



आईएसओ 9001-2015 पत्तान  
AN ISO 9001-2015 PORT

MORMUGAO PORT AUTHORITY  
**ENGINEERING MECHANICAL DEPARTMENT**  
**ELECTRICAL HARBOUR SECTION**

**NOTICE INVITING BUDGETORY OFFERS**

Name of Work	<b>" Supply, Installation, Testing and Commissioning of Smoke detector Alarm system at 33KV substation "</b>
Date of submission of budgetary quotation	On or before <b>29/05/2023 at 15:00 Hrs-</b>
Address for communication:	Executive Engineer (E-HR), 2nd floor, Mechanical Engineering Department, Mormugao Port Authority, Admin. Building, Headland sada Vasco-de-Gama Goa - 403804
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**EXECUTIVE ENGINEER (E-HR)**  
**MORMUGAO PORT AUTHORITY**



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**Sub: “Supply, Installation, Testing and Commissioning of Smoke detector Alarm system at 33KV substation”**

**Ref:** Budgetary Quotation No. CME/XEN (E-HR)/ 23/ B2

Mormugao Port Authority intends to carry out work of **Supply, Installation, Testing and Commissioning of Smoke detector Alarm system at 33KV substation** with 5 years Comprehensive Annual Maintenance Contract (CAMC) after 1 year warranty period.

As such, it is requested to kindly furnish budgetary quotation for the same (Scope of work, technical specifications and Price Schedule are enclosed)

Your budgetary quotation should reach to this office on or before 29/05/2023 at 15:00 Hrs.

**Thanking you,**

Yours sincerely,

**EXECUTIVE ENGINEER (E-HR)**

## TECHNICAL SPECIFICATION

### 1. GENERAL:

Mormugao Port Authority intends to carry out work of **Supply, Installation, Testing and Commissioning (SITC) of Smoke detector Alarm system at 33KV substation** as per the details given below:

### 2. SCOPE OF WORK

#### Part-A: Brief scope of work

- i. SITC of microprocessor based intelligent analogue addressable fire alarm control panel (FACP).
- ii. SITC of 20 **nos** of smoke detectors including mounting base with automatic dual LED type having two integrated light scattering smoke sensors with different colors/wavelengths, to avoid false alarm and the same are to be integrated with the microprocessor based FACP.
- iii. Since, the roof height of substation is high, all the smoke detectors should be fixed above the panels/transformers at 33KV substation by fabricating and mounting MS Channels/Angles with necessary hardware's and painting wherever necessary.
- iv. SITC of 2 **nos** new detector base sounders having different tone variants selection options & adjustable sound pressure levels more than 80 db with flasher.
- v. SITC of 4 nos., addressable Manual Break glass unit with necessary fixing arrangement and same are to be integrated with the microprocessor based FACP
- vi. The CAMC (quarterly) shall be for a period of 3 years after the expiry of the guarantee period of 1 year.

### 3. Technical Specifications

#### 3.1. Fire Alarm Control Panel (FACP):

Fire Alarm Control Panel should be Microprocessor based intelligent and electronically addressable, modular, networkable with two Ethernet Networking Cards, 1 - loops Panel (expandable up to 32 loops) with Loop length up to 1.5 KM. Fire alarm control panel with 5.7 inch touch screen LCD display, multiple access levels, 10,000 event history logs in the nonvolatile memory (EEPROM). The panel

should be modular microprocessor based in nature. The panel shall have redundant controller, power supply & cabinet. The panel shall have 240V AC power supply, Automatic battery charger, 12VDC, 24AH, 2 batteries sealed lead acid maintenance free batteries sufficient for 24 hours normal working and then be capable of operating the system for 30 mins during emergency condition. The panel shall be EN54 / Vds Certification.

- 3.2. **Smoke Detector:** addressable– Automatic Dual LED smoke detector with two integrated light-scattering smoke sensors using LEDs with different colors/wavelengths (blue/infrared) to avoid false alarm & should comply to Test Fire 1, including mounting base with LED... etc. complete as required, Each Detector should have 2 Isolators (one for incoming and one for outgoing line) integrated in detector for maintaining operational availability of all elements in the loop, even in the event of a short circuit & Drift Compensation feature & Automatic addressing. High resistance to electromagnetic effects. Including Junction Box, Cable glands, screw raval plugs etc complete shall be EN54/ VD's/ UL certification.
- 3.3. **Powered detector Based Sounder:** Standalone Loop Powered detector base sounder with Inbuilt Isolator with different tone variants selection options & adjustable sound pressure by 5 levels, the sound pressure shall be minimum 80 dB with flasher having Synchronized flash rate of 1 Hz and Light intensity > 2 cd, should be programmed from the panel. Including Junction Box, Cable glands, screw raval plugs etc complete shall be EN54 / VD's/UL Certification.
- 3.4. **Manual break glass unit:** addressable manual break glass unit (Double action) with Inbuilt Isolators with flexible network structures & necessary fixing arrangements with key complete as required. Including Junction Box, Cable glands, screw raval plugs etc., complete shall be EN 54 / VD's/UL Certification. .
- 3.5. **Cable:** 2 core x 1.5 sq. mm zero halogen low smoke (FRLS) fire survival cable conforming to BS-6387 CWZ, LPCB certified complete.

#### **4. MANUALS, DRAWINGS AND GUARANTEE**

On completion of the work, the Contractor shall supply 3 sets of operation and maintenance manuals after commissioning. The soft copy of substation drawing indicating locations of each fire system equipment with principal details, Schematic electric, electronic and programmable controller details and any other special feature which the bidder wishes to highlight.

The installation shall be guaranteed for 12 months from the date of acceptance and free maintenance shall be done during the guarantee period.

**5. COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT:**

**a) CONTRACT PERIOD:**

The Comprehensive AMC order will be issued after Successful completion of the One year Guarantee period. Based on the performance of the First year Annual maintenance Contract, the AMC order will be renewed each year for Three years as per the price quoted by the Tenderer. During AMC, the contractor has to replace all the spares which are required free of cost.

**b) SECURITY DEPOSIT FOR COMPREHENSIVE AMC:**

Security deposit shall consist of two parts:

- a) The DD or Bank Guarantee equivalent to 5% of the CAMC value of the First year rounded off to nearest 100 rupees, shall be submitted within 30 days of issue of Letter of Acceptance following submission of which only performance guarantee will be refunded
- b) The balance 5% shall be recovered as Retention Money from the running bills. Thereafter, the total of 10% (DD 5% and 5 % Retention money) shall be refunded on successful completion of First year of AMC and on submission of fresh DD or BG equivalent to 5% of the CAMC value of second year rounded off to nearest 100 rupees as Performance Guarantee for second year. The balance 5% shall be recovered as Retention Money from the running bills for the Second year.

The same procedure will be repeated for the third year of AMC.

**c) GENERAL FEATURES OF COMPREHENSIVE MAINTENANCE CONTRACT.**

- i. The tenderer shall provide one-year guarantee for the entire system and shall quote for the comprehensive AMC of three years duration which will be executed after expiry of guarantee period, as per the price bid.
- ii. During warranty and AMC period if any of the equipment supplied by the Tenderer are found defective /Damaged, same has to be replaced by the Tenderer at their cost. Therefore Bidders shall access the environmental conditions, in respect to the supply of quality of equipment's and workman ship so as to ensure continual stability in running of system successfully.

- iii. During warranty and AMC period each of the units of the fire alarm system shall be serviced quarterly i.e., four times in a year. The service reports shall be submitted to the Engineer in Charge. The service/ breakdown report must be submitted each time to the Engineer in Charge. Gap between two consecutive servicing should not exceed 3 months. The contractor has to attend all breakdowns if any, on call basis.
- iv. At the end of the first year, the performance of the contractor shall be reviewed and in the event that it is found unsatisfactory, The BOARD reserves the right to terminate the contract.

The cost of AMC for the period of 3 years will be considered while evaluating the price bid.

**Note: Tender without quote for CAMC will be treated as INCOMPLETE.**

**d) SCOPE OF WORK (CAMC)**

The Tenderer should enter into Comprehensive Annual maintenance contract for a period of Three years, 15 days prior to the completion of guarantee period. The Tenderer shall quote for maintaining the entire system offered for a period of Three years including replacing of spares after the guarantee period

- a. Preventive and breakdown maintenance should be carried out to maintain the Fire Alarm System in healthy operating condition.
- b. Preventive maintenance shall be carried out strictly in four equal intervals of time per annum.
- c. The contractor should conduct mock-up trial of fire alarm system by producing smoke near any randomly selected smoke detector. The Mock up trial has to be carried out during every maintenance schedule.
- d. Attending to all emergency breakdown calls even on Sundays or Holidays.
- e. Providing Telephonic support service in case of need.

**e) PENALTY CLAUSE (FOR CAMC)**

The contractor should strictly ensure that Fire Alarm System maintained in good working condition. If found not working/under break down for more than 48 hrs. a penalty of Rs. 1000 per day, will be recovered from the monthly bill, till the system is set right.

At the end of the first year, the performance of the contractor will be reviewed and in the event that it is found unsatisfactory, the BOARD reserves the right to terminate the contract.

### **Payment terms**

#### **PART- I (CHARGES TOWARDS CAPITAL WORKS):**

100% payment after satisfactory completion of the works. The payment will be released within 15 days from the date of receipt of undisputed bills in duplicate and with all other supporting documents (IT returns for last two years).

#### **PART-II (CHARGES TOWARDS CAMC):**

100% PAYMENT SHALL BE RELEASED ON QUARTERLY BASIS. However, the contractor shall submit the complete report/relevant documents along with the bill.

### **6. GUARANTEE**

The Guarantee period shall be one year from the date of taking over of the work. The repair/replacement shall be carried out in mutual consultation with the Engineer In-charge.

### **7. Special terms And Condition:**

- i. The contractor is advised to visit MPA site at his own cost before quoting.
- ii. The work shall be carried out as per the site condition and as directed by the Engineer in Charge.
- iii. The price quoted should be inclusive of all expenses.
- iv. Free Electric Power in A.C., three/ single phase, 440 V, 50 cycles will be provided for welding and execution of the contract work subject to availability. However, contractor shall arrange all cabling switch gears, etc. for power supply to his equipment at his own arrangement by their expenses for execution of contract works.



**PRICE SCHEDULE (BILL OF QUANTITIES)**

**Part A: Supply and Installation**

Sr No	Description of Item	Unit	Qty	Rate/Unit (Rs.)		Amount (Rs)
				In figure	In words	
1	Providing and fixing of Microprocessor based Fire alarm control panel as per the technical specifications.					
	Supply	No	1			
	Installation	No	1			
2	Providing and fixing of Dual LED smoke detector as per the technical specifications.					
	Supply	No	20			
	Installation	No	20			
3	Supply, erection and fabrication of MS channel/Angle with necessary hardware's and painting on top of panels/transformers for fixing the smoke detector as per requirement.	mtr	80			
4	Providing and fixing of Powered detector base sounder as per the technical specifications.					
	Supply	No	2			
	Installation	No	2			
4	Providing and fixing of manual break glass unit as per the technical specifications.					





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	Supply	No	4			
	Installation	No	4			
5	Providing and fixing of cable as per the technical specifications.					
	Supply	mtr	300			
	Installation	mtr	300			
	<b>Total Amount (Part A)</b>					

**Part B: For Comprehensive Annual Maintenance Contract**

Sr No	Description of Item	Unit	Qty	Rate/Unit (Rs.)		Amount (Rs.)
				In figure	In words	
1	Comprehensive Annual Maintenance of Fire Alarm system for at 33KV substation.					
	(i) 1st Year CAMC(after completion of one year Guarantee period)	LS	1			
	(ii) 2nd Year CAMC	LS	1			
	iii) 3rd Year CAMC	LS	1			
	<b>Total amount (Part B)</b>					
	<b>NET TOTAL =Total of (Part A)+ Total of ( Part B)</b>					

(In words Rupees \_\_\_\_\_  
\_\_\_\_\_ only)

Note: The prices offered should be exclusive of GST (%). GST will be paid extra as applicable