

**OFFICE OF THE SUPERINTENDING ENGINEER, PWD, BUILDING CONSTRUCTION & MAINTENANCE CIRCLE, TIRUNELVELI.**

**Name of work: “Providing Internal and External Electrification, Inverter arrangements to the Newly Constructed Prefabricated Workshop and Laboratory in Government I.T.I at Konam in Kanniyakumari District.**

SI No	Qty	Description of work	Rate	Per	Amount
1	107 Pts (One Hundred Seven Points Only)	Wiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V grade in suitable heavy guage MS Conduit pipe on wall and ceiling with MS accessories in flush with wall with white cover plate frame with metal flush box and 6A one way Modular switch (Legrand ) with painting of suitable colour with continuous earth wire connection of 14SWG TC wire for open light point / fan point. (For Electronic regulator) (4 Points Per Coil) ( modular switches and plates are crabtree/ legrand).		Pts	
2	78 Pts (Seventy Eight Points only)	Wiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V grade in suitable heavy guage MS Conduit pipe on wall and ceiling with MS accessories in flush with wall with white cover plate frame with metal flush box and 6A one way Modular switch (Legrand ) with painting of suitable colour with continuous earth wire connection of 14SWG TC wire for open light point / fan point. (For electronic regulator) (5 Points Per Coil) ( modular switches and plates are crabtree/ legrand).		Pts	

3	14 Pts (Fourteen Points only)	Wiring with 2x1.5 sqmm (22/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V grade in suitable heavy guage MS Conduit pipe on wall and ceiling with MS accessories in flush with wall with white cover plate frame with metal flush box and 6A one way Modular switch (Legrand ) with painting of suitable colour with continuous earth wire connection of 14SWG TC wire for open light point / fan point. (6Pts/Coil) (for rooms like bath & toilet & pumproom ). ( modular switches and plates are crabtree/ legrand).		Pts	
4	7 Pts (Seven Points only)	Wiring with 2 x 1.5 sq.mm PVC insulated SC unsheathed copper conductor of 1100V grade in suitable PVC rigid pipe concealed in wall and ceiling with PVC accessories and with MS moduler box with 6A one way module switch and 6A 3 pin module socket covered with module front plate inflush with wall with continuous earth wire connection of 14 SWG TC wire and making good of the concealed portion with suitable colour for concealed PVC plug point ( modular switches and plates are crabtree/ legrand)		Pts	
5	14 Nos (Fourteen Numbers only)	Supply and fixing of single box type 4'20W LED tube fitting (Philips / Crompton / Wipro) with LED tube complete with TW round blocks on wall or ceiling with PVC unsheathed Copper leads from terminals to the fitting		Ea	

6	42 Nos (Forty Two Numbers only)	Supply and fixing of Twin box Industrial type 4' 18W LED fitting complete with 2 Nos 18 W LED tube light with double side connection Louvers arrangements (Havells / Eq) with 2.0 mtr conduit pipe suspension, with PVC unsheathed Copper leads from terminals to the fitting.		Ea	
7	12 Nos (Twelve Numbers only)	Supply and fixing of 22 W Square type recessed LED fitting (Higher End Philips / Havells / Eq) complete with electronic ballast including fixing charges.		Ea	
8	38 Nos (Thirty Eight Numbers Only)	Supply and fixing of 36W LED 4000K 2' x 2' Square type recessed LED fitting (Higher End Philips / Havells / Eq) complete with electronic ballast including fixing charges.		Ea	
9	6 Nos (Six Numbers Only)	Supply and fixing of 120 W LED Highbay LED fitting (Crompton make Model No: LHB11-120-CDL/60-M) IP66 with suitable special type of MS clamps with PVC unsheathed copper leads from terminals to the fittings. (Havells/Philips)		Ea	
10	10 Nos (Ten Numbers Only)	Supply and fixing of WT bulk head fitting with guard (Philips / Bajaj / Crompton / K.Lite) suitable for 9 W LED bulb.		Ea	
11	28 Nos (Twenty Eight Numbers Only)	Supply and fixing of 1200 mm (42") AC ceiling fan (Crompton/havells/orient/Eq ) complete with Fan step regulator 2 Module 100W of Crabtree/ Legrand /Eq. with 2.0 Mtr down rod with suitable fan clamp.		Ea	

12	39 Nos (Thirty Nine Numbers Only)	Supply and fixing of 450 mm Wall Mounted fan (orient make) including labour charges for fixing.		Ea	
13	4 Nos (Four Numbers Only)	Supply and fixing of 300 mm (12") sweep (light duty) AC exhaust fan complete without provision of hole in the wall .		Ea	
14	4 Nos (Four Numbers Only)	Supply and fixing of louvers shutters arrangements for 300 mm (12") sweep light duty AC Exhaust fan		Ea	
15	6 Nos (Six Numbers Only)	Supply and fixing of 450 mm (18") sweep (Heavy duty) AC exhaust fan complete with provision of hole in the wall .		Ea	
16	6 Nos (Six Numbers Only)	Supply and fixing of light trap arrangements for 450 mm (18") sweep exhaust fan		Ea	
17	7 Nos (Seven Numbers Only)	Supply and fixing of 65 mm (2 1/2") GI pipe (Class 'B') of 6 mt. Length with 300mm x 300mm x 6mm MS base plate, duly welded at the bottom with concreting with construction of Masonry pedestal with suitable PVC control box with 1No 6A SP MCB (Legrand make ) on suitable angle iron frame work, with door and with lock and key arrangements and with supply and fixing of 2 Nos 48W LED Street light Luminaire fitting (Higher End Philips / Havells /Eq) with 1 metre of 25mm dia GI pipe (Class 'B') complete, with necessary clamps, on the above post with PVC unsheathed copper leads with painting of suitable colour.		Ea	

18	13 Nos ( Thirteen Numbers only)	Supply and fixing of 30 W LED Street light fitting ( Havells/ Philips / equal) with 25mm dia GI pipe (Class 'B') with 25mm GI Bend complete on the existing post /wall with PVC unsheathed copper leads MS clarnps and aluminium painting.		Ea	
19	1 No ( One Number only)	Supply and Fixing of 12" Gong bell suitable for 230 Volts 50 c/s single phase AC supply on suitable TW Board with push switch.		Ea	
20	1 No ( One Number only)	Supply and fixing of Modular type 6A/16A 3 pin combined flush type wall socket with 16A flush type switch on suitable MS box covered with white cover frame in flush with wall with earth connection.. ( In Toilet )		Ea	
21	125 Nos ( One Hundred Twenty Five Numbers only)	Supply and fixing of Modular type 2Nos 6A/16A (3 pin & 2 pin) combined flush type wall socket with control switches concealed in suitable MS box covered with white cover frame in flush with wall with earth connection.(For computer plug socket) ( Classrooms & workshop )		Ea	
22	12 Nos ( Twelve Numbers Only)	Supply and fixing of 20A DP Plug and Socket in sheet enclosure with 32A DP MCB in flush with wall with earth connection only. ( AC plug)		Ea	
23	6 Nos (Six Numbers Only)	Supply and fixing of 32 Amps DP MCB with Sheet steel enclosure ( Legrand make) in flush with wall and making good of the concealed portion with earth connection.(DP MCB & Enclosure should be of Legrand / L&T make)		Ea	

24	1 No ( One Number only)	Supply and fixing of 32A FP MCB in sheet steel enclosure ( Legrand make) in flush with wall and making good of the concealed portion with earth connection. (The FP MCB and metal enclosure should be with Legrand / Hager make) ( Street ) light )		Ea	
25	10 Nos (Ten Numbers only)	Supply and fixing of 32A, FP (3P+N+E ) P 17 Tempera Plug and Socket DB with 32A FP MCB with suitable cable entry box and internal connections on suitable angle iron frame work with earth connection only. (The FP Tempera Plug and Socket DB and FP MCB should be (Legrand (MDS) / Hager(L & T) make.		Ea	
26	2 Nos (Two Numbers only)	Supply and fixing of 40A DP MCB in sheet steel enclosure ( Legrand make) in flush with wall and making good of the concealed portion with earth connection. (The DP MCB and metal enclosure should be with Legrand / Hager make). ( For Inverter output		Ea	
27	2 Nos (Two Numbers only)	Supply and fixing of 63A FP MCB in sheet steel enclosure ( Legrand make) in flush with wall and making good of the concealed portion with earth connection. (The DP MCB and metal enclosure should be with Legrand / Hager make). ( For Inverter input )		Ea	

28	1 No ( One Number only)	Supply and fixing of 63A, FP (3P+N+E ) P 17 Tempera Plug and Socket DB with 63A FP MCB with suitable cable entry box and internal connections on suitable angle iron frame work with earth connection only. (The FP Tempera Plug and Socket DB and FP MCB should be (Legrand (MDS) / Hager(L & T) make.(		Ea	
29	5 Nos (Five Numbers only)	Supply and fixing of 8way SPN MCB Distribution board with sheet steel enclosure with IP 42 protection with 1No 32 Amps DP MCB Isolator as incoming and 6 Nos 6 Amps to 32 Amps SPMCB as outgoing in flush with wall and making good of the concealed portion with earth connection. The MCB DB and MCB's should be of Legrand / L & T make. ( Lighting & Plug set )		Ea	
30	6 Nos ( Six Numbers only)	Supply and fixing of Horizontal type 4 way triple pole neutral MCB distribution board with sheet steel enclosure with IP 42 protection with 40A 4 pole MCB Isolator as incoming and 12 Nos 32 A SP MCB as outgoing in flush with wall and making good of the concealed portion with earth connection. The MCBDB and MCB's should be of Legrand /L & T make.( Plug set DB & Lighting )		Ea	

31	1 No ( One Number only)	Supply and fixing of Horizontal type 4 way triple pole neutral MCB distribution board with sheet steel enclosure with IP 42 protection with 63 A 4 pole MCB Isolator as incoming and 12 Nos 32 A SP MCB as outgoing in flush with wall and making good of the concealed portion with earth connection. The MCB DB and MCB's should be of Legrand /L & T make.		Ea	
32	2 Nos (Two Numbers only)	Supply and fixing of Horizontal type 6way triple pole neutral MCB distribution board with sheet steel enclosure with IP 42 protection with 40A 4 pole MCB Isolator as incoming and 18 Nos 32 A SP MCB as outgoing in flush with wall and making good of the concealed portion with earth connection. The MCBDB and MCB's should be of Legrand /L & T make. ( Work shop & Machine plug set )		Ea	
33	1 No ( One Number only)	Supply and fixing of Vertical type 4 way VTPN MCB DB with metal door cover with IP 42 protection with 40 A 4 pole MCB Isolator as incoming and 4 Nos 32A TP MCB as outgoing in flush with wall and making good of the concealed portion with earth connection. The MCBDB and MCB's should be of Legrand /L & T make. ( Machine 8 Room )		Ea	



34	1 No ( One Number only)	Supply and fixing of Vertical type 8 way VTPN MCB DB with metal door cover with IP 42 protection with 100 A 4 pole MCB Isolator as incoming and 8 Nos 32A TP MCB as outgoing in flush with wall and making good of the concealed portion with earth connection. The MCBDB and MCB's should be of Legrand /L & T make. ( Workshop )		Ea	
35	1 No ( One Number only)	Supply and fixing of Vertical type 8 way VTPN MCCB DB with metal door cover with IP 42 protection with 160 A 4 pole MCCB as incoming and 8 Nos 63A TP MCB as outgoing in flush with wall and making good of the concealed portion with earth connection. The MCBDB and MCB's should be of Legrand /L & T make. ( All plug set DB )		Ea	
36	45 Mtrs (Forty Five Metres Only)	Supply and run of 2 of 1.5 sqmm (22/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V Grade in suitable heavy guage conduit on wall and ceiling with continuous earth wire connection of 14SWG TC wire with painting of suitable colour. ( For Gang Bell )		Mtr	
37	190 Mtrs (One Hundred Ninety Metres Only)	Supply and run of 2 of 2.5 sqmm (36/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V Grade in suitable heavy guage conduit on wall and ceiling with continuous earth wire connection of 14SWG TC wire with painting of suitable colour. ( For Street light )		Mtr	

38	1150 Mtrs (One Thousand and One Hundred Fifty Metres Only)	Supply and run of 2 of 4 sqmm (56/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V Grade in suitable heavy guage conduit on wall and ceiling with continuous earth wire connection of 14SWG TC wire with painting of suitable colour.		Mtr	
39	860 Mtrs (Eight Hundred Sixty Metres Only)	Supply and run of 4 of 4 sqmm (56/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V Grade in suitable heavy guage conduit on wall and ceiling with continuous earth wire connection of 14SWG TC wire with painting of suitable colour.		Mtr	
40	40 Mtrs (Forty Metres Only)	Supply and run of 4 of 6 sqmm (84/0.3) PVC insulated SC unsheathed Cu.Conductor of 1100V Grade in suitable heavy guage conduit on wall and ceiling with continuous earth wire connection of 14SWG TC wire with painting of suitable colour.		Mtr	
41	70 Mtrs (Seventy Metres Only)	Supply and clamping of 31/2 x 95 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. ( From panel to Plugset Main DB )		Mtr	
42	2 Nos (Two Numbers Only)	Supply and fixing of brass cable gland for 31/2 x 95 sq.rnrn LTUG armoured cable with earth connection.		Ea	
43	2 Nos (Two Numbers Only)	Supply and providing cable end termination of 31/2 x 95 sq.rnrn LTUG armoured cable with earth connection .		Ea	

44	237 Mtrs (Two Hundred Thirty Seven Metres Only)	Supply and run of 1 of No.8 SWG TC Copper Conductor covered with Suitable PVC pipe for earth connection.		Mtr	
45	211 Mtrs (Two Hundred Eleven Metres Only)	Supply and run of 25mm x 3mm tinned copper flat with necessary clamps / supports on wall / floor / ground for earth connection(For Lab)		Mtr	
46	171 Mtrs (One Hundred Seventy One Metres Only)	Supply and laying of 4 x 10 sq.mm PVC armoured LTUG cable in a trench to be excavated at a depth of 0.75 metre putting 0.15 Mt. Layer of sand and covering the cable completely with bricks and sand and refilling the earth to make good. ( For Street light pole)		Mtr	
47	20 Mtrs (Twenty Metres Only)	Supply and clarnping of 4 x 10 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.		Mtr	
48	22 Mtrs (Twenty Two Metres Only)	Supply and clamping of 4 x 10 sq.mm PVC LTUG armoured LTUG cable through suitable GI pipe on post or on wall MS clamps.		Mtr	
49	14 Nos (Fourteen Numbers Only)	Supply and fixing of brass cable gland for 2 x 10 sq.rnrn LTUG armoured cable with earth connection.		Ea	

50	2 Nos (Two Numbers only)	Supply and Erection of 15KVA Online UPS suitable for 3phase AC input & 1phase ACoutput Digital pure sine wave (Luminous make) with 60 minutes backup using with suitable batteries 12V,180 AH Exide make Tall Tubular Batteries floor ounted type with 24 months warranty including errection and transportation charges. Batteries floor mounted type with 54 months warranty including errection and transportation charges.		Ea	
51	12 Nos (Twelve Numbers only)	Supply erection, testing and commissioning of 2.0 TR (6000 K.cal/Hr) ABS Plastic Split type Air conditioner conforming to IS 1391 (Part-2) 1992 with Amdt No. 1 to 2 fitted with rotary compressor operating on refrigerant R-32/non CFC suitable for wall mounting for operation on 230V, 50HZ single phase AC supply with star rating of 3 star as per BEE specification and capable of performing the functions of Cooling Dehumidifying Air Circulating Filtering The installation works for the above split type AC units includes the following. 1.Mounting / Fitting Indoor and outdoor units at their respective locations.		Ea	

		<p>2.Laying refrigerant pipeline of required length connecting not exceeding 3 metre distance and both units after drilling hole/holes in the wall if required.</p> <p>3.Insulating the suction pipe with expanded polyethylene foam 5mm tubing.</p> <p>4. Laying 15mm dia flexible PVC drain pipe to throw out the condensate water being formed within the indoor unit.</p> <p>5. Leakage testing the entire system unit</p> <p>.6. Charging refrigerant gas in the unit.</p> <p>7. Suitable electric wiring to be provided with 2.5 Sq.mm PVC insulated copper wire between indoor and outdoor units up to 6 Mtrs length and up to switch within 3 Meters of location of indoor unit (Carrier/Voltas/O General).</p>			
52	12 Nos (Twelve Numbers only)	Supply of 5 KVA Electronic Automatic Voltage Stabilizer V-GUARD make VGS 400 Model with Input Voltage range of 170Volt – 270 Volt and Output Voltage range 200Volts to 240 Volts with High and Low Voltage cut off and 3 minutes time delay relay with demonstration.		Ea	
53	12 Nos (Twelve Numbers only)	Supply and fixing of angle Iron Frame work to rest the Outdoor unit.		Ea	
54	20 Mtrs (Twenty Metres Only)	Supply and laying of 5/8" and 3/8" copper refrigerant pipe of 0.8mm thick with 4 sqmm 3 core wire between indoor and outdoor unit. ( Extra beyond 3 mtr supplied with AC unit)		Mtr	

55	11 Nos ( Eleven Numbers only)	Earthing as per the ISI specification with an earth electrode of 2.1mt class 'B' GI pipe of dia not less than 40mm, with copper earth plate of size 125mm x 50mm x 6mm, with necessary funneling arrangements with necessary masonry work and with 38mm RCC cover slab for the brick masonry.		Ea	
56	1 No ( One Number only)	Supply, fabrication, erection and commissioning of 250 A dust and vermin proof floor mounting cubical type panel board of size 5ft x 6ft x 1.5ft made up of 16 SWG CRCA sheet steel for outer body and stiffness and doors, switch supports respectively and supply and fixing of following interior mounting switches with centre bus bar chamber and vertical covers on both sides of the bus bar chamber at the extreme ends side and confirming to ISI specification. All the main switches should be L&T / Siemens make only interconnection of switches with busbar chamber. (1) 250 A TPN switch disconnecter interior only with HRC fuses double break as incomer - 1 No (L&T/Siemens)		Ea	

		<p>(2) 200 A TPN switch disconnecter interior only with HRC fuses double break as outgoing - 1 No (L&amp;T/Siemens)</p> <p>(3) 100 A TPN switch disconnecter fuse interior only with HRC fuses double break as outgoing - 2 Nos (L&amp;T/Siemens)</p> <p>(4) 63 A TPN switch disconnecter fuse interior only with HRC fuses double break as outgoing - 6 Nos (L&amp;T/Siemens)</p> <p>A separate chamber on top of one side should be built with multi function digital volt meter, ammeter and frequency meter with one set of LED pilot lamp set with fuse base, top with 10A HRC link for 3 phase (Siemns) the bus will have 2 Nos 1" x 1/8" earth bus must be run all around the panel to provide double earth connection to the cubical switches cable glands, cable The switch should be separated from the bus by 6mm thick hylum sheet separators, and properly earthed by tinned solid copper flat as I.E rules CEIG sepecifications. The panel should be painted with two high quality enamel paint over one coat of red oxide primer, the cable size, capacity of switch, location etc., should be marked with white paint and 2 Nos. metallic danger board affixed complete with mounting on base channel 3"x1 1/2"x1/2" iron frame work support complete.</p>		
--	--	--	--	--

57	1 No ( One Number only)	<p>Supply, fabrication, erection and commissioning of 400 A existing panel dust and vermin proof floor mounting cubical type panel board of size 6 ft x 2 ft x 1.5 ft made up of 16 SWG CRCA sheet steel for outer body and stiffness and doors, switch supports respectively and supply and fixing of following interior mounting switches with centre bus bar chamber and vertical covers on both sides of the bus bar chamber at the extreme ends side and confirming to IS specification. All the main switches should be L&amp;T / Siemens make only interconnection of switches with busbar chamber.</p> <p>(1) 250 A TPN switch disconnecter interior only with HRC fuses double break as outgoing - 1 No (L&amp;T/Siemens) (2) 200 A TPN switch disconnecter fuse interior only with HRC fuses double break as outgoing - 1 No (L&amp;T/Siemens) A separate chamber on top of one side should be built with multi function digital volt meter, ammeter and frequency meter with one set of LED pilot lamp set with fuse base, top with 10A HRC link for 3 phase (Siemens) the bus will have 2 Nos 1" x 1/8" earth bus must be run all around the panel to provide double earth connection to the cubical switches cable glands, cable adopter box etc the bus should be mounted on synthetic moulded compound bus support at equal interval as per IS specifications. The incoming 400A switch should be connected to the bus with same size of 2" x 1/4" connected to be bus tinned copper flat.</p>	Ea	
----	----------------------------------	---	----	--



		<p>specifications. The incoming 400A switch should be connected to the bus with same size of 2" x 1/4" connected to be bus tinned copper flat.</p> <p>The switch should be separated from the bus by 6mm thick hylum sheet separators, and properly earthed by tinned solid copper flat as I.E rules CEIG sepecifications. The panel should be painted with two high quality enamel paint over one coat of red oxide primer, the cable size, capacity of switch, location etc., should be marked with white paint and 2 Nos. metallic danger board affixed complete with mounting on base channel 3"x1 1/2"x1/2" iron frame work support complete.</p>			
58	288 Mtrs (Two Hundred Eighty Eight Meters Only)	<p>Supply and laying of 31/2 x 185 sq.mm PVC armoured LTUG cable in a trench to be excavated at a depth of 0.75 metre putting 0.15 mt. Layer of sand and covering the cable completely with bricks and sand and refilling the earth to make good. ( From existing panel to New Panel )</p>		Mtr	
59	20 Mtrs (Twenty Meters Only)	<p>Supply and clamping of 31/2 x 185 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps.</p>		Mtr	
60	10 Mtrs (Ten Meters Only)	<p>Supply and clamping of 31/2 x 185 sq.mm PVC LTUG armoured LTUG cable through suitable GI pipe on post or on wall MS clamps.</p>		Mtr	

61	2 Nos (Two Numbers Only)	Supply and fixing of brass cable gland for 31/2 x 185 sq.mrn LTUG armoured cable with earth connection.		Ea	
62	2 Nos (Two Numbers Only)	Supply and providing cable end termination of 31/2 x 185 sq.mrn LTUG armoured cable with earth connection .		Ea	
63	30 Mtrs (Thirty Meters Only)	Supply and clamping of 4 x 16 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. ( Workshop 4pole MCB DB)		Mtr	
64	6 Mtrs (Six Meters Only)	Supply and clamping of 4 x 16 sq.mm PVC LTUG armoured LTUG cable through suitable GI pipe on post or on wall MS clamps.		Mtr	
65	5 Nos (Five Numbers Only)	Supply and fixing of brass cable gland for 4 x 16 sq.mrn LTUG armoured cable with earth connection.		Ea	
66	1 No (One Number Only)	Supply and fixing of 32A TPN MC switch with suitable angle iron frame work with MS cable entry boxes with earth connection only.		Ea	
67	236 Mtrs (Two Hundred Thirty Six Meters Only)	Supply and clamping of 31/2 x 25 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. ( Fro workshop Tempora Sockets )		Mtr	

68	2 Mtrs (Two Meters Only)	Supply and clamping of 31/2 x 25 sq.mm PVC LTUG armoured LTUG cable through suitable GI pipe on post or on wall MS clamps.		Mtr	
69	20 Nos (Twenty Numbers Only)	Supply and fixing of brass cable gland for 31/2 x 25sq.rnrn LTUG armoured cable with earth connection.		Ea	
70	40 Nos (Forty Numbers Only)	Supply and providing cable end termination of 31/2 x 25 sq.rnrn LTUG armoured cable with earth connection .		Ea	
71	118 Mtrs (One Hundred Eighteen Meters Only)	Supply and laying of 31/2 x 50 sq.mm PVC armoured LTUG cable in a trench to be excavated at a depth of 0.75 metre putting 0.15 mt. Layer of sand and covering the cable completely with bricks and sand and refilling the earth to make good.		Mtr	
72	80 Mtrs (Eighty Meters Only)	Supply and clamping of 31/2 x 50 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. ( From Panel to AC DB )		Mtr	
73	4 Mtrs (Four Meters Only)	Supply and clamping of 31/2 x 50 sq.mm PVC LTUG armoured LTUG cable through suitable GI pipe on post or on wall MS clamps.		Mtr	
74	2 Nos (Two Numbers Only)	Supply and fixing of brass cable gland for 31/2 x 50 sq.rnrn LTUG armoured cable with earth connection.		Ea	

75	2 Nos (Two Numbers Only)	Supply and providing cable end termination of 31/2 x 50 sq.mmm LTUG armoured cable with earth connection .		Ea	
76	1 Mtrs (One Set Only)	<p>Design, supply, erection testing commissioning and handling over of 30KVAR capacity automatic power factor control panel with 30KVAR capacitors with the following specifications.</p> <p>L&amp;T eta sys-MU contactor switched standard AFC panel / equivalent capacitors - LT XL ultra heavy duty capacitors Incomer - 63 A MCB Branch protection - MCB Switching - Auto + manual</p> <p>1) Automatic power factor controller: Power factor controller for 30 KV AR capacitor bank indigenously designed, micro controller based programmable controller, works designed, micro controller based programmable controller, works three phase and switching on the suitable capacitor banks and maintaining the PF to the Optimum. The controller is to have a scrolling, LCD display which shows instantaneous voltage and current of all the three phases KW, KVA, RKVA and PF indication for the number of banks ON/OFF load imbalance and protection for low / High voltage, single phasing and phase sequence.</p>		Set	

		<p>2) Supply and fixing of suitable power supply unit for the power factor controller</p> <p>3) Supply and fixing of current voltage Transducers of ratio 63 : 1 to measure current and voltage in all the three phases</p> <p>4) Supply and fixing of suitable current limiters to cater the inrush current.</p> <p>5) Supply and fixing of 63A MCB as incoming to the panel</p> <p>6) Supply and fixing of suitable MCCBs for switching ON and OFF of I to VIII stage wise capacitor of capacitor</p> <p>7) Supply and fixing of contactors of suitable rating for switching ON &amp; OFF of the capacitors in various stage of L&amp;T make / equivalent</p> <p>8) Supply and fixing of 30 KV AR capacitor 440V, 50Hz Delta connected L&amp;T LT/ L ultra heavy duty capacitors make / equivalent in 6 stages in steps.</p> <p>Stage wise details:</p> <p>I) Stage : 5 KV AR                      II) Stage : 5 KV AR</p> <p>III) Stage : 5 KV AR                      IV) Stage : 2 KV AR</p> <p>V) Stage : 2 KV AR                      VI) Stage : 2 KV AR</p> <p>VII) Stage : 2KV AR                      VIII) Stage : 2 KV AR IX) stage : 1KV AR</p> <p>X) stage : 1KV AR</p> <p>XI) stage : 1KV AR                      XII) stage : 1KV AR XIII) stage : 1KV AR</p> <p>9) Supply and fixing of a power coated cabinet of 18 SWG / CRCA sheet steel to enclose all the above items</p>			
77	170 Mtrs (One Hundred Seventy Meters Only)	Supply and clamping of 31/2 x 35 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. ( From Panel to Workshop DB )		Mtr	

78	4 Nos (Four Numbers Only)	Supply and fixing of brass cable gland for 31/2 x 35 sq.mmm LTUG armoured cable with earth connection.		Ea	
79	160 Mtrs (One Hundred Sixty Meters Only)	Supply and clamping of 2 x 16 sq.mm PVC LTUG armoured LTUG cable on post or on wall with MS Clamps. ( From Lighting TPN DB to 5 Nos SPN MCB DB )		Mtr	
80	10 Nos (Ten Numbers Only)	Supply and fixing of brass cable gland for 2 x 16 sq.mm PVC armoured LTUG cable, with earth connection. (		Ea	
		<b>SUB TOTAL</b>		<b>Rs</b>	
		<b>GST @ 12%</b>		<b>Rs</b>	
		<b>Total</b>		<b>Rs</b>	

Superintending Engineer, PWD, (I/C)  
Building (Constn & Mtce ) Circle,  
Tirunelveli-2