

Ref. No. P&E/JATNI/AFDAS/2024-25/141

Dated:15/02/2025



TENDER NOTICE

FOR

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUTOMATIC FIRE
DETECTION & ALARM SYSTEM (AFDAS) EQUIPMENTS**

AT

STATE BANK OF INDIA, JATNI BRANCH, BHUBANESWAR, ODISHA

GENERAL AND SPECIAL CONDITIONS OF CONTRACT

DATE OF ISSUE: 21/02/2025

LAST DATE OF RECEIPT: 05/03/2025, up to 1700hrs

VALID UP TO: 90 DAYS

Issued By:

Assistant General Manager (P&E),
State Bank of India, Premises & Estate Department,
2nd Floor, Local Head Office (LHO)
Bhubneswar-751 001

GENERAL INFORMATION OF TENDER

1.	Name of Work	Supply Installation Testing & Commissioning (SITC) of Automatic Fire Detection & Alarm system (AFDAS) and Other Allied Equipments for State Bank of India, Jatni Branch Bhubaneswar, Odisha
2.	Scope of Work	Design, Supply, Testing and Commissioning of the complete Automatic Fire Detection & Alarm system (AFDAS) and Other Allied Equipments and establishment of guaranteed performance parameters.
3.	Time allowed for completion	01 - Calendar month from the date of letter of intent (LOI)/placing work order.
4.	Price Basis	Firm Prices inclusive of all duties and taxes/GST extra as applicable. No escalation other than statutory variations for the items listed in Schedule of Quantities.
5.	Earnest Money Deposit	Rs.5,000/- in the form of DD/BC in favor of State Bank of India, payable to Bhubaneswar, to be prepared and uploaded online and the original physical copy to send at the Assistant General Manager (P&E), State Bank of India, Premises & Estate Department, 2nd Floor, Local Head Office (LHO) Bhubneswar-751 001.
6.	Security Deposit	5% of the final contract value in the form of BG issued by any Nationalized/Scheduled Bank other than SBI or in the form of DD/BG (Interest free) in favor of State Bank of India, payable to Bhubaneswar, while issuing of the work order.
7.	Cost of Tender Documents	NIL,
8.	Submission of tender bids online	On or before,05/03/2025, up to 1700hrs online mode.
9.	Online Submission of FINAL Price Bid on the web Site	On or before,05/03/2025, up to 1730hrs online mode, if any change in date will be informed by email / contact number through online tendering agency.
10.	Authority for Opening Tender	AGM (P&E)/Authorized Officials of State Bank of India, Premises & Estate Dept., Local Head Office, Bhubaneswar, Odisha.
11.	Defects Liability Period	12 Months (Twelve Months)
12.	Validity of offer	3 Months from The Date of opening of price bid
13.	Liquidated Damages:	0.5 % per Week Subject to Maximum of 5% of Contract Value.
14.	<i>Rate quoted by the bidders shall remain firm throughout the contract period (including authorized extension).</i> Rate quoted shall be inclusive of all, duties, levies, royalties & other incidental /other industrial charges etc. However, tax GST as applicable shall be paid extra by the Bank as per actual.	
15.	Digital Signature	You are advised to obtain digital signature at the earliest (if you do not already have) as it is mandatory.
16.	Agency for Arranging Online Bidding	M/s. Antares Systems Limited The Agency will do the needful for Completion of all the Business Formalities at your given email address and contact numbers if the contact numbers/email provided by you is wrong the firm will not be responsible.
17.	Name of Bank's Engineer for	Fire Officer M-916742600526/76000035062 /

	any Clarification.	fo.lhobhu@sbi.co.in
18.	Deduction for poor workmanship / defective materials	An equitable deduction to correct the poor workmanship or replacement of materials / equipments at risk of Vendor.
19.	All payments will be made at	Premises & Estate Department, LHO Bhubaneswar
20.	Jurisdiction	Bhubaneswar
21.	Terms of Payment	<p>Stage Payments</p> <ul style="list-style-type: none"> a) On Supply & delivery at site: -50% of the contract price may be paid on receipt of Goods and upon submission of the documents & check by Fire Officer. b) On Testing & Commissioning: the remaining 45% of the contract price shall be paid to the Vendor after successful testing & commissioning at site and within thirty (30) days after the date of the acceptance of Completion Certificate of Contract check by Fire Officer/Bank Authorized Official. c) Remaining 5% after completion of successful warranty period i.e., 12 months. <p>Note: -</p> <ul style="list-style-type: none"> a) Payment will be made as per actual material used at site. b) Work awarded Vendor shall have to do necessary Drawings, designs as per actual site conditions & get the actual BOQ approved before supplying the material. c) Necessary Test Certificates would have to be produced with Material.
22.	Inspection	As per site requirement.
23.	Test Certificates	Manufacturer's test certificates for panels detectors etc. Wherever applicable on demand of Employer / Bank.
24.	Insurance	Worker Insurance Policy for Vendor's men, material in transit and third-party insurance to be arranged by Vendor.
25.	Power and Water supply	The Employer shall arrange the power at one or two single point free of cost, further distribution, and safe drawl to be arranged by Vendor. Electrical Safety device such as ELCB, MCB, RRCB etc to be provided before making connection.

Note:

- a) Process Compliance Statement to be submitted.
- b) Bid received later than the given time/date will be summarily rejected. Canvassing in any form will lead to disqualification.
- c) The Bank reserves the right to reject any or all the offers without assigning any reasons thereof.

INSTRUCTIONS TO THE BIDDERS AND GENERAL TERMS & CONDITIONS

Assistant General Manager (Premises & Estate) on behalf of State Bank of India invites invite e-bids from Bank's empanelled Vendors with sound technical and financial capabilities for Supply, Installation, Testing & Commissioning of Automatic Fire Detection & Alarm system (AFDAS) and Other Allied Equipments in new building of SBI JATANI Branch, Bhubaneswar Odisha.

1.0 Mode of Submission of Tender:

The tender shall be submitted in online system in accordance with the procedure detailed herein below.

- a) **Technical Bid: to be uploaded online and** shall contain covering letter, technical and commercial terms & conditions, and Tender document all pages duly stamped and signed along with necessary attachments including a copy of EMD.
- b) **Price Bid: to be uploaded Price bid online mode and** shall be opened on as date and time as stipulated in the tender.
- c) In case the date of opening of tenders is declared as a holiday, the tenders will be opened on the next working day at the same time.
- d) **State Bank of India has the right to accept/reject any or all tenders without assigning any reasons.**
- e) For any other queries the vendors may contact **Fire Officer at the office of Premises & Estate Department, Bhubaneswar** at fo.lhobhu@sbi.co.in
- h) **Site and its Location:** The proposed work is to be carried out at in **new SBI JATANI Branch building Bhubaneswar, Odisha.**

2.0 SCOPE OF WORK

- a) The tender under reference covers supply, installation, testing, commissioning of Automatic Fire Detection & Alarm system (AFDAS) and Other Allied Equipments as per the notice inviting tender, condition of contract, technical specification, tender drawing & schedule of work and as per the direction & satisfaction of the Bank's Engineer.

3.0 COMPLETION PERIOD

Time is the essence of the contract. The time schedule for total work according to the contract shall be **One Calendar Months** from the date of placement of work order or handing over of site whichever is later.

4.0 EARNEST MONEY DEPOSIT

EMD of Rs. 5,000/- in the form of DD/BC to be submitted in the AGM (P&E), Premises & Estate Department, 2nd Floor LHO, Bhubaneswar (Odisha). Earnest Money deposit (EMD) is exempted for agencies registered under NSIC or coming under the definition of Micro and Small Industries and holding valid registration certificates covering the tendered items/services. Declaration of Udyog Aadhar Memorandum (UAM) by the MSE parties on Central Public Procurement Portal (CPPP) shall be mandatory. However, attested/Notarized copy of valid NSIC certificate or "Micro and Small" industry certificate should be submitted in this regard.

5.0 Bidders should have PAN, GSTIN registration, PF registration, ESI registration. Copy of the same shall be submitted along with techno commercial offer.

6.0 TENDER DOCUMENTS

Tender Documents comprises two parts viz. **Part-I (Un-priced)** and **Part-II (Priced)**. The Un-Priced Part consists of EMD, Notice Inviting Tender, Condition of Contract, Technical Specification and Drawings. The Priced Part consists of Priced Schedule. Bidders are requested to read all the terms and conditions mentioned in the tender document and seek clarification if any, from Fire Officer on e-mail: fo.lhobhu@sbi.co.in.

7.0 TENDER SUBMISSION

- a) The intending bidders shall be deemed to have visited the site and familiarize themselves thoroughly with the prevailing site conditions before submission of the tender. Non-familiarity with the site conditions will not be considered reason either for extra claim or for not carrying out the work in strict conformity with the drawing, specification, and time schedule.
- b) The bidder is required to register on the e-procurement and submit their bids online during business hours.
- c) For registration and online bid submission bidders may contact the service provider M/s. Antares Systems Limited.
- d) The bidders shall authenticate the bid with his **Digital Certificate** for submitting the bid electronically on e-procurement platform and the bids not authenticated by digital certificate of the bidders will not be accepted on the e-procurement platform.
- e) All the bidders who do not have digital certificates need to obtain Digital Certificate (with both Signing and Encryption Components).
- f) If any of the documents furnished by the bidders are found to be false / fabricated / bogus, the bidders are liable for rejection/d-listing.
- g) The bidder should keep track of any Addendum/Corrigendum/Amendment issued by the Tender Inviting Authority on time-to-time. No separate newspaper advertisement shall be published for such Addendum/Corrigendum/Amendment etc. The Company calling for tenders shall not be responsible for any claims/problems arising out of this.
- h) The bidders should complete all the processes and steps required for bid submission. The successful bid submission can be ascertained once acknowledgement is given by the system through bid submission number after completing all the process and steps.
- i) M/s. Antares Systems Limited will not be responsible for incomplete bid submission by users. Bidders may also note that the incomplete bids will not be saved by the system and are not available for the Tender Inviting Authority for processing.
- j) Neither the Company (SBI) nor the service provider (M/s. Antares Systems Limited) is responsible for any failure or non-submission of bids due to failure of internet or other connectivity problems or reasons thereof.

8.0 SUPPLY OF MATERIAL

All materials required for the work shall be supplied by the Bidders.

9.0 TAXES & DUTIES

All taxes and duties other than GST shall be included in the basic rate. GST shall be quoted separately as per Schedule of Work.

10.0 PAN, GSTIN registration, ESI, PF registration:

Bidders are required to submit PAN, GST registration, Provident Fund registration and ESIC along with Un-priced part of their offer, failing which their offer may be liable to be rejected.

11.0 INSTALLATION, COMMISSIONING & TRAINING

The installation, testing and commissioning of automatic sprinkler system shall be carried out by competent engineers/technicians of the Bidders at the work site. After commissioning, the

successful bidder's engineer / technician shall impart necessary training to SBI's personnel in operating and maintaining the installed fire protection system. No separate charge shall be payable by the SBI for the purpose.

12.0 NON-CONFORMANCE

Tenders not conforming to the above-mentioned requirements are liable to be rejected.

13.0 VALIDITY OF OFFER

Tendered shall keep their offer valid for a period of 90 days from the date of opening of Unpriced bid.

14.0 QUANTITY VARIATION

The quantity as mentioned in the Schedule of Work / Price Bid is indicative. The selected bidder/Vendor shall however ascertain the exact quantity required at site and supply and install accordingly. As the work progresses, it is possible that there will be quantity variations to any extent & omission of items. **Under all such circumstances, the rates should remain firm.**

15.0 FIRM PRICE

The price should be firm and irrevocable and not subject to any change till the completion of Scope of Work.

16.0 RATES AND OTHER ENTRIES

- a) The bidders should quote for all items in the Schedule of Rates. If there is any discrepancy between unit rate and total amount, the unit rate will prevail.
- b) The rates should be quoted in the same units as mentioned in the tender schedule of quantities.
- c) All entries in the tender documents should be in ink/type. Corrections if any should be attested by full signature of the bidders.
- d) Every page of the tender document including annexure/enclosures shall be stamped and signed by the bidders or his authorized representative thereby indicating that each and every page has been read and the points noted.

17.0 RIGHT TO ACCEPT OR REJECT TENDER

17.1 SBI reserves the right to accept or reject any or every tender without assigning any reason whatsoever / or to negotiate with the bidders (s) in the manner it considers suitable. In the event of receipt of lowest price from more than one (1) bidder, fresh price bids shall be invited from the lowest bidders only to determine final lowest bidder for placement of order.

17.2 Bids of any bidders may be rejected if a conflict of interest between the bidder and SBI is detected at any stage.

17.3 All the bids will be evaluated based on criteria as mentioned in this NIT. Tenders of those bidders who are not meeting the criteria will not be considered for commercial evaluation.

17.4 Tender if submitted through e-mail or fax shall be summarily rejected.

17.5 Hard copy of Price Bid should not be submitted in the envelope containing Un-priced documents failing which the bid will be summarily rejected.

17.6 Clarifications/exceptions/deviations to the tender terms & conditions and specifications:

- a) SBI expects Bidders to confirm compliance to tender terms & conditions and specifications, failing which the Bidders are liable to be rejected. Hence all Bidders in their own interest are advised to submit their bids in all respects confirming to all terms & conditions of the bid document.
- b) Bids shall be evaluated based on the information/documents available in the bid. Hence Bidders are advised to ensure that they submit appropriate and relevant supporting documentation along with their proposal in the first instance itself. Those participants are not complying the requirements of documents stipulated in the tender will be rejected without any further opportunity.

UNDERTAKING LETTER
(To be submitted along with the Bid)

Assistant General Manager (P&E),
State Bank of India, Premises & Estate Department,
2nd Floor, Local Head Office (LHO)
Bhubaneswar (Odisha-751 001)

Dear Sir,

**SUPPLY, INSTALLATION, TESTING & COMMISSIONING OF AUTOMATIC FIRE
DETECTION & ALARM SYSTEM (AFDAS) AND OTHER ALLIED EQUIPMENTS AT
STATE BANK OF INDIA, JATNI BRANCH, ODISHA**

I/We refer to the tender notice issued by you for works in connection with the above.

I undertake to submit the tender document along with all terms & Conditions, Specifications and subsequent annexure and corrigendum's (if any) duly signed and stamped by authorized representative / signatory on becoming L1. However, we accept all the terms and conditions along with the specifications, Drawings, Layouts etc defined in the tender documents.

I/We hereby offer to perform, provide, execute, complete, and maintain the works in conformity with the drawings, designs, conditions of contracts & specifications schedule of quantities relating to the works.

I/We have satisfied myself/ourselves as to the site conditions, examined the drawings and all aspects of the tender conditions, subject to above, I/We do hereby agree, should this tender be accepted in whole abide by and fulfill all the terms and provisions of the said conditions annexed here to,

Complete the works within stipulated (01 Calendar Months) time as per the work program enclosed with the tender in two or three shifts if considered necessary by the Employer at no extra cost to the Employer.

I/We will submit the 5% security deposit amount in the form of DD/BC or BG in favour of State Bank of India payable at Bhubaneswar as stipulated in the NIT, respectively which, I/We note, will not bear any interest and is liable for forfeiture.

I/We understand that you are not bound to accept the lowest or any tender you receive.

Yours faithfully,

Signature

Designation

Name of Partner / Director of the Firm, authorized to sign or name of person having power of attorney to sign the contract. (Certified true copy of power of attorney should be attached)

Signature and address of witnesses:

a. Signature

Name

Address

b. Signature.....

Name

Address

GENERAL TERMS & CONDITIONS

GENERAL REQUIREMENTS AND MINIMUM TECHNICAL SPECIFICATIONS OF AUTOMATIC FIRE DETECTION & ALARM SYSTEM (AFD&AS)

GENERAL:

The purpose of a fire detection and alarm system is to detect fire at the earliest practicable moment and to give an alarm so that appropriate action can be taken (e.g., evacuation of occupants, triggering of extinguishing processes etc.). An alarm system may be activated by automatic detection devices or by manual operation of manual call points.

The general principles given below are a guide to design and construction of fire detection and alarm systems. A fire detection and alarm system should:

- a) Detect quickly enough to fulfill its intended functions.
- b) Reliably transmit the detection signal.
- c) Translate this signal into a clear alarm indication that will attract the attention of the user in an immediate unmistakable way and indicate the location of fire and initiate operation of ancillary service, such as fire extinguishing system etc.
- d) Remain intensive to phenomena other than those which its function is to detect and
- e) Signal immediately and clearly any supervised fault that might jeopardize the correct performance of the system.

1. SCOPE OF WORK:

- 1.1 The work under this section shall consist of furnishing all labor, material, equipment, and appliances necessary and required to completely install automatic and manual fire detection and alarm system facility as required by the drawings and specified here in after or given in the schedule of qualities.
- 1.2 Without restricting to the generally of the foregoing the fire Detection & Alarm System shall include the following: -
 - a) Optical Detectors, Rate of Rise cum Fixed Temperatures Heat Detectors, Fixed temperature heat detectors, Manual call points, Electronic Hooters/Sounders, Response Indicators, and Accessories as specified.
 - b) Metallic conduits (rigid/flexible), PVC insulated copper conductor cables, armored cables, glands, tees, bends, special fittings, junction boxes etc. as specified.
 - c) Main Fire Alarm Control panels, local control panels (floor panels), batteries, and battery chargers etc. as specified.

2. GENERAL REQUIREMENTS:

- 2.1 All material shall be of the best quality confirming to Specifications and subject to the approval of the Bank Fire Officer.
- 2.2 All conduit pipes/cables shall be fixed truly vertical, horizontal or in slopes as required in a neat workman like manner or as advised by the Fire Officer
- 2.3 All conduits, cables, junction boxes etc. shall be securely fixed to brick/RCC walls and ceilings by suitable clamps at regular intervals. Only approved type of anchor fasteners shall be used.
- 2.4 Control panels shall be so located that they are easily accessible for operations, repairs, and maintenance.

- 2.5 Detectors shall be provided at appropriate spacing as given in IS: 2189:2008. The spacing shall also be in conformity with the drawings and properly coordinating with electrical fixtures, air conditioning ducts / grills, beams and other ceiling services. Contractor shall submit detailed layout drawings to Fire Engineers/Consultants in charge for approval before commencement of work.

3. **SMOKE DETECTORS:**

3.1 **OPTICAL TYPE:**

Optical smoke Detectors shall contain an emitter, a solid-state light emitting diode (LED) which, with its associated lens system, shall produce a hollow circular beam of light. A silicon photocell shall be positioned in the central dark area of the hollow beam, so that in the absence of smoke no light is received. When smoke enters the chamber a combination of reflection and deflection from smoke particles shall cause light from the beam to impinge on the photocell. The detector shall be listed with UL/FM approved.

4.0 **HEAT DETECTORS:**

- 4.1 The heat detectors shall be combined rate of rise cum Fixed temperature, Re-settable type preferably operating on twin thermistor principle where one thermistor is exposed and is therefore in good thermal contact with the surrounding air and responds quickly to changes in air temperature and the other is thermally insulated from the surrounding and responds less quickly resulting in electrical imbalance. One fixed temperature setting the detector shall operate at 60°C. The sensitivity of the detector shall be as per the requirements of IS: 2175 for grade I Heat Detectors. The detectors shall be UL/FM listed approved.

5.0 **MANUAL CALL POINT:**

- 5.1 Each manual call point unit shall comprise of a push button of reputed make enclosed in an M.S./Cast Aluminum Box with provision for cable or conduit coupling/gland from top. The manual push button shall have the words prescribed in clear bold letters on facial window. **"In case of Fire Break Glass,"** installation of the manual push button shall be as per IS: 2189. The push button shall not be shrouded and the same shall be projecting out of the surface of the M.S. Box.

6.0 **ELECTRONIC HOOTER (SOUNDER):**

The dual tone electronic hooter shall be provided so that it gives discontinuous/intermittent audible alarm automatically whenever the automatic/manual detector operates and is distinct from the background noise in every part of the premises. The mode of the alarm sounders shall be quite distinct from any other sounder to be heard. All hooters shall produce a similar sound and shall maintain the same during their operation. Hooter shall be complete with electronic oscillation, magnetic coil (sound coil) and accessories ready for mounting (fixing) and confirming to IS: 2189-2008.

6.1 Sounder cum Strobe: The Sounder Cum Strobe shall confirm to the relevant standards having the following features.

- i.) The Sounder Cum Strobe Shall have audibility level of 85dB.
- ii.) The Sounder Cum Strobe shall have 4 Candela setting 15/30/75/110cd flashing capacity at 1HZ for Visual indications.
- iii.) The Sounder Cum strobe shall be working on NAC.
- iv.) The sounder shall have two audible tone settings.

7.0 **REMOTE RESPONSE INDICATOR:**

The remote Response indicator shall consist of a steady glowing LED similar to the one provided at the base of the detector. This LED shall be mounted within a M.S. box of 16 SWG and connected in parallel to the built-in indicator of the detector by a 2-core cable. The response indicator shall come "ON" as soon as the detector actuates. The M.S. enclosure shall be painted externally and internally in synthetic enamel paint of approved shade. The LED shall be so provided that it is visible from the side also. This should be suitable for both surfaces and recess wall or ceiling mounting. It shall be Dual LED Indicator and operates 12V DC.

8.0 MICROPROCESSOR BASED CONTROL PANEL:

Good quality design and with latest technology for fire alarm control panels. This microprocessor based conventional Fire Alarm Control panel, is designed to be used for Commercial bank's building. The model should be a user friendly 4 or more zone standalone control panel with inbuilt USB and optional Ethernet & GSM module.

8.1 Panel Features:

- a) As per IS -15908: 2011 Standard.
- b) Switched Mode Power Supply.
- c) Modular Construction, Serviceable.
- d) Battery polarity & deep discharge protection.
- e) 16 X 2 Dot Matrix LCD Display.
- f) Event log with Real Time Clock (150 events).
- g) Standby battery backup with built in charging.
- h) Fire / Fault status in unambiguous colored LED indication.
- i) System ON, Mains ON & Standby ON status indication.
- j) Low Battery visual warning with audible tone.
- k) Relay output for actuators, for Fire and Fault.
- l) Zone wise one man Walk Test Facility.
- m) Zone wise Isolation facility with loop voltage cut off.
- n) USB Interface for PC Connectivity.
- o) Compatible to all type of Conventional Detectors.
- p) Optional Ethernet and GSM (SMS) facility.
- q) Includes centralized monitoring facility through Ethernet port.

8.2 GSM Features:

- a) Quad Band GSM/GPRS: 850 / 900 / 1800 / 1900 MHZ.
- b) GSM based SMS Notification includes location details.
- c) Contact wise Event Configurable.
- d) Maximum 15 mobile contacts can be configured via Software.
- e) Separate Fire and Fault message.
- f) 15 Mobile numbers for each event type.
- g) GSM Signal Strength indicator.

8.3 Ethernet Features:

- a) 10/100M high speed, automatically adapts to any TCP/IP interface.
- b) Ready-to-use TCP/IP firmware for fast integration.
- c) Easy configuration with Web browser, serial console, Telnet console or Windows utility.
- d) Low power consumption.

8.4 PC Features:

- a) Monitoring the status of Fire Alarm System
- b) Audible & Visual alerts for Zone wise Fire & fault.
- c) Multiple FACP shall be monitored and controlled from single Desktop with static IP.
- d) User friendly PC software.
- e) Shall supports USB, LAN & WAN connectivity

8.5 Electrical Specification:

- a) **Primary Power:** -120 / 220VAC + 10% -15%, 60 / 50 Hz. 60W
- b) **Standby Power:** - 24VDC (2 Nos. of 12V, 7Ah Sealed Lead acid battery).
- c) Quiescent current: - 60mA (without Ethernet), 102mA (with Ethernet), 128mA (Ethernet & GSM)
- d) **Operating Condition:** - Operating Temperature - 0 - 49° C/32-120° F.
- e) Storage Temperature - 0° to 60 ° C
- f) Relative Humidity - 93 ± 2% RH (non- condensing) at 32 ±2° C/90 ±3° F.
- g) **Notification Appliance Circuits:** - Class B wiring
- h) Operating Nominal Voltage: 24VDC, Current for NACs: 0.6 Amps
- i) End-Of-Line Resistor: 4K7, 1/2 watt
- j) **Charging Circuit:** -
- k) Charging Voltage - 28.0V, ± 2%, Charging Current - 0.5 A (Max.)
- l) **Common Relays:** - Type: Form C, No of Relays: 2, Relay Contact Rating: 2Amps @ 30 VDC, 0.5Amps @125VAC. Power Factor: 1.0
- m) **Initiating Device Circuits (Zone Circuit):** -
- n) All zones are Class B wiring, Normal Operating Voltage: 14- 21 VDC, Alarm Current: 15 - 35mA, Short Circuit Current: 42mA Maximum
- o) Loop resistance: 50 ohms Maximum, End-Of-Line Resistor: 4.7K, 1/2watt, stands by Current: 6.8mA, (2.4mA for Detectors).

8.6 Mechanical Specification:

- a) Dimensions: (350W X 250H X 100D)
- b) Color: Red / White
- c) Construction: 18 Gauge (1.22mm) CRCA sheet with powder-coated finish
- d) IP Rating: IP50
- e) Cable Entry: 16xø19mm Knockout on top of the cabinet

8.7 Compatible Devices:

- a) Photoelectric Smoke detector with base.
- b) Heat detector with base.
- c) Photoelectric & Heat detector with base.
- d) Conventional Manual Call Point.
- e) Conventional Sounder.

9.0 **ELECTRONIC CABLES, WIRING & CONDUITING:**

9.1 All wires / cables to be used for the system shall confirm to the following as specified in BOQ.

- a) PVC insulated copper conductor cables confirming to and marked IS: 694: 1990 having minimum 1.5mm² cross-sectional areas or as specified in BOQ. If stranded at least 0.5mm² cross-sectional should be used.
- b) Armored PVC / Rubber insulated cables confirming to and marked IS: 1554 (Part – I) 1988.

9.2 Joints in the cables shall necessarily be avoided. Where joints are unavoidable for qualified reasons all visible areas of the junction boxes shall be painted signal red.

9.3 The maximum number of wires that can be drawn in conduit shall be governed by the CPWD Specification for internal electrical works (Part-I).

9.4 Insulation on cable should not be lesser than one Mega Ohm when tested with a 500 Volts Megger for any section of the wiring.

10.0 **INSTRUCTION MANUAL:**

10.1 The record engineering drawings and operating instructions shall be supplied by the installers on completion of the installation. Drawings shall clearly indicate, for maintenance and record purposes, the position of various items of the equipment's, junction boxes, sizes and routes of all cables and wires and such other relevant details. If so desired by the user, circuit diagrams of fire alarm system and its components should also be supplied. These drawings and operating instructions shall be kept up – to – date and be available for convenient reference and shall be available for convenient reference and should be in the control room.

10.2 The installer shall supply the user with a logbook. The logbook shall be maintained for recording details, including causes of all the alarms (genuine, practice, test or false), faults, service tests and routine inspections, servicing/repairs, etc, as and when done. Periods of disconnection/in operation should also be shown.

A. REQUIREMENTS FOR DETECTION ZONES THAT CONTAIN NON-ADDRESSABLE AUTOMATIC DETECTION SYSTEM ARE GIVEN BELOW:

- a) Automatic fire detection and alarm system consists of fire detectors and manual call points connected by appropriate cables to sector/zonal panels which in turn are connected to control and indicating equipment (C and I). The equipment and cables of automatic fire detection and alarm system should be independent of any other system or cables and should not be shared with any other system.
- b) If the requirement of detectors in any area is less than 20, division into zones/sectors may not be necessary. Similarly, sectorization may not be necessary if the number of zones is not very large and in case of bigger premises, the premises may be divided into wings and each wing may have sectors/zones.
- c) Size of the conventional panels is normally referred by number of zones. Each zone can be connected with the conventional detectors not exceeding 20.
- d) The floor area of a single zone shall not exceed 2000 m².
- e) If the total area of a building is less than 300 m², a zone can cover more than one floor.
- f) If the total area of a building is more than 300 m², each zone shall be restricted to a single floor.
- g) The search distance, that is, the distance that has to be travelled by anyone responding to a fire alarm signal after entry to the zone in order for the location of the fire to be determined visually, shall not exceed 30 m.
- h) Automatic fire detectors within any enclosed stairwell lift well or other enclosed shaft-like structures shall be considered as a separate zone.
- i) If manual call points are located on the landings of an enclosed staircase, such points at each level shall be incorporated within the zone that serves the adjacent accommodation on that level.
- j) The detectors and manual call points within sectors / zones shall be wired to the control and indicating equipment.
- k) The entire electrical installation pertaining to the entire fire alarm system as described above shall be independent of other systems.
- l) When a signal of fire is given, it is necessary that there shall be no confusion about the zone from which it is received.
- m) In larger premises, the fire alarm system shall be so designed and arranged that it is fully compatible with the emergency procedures and provides at some central or convenient point, or points, an indication of the zone from which an alarm has originated.
- n) If the requirement of detectors or call points is less than 20 in any area, division of the area into zones is not necessary. Similarly, sectorization is not necessary if the number of zones is not very large.
- o) The zoning arrangement for systems in multiple occupations shall take into account the fact that all the premises may not be occupied at the same time. No zone shall include areas in more than one occupancy.
- p) Remote indicator lamps outside doors of rooms, cabins, etc, within a zone may be useful, if doors are likely to be locked.

B. THE FOLLOWING GUIDELINES TO BE FOLLOWED FOR THE INSTALLATION OF AUTOMATIC FIRE DETECTION & ALARM SYSTEM:

- a) The **entire area of the branch including record/stationery room & onsite ATM/E-Corner / CDM enclosure should be covered** with the detectors as per its requirement.
- b) The **equipment's and cables of Automatic Fire Detection & Alarm system (AFD&AS) should be independent of any other system** or cables and should not be shared with any other system.
- c) The electric **connection shall be provided to the system before the main switch through MCB and UPS.**
- d) The **control panel of the system should be installed near the entry/exit** of the Branch / office. The control panel may be fixed on the wall at the height of 1.2 meter, it should be easily approachable, and a key of the control panel may also be tagged with panel.
- e) If the detectors are providing under/over the false ceiling, the **armored cable / wire should be clipped / hooked with the roof. The armored cable / wire should not be laid out over the false ceiling at any cost.**
- f) **Circuits for the detectors and the manual call points (MCP) shall be different. MCP shall be fixed at a height of 1.4 mete above the floor level**, at easily accessible, well illuminated, and conspicuous positions, which are free of obstructions. It shall be located preferably near entry /exit / staircases.
- g) At the time of installation and prior to commissioning, **every detector should be allotted an identification number** (permanent marker) proceeded by alphabetic initials. For example, Z1/SDI/8 means zone -1, Ionization detector, 8th detector or Z2/SDO/5 means zone-2, optical detector, 5th detector or Z3/DHT/4 means zone- 3, heat detector and 4th detector.
- h) Under the flat ceilings and ceiling height up 4/5 meter, the **spacing between the detectors should not be more than 5 to 7 meter** in a protected area.
- i) Detectors shall not mount within **50cm of any walls, partitions, or obstructions.**
- j) Detectors shall not be mounted within **01meter of any air inlet or a forced ventilation** system.
- k) Detectors should always be mounted on the ceiling only and shall be placed on the protected side of the premises on the ceiling **1.5 meter from any door, window, or any opening** in the wall partitions.
- l) Detector sitting shall be such that a **clear space of 50cm is maintained below** each detector.
- m) Auto dialer should be **programmed with minimum 4/5 mobile numbers among the branch functionary including branch manager and must be armed 24x7hrs** with the fire alarm panel. The power supply of Auto dialer shall be given from fire control panel only.
- n) After installation of the system, a **demonstration regarding mode of operation of the system should be conducted in the branch / office before the branch functionary.** The function of automatic fire detection & alarm system along with auto dialer should be known to the users and the nearby fire station mobile number/phone number may also be connected with system. The fire station should also be informed regarding the function of captioned system in case of any emergency.

Note: - in case of any query in this regard you may seek clarification from Fire Officer (☎-06742600526/7600035062), Fire Control Room, Local Head Office, Bhubaneswar.

C. TERMS AND CONDITIONS FOR NEW INSTALLATION

1. You shall, under no circumstances, be allowed any enhancement of rates for **12-Months with effect from the date of installation.** The rates accepted are all inclusive, final, rates and no extra or additional charges other than the ones quoted in the respective tenders shall be allowed. It is also made clear that you completely indemnify the Bank against such dues and / or any claims made by any statutory authority subsequently, and to settle all such claims shall remain your responsibility.
2. **Warranty / Guarantee** shall be a comprehensive one, of free replacement of any failed components in the system, including insulator or conductor failure in the cables. Except in cases of misuse, relocation, accidents or sabotage and replacement of batteries (**beyond their warranty**) for the battery back-up. *The warranty shall also entail free, on-site, preventive maintenance of the system* at quarterly intervals as per maintenance schedule given separately. There shall be no let or relief on this account. A proper record of all such maintenance work duly authenticated by the Branch shall be kept by you and a copy of the same shall be submitted to the Fire Officer for his record.
3. The system should have an inherent likability to an auto-dialer system and a power shut down switch through MCB.
4. The batteries shall be covered by a separate warranty, which in no case shall be less than the one issued by the concerned manufacturer. **Notwithstanding any-other provision the replacement of Batteries after expiry of their own warranty shall be paid for by the Bank.**
5. This work order pertains to all aspects of Supply, Installation, on-site Testing and Commissioning of the whole system and includes the cost of all the accessories required.
6. The system should be installed in conformity with IS: 2189-2008 and various codes of practices listed therein.
7. All cables/wires, detectors should be properly anchored. The wiring for the system should be so spaced as to not cause any electrical interference in the data cables, this aspect shall be tested and confirmed by the contractor during the progress of the work. Whenever the data cables have to be crossed as far as possible the pattern of the other electrical wiring shall be followed.
8. The battery back-up pack should be powered by long life sealed, maintenance free batteries as specified above, which are chargeable and are constantly fed with charging current through the panel.
9. The panel must be weather, vermin and water- proof and conform to the specifications laid down by IS: 2189-2008. The relevant test certificate must be enclosed.
10. *A detailed schematic diagram of the whole system and cabling / wiring shall have to be handed over to the branch for its record.*
11. The cabling / wiring should be tagged with color coded, and which shall remain uniform throughout the Branch for the ease of subsequent identification and maintenance work, the marking shall be a band of fire red color paint on the cable at one meter spacing, it shall also be an aid to measuring the length of cable used.
12. The **Performance Guarantee Deposit** to ensure the performance of the contractor, shall be as detailed above. This deposit shall be held in the form of Demand Draft (DD)/BG for the like amount, for the period of warranty plus AMC of 03 years minimum

from the date of commissioning of the system, at the P&E Deptt, at LHO, Bhubaneswar. The amount shall stand released to the contractor at the end of the said term, if no bar is placed on such release, in writing, by the monitoring authority of the contract **on the grounds of proven deficiencies, inability or unwillingness in fulfilling the contractual obligations. In case of any serious deficiency by the contractor in fulfilling the contractual obligations, the Bank shall have the right to forfeit the said deposit either fully or partly, as it deems reasonable.**

13. During the currency of the **warranty and annual maintenance contract, any number of fault complaints shall have to be attended-to, free of charge. It is to be noted well that any such complaint must be attended within the timeframe laid down i.e., within 24 hrs. Failure on this score may invite penal action.**
14. The initial maintenance during the warranty period of the system as well as the battery (which is covered by its separate warranty) will be free of charge and shall include free replacement of any / all failed components / spares, with regular quarterly visits to carry out maintenance of the system, as per the enclosed schedule and scope of work.
15. You shall have to ensure that the system does not remain non-functional for more than 24 working hours from the time of reporting of fault in urban Area and 48 working hrs. in non-urban area. Deviations on this score shall invite penal actions / deduction as listed.
16. The Branch shall extend all co-operations to facilitate the smooth execution of this contract. Any work which is not in the scope of this contract i.e., work required for concealing the cables etc. if deemed necessary by the Branch, may be arranged by the Branch at its own cost. Any difficulty faced by the contractor in execution of this contract shall be brought to the notice of the Fire Officer without any delay.
17. The PVC insulated armored cable should conform to I.S.:1554-1976 Part-I.
18. A sample of all the components to be used should be provided by the contractor to the P&E Deptt. LHO, Bhubaneswar as well as kept at the sight for comparison/verification.
19. The Bank shall be at liberty to change the method and specification of the work within the limits of the rates quoted.
20. In partial modification under the head relevant clause of EOI Settlement of Dispute, the court of jurisdiction will be Bhubaneswar.
21. You shall have to co-ordinate and co-operate with the other people who are working at the site.
22. You shall have to complete the assigned work within 60 days from the date of receipt of firm order and handing over of clear site with unstinted access. **A penalty of 1% of the cost of the work shall be imposed for every additional week beyond the 60 days period mentioned above if the delay is caused by any acts of omission / commission by you. Such penalty shall be limited to 5 % of the concerned work order.** In the event this limit is breached the Bank reserves the right to cancel the whole contract and forfeit the EMD.
23. You shall make necessary arrangements to acquire insurance cover against fire, damage, accidents, injury to workman etc. The acceptance of this work-order by the contractor shall automatically indemnify the Bank against any claim pertaining to or arising out of the said work.
24. In case, the approved series detectors are not available, detectors of comparable quality with UL/BS/CE/FM certification should be provided at a cost which shall be negotiated at that point of time.

25. The drawings, survey reports and other documents created for this project by the vendors shall become Bank's property on submission to the Bank and the vendor shall no right or claim on them save for the purpose of reference for the project work.
26. **Notwithstanding any condition stipulated above, the Bank shall have the right to instantly revoke / cancel the said contract, partially or fully, with or without forfeiture of the Performance Guarantee Deposit; on the grounds of proven deficiencies, inability or unwillingness in fulfilling the contractual obligations as the Bank deems fit and reasonable. Further, the Bank reserves the right to terminate/cancel the contract at its sole discretion with liability to pay only for the equipment supplied and installed at its offices.**

27. Initial Installation Inspection Tests

- a) After installation, a visual inspection of all the detectors should be made to make sure that they are properly sited. Each detector should be inspected to ensure that it is properly mounted and connected.
- b) Restorable heat detectors and restorable elements of combination detectors should be tested by a heat source, such as a hair dryer, or a shielded heat lamp until it responds, making sure that the sensing element is not damaged. After each heat test, the detector should be reset. Precautions should be taken to avoid damage of the non-restorable fixed temperature element of a combination rate of rise/fixed temperature detector.
- c) Non-resettable fixed temperature heat detectors which are not to be heat-tested should be tested mechanically or electrically for fire alarm function.
- d) Heat detectors with replaceable fusible alloy element should be tested first by removing the element to see whether contact operate properly and then reinserting them in proper position.
- e) In periodic testing, heat detectors should be visually examined for damage or other conditions (such as heavy coats of paints, etc) likely to interfere with the correct operation.
- f) Each smoke detector should be tested to initiate an alarm at its installed location with smoke or other approved aerosol which demonstrates that the smoke can enter the chamber and initiate an alarm.
- g) In order, to ensure that each smoke detector is within its sensitivity range, it should be tested using either:
 - a) A calibrated test method, or
 - b) A manufacturer's/supplier's approved calibrated sensitivity test instrument, or approved control equipment arranged for the purpose, or other approved calibrated sensitivity test method.
- h) Detectors found to have sensitivity outside the approved range should be replaced.

NOTE - Detector sensitivity **cannot be tested** or measured using any spray/smoke producing device that administers an unmeasured concentration of aerosols / smoke into the detector.

INSTALLATION CERTIFICATE

1. It is certified that the Automatic Fire Detection & Alarm system (AFD&AS) installed inBranch (Code No.....), under Region....., Administrative Office
2. The system is installed as per State Bank of India, Local Head Office, tendering terms & conditions. All the items of the system are as per invoice No.dated have been installed in the branch and physically verified by the Branch Manager and working satisfactorily.
3. The control panel of the AFD&AS is directly connected main electrical supply through MCB; auto dialer is fitted with the working SIM, and important 05 telephone numbers are programmed.
4. **All zones area of coverage marked, and every detector allotted an identification number** (permanent marker) proceeded by alphabetic initials. For example, Z1/SDI/8 means zone -1, Ionization detector, 8th detector or Z2/SDO/5 means zone-2, optical detector, 5th detector or Z3/DHT/4 means zone- 3, heat detector and 4th detector.
5. *It is also certified that the power supply to the AFD&AS has been connected through the branch UPS system for secondary power back up.*
6. Working and mode of operation of the AFD&AS has been explained to the following staff members by Sri of M/S., including the Branch Manager, Accountant, System Room in charge, Cash Officer, Guard (If posted) etc.

S. NO.	Name	Designation	Signatures
1.		BM	
2.			

Signature

(NAME.....)

M/S.....

Countersigned by

Branch Manager (With Seal)

D. TERMS & CONDITIONS FOR COMPREHENSIVE ANNUAL MAINTENANCE CONTRACT (AMC), MAINTENANCE SCHEDULE AND SCOPE OF WORK FOR AUTOMATIC FIRE DETECTION & ALARM SYSTEM'S (AFD&AS):

1. **Validity of Contract Period:** The AMC shall be valid for warranty period.
2. **Mandatory Visits:** *Four visits in a year at an interval of 03 months with 15 days grace period. Noncompliance of the mandatory visit schedule by the vendor will invite penal action which would be termination of the contract agreement. No extra charges will be paid for emergency visit/visits during the contract.*
3. Representative (trained technician) to carry out maintenance as per given schedule and scope of work. Any failure on this aspect shall invite penal action. A copy of the said report shall be duly signed by the Branch Manager as a record of orderly progress of the contract.
4. Representative (trained technician) of the firm should arrange to visit branches/offices during working hours and will carry firm's issued identity card in original, a copy of AMC allotment letter.
5. **The said contract shall be an all-inclusive contract and shall entail free repair / replacement of any / all defective / failed components of the system including cable faults. No charges other than the stipulated Annual Maintenance Charges shall be payable by the Bank on any account.**
6. This clause shall apply to **pre** and **post** warranty as well as **free** and **paid** maintenance work. The vendor shall have to maintain the system for a total period of 05 years from the date of commissioning of the system, by entering a **paid** maintenance contract, **post warranty period**, with the Branch for the above said period, in the first instance.
7. This Maintenance Contract shall be an all-inclusive contract and **entail free replacement of any / all failed components / spares during its currency, except the replacement of detectors at the end of their normal, useful life of 10 years. Such replacement may be arranged by the Bank at its discretion through the existing vendor as per approved rates.**
8. The vendor will have the maintenance bills endorsed by the respective Branch Managers along with visit reports and submit to the Fire Officer for their verification and scrutiny. The bills of all the branches will be centrally paid by the respective Regional Office.
9. **SCOPE OF WORK:**
 - a) Checking and testing the general operating state of panel(s) in normal and during power supply failure and removal of any defect if found.
 - b) Checking and testing the operational, readiness, during mains supply/failure and testing of battery for charged condition.
 - c) Performance checks of external hooters, visual alarm (s) of panel(s), manual call point's station, and response indicator(s).
 - d) Cleaning and testing of each and every detector at all floors. Cleaning and testing of the detectors should be done so that the detectors should be cleaned **once in every quarter**. The test should be carried out by means of giving minimum smoke to the smoke detectors. For heat detectors minimum temperature should be applied.
 - e) Servicing and testing of manual call points for each Zone.
 - f) Performance checks of all Smoke/Heat detectors.

- g) Performance check of open & short circuit conditions resulting in a faulty alarm indicating in the panel.
 - h) Checking / testing of main control panel, and all the hooters along with testing of all the repeat functions of fire signal and fault signal on various floors of the building and ensuring the same to be in proper working condition.
 - i) Ensuring that the required power supply (AC/DC) always exists in the system.
 - j) Wherever there is confined space in the location of the system (viz. MCP, LCP'S & Junction boxes) these areas shall be kept free from all foreign materials.
 - k) While opening the detector from the base, the signal "open" should be shown simultaneously in Local Control Panel & Main Control Panel.
 - l) If there is any short circuit in detector line, the signal should be shown simultaneously in Local Control Panel & main control panel. If any defects are noticed during the periodical maintenance service, these will be rectified immediately and will also be brought to the notice of the Bank for rectification.
 - m) Checking up all the wirings.
 - n) Lamp(s) testing to be carried out of all panel(s).
 - o) Logbook/Security Register should be maintained and the date & working of the system will be recorded. Any incident of fire or fault shall be recorded by our personnel and we shall fill up the remarks column after job has been attended by the vendor. This will ensure that over a period of years, complete feedback is available. These entries will be countersigned by the vendor or/and by the department.
 - p) Any defects found while carrying out maintenance/testing of the system should be immediately brought to the notice of the concerned Branch Manager or person deputed for this purpose. The vendor will ensure that it replaces defective/damaged part (s) only after obtaining concurrence from the Branch Manager. The Branch Manager will invariably keep the Controller as well as the Fire Officer informed.
 - q) During the term of this agreement, the vendor shall maintain the equipment in good working condition. On receipt of information from the branches/offices the vendor shall respond as per given time frame:
 - a) *Berhampur, Cuttack, Bhubaneswar, Raurkela, and Sambalpur Municipal city area within **24 hours**.*
 - b) *Other than the above-mentioned area within **48 Hours**.*
10. Three copies of visit report will be prepared after testing/maintenance of the system by the authorized technician of the company. The Branch Manager / Authorized officials will be stamped and countersign all reports after satisfying themselves that the system is fully functional.
- a) ***One copy will be handed over to the branch,***
 - b) ***Second copy to be retained by the vendor,***
 - c) ***Third copy shall be sent to Fire Officer, P&E Department at Local Head Office, Bhubaneswar.***
11. The vendor or its employees undertaking the work to maintain total and complete secrecy and assure not to communicate or allow to be communicated to any person or divulge in any matter / information relating to the ideas, concepts, know-how, techniques, data, facts, figures, and all information whatsoever concerning, relating to the bank and its affairs to which the employees have the access.

12. The repairs / servicing of the system / equipment's shall be done as per the guidelines of the respective manuals of the manufacturers.
13. The spare parts used for the repair / servicing of the whole detection system shall be of the original make of the plant & system. Any damage caused to the plant / system due to the use of spurious parts etc. shall be recovered from the Vendor if at all used as recommended by the vendor or its representatives. In case the spare parts / components / accessories are supplied for any repair / servicing of the system / equipment, they shall be got checked by the Branch Manager and after his satisfaction / approval, the spare parts should be used for repair / replacement / servicing.
14. All the works under the AMC to be attended by Qualified Technical / Engineer by the vendor.
15. All disputes arising out of or connected with this contract shall be deemed to have arisen in Bhubaneswar City only, under the jurisdiction of the courts of Bhubaneswar.
16. In case the Fire Alarm system requires major repairs, the vendor shall provide a replacement before taking the defective system for repairs. If any part of the system requires to be changed, rates applied shall be as per Bank's Approved rates.
17. AMC / SERVICING SLIP: Vendors / Firms must maintain a record in their book of records wherein schedule for AMC Visit as mentioned below and accordingly performed the work of Servicing / Maintenance within the due date and paste a service slip / tag (Bin Card inside transparent plastic cover) at the Fire Alarm Control Panel body, as sample given below and ensure service / maintenance slip should be with good quality of adhesive if pasted on the body.

ANNUAL MAINTENANCE CONTRACT (AMC) SLIP			
Vendor / Firm Address:			
Model/Make			
Zone		Two / Four / Six / Eight	
Auto Dialer		Available / Not Available	
Date of New Supply/Installation			
DETAILS OF VISIT UNDER AMC		Remarks	Signature
First AMC Visit Date			
Second AMC Visit Date			
Third AMC Visit Date			
Fourth AMC Visit Date			
ON CALL VISIT DETAILS			
First Visit Date			
Second Visit Date			
Third Visit Date			
ZONE MARKING	AREA COVERED		
ZONE NO-1			
ZONE NO-2			
ZONE NO-3			
ZONE NO-4			

Manual of Operation of the Control Panel for the occupants to be also pasted at there, in case of Bin-card may be available on backside.

18. **MODE OF PAYMENT:**

- a) The vendor will have the maintenance bills endorsed by the respective Branch Managers along with the service certificates (as annexure C) duly certified by Branch Manager and submit the same to the concerned Region after vetting by the Fire Officer. The bills of all the branches will be centrally paid by the respective Regional Business Office.
- b) The AMC charges shall be payable **on a pro- rata basis at half-yearly intervals or on quarterly basis** at the completion of the concerned half / quarterly year. The Bank reserves the right to cancel this contract by giving one month's notice in writing, in such cases, charges due till the effective date of cancellation shall be paid.

19. **PENALTY CLAUSE:**

- a) If the complaint is not satisfactorily attended within the stipulated period of time, the Bank will levy a ***penalty of 100/- per day for each instance of delay up to maximum 10% of the AMC work value*** and the same shall be deducted from the AMC amount as applicable.
 - b) In case of repeated complaints from the branches, the vendor's services may be discontinued, and the Bank may also delist him from the panel and / or blacklist the company from the bank.
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**SCHEMATIC LAYOUT DIAGRAM (ACTUAL TO BE MADE AS PER THE
INSTALLATION AND TO BE
SUBMITTED)**



