

**Reconstruction and modernisation of the “Ion
Creangă” Secondary School, plot no.
9201110.378, including the addition of
ancillary buildings, situated in the
municipality of Ungheni, 151 Ștefan cel Mare
și Sfânt Street**

(name of the project)

Form No. 7
WinCmeta

LOCAL QUOTATION No. 2-2-6

Fire alarm system. Block B (2510 - SI)

Prepared at current prices:

No. No.	Standard symbol and resource code	Works and expenditure	Unit of measureme nt	Quantity as per project data	Estimated value, lei	
					Per unit of measure incl. wages	Total incl. salary
1	2	3	4	5	6	7
		1. Construction works				
1	RpEJ08A	Excavation of trenches up to 5 cm deep in walls of 5x50 cm brickwork	m	20.00		
2	RpEJ09D	Filling of grooves in walls up to 50 cm ²	m	20.00		
3	RCsB29C	Drilling through-holes in brick and stone masonry using a diamond core drill with a diameter of: 40 mm, Lmed=200 mm Labour coefficient = 1.8000 Materials coefficient = 1.8000 Equipment coefficient = 1.8000	pcs	100.00		
		<i>Total</i>	lei			
		<i>Social security</i>	24 %			
		<i>Transport costs</i>	%			
		<i>Procurement and warehousing</i>	%			
		<i>Total</i>				
		<i>Overhead costs</i>	%			
		<i>Total</i>				
		<i>Quotation benefit</i>	%			
		Total construction works Including wages				
		2. Installation works				
		2.1. Cabling and accessories				
4	08-02-409- 1	Vinyl-plastic pipe on existing structures, on walls and columns, secured with clamps, diameter up to 25 mm	100 m	12.50		
5	supplier price	Corrugated PVC pipe with probe, crush resistance 750 N, d = 20 mm	linear metre	1,250.00		
6	08-02-390- 1	Plastic ducts with cover, cross- section 25x16(h) mm, including all	100 m	1.60		

1	2	3	4	5	6	7
		necessary fittings (elbows, plugs, tees, crosses, etc.)				
7	08-02-152-3	Metal cable structures: welded construction	t	0.015		
8	08-02-412-1	Insertion of conductors into installed metal pipes and conduits: the first single-strand or multi-strand conductor in a common braid, with a cross-sectional area of up to 2.5 mm ²	100 m	8.00		
9	supplier's price	Fire alarm cable with solid copper conductors, HI1 cross-linked polymer insulation, pairs of twisted wires, aluminium foil screen, halogen-free (LSZH) insulation, cable insulation integrity class FE180 (tested to DIN VDE 0472 Part 814 / IEC 60331), system integrity E30 (tested to DIN 4102 Part 12), Un=225 V, with 1 pair, cross-section 0.8 mm ²	linear metre	100.00		
10	supplier price	Fire alarm cable with solid copper conductors, HI1 cross-linked polymer insulation, pairs of twisted wires, aluminium foil screen, halogen-free (LSZH) insulation, cable insulation integrity class FE180 (tested to DIN VDE 0472 Part 814 / IEC 60331), system integrity E30 (tested to DIN 4102 Part 12), Un=225 V, with 1 pair, cross-section 1.0 mm ²	linear metre	700.00		
11	08-02-412-2	Insertion of conductors into installed metal conduits and hoses: the first single-core or multi-core conductor in a common braid, total cross-section up to 6 mm ²	100 m	10.00		
12	supplier's price	Fire alarm cable with solid copper conductors, HI1 cross-linked polymer insulation, pairs of twisted wires, aluminium foil screen, halogen-free (LSZH) insulation, cable insulation integrity class FE180 (tested to DIN VDE 0472 Part 814 / IEC 60331), system integrity E30 (tested to DIN 4102 Part 12), Un=225 V, with 1 pair, cross-section 1.5 mm ²	per metre	650.00		
13	supplier price	Fire alarm cable with solid copper conductors, HI1 cross-linked polymer insulation, pairs of twisted wires, aluminium foil screen, halogen-free (LSZH) insulation, cable insulation integrity class FE180	per metre	150.00		

1	2	3	4	5	6	7
		(tested to DIN VDE 0472 Part 814 / IEC 60331), system integrity E30 (tested to DIN 4102 Part 12), Un=225 V, with 2 pairs, cross-section 1.5 mm ²				
14	supplier price	Telecommunications cable with solid copper core conductors, cross-linked polymer insulation, wires twisted into pairs (4 pairs), classified as Category 5e, with an overall aluminium foil screen, halogen-free (LSZH) insulation and outer sheath with low smoke emission, cable insulation integrity FE180 (tested to IEC 60331 / DIN VDE 0472-814), system integrity in the event of fire E30 (DIN 4102 Part 12 test), rated operating voltage Un=125 V / 300 V, with 4 -pairs, conductor cross-section 24 AWG (nominal diameter 0.51 mm)	linear metre	200.00		
15	08-02-412-3	Insertion of conductors into installed metal pipes and conduits: the first single-strand or multi-strand conductor in a common braid, total cross-sectional area up to 16 mm ²	100 m	0.10		
16	supplier's price	Copper cables that do not propagate flame, with low smoke and gas emission, low toxicity when burning, maintain their operational capability for 180 minutes at a temperature of at least 750°C, for voltages of 0.6/1.0 kV, and which meet the requirements of DIN VDE 0266, DIN VDE 0276-604, IEC 60332-3 Cat. C, DIN VDE 0472-814, DIN 4102 Part 12, Unom = 0.66 kV, type (N)HXH-JE90/FE180, cross-section 3 × 4.0 mm ²	linear metre	10.00		
		<i>Total</i>	lei			
		Total Wiring and accessories Including wages				
		2.2. Fire alarm system				
17	10-08-001-03	Receiving units: 'SI' reception, control and start-up devices – Addressable module with 1 input / 1 output	10 pcs	0.10		
18	10-08-001-03	Receiver units: 'SI' reception, control and start-up devices – Addressable module with 4 inputs / 4 outputs	10 pcs	0.02		
19	10-08-002-02	Addressable optical smoke detector with socket and mounting base for socket	pcs	78.00		

1	2	3	4	5	6	7
20	10-08-002-03	Addressable combined smoke and temperature detector with socket and mounting base for socket	pcs	8.00		
21	08-03-591-1	Addressable manual fire alarm button	100 pcs	0.10		
22	08-03-593-10	Addressable fire alarm siren with flashing light	100 pcs	0.01		
		<i>Total</i>	lei			
		Total Fire alarm system Including salary				
		2.3. Smoke extraction system				
23	10-08-003-03	Devices – power supply and control unit, including cabinet and charging module	pcs	2.00		
24	08-03-575-1	Device – Sealed lead-acid battery, 12 V, 12 Ah	pcs	4.00		
25	08-03-591-1	Single-pole switch, surface-mounted type, surface-mounted	100 pcs	0.02		
		<i>Total</i>	lei			
		Total Smoke extraction system Including wages				
		2.4. Two-way communication system between firefighters and the control centre				
26	10-04-066-06 installed	Wall-mounted unit: Communication unit with two-way audio connection to the central control centre	pcs	2.00		
		<i>Total</i>	lei			
		Total Firefighters – control room two-way communication system Including salary				
		<i>Total</i>	lei			
		<i>Social insurance</i>	24 %			
		<i>Transport costs</i>	%			
		<i>Procurement and warehousing</i>	%			
		<i>Total</i>				
		<i>Overhead costs</i>	%			
		<i>Total</i>				
		<i>Budget surplus</i>	%			
		Total installation work Including wages				
		3. Machinery and equipment				
		3.1. Fire alarm system				
27	Supplier price	Addressable electronic input/output module with control capability for 1 monitored input and 1 output with a relay featuring potential-free contacts, fitted with a direct connection to the addressable loop	pc	1.00		

1	2	3	4	5	6	7
		and an integrated line short-circuit isolator; the hardware interface is equipped with 3 indicator LEDs for signalling alarm, fault and relay activation states, fully certified in accordance with European standards EN 54-17 and EN 54-18, rated supply and operating voltage Un=19–30 VDC, maximum programmable current supported by the relay contacts up to 4 A at a voltage of 30 VDC				
28	supplier price	Addressable electronic input/output module with control capability for 4 monitored inputs and 4 relay outputs with potential-free contacts, featuring direct connection to the addressable loop and an integrated line short-circuit isolator; the hardware interface is equipped with indicator LEDs for signalling alarm, fault and relay activation states, fully certified in accordance with European standards EN 54-17 and EN 54-18; rated supply and operating voltage Un=19–30 VDC; maximum programmable current supported on the relay contacts up to 4 A at a voltage of 30 VDC	pc	2.00		
29	supplier price	Addressable electronic smoke detector with control capability for optical analysis of smoke particles based on an infrared source and the Tyndall effect, fitted with a direct connection to the addressable loop and an integrated line short-circuit isolator, the hardware interface being fitted with LED indicators for signalling alarm, fault and pre-alarm states with 360-degree visibility, fully certified in accordance with European standards EN 54-7 and EN 54-17, rated supply and operating voltage Un=19–30 VDC, maximum programmable current supported in alarm mode up to 10 mA	pcs	78.00		
30	supplier price	Addressable electronic combined smoke and heat detector with the capability to simultaneously analyse smoke particles using an infrared source (the Tyndall effect) and temperature changes using thermal sensors, fitted with a direct connection to the addressable loop	pcs	8.00		

1	2	3	4	5	6	7
		and an integrated line short-circuit isolator, the hardware interface being fitted with LED indicators for signalling alarm, fault and pre-alarm states with 360-degree visibility, fully certified in accordance with European standards EN 54-5, EN 54-7 and EN 54-17; rated supply and operating voltage $U_n=19-30$ VDC; maximum programmable current supported in alarm mode up to 10 mA				
31	supplier price	Universal detector socket with control capability and passive interconnection between the addressable loop and the detector's hardware pins; the hardware interface is fitted with a mechanical anti-tamper locking system for the detector and a dedicated auxiliary terminal for connecting a remote optical indicator; rated operating voltage $U_n=19-30$ VDC, maximum current supported at the connection terminals up to 1 A	pcs	86.00		
32	supplier price	Deep-mounting base for detectors with control capability, structural height of 34 mm and diameter of 110 mm	pcs	86.00		
33	supplier price	Manual fire alarm and warning button with control capability for rapid activation of the alarm state via direct operation with a resettable plastic element, fitted with a direct connection to the addressable loop and an integrated line short-circuit isolator, LED indicator and key-operated reset mechanism without glass breakage, fully certified in accordance with European standards EN 54-11 and EN 54-17, rated supply and operating voltage $U_n=19-30$ VDC, maximum programmable current supported in alarm mode up to 5 mA	pcs	10.00		
34	supplier price	Addressable optical-acoustic siren, capable of providing early warning via flashing light signals and loud audible alarms, fitted with a direct connection to the addressable loop and an integrated line short-circuit isolator, the hardware interface being fitted with an internal trimmer for volume calibration and selection	pcs	1.00		

1	2	3	4	5	6	7
		from a range of 32 distinct evacuation tones, fully certified to the high IP67 protection rating in accordance with European standards EN 54-3, EN 54-17 and EN 54-18, rated supply and operating voltage $U_n=19-30$ VDC, maximum sound pressure level of up to 106 dBA at a distance of 1 m				
		<i>Total</i>	lei			
		Total Fire alarm system Including salary				
		3.2. Smoke extraction system				
35	Supplier price	24 V, 20 A backup power supply with space for 2 sealed 12 V, 12 Ah batteries, comprising the following components: 1. IP31 metal enclosure, $350 \times 240 \times 420$ (h) mm, lockable, fitted with DIN, N and PE rails; 2. DIN-rail power supply, AC-AC, 24 V, 480 W; 3. UPS controller, DIN-rail, 24 V DC, 20 A	set	2.00		
36	supplier price	Sealed lead-acid battery, 12 V, 12 Ah	pcs	4.00		
37	Supplier price	Control switch with two independent momentary-action buttons, capable of controlling 3- -wire actuators at 230 VAC or for direct connection to smoke extraction and natural ventilation units, rated operating voltage up to a maximum of 250 VAC, maximum programmable current supported by contacts up to 10 A	set	2.00		
		<i>Total</i>	lei			
		Total Smoke extraction system Including wages				
		3.3. Two-way communication system between firefighters and the control centre				
38	Supplier price	A communication unit with control capabilities for high-security monitoring and quick dialling via two configurable DSS buttons in SIP intercom systems, featuring a direct connection via two RJ45 ports (PoE 802.3af-enabled network and LAN for bridging), the hardware interface featuring a Broadcom main chipset, a 2.5 W audio amplifier, an external	pcs	2.00		

1	2	3	4	5	6	7
		connector for an active speaker, an analogue audio output available for DVR recording and an integrated HD video camera, fully certified to IP65 weatherproofing and IK10 vandal resistance, compatible with Asterisk, Broadsoft and Elastix platforms, providing advanced audio management via narrowband and wideband codecs, full-duplex AEC echo cancellation and a microphone range of 5 metres, offering support for static IP configuration, DHCP, PPPoE, VPN security, VLAN and dual power supply options at 12V DC or via Class 0 PoE, in a robust die-cast aluminium alloy housing with an operating temperature range of -40 to +70 degrees Celsius, housing dimensions of 220 x 140 x 60 mm				
		<i>Total</i>	lei			
		Total Firefighters – control room two-way communication system Including salary				
		<i>Total</i>	lei			
		<i>Supply and storage</i>	%			
		Total machinery and equipment Including wages				
		4. Commissioning and start-up work				
39	1-10-001-1	Collection and processing of information signals from protection and automation devices for electrical and process systems	signal	104.00		
		<i>Total</i>	lei			
		<i>Social insurance</i>	24%			
		<i>Total</i>				
		<i>Overheads</i>	%			
		<i>Total</i>				
		<i>Budget surplus</i>	%			
		Total commissioning works Including wages				
		Total	lei			
		Total estimate: Including wages				

Prepared by

(position, signature, surname, first name)

Verified

