

**BOQ. AUNDHAI, BRANCH, RAJNANDGAON.****ELECTRICAL WORKS**

<b>S.NO</b>	<b>ITEM AND SPECIFICATION</b>	<b>QTY</b>	<b>UNIT</b>	<b>RATE</b>	<b>AMOUNT</b>
	<b>POINT WIRING</b>				
	The rates for the point wiring shall include providing and fixing of following:				
<b>a.</b>	Wiring of the point of any length from distribution board to point outlet excluding circuit wiring				
<b>b.</b>	Earthing of all switch box and all outlet boxes fitting, fans, 3rd pin of plug with 1.50mm copper wire.				
<b>c.</b>	Modular Switch/ Sockets of Standard make with necessary modular series cover plate and MS Boxes				
<b>d.</b>	All SP MCB's, MCCB & TPN should be of "C Series"				
<b>e.</b>	Embedding all conduits in walls laying in slabs, above false ceiling or in floors including all accessories as required, cutting and refilling the chases with cement mortar .				
<b>f.</b>	Providing, fixing Modular switches, sockets, M.S. boxes (1.6mm thick) draw boxes, G.I. Pull wires (where required), brass screws, ceiling rose/connector etc.				
<b>g.</b>	Adopting separate and independent system of wiring for lighting, power (normal and essential supply). Wiring for following points using PVC insulated copper conductor wires of 650V/1100V grade in 16 SWG M.S. conduit stove enameled concealed/ exposed including switches & sockets as above.				
	<b>INTERNAL WIRING</b>				
<b>1</b>	<b>POINT WIRING :</b>				
	S/I/T/C for light point / Exhaust fan point / Call bell point etc with 1.5 sq mm PVC insulated copper conductor single core multi stranded wire in 16 swg stove enameled rigid steel conduit with conduit accessories like bend , junction box etc in concealed/surface manner as per site requirement with suitable Modular Switches with plate and metal / PVC box, ceiling rose , bulb holder etc including 1.5 sqmm PVC insulated copper earth wire etc complete as required. Wire colors : Red, Black,				
	<b>Light point controlled by one switch.</b>	22	Nos.		
	<b>Fan point controlled by one switch with stepped electronic regulator as required.</b>	2	Nos		
<b>2</b>	<b>CIRCUIT WIRING FOR LIGHT BOARDS :</b>				
	S/I/T/C for Lighting circuit with 2 x 2.5 + 1 x 1.5 sq mm PVC insulated copper conductor single core multi stranded wire in 16 swg stove enameled rigid steel conduit with conduit accessories like bend, junction box etc on surface / recessed manner etc ( Wiring from D.B. / Source to Board/destination ) and making good all the damages, painting, cleaning the site etc complete as required as per site requirement and as directed (average length of circuit taken as. (12-15) M	7	Nos.		
<b>3</b>	<b>6 AMP. POINTS ON SAME BOARD :</b>				
	S/I/T/C of 1 No 6 A Multi Socket with 1No. 6 A switch ( Modular type ) with cover plate , sheet steel box / PVC modular box etc on surface / concealed manner I/c electrical connections and making good all the damages, painting, cleaning the site etc complete as required as per site	7	Nos.		
<b>4</b>	<b>16 AMP. POWER POINTS:</b>				

	S/I/T/C of 1 No 16 A switch & 1 No. six pin 6/16 Amp. Multi Socket ( Modular Type ) with cover plate , sheet steel box etc on surface / concealed manner I/c electrical wiring with 2 X 2.5 sqmm + 1 X 1.5 sqmm PVC insulated copper conductor single core multi stranded wire in 16 swg stove enameled rigid steel conduit with conduit accessories like bend, junction box etc on surface / recessed manner etc ( Wiring from D.B. / Source to Board/destination ) and making good all the damages, painting, cleaning the site etc complete as required as per site requirement	5	Nos.		
<b>5</b>	<b>AC POINTS :</b>				
	S/I/T/C of the surface / recess mounting distribution board with 20 A plug and socket, with 20 A SP MCB Incl. wiring with 2 X 4.0 sq mm + 1 X 2.5 sqmm PVC insulated copper conductor single core multi stranded wire in 16 swg stove enameled rigid steel conduit with conduit accessories like bend, junction box etc on surface / recessed manner etc ( Wiring from D.B. / Source to Board/destination ) and making good all the damages, painting, cleaning the site etc complete as required as per site requirement and as directed	3	Nos.		
	<b>PANELS AND D.B.'s</b>				
	incl. all connection ,earthing, making good all the damages, painting, cleaning the site, etc complete as per site requirement and as directed.				
<b>1</b>	<b>MAIN PANEL :</b>				
	S/I/T/C of totally enclosed compartmentalized dust and vermin proof cubical segregated and modular in construction M.V. panel board wall mounted fabricated with 14swg and 16swg of CRCA M.S. sheet duly painted with two coat of metal red oxide and two coat of fire resistance paint at inside and out side of the panel, bus-bar chamber ,outgoing switchgear etc (all feeder unit Would be compartmentalized), color coded PVC sleeved vertical / horizontal busbar of required size of length, ( bus-bar distances shall be minimum 32 mm ) insulators, hardware, neoprene gasket , hinged door, interconnecting single core multi strand lugged copper wire having current density of 2A / sqmm of suitable capacity & size with lugs from busbar to switchgears / mccb / mcb or where ever required, two earthing terminal busbar of size 25 x 5 mm with nut & bolts at out side of the panel , rating and name plates for all incoming & outgoings , two eye two nos eye bolts,wire mesh jali for ventilation etc comprising with the followings				
	<b>NOTE:-</b>				
	Sheet 16 swg : panel sides,upper,lower,and Ft.doors				
	Sheet 16 swg : back side and compartments.				
	Glande plates : 3 mm thick.				
	Cable entry : Provision at bottom and upper sides.				
	Inside the panel : white colour paint.				
	Outside the panel : Grey colour paint.or as directed.				
	<b>INCOMER</b>				
	1 Nos 110 Amp MCB, 25 KA- 4 Pole				
	1 Nos – 100 A TPN insulated Copper Bus Bar				
	1 Nos-100 Amp Onload Manual change over switch				
	Set of Indicator Lamps				
	Set of Voltmeter + Ammeter+ Selector Switch				
	<b>OUTGOINGS</b>				
	4 Nos- 63, Amp TPMCB				
	<b>SET AS ABOVE</b>	1	Nos		

<b>2</b>	<b>MASTER MCCB -125 Amp</b>	1	Nos		
	125A MCCB with double door enclosure for turn off all the electrical supply excluding UPS supply while Branch shut down.				
<b>3</b>	<b><u>LIGHT DISTRIBUTION BOARD (Branch &amp; ATM)</u></b>				
	S/I/T/C of the surface / recess mounting following way MCB three phase distribution board for single phase outgoing with IP 42 protection , direct on wall incl. the followings accessories				
	<b>INCOMER</b>				
	1 No. TPMCB 40 Amp				
	<b>OUTGOINGS</b>				
	05-06 Nos SPMCB 6-10 Amp				
	<b>SET AS ABOVE</b>	2	Nos		
<b>4</b>	<b><u>AC DISTRIBUTION BOARD</u></b>				
	S/I/T/C of the surface / recess mounting following way MCB three phase distribution board for single phase outgoing with IP 42 protection , direct on wall incl. the followings accessories				
	<b>INCOMER</b>				
	1 No. TPMCB 40 Amp				
	<b>OUTGOINGS</b>				
	3 Nos SPMCB 25 Amp				
	<b>SET AS ABOVE</b>	2	Nos		
	<b><u>UPS WIRING</u></b>				
<b>1</b>	<b><u>U.P.S. DISTRIBUTION BOARD (INCOMER)</u></b>				
	S/I/T/C of the surface / recess mounting following way Double door MCB D.B.- Single phase distribution board ( Consumer unit ) for single phase out going with IP 42 protection incl. the followings accessories – incl. Electrical connection ,earthing, making good all the damages, painting, cleaning the site, etc complete as per site requirement and as directed.				
	<b>INCOMER</b>				
	1 NOS 40 A TPNMCB				
	<b>OUTGOINGS</b>				
	2 Nos- 40 Amp SPN				
	<b>SET AS ABOVE</b>	2	Nos		
	<b><u>UPS DIST. BOARD OUTGOINGS.</u></b>				
	1 NOS 12 WAY SPN DIST BOARD				
	1 Nos- 40 Amp SPN				
	05-06 NOS 6 AMP SPMCB				
	<b>SET AS ABOVE</b>	2	Nos		
<b>3</b>	<b><u>SPECIAL POINTS: ( UPS) any length</u></b>				
	S/I/T/C of following Modular type switch socket with cover plate , sheet steel box etc on surface / concealed manner I/c electrical wiring with 2 X 2.5 sq mm + 1 X 1.5 sq mm PVC insulated copper conductor single core multi stranded wire in rigid 16 swg stove enameled rigid steel conduit with conduit accessories like bend, junction box etc on surface / recessed manner etc ( Wiring from D.B. / Source to Board/destination ) and making good all the damages, painting, cleaning the site etc complete as required as per site requirement and as directed				
	3 Nos. 6 A Switch + 3 Nos. 6 A, 5 pin Socket.	5	Nos.		
<b>3</b>	<b><u>EARTHING</u></b>				
	<b><u>CHEMICAL EARTHING</u></b>	2	Each		

	Preparation of the Earth station : ( as per I.S. 3043 )				
	S/I/T/C COPPER EARTHING ELECTRODE of size 3mts length				
	S/F of conductive back fill compound 25 kg for 2 mtr. / 50 kg for 3 mtr.				
	S/F in copper electrode model no n 80 (length 2000/3000,				
	inner pipe 42.4mm x 2.6mm, outer pipe 76.3mm x 3.2mm				
	Supply and laying of 6.0 sqmm PVC insulated copper wire from earth station to main panel board in 16 G MS conduit including all materials,	6	Mtrs.		
	<b><u>CABLING :</u></b>				
<b>1</b>	<b><u>L.T.CABLES :</u></b>				
	S/I/T/C of the following 1100 volt grade pvc insulated Al / Cu. Conductor armored cable inner and outer sheathed , along with the two run of G.I.earth wire i/c termination with brass gland and Al. lugs etc.				
	<b><u>On surface :</u></b>				
	Cable on wall/column/beam/ceiling/above false ceiling/existing trench etc incl. s/f of saddles/spacers (wherever required as per site conditions) and two run of G.I. earth wire along with the cable. Making				
	4 C x 10.0 sqmm armored copper cable with 10 SWG 2 Nos G.I. wire for	25	Mtrs.		
	<b><u>TELEPHONE WIRING / CABLING SYSTEM.</u></b>				
	<b><u>TELEPHONE POINT :</u></b>				
<b>1</b>	S/I/T/C of the telephone point with the followings -				
	Double outlet with shutter modular type Telephone Outlets ( RJ – 11 ) with suitable size M.S./ PVC modular boxes complete as required .	1	Nos.		
	Single outlet with shutter modular type Telephone Outlets ( RJ – 11 ) with suitable size M.S./ PVC modular boxes complete as required .	4	Nos.		
	<b><u>TOTAL FOR ELECTRICAL WORKS</u></b>				
	<b><u>COMPUTER CABLING SYSTEM</u></b>				
	<b><u>COMPUTER POINT : I / O's :</u></b>				
<b>1</b>	S/I/T/C of the Computer point with the following	5	Nos.		
	Four pair STP CAT 6 LAN Cable tinned copper conductor, PVC insulaed and sheathed, fire retarding, anti termite, color coded twisted pairs and rip cord				
	HMS PVC Pipe on beam/column/wall/floor etc with all necessary materials i/c connections, identification by numbering etc complete as required as per AT & T specification				
	Single outlet with shutter modular type I/O's outlets (RJ-45) with suitable size MS/PVC modular boxes as required make D-LINK				
<b>2</b>	S/I/T/C of patch cords STP-CAT 6 complete with connectors and boots on both side - 2mtr length D-LINK	6	Nos.		
<b>3</b>	S/I/T/C of four pair STP-CAT 6 LAN Cable i/c cost of 25mm dia 1.5mm thick PVC conduit/Floor trunking make D-LINK complete with connectors and boots on both side - 2mtr length D-LINK	100	Mtrs		
<b>4</b>	Testing of STP cabling with scanner for all the nodes	1	Nos.		
	<b><u>TOTAL FOR COMPUTER NETWORKING</u></b>				
	<b><u>ELECTRICAL FITTINGS</u></b>				
	S/I/T & C of Recess mounted decorative luminaire with square parabolic metalised louvre in metallic frame, held securely to the main body by four toggles, epoxy white powder coated CRCA sheet steel housing ,				

	electrochemical brightened, polished and anodized aluminium mirror reflector, Prewired with vacuum pressure impregnated copper ballast , push fit pin holders and mains connector, PL lamp, starter, P.F.				
<b>1</b>	<b><u>2 X 2 LED</u></b>				
	36 W recess mounted LED flat panel HAVELS ,SYSKA,PHILIPS or C.G.	8	Nos.		
<b>2</b>	<b><u>15 W Down lighter</u></b>				
	15 W recess mounted LED flat panel HAVELS ,SYSKA,PHILIPS or C.G.	12	Nos.		
<b>3</b>	<b><u>1 X 28 (T-5)</u></b>				
	1X28 W T-5 Batten fitting i/c electronic choke HAVELS ,SYSKA,PHILIPS or C.G.	4	Nos.		
<b>4</b>	<b><u>CEILING FAN DOUBLE BALL BEARING</u></b>	2	Nos.		
	Ceiling fan (Brilliant white) 1400 mm sweep. CG/Havells/Bajaj				
<b>5</b>	<b><u>EXHAUST FAN</u></b>	2	Nos		
	Single phase Exhaust Fan continuously rated, capacitor start and run type, totally enclosed and ruggedly built, per-lubricated double ball bearing, copper wound, A & E class insulation, dynamically balanced, below 40 db sound level etc. a) 300mm sweep, 900 r.p.m. exhaust fan.				
<b>6</b>	<b><u>WALL BRACKET FAN</u></b>	5	Nos.		
	Wall bracket fan white (400mm blade size) Havels/CG/Bajaj				
	<b>TOTAL FOR ELECTRICAL FIXTURES</b>				

