



PRICE BID

Annexure-III

BOQ for Electrical Installation Works for RACC Bihta Branch

Sl.No.	Description	UOM	Qty.	Rate (Rs.) (Exclusive of GST on work contract)	Amount (Rs.) (Exclusive of GST on work contract)
1	MAIN INCOMING SOURCE PANEL (MISP) : Supply, installation, testing and commissioning of main incoming (MIP) Panel suitable for wall /floor mounted indoor type, air insulated, totally enclosed vermin-proof , dead front, cubicle type, 2 mm thick sheet steel enclosure use on 415 V, 3 Ph., 4 wire, 50 Hz. A.C. system, instrumental panel, CTs, incoming and outgoing cable compartment. The Panel shall be complete in all respect as per site requirement, interconnection, G.I. earth busbar of adequate size covering the total length of switch board with drilled holes, G.I. bolts, nuts, washers etc. as directed by E-I-C. The cubicle should be painted with two coats of light grey synthetic enamel paint over two coats of zinc chromate primer. The complete fabrication, construction shall be done as per the site condition and conforming to the relevant IS. Approval of Manufacturer's drawings from E-I-C.				
	The Panel consists of the following INCOMING : 1 No. : 415V, 160 A 4P MCCB (36 KA), with overload and short circuit adj protection for Main Line , 1 No. : 415V, 100 A 4P MCCB (36 KA), with overload and short circuit adj protection for DG Incoming , 1 No. : 415V, 100 A 4P On-Load Changeover Switch 2 No. : Digital Multi Function Meter (MFM) one for DG and one for main Line 6 Nos.: LED Phase indicating lamps. 6 Nos.: Suitable CTS PVC sleeved TPN Tinned suitable Copper Busbar with suitable Double Bus bar System (such that DG Set should feed power to UPS Panel, raw power VTPN , sign board power & other in case of power failure through on load change over switch) G.I. EARTH BUSBAR 25mm x 3mm covering the total length of panel. OUTGOING : Termination I: (To be connected with Change over) 1 No: 100 A 4P MCCB (36 KA) for UPS , 1 No: 63 A 4P MCCB (36 KA) for Raw Power VTPNs 3 No: 32 A DP MCB for Sign Boards and others Termination-II: (Not to be connected with Change over) 1 No: 100 A 4P MCCB (36 KA) for AC VTPNs MCCBs Make - Legrands/L&T/SIEMENS/ABB/Schneider Electric/Havells or equivalent .MCCBs must have thermal & magneti release,with overload and short circuit adj protection	SET	1		
2	Sub-main line:- Wiring in MS conduit of IS specification of Proper size with core PVC insulated stranded copper wire 1.1KV grade FRLS/FR-LSH (Finolex/Havells/Polycab/ RR Kabel/ Richa/KEI or equivalent) and with supply ,installation, commissioning of all the materials required including proper termination, connection in complete as required from main DB to various DBs of approved Make:-				
i)	With 2 nos. 6 Sq.mm + 1 no. 6 Sq.mm. (green colour for earth) PVC insulated copper wire in MS conduit for LDB/ RPDB/ CDB or as per site requirement.	RM	120		
ii)	With 4 nos. 10 Sq.mm + 1 no. 6 Sq.mm. (green colour for earth) PVC insulated copper wire in MS conduit for 7.5/10 KVA UPS or as per site requirement.	RM	20		
iii)	With 2 nos. 10 Sq.mm + 1 no. 6 Sq.mm. (green colour for earth) PVC insulated copper wire in MS conduit from 7.5/10 KVA UPS to UPS DB or as per site requirement.	RM	20		
iv)	With 2 nos. 4 Sq.mm + 1 no. 4 Sq.mm. (green colour for earth) PVC insulated copper wire in MS conduit for AC(1.5 Tr) Wiring or as per site requirement.	RM	90		
v)	With 2 nos. 2.5 Sq.mm + 1 no. 1.5 Sq.mm. (green colour for earth) PVC insulated copper wire in MS conduit as per site requirement.	RM	30		
3	Supply ,installation ,testing and commissioning of distribution board manufactures made sheet steel enclosure With the following MCBs (DB, MCB and MCCB approved make) and connecting the same to the system.Make - Legrands/ Havells/L&T/SIEMENS/ABB/Schneider Electric/Hager or equivalent)				
i)	Computer DB, SPN double door with 40A (30mA-100 mA sensitivity) DP RCCB as incomer & 8 nos 10A SP MCB as outgoing.	No.s	2		

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ii)	Raw Power DB, SPN double door with 40A (30mA-100 mA sensitivity)DP RCCB as incomer & 8 nos 10A SP MCB as outgoing.	No.s	2		
iii)	(A) UPS INCOMING DB: Supply of all required materials and fixing of input UPS box (Company made) having provision of the following arrangement complete. Incoming: 1 No. 63A (25KA) TPN MCB , Outgoing: 3 Nos. 63 A (10KA) DP MCB	No.	1		
iv)	B) UPS OUTGOING DB for UPS : Supply of all required materials and fixing of output UPS box (Company made) having provision of the following arrangement complete with all respects as per the direction of engineer in charge. Incoming: 1 no. 63 A DP MCB Outgoing: 5 No. 40A (10KA) DP MCB		1		
v)	DB with 25 A DP RCCB (30mA to 100 mA), AC Socket & Top for AC complete in all respect	No.s	4		
vi)	VTPN Double Door Distribution Board with provision of fixing MCCB as incomer,having vertical fish bone busbar, with all internals such as DIN channels,neutral link,internal wiring ,termination of circuits complete in all respects with housing of following:-63 A 4 Pole MCCB (36kA) as incomer and ,12 Nos. 40 A SP MCB's,at outgoing of approved make	Set	1		
vii)	VTPN Double Door Distribution Board with provision of fixing MCCB as incomer,having vertical fish bone busbar, with all internals such as DIN channels,neutral link,internal wiring ,termination of circuits complete in all respects with housing of following:-100 A 4 Pole MCCB (36kA) as incomer and 12 Nos. 32A SP MCB's at outgoing of approved make	Set	1		
viii)	LDB : Consumer unit SPN MCB DB complete with all respects and the following MCBs. INCOMING : 1 No. 240V 32A(10KA) (30mA-100mA) DP MCB OUTGOING : 8 Nos. 240V 6A-16A (10 KA) SP MCB	Set	1		
4	Supplying, installation, testing & commissioning,laying,lugging,etc of PVC insulated aluminium armoured 1.1 KV grade 3.5 cored cable of following size with making proper trench/support on wall as per IS specification and complete with all respect as per the instruction of Engineer-In-Charge(E-I-C) .				
i)	With 3.5 core x 35 sq. mm cable	RM	100		
ii)	With 3.5 core x 120 sq. mm cable	RM	50		
5	Copper bonded Rod Earthing. SITC of OBO Betterman/JK/JEF eco safe/ make earthing system – * - UL Listed Earth Electrode - Copper bonded low carbon steel electrode, coating 250 microns - Tested as per IEC 62561-2 - Meets the requirement of IS 3043 and In one set it should include: a) One nos of Earthing rod-Type 17 3000 CCER, Length – 3000 mm Outer Dia – 17.2 mm Copper bonded low carbon steel Electrode WITH 250 microns copper bonded b) One bag (10 KG) Earth Enhancement Compound confirming to IEC 62561-7 c) One nos of universal clamp . Product Certificate of company must be provided. Earth Test Report to be submitted.	No.s	2		
6	SITC of Earth distribution Box (Bus Bar Station) to be installed in the branch near Main Panel and UPS, comprising of a bus bar of 3x25x180mm Cu strip .	SET	2		
7	Supply and laying of 8 SWG Cu cotton coated wire in 20mm dia rigid PVC conduit for earthing From the earth pit to the Main panel/UPS.	Mtr.	100		

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8	Computer Socket Outlet: Computer point wiring in MS conduit of IS specification of proper size with 2 Nos. 2.5 Sq.mm. + 1 x 2.5 Sq.mm. (green colour for earth) PVC insulated copper wire (1.1 KV grade FRLS/FR-LSH) in pre - laid (as per ISI) single core PVC insulated stranded copper wire 1.1KV grade(Finolex/Havells/Polycab/ RR Kabel/ Richa/KEI or equivalent) and with all material supply installation and commissioning complete from CDB/PDB(Raw) .The wiring shall be carried out on surface above false ceiling by chiseling the existing surface and plastering the same with cement etc. after fixing the MS conduit with all accessories like saddles screws, bends T-joint etc. 2 coats of painting Matching to the surface including supply installing, testing, commissioning of modular plate type switch and socket:Each computer socket outlet cluster consists of following 4 nos 6/10A 5 pin modular type international sockets with single 16A Modular type controlling switch with indicator on table top. (Legrands / MK/ABB/Havells or equivalent) for computer terminal on sheet steel enclosure (cadmium plated),duly fitted with screw to the steel conduit and fixed to the wall partition furniture with all interconnection and proper earthing .All the opening shall be covered with blank plate and be sealed to make the box vermin proof.B48	No.s	11		
9	Raw Power point wiring in MS conduit of IS specification of proper size with 2 Nos. 2.5 Sq.mm. + 1 x 2.5 Sq.mm. (green colour for earth) PVC insulated copper wire (1.1 KV grade FRLS/FR-LSH) in pre - laid (as per ISI) single core PVC insulated stranded copper wire 1.1KV grade(Finolex/Havells/Polycab/ RR Kabel/ Richa/KEI or equivalent) and with all material supply installation and commissioning complete from RPDB/PDB(Raw) .The wiring shall be carried out on surface above false ceiling by chiseling the existing surface and plastering the same with cement etc. after fixing the MS conduit with all accessories like saddles screws, bends T-joint etc. 2 coats of painting Matching to the surface including supply installing, testing, commissioning of modular plate type switch and socket:Each computer socket outlet cluster consists of following : 2 nos 16/20A 5 pin modular type international sockets with single 16/20A Modular type controlling switch. (Legrands / MK/ABB/Havells or equivalent) for computer terminal on sheet steel enclosure (cadmium plated),duly fitted with screw to the steel conduit and fixed to the wall partition furniture with all interconnection and proper earthing .All the opening shall be covered with blank plate and be sealed to make the box vermin proof.B48	No.s	12		
10	POWER SOCKET OUTLET AND ITS WIRING Raw power socket outlet cluster point including supply and fixing of modular type socket outlet clusters components and wiring 1100V grade, FRLS complete in all respect as detailed below. 1Nos. 16/20A 5 pin modular type International sockets and 1 No. 16/20A modular type controlling switch with 2 Nos. 4 Sq.mm. + 1 x 2.5 Sq.mm. (green colour for earth) PVC insulated copper wire in pre - laid (as per ISI) M.S. conduit including interconnection, painting etc. as required to be completed in all respect from DB to UPS/RAW Power Outlet. Proper colour code must be followed.	No.	5		
11	Wiring for light/fan/exhaust fan points using 3 X 1.5 Sq MM 1.1 kv grade FRLS/FR-LSH PVC insulated stranded copper conductor wire(Finolex/Havell's/Richa/RR kebel/KEI/Polycab or equivalent) for phase, neutral and earth in 25 mm dia heavy duty MS conduit along with associated accessories like MS junction boxes, bends, saddles, screws et. concealed in wall, floor, under flooring, below false ceiling or on surface as well as suspended from ceiling with 25mm X 3 mm MS flat suspenders duly painted above false ceiling from individual light/Fan/Exhaust Fan point outlet. etc. to individual modular type switch boards, 10 Amp modular plate type switches etc.(MK/Legrands/Havell's/ABB or equivalent), as required complete including circuit wiring with 3 X 2.5 sqmm. 1.1 kv grade PVC insulated stranded copper conductor wire and as per site requirement and as instructed by Engineer-In -Charge.				
i)	One light controlled by one switch	No.s	36		

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ii)	Wall fan point with 3 pin socket	No.s	6		
iii)	Glow sign board wiring	No.	2		
iv)	6/10 A modular socket & switch at same board	No.s	5		
v)	Ceiling Fan Point with electronic modular type regulator (2 module step, 120 watt rating)	No.s	1		
vi)	UPS light points	No.	4		
vii)	Exhaust fan point	No.	3		
	Part B- SUPPLY AND INSTALLATION OF ELECTRICAL FITTINGS				
12	Supply ,Installation ,testing & Commissioning of 36W-2'x2' LED Panel light/luminaire recessed mounted complete with all accessories. lumens >3000. Make: Philips/Wipro/GE/Crompton Greaves/Syska/Havells	No.s	8		
13	Supply ,Installation ,testing & Commissioning of 15W LED Downlighter recessed mounted of make complete with all accessories Make: Philips/Wipro/GE/Crompton Greaves/Syska/Havells	No.s	16		
14	Supply installation testing and commissioning of 18W LED T5 Batten with glare free light fitting complete with all respect. Make: Philips/Wipro/GE/Crompton Greaves/Syska/Havells	Nos	8		
15	Supply & fixing of 35W LED Street Light with suitable mounting pipe & CFL Lamp etc. of Make: Philips/Wipro/GE/Crompton Greaves/Syska/Havells complete in all respect	Nos	2		
16	Supply and installation of Wall Mounted fan 450 mm ,3 pin Metallic Blade ,1400 rpm of crompton/bajaj/usha/orient/Havells/Polar make or equivalent	No.s	6		
17	Supply and installation of Ceiling fan 1200 mm crompton greaves/bajaj/usha/havell's/orient make	No.s	1		
18	Supply and installation of Exhaust Fan complete with all respect .Make: crompton/bajaj/usha/havell's/Orient make	No.s	3		
	Part C- LAN CABLING WORK				
19	Supply and laying of E-Cat 6 UTP cable for the Data Circuit through the PVC conduit ,Rate to include for termination on both end or as directed by E-I-C(Make: D-Link, AMP, HCL,DIGISOL)	Mtr	450		
20	Supply and fixing of information outlet box suitable for 1 nos,RJ 45 terminals including mounting box(PVC) & top cover , to be fixed a concealed manner in partition by necessary bolts & nuts or as directed at site,(Make: D-Link, AMP, Legrand ,HCL,DIGISOL)	No.s	12		
21	Supply of 2 mtr. Long E-CAT 6 PATCH CHORD (Make: D-LINK, AMP, HCL, Legrand, Digisol)	No.s	12		
22	Supply & installation of 9U Rack with power supply arrangement, ventilation fan, mounting racks etc. Complete with all accessories.	No.	1		
23	MAIN TPN SFU: Supply, installation, testing and commissioning (SITC) of following TPN SFU with HRC fuses in sheet steel enclosure with cable end-box on MS Angle Frame/ MS Legs/ wall with interconnection, painting and finishing complete in all respect 160 A TPN SFU with HRC fuses	No.	1		
24	Hard Copy of Single Line Diagram of complete wiring fully laminated of Branch including power and distribution in the premises complete in all respect.	No.	2		

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25	Hard Copy of Circuit Diagram of complete LAN wiring fully laminated of Branch complete in all respect.	No.	2		
GST on work contract will be extra as applicable.		Grand Total (in Rs)			