

MATERIAL LIST & TECHNICAL SPECIFICATIONS

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| <p>1) Photoelectric Type Smoke Detector</p> <p>Type : Analog Addressable or Intelligent</p> <p>Energy : 24 VDC loop powered</p> <p>Air Velocity : 1.5m/s air velocity</p> <p>Operation : between 10% - 93% relative humidity</p> <p>Sensitivity : 0.8% - %3.5 (ft) adjustable</p> <p>Accessories : Mounting Base, Flanged Surface Mounting Kit</p> <p>Other Features : 360° visible LED, In full white or beige color, Openable – Cleanable, Passive base, base contacts are stainless and suitable for 1.5 mm² cable entry, Time-dependent sensitivity can be adjusted (from the panel)</p> <p><i>Spare : 10 Ea. Additional excluded</i></p> | 90 Ea. |
| <p>2) Photoelectric Type Smoke Detector (Inside Suspended Ceiling)</p> <p>Type : Analog Addressable or Intelligent</p> <p>Energy : 24 VDC loop powered</p> <p>Air Velocity : 1.5m/s air velocity</p> <p>Operation : between 10% - 93% relative humidity</p> <p>Sensitivity : 0.8% - %3.5 (ft) adjustable</p> <p>Accessories : Mounting Base, Flanged Surface Mounting Kit, Including remote lamp</p> <p>Other Features : 360° visible LED, In full white or beige color, Openable – Cleanable, Passive base, base contacts are stainless and suitable for 1.5 mm² cable entry, Time-dependent sensitivity can be adjusted (from the panel)</p> <p><i>Spare : 25 Ea. Additional excluded</i></p> | 290 Ea. |
| <p>3) Fixed Temperature and Rate of Rise Heat Detector (68°C)</p> <p>Type : Analog Addressable or Intelligent</p> <p>Energy : 24 VDC loop powered</p> <p>Fixed Temperature : 68°C</p> <p>Operation : between 10% - 93% relative humidity</p> <p>Accessories : Mounting Base, Flanged Surface Mounting Kit</p> <p>Other Features : 360° visible LED, In full white or beige color, Openable – Cleanable, Passive base, base contacts are stainless and suitable for 1.5 mm² cable entry,</p> <p><i>Spare : 1 Ea. Additional excluded</i></p> | 3 Ea. |
| <p>4) Photoelectric Type Smoke and Heat Combine Detector</p> <p>Type : Analog Addressable or Intelligent</p> <p>Energy : 24 VDC loop powered</p> <p>Air Velocity : 1.5m/s air velocity</p> <p>Operation : between 10% - 93% relative humidity</p> <p>Sensitivity : 0.8% - %3.5 (ft) adjustable</p> <p>Fixed Temperature : 68°C</p> <p>Accessories : Mounting Base, Flanged Surface Mounting Kit</p> <p>Other Features : 360° visible LED, In full white or beige color, Openable – Cleanable, Passive base, base contacts are stainless and suitable for 1.5 mm² cable entry, Time-dependent sensitivity can be adjusted (from the panel)</p> <p><i>Spare : 3 Ea. Additional excluded</i></p> | 35 Ea. |
| <p>5) Duct Type Photoelectric Type Smoke Detector</p> <p>Type : Analog Addressable or Intelligent</p> <p>Energy : 24 VDC loop powered</p> <p>Air Velocity : Suitable for operating between 0,5-20m/sn air velocity</p> <p>Operation : between 10% - 93% relative humidity</p> <p>Sensitivity : 0.8% - %3.5 (ft) adjustable</p> <p>Accessories : Mounting Box, Air Sampling Tube (75 cm) included</p> <p>Other Features : In full white or beige color, Openable – Cleanable, Passive base, base contacts are stainless and suitable for 1.5 mm² cable entry,</p> | 29 Ea. |
| <p>6) Duct Type Photoelectric Type Smoke Detector (Weatherproof)</p> <p><i>ditto, but</i></p> <p>Protection : At least IP 56, watertight enclosure for outdoor applications</p> | 4 Ea. |
| <p>7) Fire Alarm Manual Station</p> <p>Type : Analog Addressable or Intelligent</p> <p>Temperature : between +4-45°C</p> <p>Operation : between 10% - 93% relative humidity</p> <p>Accessories : Surface Mounting Base</p> <p>Other Features : Glass whip type, Full function can be tested (No Parts Cost),</p> | 17 Ea. |

	with LED display, written in Georgian and English, Red in color, At least IP44 or equivalent external protection conditions	
<i>Spare</i>	: 2 Ea. Additional excluded	
8) Fire Alarm Manual Station (Weatherproof)		3 Ea.
<i>ditto, but</i>		
Protection	: At least IP65 or equivalent external protection conditions	
9) Audio-Visual Alarm Device (Horn Strobe)		30 Ea.
Supply	: 24 VDC	
Sound Output	: 105 dBA @ 3m	
Sound Type	: 500-1000Hz Horn (Field Selectable)	
Light Type	: Strobe	
Light Output	: 95 candela & 60 Strobe/min.	
Wiring	: 4-wire / The horn and strobe circuits must be wired independently, and each circuit must be terminated with the appropriate EOL device	
Protection	: IP 44	
Accessories	: Surface Mounting Base	
<i>Spare</i>	: 3 Ea. Additional excluded	
10) Audio-Visual Alarm Device (Horn Strobe) (Weatherproof)		3 Ea.
<i>ditto, but</i>		
Protection	: At least IP65 or equivalent external protection conditions	
11) Monitoring (Input) Module		40 Ea.
Type	: Field Mounted	
Input	: 1 ea. potential-free SPST contact	
Accessories	: Surface Mounting Base, w Alarm/Trouble Indicator	
Operation	: between 10% - 93% relative humidity	
Protection	: At least IP44 or equivalent external protection conditions	
<i>Spare</i>	: 11 Ea. Additional excluded	
12) Control (Output) Module		120 Ea.
Type	: Field Mounted	
Output	: 1 Ea. SPDT Contact	
Accessories	: Surface Mounting Base, w Alarm/Trouble Indicator	
Operation	: between 10% - 93% relative humidity	
Protection	: At least IP44 or equivalent external protection conditions	
<i>Spare</i>	: 20 Ea. Additional excluded	
13) Auxiliary Power Supply		1 Ea.
Input Supply	: 220VAC, 50 Hz.	
Output	: 24VDC @ 2-4 A (The electrical power of the power supply will be evaluated together with the existing power supplies, and the equipment and layout are determined according to the total power requirement of the devices driven by the control module.)	
Secondary Supply	: - Battery, Lead-acid Sealed, Maintenance-free - Capacity for 24 hours of monitoring, 30 min. of alarm	
Protection	: At least IP44 or equivalent external protection conditions	
Other Features	: SPDT relay output in case of error, Approved for fire use (EN 54-4, etc.)	
14) Fire Detection & Alarm Control Panel		2 Ea.
Capacity	: min. 500 Address	
Initiating Input Loops	: min. 4 Ea. (4-wire detection loops)	
Loop Capacity	: min. 125 Address/loop	
Alarm Output Loops	: min. 3 Ea. (Programmable) (Suitable for 4-wire horn strobe) (The number of warning outputs will be suitable for distribution, if there are not enough outputs, the required module and power supply will be added to the offer.)	
Relay Outputs	: - General Alarm : min. 2 Ea. SPDT - General Trouble : min. 1 Ea. SPDT - Programmable : min. 8 Ea. SPDT	
Display	: At least 2x30 alphanumeric LCD screen (preferably with Georgian menu)	
Printer	: Mini Line Printer, Panel Mounted	
Supply	: 220VAC, 50 Hz.	
Secondary Supply	: - Battery, Lead-acid Sealed, Maintenance-free - Capacity for 72 hours of monitoring, 30 min. of alarm (In the absence of a repair contract that gives a maximum repair time of less than 24 hours, the system must be maintained at a running capacity of 72 hours.)	



GEORGIA
HEALTHCARE
GROUP
Tbilisi / Georgia

SUNSTONE HOSPITAL FIRE DETECTION & ALARM SYSTEMS MATERIAL LIST AND TECHNICAL SPECIFICATIONS EVEX-SUNSTONE-KAR-MTL-005

KARINA
KARINA Design,
Consultancy and Training
Services Ltd.Co.

Other Features	: - Built-in Buzzer - Buzzer Silence - Lamp Test - Real time, sensitivity and delay programmable functions - Building evacuation warning with a single lockable button - With all software and necessary equipment - With semi-flush sheet casing - Field Programmable	
Accessories	: - Surface Mounting Cabinet	
15) Graphic Monitoring System		1 Set
Features	: - Including hardware and any necessary software and programming - Will work with the Fire Detection and Alarm Panel - Graphic middleware alarm and error tracking modules, software that facilitates maintenance and monitoring and all kinds of engineering services related to it. - Up to 15 pages Graphic / Mimic Screen Display - Computer with at least Intel or Amd Duo processor, 1TB HD, 8GB RAM, 17" LCD-TFT Display and peripheral hardware required for the application. - Fire Detection and Alarm Panel and Repeater Panel and graphic monitoring computer can continuously communicate digitally. - Fire Detection and Alarm Panel and Repeater Panel information (status, error, etc.) visible by the monitoring system - All system errors (battery error, power cut, etc.) can be seen and memorized by the monitoring system - Detector-related operations such as suspend, disable, remove-add, pollution control can be performed, - Able to remove and add audio visual alarm devices - Error and Event Line Printer (standard dot matrix) - Operating System included - Including the Uninterruptible Power Supply that will provide uninterrupted operation for 1 hour - 1 ea. Including additional HD ready to be connected, software installed (preinstalled inside)	
16) Fire Alarm System Cabling and Installation		1250 m.
Dimension	: 2x2x1.5mm ²	
Conductor	: Multi strand copper wire	
Type	: LIH(St)H... or the type requested by the manufacturer	
Fire Resistance	: Minimum FE60 and PH120	
Other Features	: Halogenfree, Silicone insulated	
17) Fire Detection System Cabling and Installation		5000 m.
Dimension	: 2x2x1.0mm ²	
Conductor	: Multi strand copper wire	
Type	: LIH(St)CH... or the type requested by the manufacturer	
Fire Resistance	: Minimum FE60 and PH120	
Other Features	: Halogenfree, Silicone insulated	
18) Power Supply Cabling and Installation		100 m.
Dimension	: 2x1.5mm ²	
Conductor	: Multi strand copper wire	
Type	: NYY... or the type requested by the manufacturer	
Fire Resistance	: Minimum FE60 and PH120	
Function	: Electricity supply of Fire Detection and Alarm Systems	
Other Features	: Halogenfree, Silicone insulated	
19) Digital Data Communication Cabling and Installation		100 m.
Type	: To be determined by the manufacturer	
Fire Resistance	: Minimum FE60 and PH120	
Function	: Connection between Fire Detection and Alarm Panels with each other and with the Graphic Monitoring System	
Other Features	: Halogenfree, Silicone insulated	
20) PVC Cable Conduit & Installation		1500 m.
Dimension	: Minimum 4cm width, narrower if required	
Type	: with Cover and double cable conduits	
Combustibility	: Halogenfree, non-flammable, fire retardant	
21) Cable Protection		3000 m.

Dimension	: DN20	
Type	: Made of PVC or PE material	
Combustibility	: Halogenfree, non-flammable, fire retardant	
Other Features	: With intermediate fittings and boxes where necessary	
22) Electrical Metallic Tubing (EMT) Conduit		500 m.
Dimension	: ½" diameter	
Material	: Stainless galvanized steel	
Accessories	: With all kinds of spare parts and materials etc.	
Function	: For Use in Technical Areas and Outdoors	
23) Flexible Spiral Conduit		50 m.
Dimension	: ½" diameter	
Material	: Stainless galvanized steel	
Accessories	: With all kinds of spare parts and materials etc.	
Function	: For Use in Technical Areas and Outdoors	
24) Device Installation		1 Set
Features	<ul style="list-style-type: none">- Installation cost of any type of detector, manual call station, module, horn, etc. in accordance with the requirements of the relevant specification.- Displacement and assembly of existing system components specified in the specification and drawings,- Making connections and controls- Programming, running- Installation, including any auxiliary and supplementary additional materials required for the performance of the work- Installation of devices, addressing works- Programming of audio visual devices suitable for the selected sound alert type- Commissioning	
25) Auxiliary Materials and Engineering Services		1 Set
Features	<ul style="list-style-type: none">- Performing of turnkey work in accordance with the relevant specification requirements- Cabling and checking,- Panel assemblies, programming, running- Supply and installation of all kinds of auxiliary, complementary, additional materials required for the performance of the work,- Trial, maintenance, programming and operation of existing system components in accordance with the relevant specification requirements,- Training services and documentation in accordance with the relevant specification requirements- Testing, trial and acceptance studies of all devices in accordance with the relevant specifications and standards,	
26) Annual Regular Maintenance and Technical Support Service		1 Set
Features	<ul style="list-style-type: none">- Periodic maintenance of the system for an additional 1 year at the end of the Warranty Period- Performing and reporting the necessary trial procedures for 1 calendar year- Intervention guarantee in case of failure- Providing all kinds of compulsory and preventive maintenance, maintenance and trials in accordance with the relevant standard- Providing "Operational Training" to the personnel at the beginning of the maintenance contract.- Providing "Training Documentation" at the beginning of the maintenance contract- Submission of "Current Status Report" at the beginning of the maintenance contract	
Optional Applications:		
1) Device Removal, Cleaning and Delivery		1 Set
Features	<ul style="list-style-type: none">- Dismantling of Existing Fire Detection and Alarm Devices (Type and number of devices will be determined by the Contractor during the site visit.)- Cleaning and delivery of the devices and repairing the dismantled areas (The numbers will be determined later.)	
2) Dismantling of Cable and Protective / Supporting Installation		1 Set

Features : - Removal of Cables of Existing Fire Detection and Warning Devices
(Cable length will be determined by the Contractor during the site visit.)
- Dismantling of the carrier and protective cable harness where the existing
Fire Detection and Alarm System will not be used
- Repairs of disconnected cable locations

3) Recommended Spare Parts Price List

1 Set

Features : By pricing in unit price

General Notes:

- 1) *All the materials shall conform to EN54.*
- 2) *All the materials shall be approved by VdS or LPCB.*
- 3) *See drawings for the system details.*
- 4) *If the detectors do not have built-in Line Insulators, a Line Insulator will be placed in every 20 devices.*
- 5) *All excavation and filling works for outdoor cable routes are excluded from material list.*
- 6) *If the purpose of the specified cable types does not comply with the requirements of the manufacturer and the system, the appropriate type of cable should be offered by specifying the type.*
- 7) *All kinds of auxiliary and supplementary materials required for the work to be performed as defined should be included in the cost of the relevant material.*
- 8) *All kinds of hardware, software and services required for the systems to work as defined should be within the bid price, even if they are not included in the Bill of Materials.*
- 9) *In case of partial delivery, the detailed list of all delivered materials must be prepared with the relevant shipment and delivered to the Employer.*
- 10) *Fire Detection and Alarm Panel power output and defined modules and power supplies will be used for the power supply of the desired number and distribution of Audio Visual Alarm Devices. Along with the final calculations, changes in the required module and uninterruptible power supply quantities should be stated in the proposal.*
- 11) *The sample "Annual Regular Maintenance and Technical Support Contract" should be attached to the offer.*
- 12) *Devices with a high dust protection level should be selected throughout the facility, as specified in the material properties.*
- 13) *Necessary determination and examination should be done together with Site Visit.*
- 14) *The quantities of all materials will be finalized with the application projects after the tender.*

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