

**STATE BANK OF INDIA
LHO, MAHARASHTRA**

TADKLAS BRANCH : ELECTRICAL WORKS

SL NO	DESCRIPTION OF WORK	QTY	UNIT	RATE
1	<p>Installation, testing & Commissioning of energy meter cubicle made out of 16 SWG CRCA sheet consisting of the following - (to Separate chamber for energy meter (with fixing plate, view glass and holes with rubber gromets), Separate Lockable CT chamber big enough to accommodate 3 nos. CTs comfortably, Chamber for Cutouts & switchgear etc. and consisting of the following.</p> <p>3 Nos. 125 A Open Type cutout fuse with bakelite base and with 125 A HRC fuses</p> <p>25 x 6 mm Tinned copper earth bench with black sleeve mounted on FRP insulators with SS Nuts & bolts for giving connections.</p> <p>4 Runs 25 x 6 Sq.mm Tinned Copper Busbar with heat shrinkable PVC sleeves for giving internal connections between C/O fuses, MCCB Input, Neutral Link etc with copper Lugs / SS Nuts&Bolts.</p> <p>125 A, 16 kA (at 415 volts) , 4 Pole MCCB with operating handle - 1No. as Incomer</p> <p>Spreaders for all MCCB Connections and SS Nuts & Bolts, Rubber gromets for metal crossings of wires, door knobs with lock nuts etc.</p> <p>Mark ON & OFF direction, MCCB & Cut out fuse ratings, cable size, consumer No., Name of Bank etc.neatly using good quality stickers /Paint.</p> <p>Complete with all interconnections and powder coated painting.</p> <p>Note :- GA & Control Drawing of the panel shall be approved by the consultant before fabrication. (Panel shall be manufactured from CPRI approved manufacturer only.) All test certificates for Panel shall be submitted alongwith the delivery of Panel at site.</p>	1	Set	
2	<p>MAIN SWITCH (NE DB): Supply and Installation of 100 A 10kA 4 pole MCCB (with operating handle) and with suitable Metallic enclosure. The MCCB should be provided with spreaders at Input & Output Side with SS Nuts and Bolts. (From MSB to NEDB)</p>	1	Set	
3	<p>MAIN VDB -Supply, Installation, Testing and Commissioning of 6 Way Vertical TPN MCCB DB consisting of the following and complete with all interconnections.</p> <p>125 A 25kA (at 415 Volts) TPN MCCB set at 100A as Incomer - 1 No.</p> <p>100A TP MCB (C-Series) as out going - 1 nos. (NE DB)</p> <p>63 A TP MCB (C-Series) as out going - 1 nos. (APFC)</p> <p>40 A TP MCB - 2 Nos. (LDB, ATM and Spare)</p> <p>63 A SP MCB - 3 Nos. (UPS & Spare)</p> <p>16A SP MCB - 3 nos. (To Name Board & Spare)</p> <p>The incoming copper conductors should be connected directly to the DB Earth benches and the body should be earthed from DB earth bench or out side main earth bench if any.</p>			

	Complete with all inter connections and neat marking/identification of DB Name, Cable Size and outgoing MCBs using good quality stickers /paint.	1	Set	
4	NON ESSENTIAL VDB -Supply, Installation, Testing and Commissioning of 4 Way Vertical TPN MCB DB consisting of the following and complete with all interconnections.			
	40 A 4 Pole MCB (C-Series) as Incomer - 1 No.			
	40 A TP MCB - 4 Nos. (AC DB, PDB, LDB and Spare)			
	The incoming copper conductors should be connected directly to the DB Earth benches and the body should be earthed from DB earth bench or out side main earth bench if any.			
	Complete with all inter connections and neat marking/identification of DB Name, Cable Size and outgoing MCBs using good quality stickers /paint.	1	Set	
5	AC DB : Supply, Installation, testing and commissioning of 40 A 4 Pole MCB (C-Series) and separate 40A, 100 mA 4P RCCB as Incomer - 1 No. 25 A, SPole MCB (C-Series) - 4 Nos (To Cassattee Acs) 16 A, SPole MCB (C-Series) - 2 Nos.(To split ACs & Spare) Dummy Plate - 6 Nos. The incoming copper conductors should be connected directly to the DB Earth benches and the body should be earthed from DB earth bench or out side main earth bench if any. Complete with all inter connections and neat marking/identification of DB Name, Cable Size, MCCB rating and outgoing MCBs .	1	Set	
6	PDB: Supply, Installation, testing and commissioning of Double 32 A 4 Pole MCB (C-Series) and separate 40A, 100 mA 4P RCCB as Incomer - 1 No. 10 A, SPole MCB (C-Series) - 12 Nos The incoming copper conductors should be connected directly to the DB Earth benches and the body should be earthed from DB earth bench or out side main earth bench if any. Complete with all inter connections and neat marking/identification of DB Name, Cable Size, MCCB rating and outgoing MCBs .	1	Set	
7	MAINS CHANGE OVER Supply and installation of 125 A 4 Pole ON LOAD Change over switch with suitable metallic enclosure with cable entry box and powder coat painted and with 6 nos 2A SP MCB with 6 nos LED indicators for the identification of MSEDCL / DG Set 'ON' & neat marking thereof. (Separate chamber & door for COS chamber & Indicator + MCB Chamber). Use 1/1.5 Sq.mm rigid single core PVC insulated copper conductor for control wiring. Suitable metal supports shall be incorporated to guide/tie the control wiring and neat dressing thereof. All unused knock out holes/gaps shall be properly sealed.	1	No.	
8	APFC PANEL: Fabrication, Supply, Installation, testing and commissioning of wall mounting type dust and vermin proof cubicle type switch board (15 kVAr Microprocessor controlled Automatic Power Factor Correction Panel) made out of 16 SWG CRCA sheet with powder coated painting (siemens grey) and consisting of the following. 63A, 4 Pole MCB (C-Series) as Incomer -1 No.			

	<p>25x3mm Tinned Copper Bus bar for 3 Phases and Neutral with heat shrinkable PVC sleeve with colour coding and SMC/BMC Busbar supports -1 Set.</p> <p>10A TP MCB (C-Series) as Outgoing - 7 Nos.</p> <p>Microprocessor based 8 stage APFC Relay -1 No.</p> <p>3 kVAr MPP-SH (Metallised Poly Propylene-Self Healing) Type Heavy Duty Capacitor - 3 Nos.</p> <p>2 kVAr MPP-SH (Metallised Poly Propylene-Self Healing) Type Heavy Duty Capacitor-2 No.</p> <p>1 kVAr MPP-SH (Metallised Poly Propylene-Self Healing) Type Heavy Duty Capacitor-2 No.</p> <p>L&T Make MO C-3 type Capacitor Duty (AC-6b) Power Contactor with Kit, Coil, Thermal O/L Relay and 2 Sets of NO & NC Contacts each - 6 Sets. (for 1 to 3 kVAr)</p> <p>Digital VAF Meter with CTs- 1No.</p> <p>RYB LED Indicator Lamps for Mains- 3 Nos.</p> <p>2A SP MCB for control supply - 6 Nos.</p> <p>Over Voltage, Undervoltage & Phase Protection Relay- 1 Set</p> <p>ON /OFF LED Indication Lamps (Red & Green) for Individual capacitors- 6 Sets.</p> <p>The panel shall be provided with required nos of louvers in the capacitor chamber for its cooling. Also required nos of ventilation fans with auto sensing thermostat shall be provided in the panel to improve capacitor life & ventilation fans.</p> <p>Complete with all interconnections and powder coated painting. The Panel Board shall be conforming to IS and Electrical Inspectorate / MSEDCL standards.</p>	1	Set	
9	<p>LDB: Supply, Installation, testing and commissioning of Double door 4 way TPN MCB DB consisting of the following.</p> <p>32 A 4 Pole MCB (C-Series) and separate 32A, 30mA 4P RCCB as Incomer - 1 No.</p> <p>6 A 'C' Series SP MCB as out going - 12 Nos.</p> <p>The incoming copper conductors should be connected directly to the DB Earth benches and the body should be earthed from DB earth bench or out side main earth bench if any.</p> <p>Complete with all inter connections and neat marking/identification of DB Name, Cable Size and outgoing MCBs using good quality stickers /paint.</p>	1	Set	
10	<p>NB DB Supply, erection, testing and commissioning of wall mounted type double door dust and vermin proof 6 way SPN MCB DB fixed on wall comprising the following:</p> <p>20 A DP MCB as Incomer - 1 No.</p> <p>25A, 30mA DP ELCB as Incomer - 1 No.</p> <p>16A SP MCB - 2 Nos. (Outside light & Name Board)</p> <p>The DB Earth Bench and DB enclosure should be directly connected to the UPS Main Earth Bench using 4 Sq.mm PVC insulated copper wire with copper lugs, SS Nuts and bolts etc.</p> <p>Complete with all inter connections and neat marking/identification of DB Name, I/C Cable Size and outgoing MCBs using good quality stickers /paint.</p>	1	Set	
11	<p>UPS IP DB: Supply and Installation of Single Door 8 Way SPN MCB DB Consisting of 63A 4P MCB (C-Series) and Separate 63 A, 4 Pole, 100mA ELCB with all interconnections.</p>	1	Set	

12	UPS IP DB: Supply and Installation of Single Door 4 Way SPN MCB DB Consisting of 63A DP MCB (C-Series) and Separate 63 A, DPole, 100mA RCCB with all interconnections.	1	Set	
13	COMPUTER DB : Supply, erection, testing and commissioning of wall mounted type double door dust and vermin proof 8 way SPN MCB DB fixed on wall comprising the following: 32 A DP MCB as Incomer 10 A SP MCB - 6 Nos. The DB Earth Bench and DB enclosure should be directly connected to the UPS Main Earth Bench using 4 Sq.mm PVC insulated copper wire with copper lugs, SS Nuts and bolts etc. Complete with all inter connections and neat marking/identification of DB Name, I/C Cable Size and outgoing MCBs using good quality stickers /paint.	1	Set	
14	Supply and Installation of L&T/Legrand make 24 Hour Dual Timer with enclosure for Branch Board Light & Outside lights / ATM Board Light & Raw power lights.	2	No.	
15	AC CONTROL: Supply and installation of modular type 25/32A Double Pole Two module switch with indicator. All AC switches should be placed together but mounted on separate boxes.	7	Nos.	
16	AC PLUG SOCKET: Supply and installation of modular type 20/25A 3 Pin 3 module plug socket for Split AC Indoor unit (Server Room)	3	Nos.	
17	Supply and Installation of 1 to 12 hr user selectable timer for UPS Exhaust.	1	Nos.	
18	CABLE LAYING AND TERMINATIONS Supply, laying and dressing of the following size of 1.1 KV grade PVC insulated armoured cable with aluminium conductor concealed or clamped on wall / ceiling / trench / cable tray/lamps if necessary.			
a.	3.5 x 70 Sq.mm AYFY (Meter Box to Main VDB via Main COS & to DG Set if required)	50	Mtr.	
b.	3.5 x 50 Sq.mm AYFY (MSB to NE DB via MS)	30	Mtr.	
c.	4 x 25 Sq.mm AYFY Cable (APFC)	10	Mtr.	
d.	4 x 16 Sq.mm AYFY Cable (UPS)	15	Mtr.	
e.	4 x 10 Sq.mm AYFY Cable (AC DB, PDB & LDB)	30	Mtr.	
f.	3 x 2.5 Sq.mm Armoured Copper Cable (for NB)	15	Mtr.	
19	End termination of the following size of cables using flange type cable glands and heavy duty tinned aluminium crimping type cable sockets including gland earthing.			
a.	3.5 x 70 Sq.mm AYFY	6	Nos.	
b.	3.5 x 50 Sq.mm AYFY	4	Nos.	
c.	4 x 25 Sq.mm AYFY Cable	2	Nos.	
d.	4 x 16 Sq.mm AYFY Cable	4	Nos.	
e.	4 x 10 Sq.mm AYFY Cable	6	Nos.	
f.	3 x 2.5 Sq.mm Armoured Copper Cable	2	Nos.	
20	EARTH CONDUCTORS Supply and laying of the following size of bare copper conductor along with above cables, for interconnections between panels, DBs, change over switches etc.and also for interconnections between earth pits.			

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a.	Supplying and laying 8 SWG G.I. wire at 0.50 metre below ground level for conductor earth electrode, including connection/termination with GI thimble etc. as required. (rate for single run) (From Earth pit to EM and UPS, EM to Main)	30	Mtr.	
b.	No.10 SWG (rate for single run) (From MVDB to Sub DBs) Total 2 runs 10SWG Cu for single and Independant DB Total 3 Runs 10 SWG Cu for two DBs placed nearby. (One run each to each DB and third one for interlinking) Total 4 Runs 10 SWG Cu for three or more DBs placed nearby. (One Run each to each DB and one for interlinking.	100	Mtr.	
21	PIPE EARTHING: Supply and providing ISI pipe earthing as per IS 3043 with 2.5m long 40mm dia B class G.I. pipe providing GI clamp at the top of the GI pipe test joint, filling around the GI pipe at the radius of 15cm with homogeneous mixture of charcoal, commol salt and river sand up to height of 2.5m from the botton and the rest of the portion with excavated soil, providing brick work masonries, plastering, fixing cast iron/concrete cover of 30x30cm size etc. complete. (Use only SS Nuts, Bolts and washers along with copper sockets for giving connections).	4	Nos.	
WIRING FOR LIGHT, FAN, PLUG, SOCKETS ETC				
22	POINT WIRING Supply and wiring for light/fan/exhaust fan/calling bell/mirror lamp/bulk head light/wall fans etc.with 3 plate ceiling rose and by using 3 X 1.5 Sqmm FRLS PVC insulated copper conductor wire in 20mm dia 1.5mm thick rigid PVC conduit, controlled by 6 Amps modular type switch with provisions for modular type ceiling fan regulator on separately fabricated MS Box. The M. S. box should be earthed properly. One way point. (The switch boards shall be placed at user friendly locations for easy ON/OFF. Separate controls for EB/UPS lights for BM cabin and Cash Officer. All other counters including 1 row of customer area, 2 SBs + UPS SB on back side wall of counters. Separate SB near entrance & Visitors lounge). The Raw Power & UPS Power Supply to Strong Room and Locker Room shall be taken though 16A S/S (Raw Power) and 6A S/S (UPS Power) fixed outside the respective entrance and to be taken to SBs inside Strong Room & locker Room using 6/16A plug Top with 3 core 2.5 Sq.mm flexible cable. Similarly 16A S/S for record Rooms (Raw Power Only)	60	No.	
23	Same as above but for secondary light points (looped points)	60	Nos.	
24	Supply and fixing of Modular type 6A, 2/3 pin plug points controlled 6A modular switch mounted on suitable box. (on common switch board)	3	No.	
25	Supply and fixing of modular type 6/16A, 3 module plug socket with 16A modular type switch mounted on suitable Box.	1	No.	
26	RAW POWER STATION : Supply and installation of combined 6A, 3pin modular plug socket & 16A combined 3 module modular plug socket in suitable single PVC box. for raw power supply in counters, tables etc. 1 No. each in all counters and tables including BM & Cash Officer.	8	Nos.	
27	Same as above but with additional 5A Modular switch on the same box. (for cash Officer side table / back side for Note sorting machine and BM cabin - above side table.	3	Nos.	

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28	Supply and providing 6/16 A plug top and 1.5m long 3 core 2.5Sqmm flexible copper cable for taking incoming supply from 6/16A socket. (For Raw Power & UPS power supply to Strong room (Cash), Record Rooms and Water Pump. The 3 core cable shall be laid through braided hose (green) with supporting clamps placed inside strong room/locker room/record room for safe keeping of connecting cable.	5	Nos.	
29	Circuit Wiring: Supply and wiring wall / floor etc. / recessed / surface as per colour code with 3 runs of 1.1KV grade 2.5 Sqmm FRLS PVC insulated flexible copper wire for phase neutral and earth conductor with standard colour coding, through ISI marked 20mm dia rigid PVC conduit with all accessories. The rate includes the cost of complete wiring from switch box to switch box.(Lighting Circuit-Max 10 points per circuits, UPS Circuit- Max 3 Tables/Counters per circuit, Raw Power Circuit- Max 3 tables/counters per circuit, Name Board, Water pump, etc.))	500	Mtr.	
30	Same as above but with 3 x 4 Sq.mm FRLS PVC Insulated copper wire. (for 1.5/2Tonne AC and UPS I/P & O/P to COS to Computer DB and for Name Boards if there are multiple Nameboards or extra ordinarily lengthy Name Boards)	145	Mtr.	
31	UPS POWER STATIONS Supply, install, test and commissioning of computer power stations with 4 Nos. 6A modular type two module 2/3 pin sockets mounted on suitable PVC / M.S.Box. The boxes should be fixed on wall / partitions (wooden) consealed or open as required at site. (2 Sets per table / counter including BM and cash officer)	8	No.	
32	Supply, install, test and commissioning of 16A modular type master switch with indicator with suitable PVC box for the main control of UPS & raw Power Station in the Tables.	10	No.	
33	Marking of Panels & DBs with weather proof and non corrosive metal plates fixed in suitable position with full particulars engraved thereon with white letters against black background, its switch and fuse ratings, cable size, location etc (Neat identification from top to extreme load end of both light and power distribution) Marking of Raw Power / UPS plug sockets & switch boards using white / black paint and stencil. (free hand writing not allowed). Good quality stickers may also be used.	1	LS	
34	Charges for fixing wooden/steel framed laminated copies of Electrical Inspectorate/Bank's Engineer/Architect approved as fitted drawings inside the UPS room.(Copy of final as fitted drawing approved by Electrical Inspectorate. both schematic and layout drawings.)	1	LS	
35	Charges for marking the telephone sockets and its correspondonding cable in the KRONE Box and preparation of single line diagram / layout of the whole telephone wiring showing location and numbering marked in the plan using AutoCAD, lamination and displaying it inside the Server Room/Manager Cabin.	1	LS	
36	Charges for preparation of drawings, completion report etc to local MSEDCL authorities on behalf of bank/landlord for & getting order for statutory payments, obtaining new power connection / enhancement of connected load / shifting/replacement of suitable energy meter if necessary with MSEDCL.	1	LS	

37	LIGHT FIXTURES & FANS			
a	Supply and Installation of Philips make recess mounting (gypsum board ceiling) 30 Watts LED FULL GLOW type square luminaire Cat. No. RC380B G5 LED 36S-6500 PSE OD WH Or OSRAM Luxpower (including fixing frame if any required)	20	Nos.	
b	Supply & installation of 1 X 13.5 Watts Philips Greenperform sleek DN 296B LED 15S-6500 PSU WH led Down Light fitting with lamps and white reflector on false ceiling or Osram Luxstar 13/14Watts.(including UPS Lights)	25	Nos.	
c	Supply and Installation of 21 watts LED type weather proof Yard lighting Luminaire with suitable angle GI pipe support for wall mounting. Philips GreenLine Smart Hi power LED BRP 022	4	Nos.	
d	Supply and Installation of 20 / 21W, 4 Feet LED Batten Light fitting with suitable mounting clips. Philips Slimline / Panasonic Harrow AL	15	Nos.	
e	Supply and providing IP 20 type, 10 Watts / Metre LED Strip light (Blue Colour) with the corresponding driver of 5/10A including cost of driver unit. Wipro Garnet make.	35	Mtr.	
g	Supply & installation of Mains power operated electronic calling bell	1	No.	
h	Supply and installation of Angle batten holder with 9W Cool Day Light LED bulb on suitable PVC box (for toilets/UPS Points)	5	Nos.	
i	Supply and installation of 9" size medium duty exhaust fan with metallic body and blades. (Toilets) Crompton / Almonard make. The cost shall be inclusive of cost of wall cutting, its re-plastering finishing and mettalic grill grouted to the outside wall.	2	Nos.	
j	Supply and installation of 12" size Heavy duty exhaust fan with metallic body and blades in the new UPS Room with required wall opening and its finishing thereof. The cost shall be inclusive of cost of wall cutting, its re-plastering finishing and mettalic grill grouted to the outside wall.	2	No.	
k	Supply and installation of 5 star rated 1200mm Sweep BLDC fan (Atomberg/Crompton make) without remote control.	10	Nos.	
l	Supply & Installation of step type modular electronic regulator	10	No.	
m	Supply and providing fan rod with painting (upto 1m length) (other than that supplied with fan and if required)	2	Nos.	
n	Supply and providing fan hook on ceiling.	2	No.	
o	Supply and providing tinned copper earth bench using 25 x 3 mm copper strip (25 Cm in length)	3	Nos.	
p	Supply and providing of 6A, 3 pin modular socket on suitable metal box for TV /Token Display	1	Nos.	
q	Supply and providing of Electrical Grade Rubber Mat (2m x 1m x 6mm) (for COS & UPS room)	2	Nos.	
r	Supply and fixing of wooden/steel framed Shock Treatment chart with glass of Standard size. (UPS room & Near VDB)	1	Nos.	
s	Supply and fixing of LT DANGER BOARD Sticker with weather proof and non corrosive metal plates (Red back ground with white letters and size of Min. 15x10 Cms) (on All DBs & UPS Room Door)	1	LS	

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38	Supply and wiring using 2 pair telephone cable 20mm PVC conduit from the EPABX to the individual points. One separate cable for each point. Number of cables in one conduit limited to 5.			
a.	2 pair telephone cabling (0.50 Sq.mm)	150	m	
b.	10 pair Armoured telephone cabling (0.50 Sq.mm)	30	m	
39	Supply and fixing of RJ 11 type modular telephone socket on suitable PVC / metal boxes.			
a.	Telephone socket - single (modular type)	4	No.	
b	Telephone socket - double (modular type)	1	No.	
40	Supply and installation of KRONE connector telephone junction box of 10 pair. (Outside)	1	Nos.	
	<u>MUSIC SYSTEM</u>			
41	Supply and wiring as per colour code with 2.50Sqmm PVC insulated stranded copper wire 2 runs through ISI grade 20mm conduit for speakers.	80	m	
42	Supply and fixing 6W recessed type speakers on ceiling. Ahuja CS-663T	5	No.	
43	Supply and installation of Ahuja make 30W Amplifier with USB port. Model: Ahuja DPA 370	1	No.	
GRAND TOTAL				

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