

Town: Belgrade
 Building: Protected Social Housing
 Construction Site: Jabučki Rit

ELECTRICAL INSTALLATIONS

BILL OF QUANTITIES

NOTE: This Bill of Quantities shall include the delivery of all the necessary materials and equipment, installation works as described under individual items, testing and putting in operation, as well as reparation of all damages in installation works already performed. All the materials used shall be of first class quality. All works shall be performed by qualified manpower, fully in compliance with the regulations and standards in power for this type of works. The price shall include all the materials described under individual items and all accessories needed for the given item, transport as well as the cost of manpower with all the taxes and benefits included. The price shall also include testing and putting in operation all the installation parts described under individual items.

The contractor shall perform all the works fully in compliance with the attached technical description, technical specifications, Bills of Quantities and drawings, and study the received documentation well before commencing works and give a timely warning of any conflicts with existing regulations.

The contractor shall not be exempt from performing certain works envisaged by the BoQ, but perhaps not mentioned in the technical description or any other attachment to this project, which they are to perform in compliance with the regulations in power applicable to the installations for this type of building.

The prices stated serve as information only. For the delivery of equipment, material and works performed, the prices given in the contractor's offer shall apply.

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
I. ELECTRICAL POWER INSTALLATIONS					
I.1 POWER SUPPLY, CCB, MDC and POWER SUPPLY LINES					
1	Deliver and lay cable pipeline made of yuvidur pipes Ø110 mm from the cable connection box (CCB/KPK) to the green free area. The works shall include digging the trench, placing the pipe in sand or small-grain soil, backfilling the trench and returning the route to its original state. The works shall be performed fully in accordance with the regulations and recommendations of the Power Distribution Company (PDC). The works shall be performed simultaneously with the construction works.	m	10	x	=
2	Deliver and install complete (CCB/KPK) with two inlets, fully protected from moisture and dust, protection level IP-54, be mounted onto the wall by the entrance. The price shall include all construction and specialist works with chase cutting to the wall if necessary, closing the opening after placing the (CCB/KPK) and returning everything to its original state. CCB shall have the following equipment built in: 3 pcs - HRC (high rupturing capacity) fuse 250/100 A.	pcs	2	x	=
3	Deliver and lay power cable from CCB1/KPK1 to the main distribution cabinet MMDC1/GMRO1 type PP00-A, 1 kV, cross-section 4x50mm ² . The cable shall be laid in pre-made ducting in the facade wall of the building and in PVC pipes Ø110mm installed before the concrete works on the walls. All together with PVC pipes, all the necessary construction works and complete wiring.	m	4	x	=
4	Deliver and lay power cable from CCB2/KPK2 to the main distribution cabinet MMDC2/GMRO2 type PP00-A, 1 kV, cross-section 4x50mm ² . The cable shall be laid in pre-made ducting in the facade wall of the building and in PVC pipes Ø110mm installed before the concrete works on the walls. All together with PVC pipes, all necessary civil engineering works and complete wiring.	m.	4	x	=

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
5	Deliver and lay power cable from CCB1/KPK1 to CCB2/KPK2, type XP00-A, 1 kV, cross-section 3x150+70mm ² according to PDC requirements. The cable shall be laid in pre-made ducting in the facade wall of the building and in PVC pipes Ø110mm installed before the concrete works on the walls. All together with PVC pipes, all necessary construction works and complete wiring.	m	23	x	=
6	Deliver and install a self-standing MMDB1/GMRO1 in the entrance to the building. The cabinet shall be made according to PDC standards using two times pickled sheet with sheet metal door, lock and key, finishing as per PDC standards (standard solution <i>Elektrodistribucija-Beograd</i>) and build in and connect the following equipment inside:				
	MMDC1/GMRO1:				
	1 piece three-pole switch NS-100A				
	3 pcs signal lights (phase indicators)				
	7 pcs single-phase active power meter, precision class 2, 10-40A				
	8 pcs automatic fuse U or C/25A				
	1 set surge arresters ETITEC WENT TNC-S, 25KA, 3F				
	1 piece single-phase active power meter, precision class 2, 10-40A for building community consumption				
	2 pcs automatic fuse B/6A				
	1 pcs - Network Audiofrequency Control (MTK receiver)				
	1 pcs circuit breaker GS-10-52U, 0-1-2				
	5 pcs copper rails				
	1 pcs contactor K-10				
	Wiring materials and accessories as needed.				
	Together with all inside wiring and equipment mounting on standard DIN bus bars.				

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
	Assembled and tested.				
	All built-in cabinet equipment shall be adequately labelled and unipolar schematic attached.	pcs	1	x	=
7	Deliver and install distribution cabinet for shared building consumption DB BC1/RO ZP1 in the entrance to the building. The cabinet shall be made using two times pickled sheet, with sheet metal door, lock and key, and the following equipment built in and connected inside:				
	1 pcs switch GS-25A				
	1 pcs automatic fuse B/6A				
	5 pcs automatic fuse B/10A				
	1 pcs automatic fuse B/16A				
	1 pcs time relay and instrument control for day light				
	1 pcs contactor Cn-10, 220V				
	1 pcs switch GS-16-51, 1-0-2				
	1 pcs non-interrupted power supply unit NN 5000/2, Fenix - Niš.				
	1 pcs contactor K-10				
	1 pcs Photo Relay (FR)				
	Wiring material and accessories as needed				
	Together with all inside wiring equipment assembly on standard DIN bus bars.				
	Assembled and tested				
	All built in equipment shall be duly labelled and unipolar schematic attached	pcs	1	x	=
8	Deliver and install self-standing MMDC2/GMRO2 in the entrance to the building. The cabinet shall be made according to PDC standards using two times pickled sheet, with sheet metal door, lock and key, finished per PDC standards (Standard Solution <i>Elektroistribucija-Beograd</i>) and the following equipment built in and connected inside:				
	MMDC2/GMRO2:				
	1 piece three-pole switch NS-100A				
	3 pcs signal lights (phase indicators)				
	8 pcs single-phase active power meter, precision class 2, 10-40A				
	9 pcs automatic fuse U or C/25A				
	1 set surge arresters ETITEC WENT TNC-S, 25KA, 3F				
	1 piece single-phase active power meter, precision class 2, 10-40A for building community consumption				
	2 pcs automatic fuse B/6A				
	1 pcs - Network Audiofrequency Control (MTK receiver)				
	5 pcs copper rails				
	1 pcs circuit breaker GS-10-52U, 0-1-2				
	1 pcs contactor K-10				
	Wiring materials and accessories as needed.				
	Together with all inside wiring and equipment mounting on standard DIN bus bars.				
	Assembled and tested.				
	All built-in cabinet equipment shall be adequately labelled and unipolar schematic attached.	pcs	1	x	=

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
9	Deliver and install distribution cabinet for building community consumption DB BC2/RO ZP2 in the entrance to the building. The cabinet shall be made using two times pickled sheet with sheet metal door, lock and key, and build in and connect the following equipment inside: Isporuca i postavljanje u ulazu objekta razvodnog ormana zajedničke potrošnje RO ZP 2. Orman izraditi od dva puta deka piranog lima sa limenim vratima, bravom i ključem, i u njega ugraditi i povezati sledeću opremu:				
	1 pcs switch GS-25A				
	1 pcs automatic fuse B/6A				
	6 pcs automatic fuse B/10A				
	1 pcs time relay and instrument control for day light				
	1 pcs switch GS-16-51, 1-0-2				
	1 pcs contactor Cn-10, 220V				
	1 pcs non-interrupted power supply unit NN 5000/2, Fenix - Niš				
	1 pcs contactor K-10				
	1 pcs Photo Relay (FR)				
	Wiring material and accessories as needed				
	Together with all inside wiring equipment assembly on standard DIN bus bars				
	Assembled and tested				
	All built in equipment shall be duly labelled and unipolar schematic attached	pcs	1	x	=
10	Deliver the material and make the entire installation of feeders from MMDC/GMRO to distribution boards (DB/RT) in homes and building community consumption distribution boards (CCDB/RTZP), with power lines type PP-Y, 1 KV, with a corresponding number of conductors and cross-sections placed in PVC installation pipes under the mortar in the walls or appropriate PVC pipes in the concrete. PVC pipes in the concrete shall be installed timely, simultaneously with construction works. All together with the making of all connections in MMDC/GMRO and distribution boards and distribution cabinets.				
	PP-Y 3x6 mm ² / Ø36mm	m	180	x	=
	PP-Y 3x4 mm ² / Ø36mm	m	7	x	=

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
11	Same as item 8, but referring to signalization circuit for second tariff, type PP 4x1,5mm2 in PVC installation pipe Ø16mm.	m	165	x	=
12	Deliver the material, make and install complete box with equipotential bus bars (EBB/SIP) (single potential earthing) made of Cu strip 30x5x650 mm with at least 8 holes for bolts N10. Complete box shall be placed near MMDC/GMRO.	pcs	2	x	=
13	Deliver the material and connect all metal parts of the building, such as metal water supply and sewage pipes, through a line PP00-Y 1x16 mm2. All connections shall be made using appropriate accessories, spacer clips with washers, cable connectors and bolts, as well as all wiring.	m	60	x	=
14	Deliver the material and connect the main distribution cabinet to the EBB using cable type PP00-A 1x50mm2.	m	3	x	=
15	Deliver the material and bypass the water meter using braided-type copper bonding jumpers Ø16 mm, spacer clips with lead washer and bolts with nuts.	pcs	2	x	=
16	Test the MMDB1/GMRO1 and MMDB2/GMRO2 for functionality and put in operation, including the visit of the PDC representative on site and technical approval by PDC.	pcs	1		
	TOTAL I.1:				
I.2 ELECTRICAL INSTALLATIONS FOR BUILDING COMMUNITY CONSUMPTION					
1	Complete distribution board (DB/RT) for homes (DBBC/RTZP), made of shockproof self-extinguishing material with protective cover, protection level IP43, shall be positioned above the entrance to the homes or in corridors. The distribution board shall be wired according to unipolar schematic separately and all equipment on the board shall be labelled using clear and durable signs. The following equipment shall be installed in the distribution board:				
	1 pcs - casing				
	1 pcs - protective current differational circuit breaker FID 16/0.5A				
	4 pcs - set of NN automatic switches - fuses, type B, 6 kA, different nominal value currents (6A and 10A) as per the unipolar schematic				
	1 pcs - set of NN automatic switches - fuses, type B, 6 kA, nominal value currents (4A) as per the unipolar schematic				
	Copper bus bars, serial screw terminals, sign plates - other materials necessary for full completion.				
	Total for work, materials and transport.	pcs	1	x	=
2	Deliver the material and perform the entire installation of lighting for the stairway and the wind protected area to be turned on using the stairway automatic unit, through the cable PP-Y 3x1.5 mm2, 1 kV, installed under the mortar in the wall and in the ceiling. Distribution boxes shall be placed on the concrete form before pouring the concrete. Distribution boxes must be type TICINI, INDE or similar. Average spacing between light outlets shall be 18 m.	pcs	8	x	=
3	Deliver the material and perform the entire installation of lighting in the common rooms, using cable PP-Y 3x1.5 mm2, 1 kV, placed under the mortar in the walls and the ceilings, including the purchase and installation of suitable distribution boxes. Average spacing between light outlets shall be 28 m.	pcs	1	x	=

Item No	DESCRIPTION	UoM	NoU		Unit Price		TOTAL
4	Same as under item 2, but the cable PP-Y 2x1.5 mm2 shall be built in the walls under the mortar, including the purchase and installation of appropriate distribution boxes Ø60mm in diameter and push button 6A, 250V to switch on the lights in the stairway, with glow lamp or fluorescent coating and embossed light sign and entire wiring completed. Average length shall be 11 m.	pcs	12	x		=	
5	Deliver the material and perform complete installation for single-phase earthed socket PP-Y 3x2,5 mm2 placed in the wall under the mortar with suitable built-in distribution boxes and single-phase earthed socket, protection level IP20, 16A, 250V and entire wiring completed. Average length shall be 12 m.	pcs	1	x		=	
6	Same as item 7, but with single-phase socket 16A, 250V, built in with protective cover, protection level IP44. The socket shall be placed to 1.0 m and 0.5 m above the floor in the common area. Average length shall be 6 m.	pcs	7	x		=	
7	Same as item 7, but the cable PP-Y 3x2,5 mm2 partially installed also on cable spacer clips with single-phase socket 16A, 250V in PVC or siluminum casing with cover, protection level IP65. The socket shall be placed to 1.5 m above the floor in the washing room. Average length shall be 20 m.	pcs	3	x		=	
8	Deliver the materials and install the entire single-phase outlet using PP-Y 3x2, 5mm2 cable, power supply unit for interphone installation and RO-TV in the wind protected area, without procuring switches and devices. Average length shall be 3 m.	pcs	4	x		=	
9	Same as item 4, but performing the complete installation for the axial fan up to 30W, using PP-Y 3x1,5 mm2 cable. Average length shall be 6 m. The price shall include delivery and assembly of the axial fan.	pcs	1	x		=	
10	Deliver and assemble white micro switches with box for installation (regular and serial) 6/10A, 250V, protection level IP20.	pcs					
	a) regular	pcs	3	x		=	
	b) serial	pcs	2	x		=	
11	Same as item 14, but the switch in protective PVC casing made of hard plastic or bakelite, protection level IP44.						
	a) regular	pcs	1	x		=	
	TOTAL I.2:						

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
I.3 ELECTRICAL INSTALLATIONS IN HOMES					
1	Complete distribution board (DB/RT) for homes (DBBC), made of shockproof self-extinguishing material with protective cover, protection level IP43, shall be positioned above the entrance to the homes or in corridors. The distribution board shall be presented as unipolar schematic separately and all equipment on the board shall be labelled with clear and durable signs The following equipment shall be installed in the distribution board:				
	RT-P1, RT-P4, RT-P2', RT-P4', RT-5', RT-7'				
	1 pcs - casing				
	1 pcs protective current differential circuit breaker FID 25/0.5A				
	15 pcs - set of NN automatic switches - fuses, type B, 6 kA, various nominal value currents (4A, 10A and 16A) as per the unipolar schematic				
	1 pcs - electric ding-dong bell connected to 230V				
	1 pcs - protective current differential circuit breaker FID 16(25)/0.03A				
	1 pcs light indicator 5 W, 230 V, indicating second tariff				
	Copper bus bars, serial screw terminals, sign plates - other materials necessary for full completion				
	Total for work, material and transport	pcs	6	x	=
2	Complete distribution board (DB/RT) for homes (DBBC), made of shockproof self-extinguishing material with protective cover, protection level IP43, shall be positioned above the entrance to the homes or in corridors. The distribution board shall be presented as unipolar schematic separately and all equipment on the board shall be labelled with clear and durable signs The following equipment shall be installed in the distribution board:				
	RT-P2,RT-P3,RT-P1',RT-P3'				
	1 pcs - casing				
	1 pcs protective current differential circuit breaker FID 25/0.5A				
	11 pcs - set of NN automatic switches - fuses, type B, 6 kA, various nominal value currents (4A, 10A and 16A) as per the unipolar schematic				
	1 pcs - electric ding-dong bell connected to 230V				
	1 pcs - protective current differential circuit breaker FID 16(25)/0.03A				
	1 pcs light indicator 5 W, 230 V, indicating second tariff				
	Copper bus bars, serial screw terminals, sign plates - other materials necessary for full completion				
	Total for work, material and transport	pcs	4	x	=
3	Complete distribution board (DB/RT) for homes (DBBC), made of shockproof self-extinguishing material with protective cover, protection level IP43, shall be positioned above the entrance to the homes or in corridors. The distribution board shall be presented as unipolar schematic separately and all equipment on the board shall be labelled with clear and durable signs The following equipment shall be installed in the distribution board:				
	RT-5, RT-7, RT-6' ,RT-8'				
	1 pcs - casing				
	1 pcs protective current differential circuit breaker FID 25/0.5A				

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
	12 pcs - set of NN automatic switches - fuses, type B, 6 kA, various nominal value currents (4A, 10A and 16A) as per the unipolar schematic				
	1 pcs - electric ding-dong bell connected to 230V				
	1 pcs - protective current differential circuit breaker FID 16(25)/0.03A				
	1 pcs light indicator 5 W, 230 V, indicating second tariff				
	Copper bus bars, serial screw terminals, sign plates - other materials necessary for full completion				
	Total for work, material and transport	pcs	4	x	=
4	Complete distribution board (DB/RT) for homes (DBBC), made of shockproof self-extinguishing material with protective cover, protection level IP43, shall be positioned above the entrance to the homes or in corridors. The distribution board shall be presented as unipolar schematic separately and all equipment on the board shall be labelled with clear and durable signs The following equipment shall be installed in the distribution board:				
	RT-6				
	1 pcs - casing				
	1 pcs protective current differential circuit breaker FID 25/0.5A				
	10 pcs - set of NN automatic switches - fuses, type B, 6 kA, various nominal value currents (4A, 10A and 16A) as per the unipolar schematic				
	1 pcs - electric ding-dong bell connected to 230V				
	1 pcs - protective current differential circuit breaker FID 16(25)/0.03A				
	1 pcs light indicator 5 W, 230 V, indicating second tariff				
	Copper bus bars, serial screw terminals, sign plates - other materials necessary for full completion				
	Total for work, material and transport	pcs	1	x	=
5	Deliver the material and perform the entire installation of lighting in the homes using cable PP-Y 3x1.5 mm2, installed under the mortar in the wall and in the ceiling, including purchase and installation of appropriate distribution boxes to be mounted in the walls and the concrete and complete wiring. Distribution boxes shall be placed on the concrete form before pouring the concrete. Distribution boxes must be type TICINI, INDE or similar. Average length shall be 7 m.	pcs	108	x	=
6	Same as item 5, but performing the complete installation for the axial fan up to 30W, using PP-Y 3x1.5 mm2 cable. Average length shall be 8 m. The price shall include delivery and assembly of the axial fan.	pcs	20	x	=
7	Deliver materials and complete installation of electric doorbell, using cable PP 2x1.5 mm2, placed under mortar in the wall with white bakelite push button with embossed bell symbol, light indicator or glow lamp and all the wiring. Average length shall be 8 m.	pcs	15	x	=

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
8	Deliver the material and perform complete installation for single-phase earthed socket PP-Y 3x2.5 mm2 placed in the wall under the mortar with appropriate built-in distribution boxes and single-phase earthed sockets, protection level IP20, 16A, 250V and entire wiring completed. The socket shall be placed to 0.5, and 1.5 m above the finished floor. Average length shall be 10 m.	pcs	70	x	=
9	Same as item 7, but with single-phase socket 16A, 250V, built in with protective cover, protection level IP44. The socket shall be placed to 1.1 m above the floor in the kitchen and 1.5 m above the floor in the bathroom. Average length shall be 12 m.	pcs	60	x	=
10	Same as under item 7, but "double" single-phase socket to be installed in the living room and bedrooms. Average length shall be 10 m.	pcs	25	x	=
11	Same as under item 7, but "double" single-phase socket with cover to be installed in the kitchen and bathroom. Average length shall be 10 m.	pcs	13	x	=
12	Same as under item 7, but "quadruple" single-phase socket to be installed in the living room and bedrooms. Average length shall be 10 m.	pcs	15	x	=
13	Same as under 7, but make single-phase outlet using cable PP-Y 3x2,5mm2 for the water and electric heaters in the bathroom and the water heater in the kitchen, without the purchase of switches and appliances. Average length shall be 10 m.	pcs	30	x	=
14	Deliver and assemble bathroom heater with heating element up to a maximum of 2000 W power.	pcs	15	x	=
15	Deliver the materials and install bathroom appliances operation indicators with 3 switches (three locking switches 16A, 250V), with light indicators (or light bulbs) and build-in distribution box and complete wiring. Total for work, materials and transport.	pcs	15	x	=
16	Deliver and assmble white micro switches with build-in box (regular, serial I) 6/10A, 250V, protection level IP20.				
	a) regular	pcs	50	x	=
	b) serial	pcs	38	x	=
17	Deliver materials and install the entire potential equalization installations in sanitary facilities using cable P-Y 1x6 mm2, (P-Y 1x4 mm2) laid inside the wall under mortar, starting with earthing rail in the corresponding DB to the PS49 box in the bathroom and on to all metal masses, over corresponding spacer clips and cable terminals. Average length per bathroom shall be 12 m.	pcs	17	x	=
18	Deliver and build in complete build-in box for potential equilizing similar to type PS49 and complete all wirings.	pcs	17	x	=
	TOTAL I.3:				

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
I.4 INSTALLATION OF ANTI-PANIC LIGHTING					
1	Deliver the materials and perform complete installatoin for anti-panic lights using cable PP-Y 3x1,5 mm2, placed under the mortar in the walls and the ceiling, including purchase and installation of appropriate build-in distribution boxes and complete wiring. Distribution boxes in the concrete shall be placed on the concrete form before pouring concrete. The type of distribution boxes to be built in the concrete must be TICINI, INDE. Anti-panic light installations shall be spaced from other installations at a minimum of 5 cm, and the distribution boxes shall be painted red inside. Average length shall be 10m.	kom.	6	x	=
2	Deliver materials and install wall and ceiling fluo anti-panic lighting, with one 8-W fluo light, with casing, protective glass, assembly equipment and EXIT sign over the lights or arrow sign with own power source (NiCD batteries with 6-hour duration).	pcs	6	x	=
TOTAL I.4:					
I.5 LIGHTING EQUIPMENT					
1	Deliver and install completely equipped incandescent decorative light with opaline, square or round, white glass, 100-W light bulb, E-27 socket and equipment for installation on the ceiling, protection level IP20, marked as "P" in the drawing.	pcs	67	x	=
2	Deliver and assemble fluo-lighting with one 18-W fluo light and own switch, with necessary equipment for installation on the wall, protection level IP40, similar to type <i>Strela</i> , marked as "S" in the drawing.	pcs	15	x	=
3	Deliver and assemble completely equipped incandescent waterproof light with metal framework, opaline white glass, up to 100-W light bulb, rubber seal, E-27 socket and equipment for installation on the ceiling in the stairway, hall, wind protected area and porch, protection level IP44, marked as "PA" in the drawing.	pcs	17	x	=
4	Deliver and assemble completely equipped incandescent waterproof light with metal framework, opaline white glass, lup to 100-W light bulb, rubber seal, E-27 socket and equipment for installation on the walls in the bathrooms, toilets and balconies, protection level IP44, marked as "ZA" in the drawing.	pcs	30	x	=
5	Deliver and install complete waterproof "ship" light with protective grid, diffuser, up to 100-W light bulb, rubber seal, E-27 socket and equipment for installation on the ceiling in the ground floor storage room, protection level IP55, marked as "BS" in the drawing.	pcs	4	x	=
6	Deliver and install complete fluo grill ceiling lamp, protection level IP40. The price shall include delivery and installation of the entire light fixture with double connection, with four 18-W fluo light bulbs, starters and the necessary equipment for installation, marked as "F" in the drawing.	pcs	3	x	=

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
7	Deliver and install and make all the necessary adjustments in the waterproof halogen spotlight, with halogen light bulb up to 300 W, R7s socket and motion sensor - infrared switch. The light shall be with complete accessories and pre-connected devices. The protection level shall be IP44, marked in the drawing as "ZA1".	pcs	2	x	=
8	Deliver and install room pendant lights NH 8015, E27, Brilight or similar, marked as "L" in the drawing. The price shall include delivery and installation of the complete light fixture.	pcs	17	x	=
	NOTE: The lights have been chosen based on free design principles. The investor shall choose the type of light fixture and manufacturer on their own accord, respecting the level of protection (IP) and power used by the given light (light bulb). The quantities are given for the entire building.				
	TOTAL I.5:				
	TOTAL I:				
II. FOUNDATION EARTHING AND LIGHTNING PROTECTION INSTALLATION					
1	Deliver and lay galvanized steel FeZn strips 25x4mm sidelong in the building foundations to the lower concrete reinforcement zone and weld it electronically to the foundation reinforcement, whereas the welded joint needs to be protected with two layers of anti-corrosion coating. The joints with the reinforcement shall be spaced at 1-2 m, with the required number of lightning earhdown conductors, gutter downspouts, SIP, etc. Strip for connecting the earthing on different levels shall also be included.	m	118	x	=
2	Deliver and lay galvanized steel strip Fe Zn 25x4 mm as outlet from foundation earthing to test joint, gutter downspouts, SIP, partly laid in the foundation and partly in the facade wall or concrete pillar. Outlets shall be made with 0.6 m of free strip.	m	38	x	=
3	Deliver crossrun clamps JUS N.B4.936 in casing K-U-K, resume and crossrun the galvanized steel strip where necessary in the building foundation and pour liquid hot lead over the crossrun clamp.	pcs	28	x	=
4	Deliver and lay galvanized steel strip FeZn 20x3mm, as lighting rod along the length of 0.5 m from the highest roof point, i.e. the chimney.	pcs	12	x	=
5	Deliver and lay galvanized steel strip FeZn 20x3mm along strip support on the chimney of the building.	m	24	x	=
6	Deliver and lay galvanized steel strip FeZn 20x3mm along the building roof (join metal masses and natural lightning rod holders) using appropriate clamps, couplings and spacer clips.	m	25	x	=
7	Deliver and lay galvanized steel strip FeZn 20x3mm as lightning earhdown conductor in concrete pillar or under facade lining in PVC tube all the way to the test joint box.	m	42	x	=
8	Deliver and lay galvanized steel strip FeZn 20x3mm to join holders and earhdown conductor to balcony metal fence and large metal masses and two levels of roof metal covers, set in concrete pillar or under facade lining and in the protection tube in the balcony floor all the way to the metal mass.	m	10	x	=
9	Deliver clamp for horizontal gutter JUS N.B4.908 and join the gutter to the lightning rod clamp.	pcs	16	x	=

Item No	DESCRIPTION	UoM	NoU	Unit Price	TOTAL
10	Deliver clamp for gutter downspout JUS N.B4.914 and join the gutter to the foundation earthing outlet.	pcs	10	x	=
11	Deliver and install test joints JUS N.B4.932 in the test joint casing JUS N.B4.912 on the building facade at 1.6-1.7 m above terrain level.	pcs	6	x	=
12	Link FeZn 20x3mm strip and metal mass using appropriate clamps, spacer clips, by welding or riveting using pop rivets at a minimum of three points.	pcs	28	x	=
13	Deliver crossrun clamp JUS N.B4.936, resume and crossrun strips on the roof, facade and wherever needed, pour with bitumen.	pcs	22	x	=
14	Measure earthing resistance of the foundation earthing, as well as impact resistance of the lightning installation and issue certification for the tests performed.	lumpsu	1	x	=
	TOTAL II:				
	RECAPITULATION				
	I. ELECTRICAL POWER INSTALLATIONS				
	II. FOUNDATION EARTHING AND LIGHTNING PROTECTION INSTALLATION				
	T O T A L:				