETCO			
	20	Indicating lamp	LED lamp type		
		- Main AC supply ON	For all three phases		
	21	Incoming AC Supply	1 Nos.		
		Controlled with MCB	Yes		
	i	MCB details	Confirming to IEC:898-1987 & IS:8828		
		- No of Phases	3		
		- Rated voltage	415V		
		- Rated current	63A		
	ii	Terminal Block detail for Incoming supply			
		- Type			
		- Ratings			
		- Connection Suitability	Suitable for 25 sq mm Aluminium cable		
		- Min. requirement of Terminal Blocks	6		
	22	Outgoing AC feeder supply	8 Nos.		
		Controlled with MCB	Yes		
	i	MCB details	Confirming to IEC:898-1987 & IS:8828		
		- No of Phases	3		
		- Rated voltage	415V		
		- Rated current	16A		
	ii	Terminal Block detail for outgoing supply			
		- Type			
		- Ratings			

		- Connection Suitability	Suitable for 4 sq mm copper cable		
		- Min. requirement of Terminal Blocks	40		
	23	Terminal Block Details for Analogue and Control circuits			
	i	- Type	Disconnecting M4 Stud		
		- Ratings	800V,41A		
		- Connection Suitability	Suitable for 4 sq mm copper cable		
		- Min. requirement of Terminal Blocks	60 Nos.		
	ii	- Type	Non-Disconnecting M4 Stud		
		- Ratings	800V,41A		
		- Connection Suitability	Suitable for 4 sq mm copper cable		
		- Min. requirement of Terminal Blocks	150 Nos.		
	24	Provision for mounting additional TBs	Yes		
	25	Wire ways	PVC wire ways in vertical formation for CT/CVT/PT & control wiring		
	26	Space heater	Automatically controlled by thermostat		
		- Isolation	By fuses and switch		
		- Thermostat range			
	27	Illumination	CFL with fixture in both compartment		
		- Control Ckt	Controlled by respective door operated switch		
	28	Fuse (Indication & AC distribution)	HRC Fuse & Neutral link with "FUSE BASE"		

<b>B</b>		<b>Document Submission</b>			
	1	Drawings			
		- GA Drawing	All dimensions		
		- Internal view	Mounting arrangement, Clearances		
		- Front view			
		- Rear view			
		- Side View			
		- Top View			
		- Foundation Plan			
	2	Constructional details			
	3	TB Diagram			
	4	Name Plate details			
	5	BOM			
	6	QAP			
<b>C</b>		<b>TYPE TESTS</b>			
	1	Degree protection of	IP 55 As per IS 2147 & Type test report from NABL lab		