

Specifications of Power Panel

1. Items to be included in the Panel are described in the Annexure-1
2. Panel construction with 2mm thick CRCA sheet steel for outer frame, 1.6mm for barriers sheet steel fabricated floor mounted, free standing, dust and water proof.
3. Painting: Powder coating, Siemens Grey confirming to RAL7032 structure paints for both exterior & interior.
4. Provision has to be made for cable entry from bottom of the panel.
5. Enclosure protection shall comply with IP54.
6. Copper earth bus of size 6 X 25 mm shall be provided for the entire length of the panel with double earthing for switch gears.
7. **All Copper bus bars shall be coated with Tin coating with minimum 60-80 Microns to avoid oxidation.**
8. Necessary Ventilation shall be provided for all bus bar chambers & cable chambers.
9. All panel doors shall be of flush type with gasket arrangements and doors Knobs.
10. Back side doors shall be provided with door handles for maintenance work.
11. Provision of eye Hooks (4 No.s) for power panel Lifting.
12. Guarantee for proper operation of entire panel to be provided for minimum 12 months period from the date of installation.
14. All the switchgear, auxiliary items like indicator lamps, meters, switches and Current transformers are in supplier scope.
15. Single line diagrams are to be submitted along with the offer.
16. Detailed schematic circuit diagram should be submitted before starting the work and approval has to be obtained from BHEL R&D (EMC Lab).
17. Approval shall be obtained by BHEL R&D for components and accessories being used, before starting the work.

Note:

- 1) The party undertaking the work should have their own registered fabrication plant with in-house facilities for all fabrication work and painting.
- 2) **Supplier shall send their compliance or deviations for all the enquiry specifications clearly at all points.**

Any clarifications regarding specifications please contact EMC Lab, BHEL R&D - Hyderabad.

ANNEXURE-1

SI No.	Description	Quantity Per panel
1	Mounting cut outs and fixtures to accommodate 600 Amps TPN Switch Disconnecter Fuse unit to operate on 415 Volts 3-Phase 50Hz type FN	1
2	Mounting cut outs and fixtures to accommodate 400 Amps TPN Switch Disconnecter Fuse unit to operate on 415 Volts 3-Phase 50Hz type FN	1
3	Mounting cut outs and fixtures to accommodate 100 Amps TPN Switch Disconnecter Fuse unit to operate on 415 Volts 3-Phase 50Hz type FN	3
4	Mounting cut outs and fixtures to accommodate 63 Amps TPN Switch Disconnecter Fuse unit to operate on 415 Volts 3-Phase 50Hz type FN	4
5	Mounting cut outs and fixtures to accommodate 63 Amps 4pole MCBs-2, 32 amps 4 pole MCBs-2, 32 Amps 2 pole MCBs -10.	14

01. Mounting cut outs and fixtures to accommodate 600 Amps TPN Switch Disconnecter Fuse unit to operate on 415 Volts 3-Phase 50Hz type FN – 1 No. **(INCOMING)**

S.NO.	DESCRIPTION	MAKE	Supplier Scope Qty
1	600 Amps TPN Switch	L&T/Siemens/Legrand	1
2	0-600 A Digital Ammeter	AE/Conzerve/Reputed	1
3	0-500V AC Digital Voltmeter	L&T or Kaycee / Reputed	1
4	R,Y,B LED Lamp Set	L&T or Kaycee/Reputed	1set
5	600/5A Current Transformer	Kappa/ Powernics / Reputed	As required
6	MCB	L&T or Kaycee/Reputed	As required
7	Incoming Switch: Copper strip 8 X 50 mm or 10 X 40 mm 1 no each phase and neutral 6 X 40 mm 1 no	Copper Strip	As required
	Outgoing Switch: Copper strip 8 X 50 mm or 10 X 40 mm 1 no each phase and neutral 6 X 40 mm 1 no	Copper Strip	As required
		Copper Strip	As required
		Copper Strip	As required

02. Mounting cut outs and fixtures to accommodate 400 Amps TPN Switch Disconnecter Fuse unit to operate on 415 Volts 3-Phase 50Hz type FN – 1 No. **(OUT GOING)**

S.NO.	DESCRIPTION	MAKE	Supplier Scope Qty
1	400 Amps TPN Switch	L&T/Siemens/Legrand	1
2	R,Y,B LED Lamp Set	L&T/Kaycee/Reputed	1set
3	Incoming Switch: Copper strip 5 X 20 mm or 4 X 25 mm 1 no each phase and neutral 4 X 20 mm 1 no	Copper Strip	As required
	Outgoing Switch: Copper strip 5 X 20 mm or 4 X 25 mm 1 no each phase and neutral 4 X 20 mm 1 no	Copper Strip	As required
		Copper Strip	As required
		Copper Strip	As required

03. Mounting cut outs and fixtures to accommodate 100 Amps TPN Switch Disconnecter Fuse unit to operate on 415 Volts 3-Phase 50Hz type FN – 3 No's. **(OUT GOING)**

S.NO.	DESCRIPTION	MAKE	Supplier Scope Qty
1	100 Amps TPN Switch	L&T/Siemens/Legrand	3
2	R,Y,B LED Lamp Set	L&T/Kaycee/Reputed	3sets
	Income Switch: Copper strip 5 X 20 mm or 4 X 25mm 1 no each phase and neutral 4 X 20 mm 1 no	Copper Strip	As required
	Outgoing Switch: Copper strip 5 X 20 mm or 4 X 25 mm 1 no each phase and neutral 4 X 20 mm 1 no	Copper Strip	As required
3		Copper Strip	As required

04. Mounting cut outs and fixtures to accommodate 63 Amps TPN Switch Disconnecter Fuse unit to operate on 415 Volts 3-Phase 50Hz type FN – 4 No's. **(OUT GOING)**

S.NO.	DESCRIPTION	make	supplier scope Qty
1	63 Amps TPN Switch	L&T/Siemens/Legrand	4
2	R,Y,B LED Lamp Set	L& T /Kaycee/Reputed	4sets
	Income Switch: Copper wire 35 Sq mm copper wire with lugs and Neutral 25 Sq mm copper wire with lugs 1 No. Each phase and neutral.		As required
	Outgoing Switch: Copper wire 35 Sq mm copper wire with lugs and Neutral 25 Sq mm copper wire with lugs 1 No. Each phase and neutral.		As required
3			As required

05. Mounting cut outs and fixtures to accommodate following
 (63 Amps 4pole MCBs-2, 32 amps 4 pole MCBs-2, 32 Amps 2 pole MCBs -10.) – 14 No's.
(OUT GOING)

S.NO.	DESCRIPTION	MAKE	Supplier Scope Qty
1	63 Amps 4 Pole MCB	Legrand/Siemens/L&T	2
2	32Amps 4 Pole MCB	Legrand/Siemens/L&T	2
3	32Amps 2 Pole MCB	Legrand/Siemens/L&T	10
4	Neutral link	Reputed	As Required
5	Earth strip	Reputed	As Required
6	Terminals	Reputed	As Required

NOTE: All the switch gear required are included in supplier's scope