

Subject	Electrical Instalation work for State Bank of India Branch Office at Kumarhatti, Distt. Solan (H.P.). Branch Code – 13705.				
	BOQ				
	ITEM DETAILS	QTY.	UNIT	RATE	AMOUNT
	PART- A :				
	PART- I : PANELS , KIT KATS & CABLES				
1	Providing and fixing of 03 no 100 Amps KITKAT with 1 no neutral link on suitable size of Bakelite sheet of thickness not less than 12 mm complete as required.	1.00	job		
2	MAIN PANEL : Supply at site installation testing and commissioning of panel fabricated with 16 G MS sheet. The panel shall be free standing type totally enclosed dust and vermin proof construction with rubber gaskets. The floor mounting panel shall have ISMC mounting channels, GI earth busbar, busbar chamber ,cable alleys interconnection with solid bar/PVC insulated copper conductor as per requirement, and suitable supports of busbars. The panel shall be painted with two coats of enamel paint (Grey shade) over primer and shall also be provided with designation of Incoming and outgoing feeder as details below:				
	INCOMING				
	1 no MCCB Breaking Capacity 25 KA 125 Amp 4P , DN Series, L&T make				
	1 no 0 -500V digital Voltmeter in separate compartment and digital Amp meter and one set of CTs (3 Nos) with CT Ratio 150 / 5 A with LED type phase Indication Lamps with protection fuses in a separate compartment				
	160 Amps capacity 4 strips Aluminium bus bars.				
	OUTGOING				
	6 nos MCCB Breaking Capacity 25 KA 63 Amp 3P, DN Series with seprate neutral Link, L&T make.	1.00	set		
3	Supply, Installation, testing & commissioning of PVC insulated PVC sheathed armoured cable of 1100 V (IS ;1554 Part 1) and fixing of cable on wall with suitable size of clamps /saddles or laid in floor/recess wall including cutting of wall /floor and making good the damages etc complete as required of following sizes (ISI marked). (Make: Havells/ RR Kable / KEI/Finolex) to be laid as per drg.				
a)	3.5X25 sq. mm aluminum conductors armoured cable with two Nos. 8 SWG GI wire	30.00	mtr.		
b)	4 X16 sq. mm aluminum conductors armoured cable with one Nos. 8 SWG GI wire. (AC DB & Power DB)	20.00	mtr.		
c)	4 X10 sq. mm aluminum conductors armoured cable with one Nos. 8 SWG GI wire. (Light DB & UPS DB)	35.00	mtr.		
d)	3X6 sq. mm copper conductors armored cable with one Nos. 8 SWG GI wire (For UPS Supply only)	40.00	mtr.		
e)	3X2.5 sq. mm copper conductors armored cable (AC DB to Metal clad in ECP)	20.00	mtr.		

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4	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium/Copper conductor cable of 1.1 kV grade as required.				
a)	3.5X 25 sq.mm aluminum conductor	6.00	no.		
b)	4 X16 / 4 X10 sq. mm aluminum conductor	8.00	no.		
c)	3X6 sq. mm Copper cable gland.	4.00	no.		
d)	3X2.5 sq. mm Copper cable gland.	10.00	no.		
5	Supplying & fixing the 1 no.4 pole 160 Amps capacity change over switch and complete connection with Electrical Panels as required. Make: Havells/HPL/Standard/ Legrand/L&T	1.00	no.		
6	UPS DISTRIBUTION BOARD				
	supply, installation, testing and commissioning of factory fabricated distribution board rust inhibited, powder coated sheet fabricated comprising of incoming and outgoing isolator and MCB's neutral link or neutral bus, top and bottom detachable entry earthing bolts interconnection and grouting bolts etc complete as reqd. Make: Havells/HPL/Standard/ Legrand/L&T. as per details below :-				
a	4 way DB comprising of 2 no. 63 amp DPMCB (UPS out put).	2.00	each		
b	4 way DB comprising of 1 no. 63 amp TPN MCB (UPS input).	1.00	each		
7	Supply, installation, testing and commissioning of following capacity 3 pin metal clad industrial type plug and socket arrangement with plug top, cap and chain controlled by under noted capacity: (Make: Havells/HPL/Standard/Legrand/L&T)				
a)	30 Amp with 32 Amp. With SP MCB. (for ups panel)	3.00	no.		
b)	20 Amp with 20 Amp. with SP MCB. (for ups panel)	4.00	no.		
8	Providing and fixing 16 S.W.G. MS sheet adapter box, and also base frame for installation of MCB DBs plug and socket arrangement and to cover cables in system room including painting etc. complete	3.00	sq. mtr.		
9	Providing and laying following sizes of PVC insulated copper conductor cable of 1100 V in flexible/ PVC conduit pipe with accessories such as glands bends etc (as per requirement) including making necessary interconnection etc complete as required.				
a	2 X 6 Sq mm with 1 no suitable insulated 2.5 sq mm multi stranded copper wire in PVC flexible pipe. (Make: Havells/ RR Kable / KEI/Finolex).	20.00	mtr.		
	PART-II : COMPUTER POINTS & DISTRIBUTION				

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10 / i	UPS POINT - Supply all material, storing, handling, fixing of computer points computer points in suitable size of GI/PVC box including providing 3 nos 5 amps 3 pin modular sockets to be provided under table top and controlled by 1 no 15 A moduler type switch and indicator with moduler cover plate etc complete as required including 3X2.5 sq. mm copper armored cable. Note: Maximum two computer points are to be provided on one circuit. (Switches : Make: Anchor/Crabtree/North-West/MK. (BM, SWO counter, O.T. table - 2 each, N. Rack & LED - 1 each).	17.00	each		
ii	UPS POINT - As per item above but with 2 Nos. 15 A 5 pin socket controlled by 1 no 15 A switch and indicator. (for E - corner - 2Nos, BM - 1Nos. etc.).	4.00	each		

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11	Supply, installation, testing and commissioning of factory fabricated distribution board rust inhibited powder coated sheet fabricated comprising of incoming and outgoing isolator & MCBs neutral link or neutral bus, top and bottom detachable entry earthing bolts interconnection and grouting bolts etc complete as required as per details below. Make: Havells/HPL/Standard/ Legrand/L&T.				
a)	12 way SPN MCBDB Double Door comprising of 1 No 63 Amp DP Isolator and 10 No SPMCB 10/16 Amp. (UPS output)	1.00	no.		
b)	6 way SPN MCBDB Double Door comprising of 1 No 40 Amp DP Isolator and 4 No SPMCB 10/16 Amp. (UPS output)	1.00	No		
c)	4 Way TP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 100 A FP TPN and 6 Nos.32 A DPMCBS etc complete as required. (for Air conditioning only).	1.00	no.		
d)	4 WayTP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising with 30mA ELCB and 12 Nos. 6/10 Amp SPMCBS etc complete as required. (for Light, Fan point only)	1.00	no.		
e)	4 WayTP MCBDB Double Door in recessed wall including cutting of wall and making good the damages comprising 1 no 100 A FP MCB and 12 Nos. 20/25 Amp SPMCBS etc complete as required. (for Raw Power Only)	1.00	no.		
12	<u>RAW POWER:</u> Supply all material, storing, handling, fixing of Raw power points in suitable size of GI/PVC box including providing 1 nos 15 amps 6 pin modular power sockets to be provided controlled by 1 no 15 A moduler type switch and indicator with moduler cover plate etc complete as required including 2X2.5 sq. mm FRLS copper wire + 1 x 2.5 earth wire in dia 2 mm in thickness ISI Mark PVC pipe. Note: One RAW power points are to be provided on one circuit and dirctly to be connected on Power DB. (Switches : Make: Anchor/Crabtree/North-West/MK	10.00	each		
13	Supply, installation, testing and commissioning of following capacity 3 pin metal clad industrial type plug and socket arrangement with plug top, cap and chain controlled by under noted capacity: (Make: Havells/HPL/Standard/Legrand/L&T)				
a)	20 Amp with 20 Amp. C Curve SP MCB. (Ac - 7Nos as required only metal clad for 1.0Tr /1.5 Tr High wall split AC's and seprate connection of record room / doc. room /safe room/ lockers room etc.- 3 nos. (including wiring for record room / doc. room /safe room/ lockers room / required connection with 2 x 1.5 mm + 1x 1.5 mm from nearest switch board).	10.00	no.		

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14	Providing and fixing of suitable size MS box fabricated with 16 G MS sheet either in recess wall or on surface to accommodate dedicated earth from earth electrode and further distribution of earth to computer points including providing of 5 mm bakelite on base connector strip and painting of box etc as required.	1.00	job		
15	Basic electrical Wiring of light points, plug points				
	Wiring for light point/ ceiling fan point/ exhaust fan point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit ISI Mark, with 6Amp modular switch, modular plate, suitable GI junction & switch boxes & clip and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.(Wires Make: Havells/ RR Kable / KEI/Finolex) (Switches : Make: Anchor/Crabtree/North-West/MK)				
	(Rate includes 3 x 2.5 sq.mm FRLS copper conductor, single core cable in PVC conduit for circuit/sub main wiring along with earth wire)				
a)	single 6 Amp Switch controlling 1 light point for T-5, Cove light, exhaust Fans, Ceiling fan and other seprate room supply only.	30.00	no.		
b)	single 6 Amp Switch controlling 4 no. downlights / 4 no. LED downlight / 2 no. 2'- 0"x 2'-0" 36 watt light fittings.	20.00	no.		
c)	single 6Amp socket controlling by 5Amp Modular switch in switch boards with switch & socket in separate switch board etc complete as required.	8.00	no.		
d)	One switch controlled by one socket (independent for wall fan etc.)	7.00	no.		
	Note: Lihgts/fans points to be calculated by numbers of lights and no extra cost shall be paid for dummy switch.)				
	PART III - EARTHING				
16	(a) supply and fix copper plate earth station with 600x600x3 mm thick copper plate including all accessories such as watering pipe and funnel and providing masonary enclosure at top with cover plate i/c excavation of pit, supplying and filling of salt charcoal, refilling of pit etc. complete as required as per IS 3043 1987. the voltage between netural & earth must be below 1 volt.	1.00	set		
	(b) supply and fix G.I. plate earth station with 600x600x6 mm thick G.I. plate including all accessories such as watering pipe and funnel and providing masonary enclosure at top with cover plate i/c excavation of pit, supplying and filling of salt charcoal, refilling of pit etc. complete as required as per IS 3043 1987. the voltage between netural & earth must be below 1 volt.	2.00	set		
	NOTE - The chambers for both type of earthingsshall be available at site. The vendor required to provide pitchers of earthing taken at the time of execution of the same along with as required.				
17	(a) supplying, fixing, laying & termination of 20x3 mm copper with earth station below ground level etc. complete as required.	3.00	mtr		

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	(b) supplying, fixing & termination of 32x6 mm G.I. strip with earth station below ground level etc complete as required.	6.00	mtr		
18	(a) providing and fixing 8 S.W.G. copper earth wire on surface or in recess for loop earthing etc. as reqd.	30.00	mtr		
	(b) providing and fixing 8 S.W.G. G.I. earth wire on surface or in recess for loop earthing etc. as reqd.	40.00	mtr		
19	Supply & laying 2mm thick 25 mm dia ISI mark PVC conduit pipe complete with accessories such as bends, junction boxes etc under floor or in recessed walls from copper earth electrode to UPS room for computer dedicated earthing, from GI earth electrode to main panel & UPS panel etc. wherever reqd. Note: flexible pipe not to be used any where.	50.00	mtr		
	PART IV - TELEPHONE & DATA CABLE				
20	Wiring for telephone points with 0.6 mm dia 2 pair insulated annealed tinned electrolatic copper conductor in 2 mm thick 25 mm dia ISI marked PVC conduit complete with accessories such as bends, junction boxes etc. with suitable size of G.I./PVC box modular plate and cover in front on surface or in recess including providing and fixing modular type telephone socket outlet and making necessary connections etc. complete as reqd. (Make: Dglink/KEI/Finolex)	6.00	no.		
21	Supply, installation and testing & commissioning of Tag Block 20 pair for telephone connections Make: krone	1.00	no.		
22	Providing , Laying, testing & commisioning of 10 pair telephone cable from outside govt. / bsnl DB to Rack for lease line, ISDN of Make: Delton, finolex, polycab.	20.00	mtr.		
23	Data cabling work for computer networking starting from mounting rack at system room with UTP CAT-6e LAN Data cable in 2mm thick 25 mm dia ISI mark PVC conduit with accessories such as bends, Tees, junction boxes including providing and fixing cat-6 I/O plates and SMB complete with all networking accessories etc complete as reqd. (Make: D-Link/MOLEX/AMP/COMMSCOPE). Note: Only One Data Points to be provided in One Table/Counter. Extra poitns not to be paid if provided. Maximum 6 no. data cable must be run in one pvc pipe. (Extra Data points not to be provided as per bank's guidlines)	20.00	no.		
24	supply, installation, testing and commissioning of 24-port Patch Panel	1.00	no.		
25	Supply and installation, testing and commissioning of mounted rack 15" hight made of powder coated MS sheet	1.00	no.		
26	supply, installation, testing and commissioning of factory manufactured CAT- 6e patch chord complete with 2 no. connectors etc. complete as reqd.				
a)	1 mtr. long	20.00	no.		
b)	2 mtr. long	10.00	no.		

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	PART-V : AIR CONDITIONING REFRIGERATION/DRAIN WORKS				
27	Supplying & Laying of following COPPER REFRIGERANT PIPING Thickness 22 SWG For Air Conditioners units complete with fittings Suction / Discharge line insulated with 12 mm SUPERLON / ARMAFLEX suction line. Multi-runs between Indoor & Outdoor units shall be considered as ONE length for the purpose of measurement. (Make: Total Line/Armacell)				
a)	1/4" + 1/2" Refrigerant Copper piping - For Hiwall Split AC's (1.0Tr / 1.5Tr) to be provided as per drg. (for ATM)	70.00	mtr.		
28	Supplying & laying recessed in wall Rigid ISI Mark PVC drain pipe of size 25 mm dia complete with fittings, U traps etc. & as specified to the nearest toilet / drain point under floor or in recessed walls for AC drains including cutting of walls, bends & Tees. making good the damages etc. wherever required. (Make: Diplast/Supreme)	30.00	mtr		
29	Supplying and providing Eletrical flexible FRLS Copper cable of 3 x 2.5sq.mm multi strand suitable for 1.0Tr / 1.5 Tr H.W Split / 2.00 Tr Cassette Multi-runs between Indoor & Outdoor units and between Metal Clads to Out door (for all AC) for electrical supply etc complete as required (Make: Havells/ RR Kable / KEI/Finolex)	150.00	mtr		
	PART- B :				
	PART-VI : LIGHTS & FANS FIXTURES				
30	SITC of 2"x2" Celing grid 33-36 watt LED panel fixtures with essential driver in false ceiling including making necessary arrangement for mounting the fixtures and connection with 2 x 1.5 sq.mm insulated copper cable from adjacent point (roof etc.) in PVC flexible pipe etc Complete as reqd. Cat. No. BZRSQ 43L LED GF of Bajaj or equivalent of Philips / Wipro. 120 Lumens per Watt. Color temperature 6000K.	16.00	no.		
31	SITC of 15 watt LED fixtures /dowlighters with essential driver in false ceiling including making necessary arrangement for mounting the fixtures and connection with 2 x 1.5 sq.mm insulated copper cable from adjacent point (roof etc) in PVC flexible pipe etc complete as reqd. Make Phillips cat no. DN - 192 - 1000 or equivalent of Wipro / Crompton / Bajaj.	32.00	no.		
32	SITC of 18 watt of T5 LED fixtures directly on ceiling / wall including making necessary connections with 2x1.5 sq.mm insulated copper cable conductor wire etc. complete as reqd Make; Phillips / Wipro / Bajaj.	10.00	no.		
33	Supply of 450 mm sweep full metal Body and metal Blades Crompton greaves (or equivalent) SDX BLCK GOLD wall fan etc. 1325 rpm Mode complete as required. (M/s equivalent of Orient / Bajaj / Havells / Usha)	5.00	no.		
34	SITC of 1200 mm CEILING fans complete as reqd. (M/s Crompton High Breeze or equivalent of USHA / Bajaj).	3.00	no.		

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35	SITC of 200 mm exhaust fans (only metal body) complete with self opening louvers / shutters including necessary frame etc, complete as reqd. (M/s Crompton High Breeze or equivalent of USHA / Bajaj)	3.00	no.		
36	LED Strip light (4.5/5 watt) of wharm white shade for cove (M/s Phillips /Wipro / Bajaj / Crompton / Havles / Osram Complete in all respects with suitable drivers.	80.00	MTR.		
37	SITC of 30 watt Street light /Flood light for lighting the front side of the branch(M/s Crompton Cat No. LSTS-30-CDL or equivalent of Philips/Wipro .	2	no.		
38	SITC of Automatic Programmable Time Switch 24 Hour for Glow sign board and ATM AC's (Make: L&T or equivelent to Legrand/Havells/Seimens)	1	no.		
	TOTAL OF PART : I +II+III+IV+V (A)				
	TOTAL OF PART : VI (B)				
	TOTAL AMOUNT (A+B)				
	GST extra as per applicable				
	Note: the vendor have to provide LAN diagram after completion of the work along with the bill, without it payment will not be made.				