

Renovation of Operation Theatre and Labour room in Ayurveda college Hospital for Women & Children, Poojappura

PART II- ELECTRICAL WORKS

Sl. No	Description	Unit	Qty	Rate in figures & words	Amount in Rs
A. Wiring					
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC Conduit, with modular switch, modular plate, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.	Point	30		
2	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC Conduit as required				
2.1	2 x 1.5 sq.mm + 1 x 1.5 sq.mm earth wire	Rm	200		
2.2	2 x 2.5 sq.mm + 1 x 2.5 sq mm earth wire	Rm	250		

2.3	2 x 4.0 sq.mm + 1 x 4.0 sq mm earth wire	Rm	220		
2.4	2 X 10 sq. mm + 1 X 10 sq. mm earth wire	Rm	25		
3	Supplying and drawing following sizes of FRLS PVC insulated copper conductor, single core cable in the existing surface/ recessed steel / PVC conduit as required				
3.1	3 x 1.5 sqmm	Rm	200		
3.2	3 x 2.5 sqmm	Rm	150		
3.3	3 x 4 sqmm	Rm	120		
4	Supplying and drawing 2 pair 0.5 sq mm FRLS PVC insulated annealed copper conductor, unarmored telephone cable in the existing surface/ recessed steel/ PVC conduit as required.	Rm	180		

5	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required.				
5.1	20 mm	Rm	120		
5.2	25mm	Rm	60		
6	Supply and fixing of 250 mm x 300 mm x 100 mm deep metal box (nominal size) on surface or in recess with suitable size of phenolic laminated sheet cover in front including painting etc as required.	Each	5		
7	Supplying and fixing following modular socket outlet on the existing modular plate & switch box including connections but excluding modular plate etc. as required.				
7.1	5/6 amps switch	Each	45		

7.2	15/16 amp switch	Each	5		
7.3	3pin 5/6A Socket Outlet	Each	15		
7.4	6pin 15/16 A Socket outlet	Each	5		
7.5	Telephone socket outlet	Each	12		
7.6	Bell push	Each	2		
8	Supplying and fixing stepped type electronic fan regulator-modular on the existing modular plate switch box including connections but excluding modular plate etc. as required.	Each	10		

9	Supply and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	20		
10	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required.				
10.1	1 or 2 Module	Each	10		
10.2	3 Module	Each	5		
10.3	4 Module	Each	10		
10.4	6 Module	Each	5		
10.5	8 Module	Each	10		

10.6	12 Module	Each	5		
11	Supplying and fixing suitable size GI / PVC box with modular plate and cover in front on surface or in recess, including providing and fixing 3 pin 5/6 amps modular socket outlet and 5/6 amps modular switch, connection etc. as required.	Each	20		
12	Supplying and fixing suitable size GI / PVC box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required.	Each	15		
13	Supplying and fixing 3 pin, 5 amp ceiling rose on the existing junction box/ wooden block including connection etc as required.	Each	10		
14	Supplying and fixing call bell / buzzer suitable for single phase, 230 volt, complete as required.	Each	2		

15	Installation, testing and commissioning of pre-wired, fluorescent fitting / compact fluorescent fitting of all types, complete with all accessories and tube etc. directly on ceiling / recessed on false ceiling including connection with 1.5 sq. mm FRLS PVC insulated, copper conductor, chain, anchor fastner, single core cable and earthing etc. as required.	Each	45		
16	Installation, testing and commissioning of ceiling fan, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FRLS PVC insulated, copper conductor, single core cable etc. as required.	Each	10		
17	Installation of exhaust fan in the existing opening, including making good the damage, connection, testing, commissioning etc. as required.				
17.1	Upto 450 mm sweep	Each	5		
B. MCCB, MCB & DBs					
18	Providing and fixing following rating and breaking capacity MCCB in existing cubicle panel board including drilling holes in cubicle panel, making connections, etc. as required.				

18.1	100 Amp, 16 KA	Each	1		
19	Supplying and fixing following way, single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface/recess, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required. (But without MCB/RCCB/Isolator).				
19.1	14 way, Double door	Each	1		
20	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
20.1	Single pole	Each	25		
20.2	Triple pole	Each	10		

20.3	Triple pole and neutral	Each	1		
21	Supplying and fixing modular blanking plate on the existing modular plate & switch box excluding modular plate as required.	Each	10		
22	Supplying and fixing following rating, double pole, 240 volts, isolator in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
22.1	63 amps	Each	1		
23	Supplying and fixing following rating, double pole, (single phase and neutral), 240 volts, residual current circuit breaker (RCCB), having a sensitivity current upto 300 milliamperes in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
23.1	63 amps	Each	1		

24	Supplying and fixing DP sheet steel enclosure on surface/recess along with 25/32amps 240 volts "C" curve DP MCB complete with connections, testing and commissioning etc. as required.	Each	2		
25	Supplying and fixing FP sheet steel enclosure on surface/recess along with 10/16/25amps 415 volts "C" curve TPN MCB complete with connections, testing and commissioning etc. as required.	Each	10		
26	Supplying and fixing 20 amps, 240 volts, SPN industrial type, socket outlet, with 2 pole and earth, metal enclosed plug top alongwith 20 amps "C" curve, SP, MCB, in sheet steel enclosure, on surface or in recess, with chained metal cover for the socket out let and complete with connections, testing and commissioning etc. as required.	Each	14		
27	Supplying and installing following size of perforated pre-painted M.S. cable trays with perforation not more than 17.5%, in convenient sections, joined with connectors, suspended from the ceiling with M.S. suspenders including bolts & nuts, painting suspenders, including bends, couplers, tees etc as required.				

27.1	150 mm width X 50 mm depth X 1.6 mm thickness	Rm	30		
28	Providing and fixing 8 SWG dia G.I. wire on surface or in recess for loop earthing along with existing surface / recessed conduit / submain wiring / cable as required.	Rm	115		
29	Providing and fixing 4 mm dia copper wire on surface or in recess for loop earthing along with existing surface / recessed conduit / submain wiring / cable as required.	Rm	80		
C. MV Cable laying					
30	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size direct in ground including excavation, sand cushioning, protective covering and refilling the trench etc as required.				
30.1	Upto 35 sq. mm	Rm	25		

31	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on wall surface as required.				
31.1	Upto 35 sq. mm (clamped with 1mm thick saddle)	Rm	175		
32	Laying and fixing of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of following size on cable tray as required.				
	Upto 35 sq. mm (clamped with 1mm thick saddle)	Rm	80		
33	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.				
33.1	3½ X 35 sqmm	Each	2		

33.2	4C x 4 sqmm	Each	8		
33.3	4C x 6 sqmm	Each	8		
33.4	4C x 10 sqmm	Each	6		
33.5	4C x 16 sqmm	Each	4		
34	Supply & installation of 2x18W recess mounted closed downlight luminarie with centre frosted glass cover suitable for horizontal lamp complete with all accessories, electronic ballast, lamp holder, 18W lamp etc as required. Philips FBS085 2xPL-C/4P18W HFB RG-FR / Crompton DDLHR218EB/G/SL / WIPRO WCP 34218 2 x18w CFL(TC-D)	Each	10		

35	Supply and fixing ISI marked PVC batten / angle holder including connection, 15W CFL lamp including all accessories as required.	Each	10		
36	Supply of the following size 1.1kV grade XLPE insulated PVC sheathed, armoured Aluminium conductor power cable confirming to IS 7098 (part 1) ammended upto date.				
36.1	3½ X 35 sqmm	Rm	60		
36.2	4C x 4 sqmm	Rm	40		
36.3	4C x 6 sqmm	Rm	60		
36.4	4C x 10 sqmm	Rm	80		
36.5	4C x 16 sqmm	Rm	40		

37	Supply, installation, testing & commissioning of 10 kVA, 3 phase, input, 1 phase output, true on-line UPS system (specifically for Medical application) with 30 minutes back up (full load), including all accessories, SMF Tubular batteries VRLA type with powder coated MS cabinet, battery cabling including all accessories as required complete having following specification.				
	Fully digital controlled based on DSP(IGBT based)				
	Power factor corrected from end > 0.9				
	Pure sine wave output.				
	Full time output voltage & frequency regulation				
	Auto regulation of battery end voltage				
	Intelligent interface with LED/LCD display				
	Static bypass switch & manual by pass switch				
	Auto temperature compensation				
	Make: Hykon / Power one / Sukam	Each	1		
38	Supply and Installation of 10 pair Telephone Terminal box with 1 no. 10 pair krone IDC module and SS BMF with all accessories.	Each	1		

39	Supplying and fixing FP sheet steel enclosure (outdoor type) on surface/ recess along with 10/16/25/amps 415 volts "C" curve TPN MCB complete with connections, testing and commissioning etc. as required.	Each	6		
40	Supplying and fixing FP sheet steel enclosure on surface/ recess along with 40amps 415 volts "C" curve TPN MCB complete with connections, testing and commissioning etc. as required.	Each	2		
41	Supplying and fixing following ways surface/ recess mounting, vertical type, 415 volts, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 amps tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, with provision of 100 amps TP 16 KA MCCB as incomer, interconnection between incomer MCCB and bus bars (but without MCB's/ MCCB) as required . (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.)				
41.1	8 way TP	Each	1		

42	Dismantling the existing light fixing (indoor), ceiling fan, exhaust fan, DB etc with least damage and storing the same to the place as per the direction of engineer in charge.	Each	65		
43	Dismantling of existing electrical conduits / cassing & capping, switches, switch boards, junction boxes, wires, angle batten including all accessories in a total floor area (under renovation) and storing in space as directed by Engineer-in-charge	Job	1		
44	Installation of 3 phase horizontal TPN MCB DB in surface/ recess mounting, made of sheet steel, dust protected, duly powder painted, inclusive of tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCB's, interconnections, termination etc as required.	Each	1		
45	Liasoning, preparation and submission of all required drawings and documents to statutory bodies (electrical inspectorate, KSEB etc) for obtaining sanction from authorities for energising the installations done.	Job	1		
TOTAL OF PART II- ELECTRICAL					