

	4.0 SUBHEAD-4				
	LT PANELS				
	MAIN LT PANEL:				
1	LT PANELS:	CSR 33.23 A			
	<p>Designing, Supply, Erection, Testing & commissioning of indoor Type LT cubical panel enclosure (dust, vermin and interchangeable modules with facilities for extensions or reduction as per the space or requirements). The Panel shall be suitable for operation at 415+6% Volts, 50HZ, 3 phase 4 wire & earth system. The assembly manufacturer should be ISO approved and CPRI tested for short circuit of (minimum 50kA) as well as IP degree of protection (IP 54/55).</p> <p>Fabrication:- Panel shall be made from 14/16 SWG CRCA sheet, conforming to IS 8623/1977-82. The sheet metal used for the fabrication of control panel will be 2mm for load bearing member's door and fittings plates etc. the partitions and other non load bearing members will be fabricated out of 1.6mm sheet, the sheet will be of mild steel CRCA type. The base channel will be made out of 75 x 40 x 5mm rolled channel. The door should be double folded without edge and the</p>				

96	gasket should be 'S' type puffed neutral rubber gasket for long life. The hinges of the door should be bolted type with double hole arrangement. The panel door lock should be quick openable type spring loaded. There should not be any special tool or key to open the lock. Minimum depth of the panel. The panel will be free standing floor mounting type having provision for cable entry from bottom/top with cable glands etc.			
43	The fabrication should be such that all the member i.e. vertical/horizontal should be detachable type i.e. total bolted. In case of any changes required at site, it should be possible then and their self without any cutting or welding. The fabrication of the panel in 3B construction fully compartmentalized type i.e. bus bar chamber as well as the cable chamber should be totally isolated from the feeder chamber. Where there crossing of the wire or bus links. It should have proper rubber gaskets or non-hygrosopic material. No live part should be in visible condition.			
53	Painting:- The sheet metal is sprayed with corrosion resistant etch Primer. The finishing treatment shall be applicable with air drying paint (7/9 tank Powder coated process should present in company premises) after necessary putty work			
2	Busbars:- The panel shall be provided with TPN aluminium busbar of suitable size according to the size of MCCB's. Busbar shall be of high conductivity (53% to 58%) E91-E Grade aluminium (1A/Sq.mm). All Busbar will be air insulated with codified in Red, Yellow, Blue & Black as per standard for cable termination with the help of extended busbar only with proper adjustable cable supports. The main busbar would be supported upon non-hygrosopic SMC/DMC supports.			
8	Metering:- The panel shall be completed with digital metering unit (with selector switches, voltmeter & ammeter) epoxy Insulator, gasket, PVC sleeves, CT's & L.E.D. type indicator etc. Manufacturer of Panel should be CPRI Approved (Approval not older then 5 years) & ISO certified (Manufacturer workshop as per ISO 9001: 2015 standard) The Concerned contractor shall be approved the detailed drawing of panel with complete specification from the Engineer in charge at site. Detail of capacities of MCCB's to be installed in the cubical panel Enclosure (Excluding the cost of MCCB's) as per following:-			
1	All Incomers & Out going With Extendable Rotary Handle with adjustable depth complete as per schematic diagram attached & Satisfaction of the Engineer in charge at site.			
6	SUB LT PANEL (NORMAL-1, GROUND FLOOR)			
4	(i) LT Panel enclosure having space for 1No. Incomer MCCB 630Amp. and 10Nos. outgoing MCCB's 40amp. to 250amp. (Option: MCCB 200-250amp.= 4Nos. and MCCB's 40-160amp.= 4Nos.) according to the requirement at site (Approx. size 1475 x 1800 x 400mm)	CSR 33.23 A	1	Each

2	(ii) LT Panel enclosure having space for 1No. Incomer MCCB 250Amp. and 8Nos. outgoing MCCB's 40amp. to 100amp. according to the requirement at site (Approx. size 1575 x 1700 x 400mm)	CSR 33.23 A (iv)
	MCCB's (FOR PANELS & SHEET ENCLOSURE):	
	2 Supply and erection of Moulded Case Circuit Breaker (Panel mounting Cubical type) in the existing Cubical Panel (confirm to IEC:60947-2) having Ics=100% Icu, 100% neutral with spreader terminal links, Extended rotary handle and relevant PWD general specifications complete with G.I. Bolts, Nuts & Connection on both sides of MCCB with suitable size of thimbles etc:-	CSR 33.23 B
✓	(a) MCCB Four Pole 630amp., 415volts, ≥36kA Microprocessor Based Adjustable Thermal and Magnetic Setting	(ix)
	(b) MCCB Four Pole 250amp., 415volts, ≥36kA Microprocessor Based Adjustable Thermal and Magnetic Setting	(vii)
	(c) MCCB Four Pole 160amp., 415volts, ≥25kA Fixed Magnetic and Adjustable Thermal Setting	(iv)
	(d) MCCB Four Pole 200amp., 415volts, ≥25kA Fixed Magnetic and Adjustable Thermal Setting	(v)
	(e) MCCB Four Pole 125amp., 415volts, ≥25kA Fixed Magnetic and Adjustable Thermal Setting	(iv)
	(f) MCCB Four Pole 100amp., 415volts, ≥25kA Fixed Magnetic and Adjustable Thermal Setting	(ii)
	FLOOR PANEL Normal supply (Second & Third Floor)	
3	(a) LT Panel enclosure having space for 1No. Incomer MCCB 250Amp. and 6Nos. outgoing MCCB's 100amp. to 125amp. according to the requirement at site (Approx. size 1825 x 1000 x 300mm)	(ii)
	FLOOR PANEL Emergency supply (Second & Third Floor)	
4	(b) LT Panel enclosure having space for 1No. Incomer MCCB 160Amp. and 6Nos. outgoing MCCB's 40amp. to 100amp. according to the requirement at site (Approx. size 1825 x 900 x 300mm)	(i)
	(b) MCCB Four Pole 200amp., 415volts, ≥25kA Fixed Magnetic and Adjustable Thermal Setting	(v)
	(c) MCCB Four Pole 125amp., 415volts, ≥25kA Fixed Magnetic and Adjustable Thermal Setting	(iv)

Panel: MCH AT Faridkot

full

10/11/24

- 1) Incoming MCCB (MP Base)
 630 Amp = 1 - 4P ≥ 36 KA
 Outgoing MCCB 250 Amp = 2 - MP-4P, ≥ 36 KA
 125 Amp = 4 - 4P ≥ 25 KA
 200 Amp = 1 - 4P ≥ 25 KA
 100 Amp = 3 - 4P ≥ 25 KA

Bus Bar = 1000 Amp

Approx size :- 1475 x 1800 x 400 mm

- ② Incoming - MCCB 250 Amp (MP) 36 KA = 1 pc
 Outgoing:- MCCB 160 Amp 25 KA = 2 pc
 125 Amp 25 KA = 3 pc
 100 Amp 25 KA = 3 pc
 Size:- 1575 x 1700 x 400 mm
 Bus Bar = 400 Amp

- ③ Incoming:- MCCB 250 Amp (MP) 36 KA = 1
 Outgoing:- MCCB 160 Amp 25 KA = 1
 MCCB 125 Amp 25 KA = 1
 MCCB 100 Amp 25 KA = 4
 Bus Bar = 400 Amp - Size [1825 x 1000 x 300 mm]

- ④ Incoming - MCCB 160 Amp = 1 - 25 KA
 Outgoing:- MCCB 100 Amp = 5 - 25 KA
 MCCB 125 Amp = 1 - 25 KA
 Bus Bar 250 Amp
 (1825 x 900 x 300)



5.	Selector Switch	Kaycee, L&T, BCH, Salzer, Siemens
6.	Current Transformer	Kappa, (L&T) Gillbert & Maxwell, Precise, Matrix
7.	Indication Lamp	L&T, BCH, Siemens, Teknik
8.	LT Panels	EMCO, ETE Electrogears, Kalyani Switchgear, CMKL, UPS International, C&S, Bhandari, DVEPL, Standard Control Panel Pvt. Ltd.
9.	Distribution board with miniatures circuit breakers	Legrand, Standard, L&T, Schneider, Hager, Havells, Fine (MCB's), C&S, Indo Asian, Crystal, Rallison
10.	PVC insulated PVC sheath armoured cable of 1.1 Kv grade as per IS 1554	ECKO, Polycab, SCI, National, ALCON, Havells, KEI, RR Kabel, Fine, Grandlay, Crystal, Ultracab, Rallison