WEST BENGAL MEDICAL SERVICES CORPORATION LTD.

(Wholly owned by the Government of West Bengal)

Swasthya Sathi, GN-29, Sector-V, Salt Lake, Kolkata-700 091.

NOTICE INVITING TENDER DOCUMENTS FOR

Comprehensive Annual Operation & Maintenance (with manpower & consumables) Contract for Fire Fighting, Fire Alarm & Fire Detection System installed at various locations of the (G+4) storied Arambagh Super Specialty Hospital buildings (Internal & External) at Arambagh Govt. Medical College campus.

(NIT Reference No. :- WBMSCL/NIQ-05/2022, Dated – 04/01/2022)

WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED

(Wholly Owned by the Government of West Bengal)

Registered Office: Swasthya Sathi, GN-29, Sector-V, Salt Lake, Kolkata-700091
Phone: 033-4034-0300 ◊ Email: info@wbmsc.gov.in ◊ website: www.wbmsc.gov.in

NIT Ref No. :WBMSCL/NIQ-05/2022 Dated : 04/01/2022

Managing Director, West Bengal Medical Services Corporation Limited, Swasthya Sathi, GN-29, Sector-V, Kolkata - 700 091, invites e-tender for the works detailed in the table below

(Submission of Bid through online)

Sl. No.	Name of the work	Earnest Money (Rs.)	Cost of Tender documents (Rs.) (Nonrefundable)	Time of Completion	Name & address of the Office
01.	Comprehensive Annual Operation & Maintenance (with manpower & consumables) Contract for Fire Fighting, Fire Alarm & Fire Detection System installed at various locations of the (G+4) storied Arambagh Super Specialty Hospital buildings (Internal & External) at Arambagh Govt. Medical College campus.	10,000/-	NIL	01 (One) year	Managing Director, West Bengal Medical Services Corporation Limited, Swasthya Sathi Building, GN29, Sector –V, Saltlake,

Eligibility of Contractor: Intending bidders having Trade license in similar nature of job should produce credentials of a similar nature of completed work of the minimum value of (i) Rs.4,00,000/-(Rupees Four Lacks) during last 5(Five) years prior to the date of issue of this tender notice or (ii) Two similar nature of completed work, each of the minimum value of Rs.3,00,000/-(Rupees Four Lacks)during last 5(Five) years prior to the date of issue of this tender notice or (iii) One single running work of similar nature which has been completed to the extent of 80% or more and value of which is not less than the Rs.4,00,00)/-(Rupees Four Lacks).

Note:

a) For contract value exceeding 2.5 lakh deductions of TDS on GST is mandatory.

b) Quoted rate must be inclusive of GST.

c) Completion certificate should contain
i) Name of work, ii) Name of Agency, iii) Amount put to tender, iv) Tender No, v) Schedule month and year of commencement and completion as per the work order, vi) actual date of completion, vii) Gross value of the work done as per final bill.

d) Payment will be made after getting the work done certificate & recommendation from the respective Site Engineer.

e) The prospective bidders must have the credential(s) of satisfactory completion as a prime agency during the last 5(five) years from the date of issue of this Notice as mentioned in Eligibility criteria under authority of State/ Central Govt., State /Central Govt. undertaking/ Statutory Bodies Constituted under the Statute of the Central / State Govt.

f) Payment certificates in lieu of credentials will not be accepted.

g) Valid up to date clearance of Income Tax return / GST Registration Certificate/ Professional Tax Enrolment/latest Deposit Challan / P.T. (Deposit Challan) / Pan Card / License / Voter ID Card for self-identification to be accompanied with the Technical Bid Documents, Income Tax Acknowledgement Receipt for latest assessment Year to be submitted.

h) The contractors who have been delisted of debarred by any government department shall not be eligible in anyway.

i) Joint venture will not be allowed to participate in the above NIT.

j) A prospective bidder participating in a single job either individually or as partner of a firm shall not be allowed to participate in the same job in any other form.

k) A prospective bidder shall be allowed to participate in a single job either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single job, all his applications will be rejected for that job.

l) Where there is a discrepancy between the unit rate & the line item total resulting from multiplying the unit rate by the quantity, the unit rate quoted shall govern.

m) Prevailing safety norms has to be followed so that LTI (Loss of time due to injury) is zero.

n) No mobilization /secured advance will be allowed.

o) Agencies shall have to arrange land for erection of Plant & Machineries, storing of materials, labour shed, laboratory etc. at their own cost and responsibility.

p) Constructional Labour Welfare Cess @ 1 % (one percent) of the cost of construction will be deducted from every bill of the selected agency. GST, Royalty & all other Statutory Levy / Cess will have to be borne by the contractor. As the rates in the Schedule of rate are inclusive of GST & Cess as stated above.

q) In connection with the work, Arbitration will not be allowed. The Clause No. 25 of 2911(ii) is to be considered as deleted clause vide gazette notification no 558/SPW-13th December, 2011.

r) The work is of URGENT in nature and agency entrusted for it shall have to complete the work within stipulated time without any failure.

s) Refund of EMD: The Earnest Money of all the unsuccessful bidders, deposited online, shall be refunded in accordance with the Memorandum of the Finance Department vide No. 3975-F(Y) dated 28th July, 2016.

t) Penalty for suppression / distortion of fact. Submission of false document by tenderer is strictly prohibited & if found action may be referred to the appropriate authority for prosecution as per relevant IT Act with forfeiture of earnest money forthwith.

u) The Earnest Money may be forfeited if ; -

i) If the Bidder withdraws the Bid during the period of Bid validity.
ii) In case of successful Bidder, if the Bidder fails to execute formal agreement within the stipulated time period.
iii) During scrutiny, if it is come to the notice of tender inviting authority that the credential or any other document which were uploaded & digitally signed by the Bidder are incorrect /manufactured / fabricated.

v) The successful Bidder shall have to execute Formal Agreement with Managing Director, West Bengal Medical Services Corporation Limited within 7(Seven) days from the issuance of Provisional Work order.

w) Bank guarantee shall be accepted for the purpose of the security.

1. In the event of e–filing, intending bidder may download the tender documents from the website: http://https://wbtenders.gov.in directly with the help of Digital Signature Certificate. Necessary Earnest Money will be deposited by the bidder electronically online through his net banking enabled bank account, maintained at any nationalized bank by generating NEFT/RTGS challan from the e-tendering portal and also to be documented through e-filing.

   As per G.O. No. 1592 – F(Y) dated. 20.03.2014 of the Finance Dept. of Govt. of West Bengal, in case of e–tendering, EMD/Bid security will have to be submitted as soft copy (scanned copies of the originals) along with the tender for instruments and in case of deposit of money it should compulsorily be deposited on – line by the bidders. The L1 bidder will submit the hard copy of the documents to the tender inviting authority with his acceptance letter of the LOI within specified time as mentioned in the letter of acceptance. Failure to submit the hard copy with the acceptance letter within the time period prescribed for the purpose may be construed as an attempt to disturb the tendering process and dealt with accordingly legally including blacklisting of the bidder.

2. Both Technical bid and Financial Bid are to be submitted concurrently duly signed digitally in the website https://wbtenders.gov.in

3. Dully filled in copies of **Section – II (Forms I to IV)**&**FORM-A in Section- III** in prescribed proforma with proper dated signature in the relevant spaces to be uploaded electronically.

   Documents in support of the information furnished in Forms Section-II (Form I to IV), must be attached/uploaded for evaluation and the file number & page number has to be indicated in the respective column of the Form.

4. i) On selection of RTGS/NEFT as the payment mode, the e-Procurement portal will show a pre-filled challan having the details to process RTGS/NEFT transaction.
   ii) The bidder will print the challan and use the pre-filled information to make RTGS/NEFT payment using his Bank account.
   iii) The EMD of the bidders disqualified at the technical evaluation will be refunded through an automated process to the respective biddres' bank accounts from which they made the payment transaction.

5. 4. The Financial Offer of the prospective Tenderer will be considered only if the Tenderer qualifies in the Technical Bid. The decision of the **Managing Director, WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED** will be final and binding on all concerned and no challenge against such decision will be entertained.

6. In case of inadvertent typographical mistake found in the Specific Price Schedule of Rates i.e. Bill of Quantity (BOQ), the same will be treated as to be so corrected as to conform with the prevailing relevant Schedule of Rates and/or Technically Sanctioned Estimate.

7. Running payment for work may be made to the executing agency as per availability of fund. The executing agency may not get a running payment unless the gross amount of Running Bill stands at least **25% (twenty-five percent)** of the tendered amount. Provisions in Clause(s) 7, 8& 9 contained in W.B. Form No. 2911(ii) so far as they relate to quantum and frequency of payment is to be treated as superseded.

8. Bids shall remain valid for a period not less than 120 (one hundred twenty) days after the dead line date for Financial Bid submission.

9. Important Information:

DATE AND TIME SCHEDULE:

Sl. No.	Particulars	Date & Time
1	Date of uploading of NIeT Documents (online)(Publishing Date)	07.01.2022 at 09.00 AM
2	Tender documents download start date (online)	07.01.2022 from 10.00 AM
3	Bid proposal submission start date (online)	10.01.2022 from 09.00 AM
4	Technical & Financial Bid proposal Submission end date(online)	13.01.2022 up to 02.00 PM
5	Bid opening date of Technical evaluation (online)	14.01.2022 at 12.00 PM
6	Bid opening date of Financial proposal	To be notified later

10. Cost of Tender Documents: **NIL** (As per Notification of the Secretary, Public Works Department, CRC Branch, Government of West Bengal vide No. 199-CRC/2M-10/2012 dated: 21/12/2012 communicated by the Technical Secretary, Public Works Department, Government of West Bengal that the intending tenderers shall not have to pay the cost of tender documents for the purpose of participating in e-tendering.)

11. Earnest Money: The amount of Earnest Money is to be submitted Online through his net banking enabled bank account, maintained at any nationalized bank by generating NEFT/RTGS challan from the e-tendering portal and also to be documented through e-filing. The process of deposit of earnest money through offline instruments like Bank Draft, Pay Order etc. will be stopped for e–tender procurement of this office wef. 01.09.2016.

Once the financial bid evaluation is electronically processed in the e-Procurement portal, EMD of the technically qualified bidders other than that of L1 and L2 bidders will be refunded through an automated process to the respective bidders' bank accounts from which they made the payment transaction. If the L1 bidder accepts the LOI and the same is processed electronically in the e-Procurement portal, EMD of the L2 bidder will be refunded through an automated process to his bank account from which he made the payment transaction.

The earnest money of the successful bidder (being converted to security deposit) deposited, will remain under the custody of the department till satisfactory completion of the work in full including extended quantity if ordered for. Besides this, necessary percentages shall be deducted from the progressive bids **so as to make it 3% (Ten percent) of the value of work billed for. [as per memorandum No. 201-F(Y), date 18th Jan'21]**

12. The Bidder, at his own responsibility and risk is encouraged to visit and examine the site of works and its surroundings and obtain all information that may be necessary for preparing the Bid and entering into a contract for the work as mentioned in the Notice Inviting Tender, before submitting the offer with full satisfaction. The cost of visiting the site shall be at his own expense.

13. The intending Bidders should clearly understand that whatever may be the outcome of the present invitation of Bids, no cost of Bidding shall be reimbursable by the Department. The Managing Director, WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED reserves the right to reject any or all the application(s) for purchasing Bid Documents and/or to accept or reject any or all the offer(s) without assigning any reason whatsoever and is not liable for any cost that might have been incurred by any Tenderer at the stage of Bidding.

14. The intending bidders are required to quote the rate online only. No offline tender will be entertained.

15. If more than one Bidder quoted same rate and which are found lowest at the time of opening, such similar multiple rates will not be entertained / accepted. Lowest offer will be ascertained by sealed bid amongst the lowest bidders.

16. Contractor shall have to comply with the provisions of (a) the contract labour (Regulation Abolition) Act. 1970 (b) Apprentice Act. 1961 and (c) minimum wages Act. 1948 and any other notification thereof or any other laws relating thereto and the rules made and order issued there under from time to time.

17. During the scrutiny, if it comes to the notice of the tender inviting authority that the credential(s) and/or any other paper(s) of any bidder is / are incorrect/ manufactured/fabricated, that bidder(s) will not be allowed to participate in the tender and that application will be rejected outright.

18. The Managing Director, WBSMCL reserves the right to cancel the N.I.T. or issue corrigendum notices to the NIT due to unavoidable circumstances and no claim in this respect will be entertained.

19. List of "Technically Qualified Bidders" will be published in the web portal only. Financial Bid will be opened within a short period after such publication. Therefore, Bidders are requested to view the tender status on a regular basis.

20. In case of any objection regarding prequalifying an Agency, that should be lodged to the Managing Director, WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED within 1(one) day from the date of publication of the list of qualified agencies and beyond that time schedule no objection will be entertained.

21. Before issuance of the work order, the tender inviting authority may verify the credential(s) and/or other document(s) of the lowest tenderer, if found necessary. After verification, if it is found that the

document(s) submitted by the lowest tenderer is/are either manufactured or false, the work order will not be issued in favour of the said Tenderer.

22. If any discrepancy arises between two similar clauses on different notifications, the clause as stated in later notification will supersede former one in following sequence; -

a) Notice Inviting Tender
b) Special Terms and Conditions
c) Financial Bid
d) Schedule of Works (**as per Section III)**

All works covered in the clause appearing hereinafter shall be deemed to form a part of the appropriate item or items of works appearing in the work schedule whether specifically mentioned in any clause or not and the rates quoted shall include all such works unless it is otherwise mentioned that extra payment will be made for particular works.

Intending tenderers are required to submit online attested/self-attested photocopies of valid enlistment renewal certificate, valid partnership deed (in case of partnership firm), current Professional Tax Deposit Challan / Professional Tax Clearance Certificate, PAN Card, Trade License from the respective Municipality, Panchayet etc. (in case of S & P Contractors only), [Non statutory documents]

In case of Registered Unemployed Engineers' Co-operative Societies and Registered Labour Cooperative Societies, attested photocopies of documents of credentials showing satisfactory completion of a single work in any Government Department commencing on or after 01.04.2009 of value not less than 40% of the Estimated Cost of the work applied for, 'Certificate of Registration' from the respective Assistant Registrar of Co-operative Societies, Professional Tax Deposit Challan / Professional Tax Clearance Certificate, PAN Card, must be submitted online. Payment certificates in lieu of credentials will not be accepted. [Non statutory documents]

The intending tenderer is required to quote the rate in figures as well as in words as per the FORM A in SECTION III.

Conditional / incomplete quotation will not be entertained.
Issuance of work order as well as payment will depend on availability of fund and no claim whatsoever will be entertained for delay of Issuance of work order as well as payment, if any. Intending tenderers may consider this criterion while quoting their rates.

If any tenderer withdraws his offer before acceptance or refuse within a reasonable time without giving any satisfactory explanation for such withdrawals, he shall be disqualified from submitting tender to WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED for a minimum period of 1(one) year.

Tax and other deductions shall be made as below:

i) GST will be deducted as applicable.
ii) Cess @ 1% (One Percent) of the cost of construction works will be deducted from the bills of the contractors on all contracts awarded on or after 01.11.2006 in pursuance with G.O. No. 599A/4M-28/06 dated 27.09.2006.
iii) 2% (Two percent) Income Tax of the cost of construction work will be deducted from the bill.
iv) Security Money deposit @ 1% (One Percent) will be deducted from the progressive bills in addition to the earnest money to make a total deposit of 3%(Ten Percent) of the value of work executed.

- Modification in the West Bengal Form No.: 2911/2911(i)/2911(ii)Clause 17 of CONDITIONS OF CONTRACT of the Printed Tender Form shall be substituted by the following vide Govt. Notification No 5784-PW/PW/L&A/2M-175/2017 dated 12.09.2017:

'Clause 17 - If the contractor or his workmen or servants or authorized representatives shall break, deface, injure, or destroy any part of building, in which they may be working, or any building, road, road-curbs, fence, enclosure, water pipes, cables, drains, electric or telephone posts or wires, trees, grass or grassland or cultivated ground contiguous to the premises, on which the work or any part of it is being executed, or if any damage shall happen to the work from any cause whatsoever or any imperfection become apparent in it at any time whether during its execution or within a period of three months or one year or three years or five years, as the case may be (depending upon the nature of the work as described in the explanation appended hereto) hereinafter referred to as the Defect Liability Period, from the actual date of completion of work as per completion certificate issued by the Engineer-in-Charge, the contractor shall make the same good at his own expense, or in default, the Engineer-in-Charge may cause the same to be made good by other workmen and deduct the expense (of which the certificate of the Engineer-in-Charge shall be final and binding on all concerned) from any sums, whether under this contract or otherwise, that may be then, or at any time thereafter become due to the contractor from the Government or from his security deposit, either full, or of a sufficient portion thereof and if the cost, in the opinion of the Engineer-in-Charge (which opinion shall be final and conclusive against the contractor), of making such damage or imperfection good shall exceed the amount of such security deposit and/or such sums, it shall be lawful for the Government to recover the excess cost from the contractor in accordance with the procedure prescribed by any law for the time being in force.-
Provided further that the Engineer-in-Charge shall pass the "Final Bill" and certify thereon, within a period of thirty days with effect from the date of submission of the final bill in acceptable form by the contractor, the amount payable to the contractor under this contract and shall also issue a separate completion certificate mentioning the actual date of completion of the work to the contractor within the said period of thirty days. The certificate of the Engineer-in-Charge whether in respect of the amount payable to the contractor against the "Final Bill" or in respect of completion of work shall be final and conclusive against the contractor . However, the security deposit of the work held with the Government under the provision of clause 1 hereof shall be refundable to the contractor in the manner provided here under:-

(a) For work with three months Defect Liability Period:
    i) Full security deposit shall be refunded to the contractor on expiry of three months from the actual date of completion of the work.
(b) For work with one year Defect Liability Period:
    i) Full security deposit shall be refunded to the contractor on expiry of one year from the actual date of completion of the work.
(c) For work with three years Defect Liability Period:
    i) 30% of the security deposit shall be refunded to the contractor on expiry of two years from the actual date of completion of the work;
    ii) The balance 70% of the security deposit shall be refunded to the contractor on expiry of three years from the actual date of completion of the work;
(d) For work with five years Defect Liability Period:
    i) No security deposit shall be refunded to the contractor
    ii) for 1s t 3 years from the actual date of completion of the work;
    iii) 30% of the security deposit shall be refunded to the contractor on expiry of four years from the actual date of completion of the work;
    iv) The balance 70% of the security deposit shall be refunded to the contractor on expiry of five years from the actual date of completion of the work;

Explanation :

The word 'work' means and includes building work, road work, drain work, sanitary and plumbing work and/or any other work contemplated within the scope and ambit of this contract. For

i) The work of patch repair or patch maintenance, annual operation &maintenance in nature or a combination, thereof, the Defect Liability Period of the work shall be three months from the actual date of completion of the work.

ii) Thorough Bituminous Surfacing work with bituminous thickness less than 40 mm, Repair & Rehabilitation of any road / bridge / culvert / building / Sanitary & Plumbing work, the Defect Liability Period of the work shall be one year from the actual date of completion of the work;

iii) Extension of building / bridge / culvert, Construction of new flexible pavement up to bituminous level which has been designed for a period of 3 years or more, Widening and strengthening of flexible pavement designed for a period of 3 years or more, Improvement of riding quality / Strengthening of flexible pavement designed for a period of 3 years or more; Providing only mastic asphalt layer over existing bituminous surface with out providing bituminous profile corrective course / bituminous base course, the Defect Liability Period of the work shall be three years from the actual date of completion of the work;

iv) Construction of new building / new bridge / new culvert, Reconstruction of building / bridge / culvert including construction of approach roads for bridge / culvert, Construction of rigid pavement, Reconstruction of rigid pavement, Construction of new flexible pavement covered by mastic work which has been designed for a period of 5 years or more, Widening and strengthening of flexible pavement covered by mastic work which has been designed for a period of 5 years or more, Improvement of riding quality / Strengthening of flexible pavement covered by mastic work which has been designed for a period of 5 years or more, the Defect Liability Period of the work shall be five years from the actual date of completion of the work;

Successful Tenderers will be required to obtain valid Registration Certificate & Labour License from respective Regional Labour Offices where construction work by them are proposed to be carried outas per Clauses u/s 7 of West Bengal Building & other Construction Works' Act, 1996 and u/s 12 of Contract Labour Act.
Power of Attorney holders are not allowed to sign Tender Documents unless otherwise approved by the Government.

Clause-25 of the conditions of contract of the West Bengal Form No. 2911/2911(ii) may be treated to be omitted and there is no provision for arbitration for resolution of disputes that may arise out of the contracts to be entered into by the Department with the contractors for the purpose of carrying out execution of public works as per G.O No. 558/SPW dated 13-12-2011 of P.W.D.

Successful tenderers will be required to observe the following conditions strictly:

a. Employees' Provident Fund and Miscellaneous Provisions Act, 1952 and Employees StateInsuranceAct,1948 should be strictly adhered to wherever such Acts become applicable.
b. Minimum wages to the workers shall be paid according to the rates notified and/or revised by the State Government from time to time under the Minimum Wages Act, 1948 in respect of scheduled employments, within the specified time as per law. Payment of bonus, wherever applicable, has to be made.
c. Adequate safety and welfare measures must be provided as per the provisions of the Building and other Construction Workers' (Regulation of Employment & Conditions of Service) Act, 1996 read with

West Bengal Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Rules, 2004.

d. All liabilities arising out of engagement of workers are duly met before submission of bills for payment.

If there is any violation of any or all the relevant above criterion during execution of the job, it will render the concerned agencies ineligible for the work then and there or at any subsequent stage
as may be found convenient.

Sd/-
Managing Director
West Bengal Medical Services Corporation Limited

INSTRUCTION TO BIDDERS

SECTION–I

1. General guidance for e-Tendering

Instructions / Guidelines for tenders for electronic submission of the tenders online have been annexed for assisting the contractors to participate in e-Tendering.

1. **Registration of Contractor**
   Any contractor willing to take part in the process of e-Tendering will have to be enrolled &registered with the Government e-Procurement system, through logging on to https://wbtenders.gov.in the contractor is to click on the link for e-Tendering site as given on the web portal.

2. **Digital Signature certificate (DSC)**
   Each contractor is required to obtain a class-I, class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders, from the approved service provider of the National Information's Centre (NIC) on payment of requisite amount details are available at the Website stated in Clause-2 of Guideline to Bidder DSC is given as a USB e- Token.

3. The contractor can search & download NIT & Tender Documents electronically from computer once he logs on to the website mentioned in Clause 2 using the Digital Signature Certificate. This is the only mode of collection of Tender Documents.

4. **Participation in more than one work**
   A prospective bidder shall be allowed to participate in the job either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single job all his applications will be rejected for that job.

5. **Submission of Tenders**
   General process of submission:- Tenders are to be submitted through online to the website stated in Cl. 2 in two folders at a time for each work, one in Technical Proposal & the other is Financial Proposal before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).

6. **Eligibility to Participate**
   i. Bidders must have valid trade license without which no bidder will be allowed to participate.
   ii) Bidder must have valid PAN, ESI, EPF registration without which no bidder will be allowed to participate.
   iii) Bidders not fulfilling the eligibility criteria need not to participate and in the event of their participation without being fulfilling the eligibility criteria, their bids will summarily be rejected.

A. Technical proposal

The Technical proposal should contain scanned copies of the following in two covers (folders)

A-1. Statutory Cover files Containing

i) Earnest money (EMD) as prescribed in the NIT against each of the serial of work in favour of the Managing Director, West Bengal Medical Services Corporation Limited.

ii) Tender form No. 2911(ii) & NIT (Properly upload the same Digitally Signed).The rate will be quoted in the BOQ. Quoted rate will be encrypted in the B.O.Q. under Financial Bid. In case of Quoting any rate in 2911(ii) the tender is liable to summarily rejected).

A-2. Non statutory / Technical Documents

i) Professional Tax (PT) deposit receipt challan for the financial year 2017-18, Professional Tax clearance certificate, Pan Card, Income Tax Return, Certificate of provisional registration of GSTIN and valid Trade License.

ii) Registered Deed of partnership Firm/ Article of Association & Memorandum

iii) Registration Certificate and Clearance Certificate issued by the Assistant Register of Cooperative Society (ARCS) bye laws are to be submitted by the Registered labour Co-Operative Society/ Engineer's Co operative Society.

iv) Requisite Credential Certificate for completion of at least one similar nature of work under the authority of State/ Central Govt. having a magnitude of at least 40(forty)percent of the Estimated amount put to tender during the last 3(three) years prior to the date of issue of this NIQ is to be furnished in applicable cases.

v) Valid Service Tax Registration should possess by the tenderer.

vi) Individual deposit Challan (upto date) of Employees' Provident Fund & Employees' State Insurance.

Note:- Failure of submission of any of the above mentioned documents will render the tender liable to be rejected for both statutory & non statutory cover.

THE ABOVE STATED NON-STATUTORY/TECHNICAL DOCUMENTS SHOULD BE ARRANGE IN THEFOLLOWING MANNER

Click the check boxes beside the necessary documents in the My Document list and then click the tab

"Submit Non Statutory Documents" to send the selected documents to Non-Statutory folder. Next Click the tab "Click to Encrypt and upload" and then click the "Technical" Folder to upload the Technical Documents.

Sl. No.	Category Name	Sub Category Description	Details
A.	CERTIFICATES	CERTIFICATES	1. Certificate registration of GSTIN. 2. PAN 3. P. Tax (Challan) (2018-19 to 2020-21) 4. Latest IT Receipt 5. IT-Return for last three years 6. Trade License
B.	Company Details	Company Details -I	1. Proprietorship Firm (Trade License in civil works) 2. Partnership Firm (Partnership Deed, Trade License in civil works) 3. Society (Society Registration copy, Trade License in civil works) 4. Registration Certificate from ARCS
C.	Credential(in applicable cases)	Credential 1 Credential 2	Documents of Credentials as per Notification No. 03-A/PW/O/10C-02/14 Dated: 12.03.2015 **For –1st call of NIeT** (i) Intending tenderers should produce credentials of a similar nature of work of the minimum value of 40% of the estimated amount put to tender during 5(Five) years prior to the date of issue

			of this tender notice;or, (ii) Intending tenderers should produce credentials of 2(Two) similar nature of work, each of the minimum value of 30 % of the estimated amount put to tender during5(Five) years prior to the date of issue of this tender notice; or (iii) Intending tenderers should produce credentials of one single running work of similar nature which has been completed to the extent of 80% or more and value of which is not less than the desire value at (i) above; In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority will be eligible for the Tender. In the required certificate it will be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the executed agency, i.e. the tenderer. **For – 2nd call of NIeT** (i) Intending tenderers should produce credentials of a similar nature of work of the minimum value of 30% of the estimated amount put to tender during 5(Five) years prior to the date of issue of this tender notice; or, (ii) Intending tenderers should produce credentials of 2(Two) similar nature of work, each of the minimum value of 25 % of the estimated amount put to tender during5(Five) years prior to the date of issue of this tender notice; or (iii) Intending tenderers should produce credentials of one single running work of similar nature which has been completed to the extent of 75% or more and value of which is not less than the desire value at (i) above; In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority will be eligible for the Tender. In the required certificate it will be clearly stated that the work is in progress satisfactorily and also that no penal action has been initiated against the executed agency, i.e. the tenderer. **For – 3rd call of NIeT** (i) Intending tenderers should produce credentials of a similar nature of work of the minimum value of 20% of the estimated amount put to tender during 5(Five) years prior to the date of issue of this tender notice; or, (ii) Intending tenderers should produce credentials of one single running work of similar nature which has been completed to the

			extent of 70% or more and value of which is not less than the desire value at (i) above; In case of running works, only those tenderers who will submit the certificate of satisfactory running work from the concerned Executive Engineer, or equivalent competent authority will be eligible for the Tender. In the required certificate it will be clearly stated that the work. Payment Certificate will not be treated as Credential.
D.	Financial (If necessary)	Work in hand	1. Authenticated
		Payment certificate – 1 Payment certificate - 2	Only payment certificates not the TDS certificate.
	2017-2018	P & L and Balance sheet	Profit & Loss and Balance sheet
	2018-2019	P & L and Balance sheet (with annexure)	Profit & Loss and Balance sheet
	2019-2020	P & L and Balance sheet (with annexure)	Profit & Loss and Balance sheet

Opening of Technical proposal:-

i) Technical proposals will be opened by the **Managing Director, West Bengal Medical Services Corporation Limited** and his authorized representative electronically from the web site stated using their Digital Signature Certificate.

ii) Intending tenderers may remain present if they so desire.

Opening of Financial proposal:-

i) The financial proposal should contain the following documents in one cover (folder) i.e. Bill of quantities (BOQ) the contractor is to quote the rate in the manner (Above/ Below/ At per) online through computer in the space marked for quoting rate in the BOQ.

ii) Only downloaded copies of the above documents are to be uploaded virus scanned & Digitally Signed by the contractor.

The eligibility of the Bidder will be ascertained on the basis of document submitted / uploaded &digitally signed in support of the minimum criterion as mentioned above. If any document submitted / uploaded by the Bidder is either manufactured or false the eligibility of Bidder will be out rightly rejected at any stage without prejudice and action will be taken as per stipulation of IT Rules in force.

Sd/-
Managing Director
West Bengal Medical Services Corporation Limited

SECTION–II

FORM–I

B.1. PRE-QUALIFICATION APPLICATION.

To
Managing Director,
West Bengal Medical Services Corporation Limited

Ref:-Tender for _____
_____work_____
_____
_____

N.I.T. No: WBMSCL/NIQ-05/2022, Dated –0 4 /01/2022 of West Bengal Medical Services Corporation Limited

Dear Sir,
Having examined the Statutory, Non statutory, Instruction to Bidders & NIT documents along with its Agenda & corrigendum, I /we hereby submit all the necessary information and relevant documents for evaluation

The application is made by me / us on behalf of _____

In the Capacity _____ duly authorized to submit the order.

The necessary evidence admissible by law in respect of authority assigned to us on behalf of the group of firms for Application and for completion of the contract documents is attached herewith. We are interested in bidding for the work(s)given in Enclosure to this letter. **We understand that:**

(a) Tender Inviting & Accepting Authority/Engineer-in-Charge can amend the scope & value of the contract bid under this project.
(b) Tender Inviting & Accepting Authority/Engineer-in-Charge reserve the right to reject any application without assigning any reason.

(c) **Enclo:- e-Filling:-**
(d) 1. Statutory Documents.
(e) 2. Non Statutory Documents.

_____

Date:-

Signature of applicant including title
and capacity in which application is made.

SECTION–III

FORM-II

B.3. STRUCTURE AND ORGANISATION.

B.3.1. Name of applicant::_____

B.3.2. Office Address:: _____

_____

Telephone No.**::** _____

Fax No. **::**_____

E-mail ID : : _____

B.3.3. Name & address of Bankers::_____

_____

_____

B.3.4. Attach an organization chart showing the structure of the company with names of Key personnel and technical staff with Bio-data.

Note: Application covers Proprietary Firm, Partnership, Limited Company or Corporation,

_____

Date: **Signature of applicant.**

including title and capacity in which application is made.

SECTION–III

FORM –III

B.4. EXPERIENCE PROFILE.

B.4.1. Name of the Firm: _____

_____

B.4.2. LIST OF PROJECTS COMPLETED THAT ARE SIMILAR IN NATURE TO THE WORKS HAVING MORE THAN 40% OF THE PROJECT COST EXECUTED DURING THE LAST FIVE YEARS.

Name, Location & nature of work	Deptt. Concern	Engineer-in-Charge	Contract price in Indian Rs.	% of Participation of company	Original Time Schedule		Actual Time Schedule		Reasons for delay in completion (if any)
					Start Date	Completion Date	Start Date	Completion Date	

Note: a) Certificate from the Employers to be attached

b) Non-disclosure of any information in the Schedule will result in disqualification of the firm.

_____

Date: **Signature of applicant**

including title and capacity in which application is made.

SECTION–III

FORM –IV

[Print out in Agency's Letter head & upload the filled proforma with digitally signed as stated below]

DECLARATIONBYTHETENDERER

I/We have inspected the site of work and have made myself/ourselves fully acquainted with local conditions in and around the site of work. I /We have carefully gone through the Notice Inviting Tender and other tender documents mentioned therein along with the drawing attached. I/We have also carefully gone through the 'Priced schedule of Probable Items and Quantities'.

My/Our tender is offered taking due consideration of all factors regarding the local site conditions stated in this Detailed Notice Inviting Tender to complete the proposed work referred to above in all respects.

I/We promise to abide by all the stipulations of the contract documents and carry out and complete the work to the satisfaction of the department.

I/We declare that I/We in the capacity of individual/ as a partner of a firm not debarred in the last financial year.

I/We also agree to procure tools, plants and others as per requirement, at my/our cost required for the work.

Signature of Tenderer with **Date :**

Postal address of the Tenderer

Name of the Firm with Seal

INSTRUCTION TO BIDDER

SECTION–III

Comprehensive Annual Operation & Maintenance (with manpower & consumables) Contract for Fire Fighting, Fire Alarm & Fire Detection System installed at various locations of the (G+4) storied Arambagh Super Specialty Hospital buildings (Internal & External) at Arambagh Govt. Medical College campus.

The intending bidders are requested to visit the sites at their own cost to ascertain the cost of Annual Operation & Maintenance (with manpower & consumables) Contract. In case of any non-functional /breakdown of the Fire Fighting, Fire Alarm & Fire Detection System installed at various locations of the Super Specialty Hospital, the primary servicing cost has to be ascertain and have to be placed in the prescribed format. No travelling charges will be given to the agency for their site visit.

1. In case of the non-functional/breakdown of the Fire Fighting, Fire Alarm & Fire Detection System installed at various locations of the Super Specialty Hospital, the **bidders have to quote a rate separately** along with supporting BOQ for servicing of the aforesaid system to make these in working condition.

2. The bidders have to place the **direct quotation for annual operation & maintenance** (with manpower & consumables) as per the prescribed format (Section III, Form A).
3. Then selected contractor should make the whole system in running condition within 01 month from date of Work order in case of non-functional/breakdown. The AMC will be operational from the very first day of proper functioning of the said System after servicing (if required).
4. The bidder has to place a **separate quotation for getting the FIRE NOC** for the (G+9) Super Specialty Hospital Building from the concern department as the FIRE NOC is yet not available for the aforesaid hospital building. Gross bided value i.e., the summation of the amount of (1) + (2) + (4) will be considered as the final quoted rate.
5. **Overall Scope of Work:**
    1) On day to day basis (24 X 7), the contractor must operate & maintain the entire (all electrical/ELV& mechanical equipment and other parts of the system) Fire Fighting, Fire Alarm & Fire Detection System installed at various locations of the (G+9) Super Specialty Hospital, regular scavenging of the plant room and the landscaping/gardening work at the surrounding area (at least upto 30m radius) of the plant for a period of 01 (One) year. After which the AMC may be extended depending on the performance of the contractor or till finalization of the next tender.

The intending bidders who wishes to quote are required to visit and examine the whole systems and satisfy themselves before submitting their offer and to apprise themselves about the plant and equipment's, accessories and parts of the complete systems.

2) **List of Items:**

1. Main Fire pumps (Electric) for wet Riser with test array arrangement for pressure control.
2. Diesel Engine Fire Pump:- with other accessories
3. Jockey Pump (Electric)
4. Auto start & other Electric panels
5. Internal Fire hydrants
6. External fire hydrants
7. Valve chambers
8. Butterfly valves/ CI valve
9. Main fire alarm panel
10. Fire detector
11. Fire extinguishers (checking/ testing will be performed by the agency at the time of fire drills)
12. Any other item which the bidder feels is required may be considered under this AMC.

The list of items is only indicative. However, the bidder is advised to visit and inspect the site of works and its surroundings and obtain for himself all information that may be necessary for preparing the bid. The costs of any such visits / site inspections shall be entirely at the bidder's own expenses.

3) The contractor shall fulfill the requirement of various law enforcing agencies / local authorities, such as Fire Dept.etc by taking their approvals as and required. The contractor has to obtain NOC/or renewal of NOC from FIRE DEPT. on behalf of competent authority. In case of any failure a penalty will be imposed from the contract amount will be deducted from the final bill.

4) The firm/ agency/contractor will be responsible for the safety of their deputed staff during the performance of their duty at site.

5) The contractor shall be responsible for day to day basis operation & shall maintain the decorum, punctuality, discipline work output and cleanliness of the Plant and its surroundings (at least up to 30m radius).

6. **Operation & Maintenance Part**:

1) The day to day (24 hr X 7 days) operation work of the plant is to be done by the experienced personnel with a reasonable duty roster.

2) The contractor shall keep the equipment/system well maintained, neat and clean and adhere to the **Operation & Maintenance Schedule** given below.

DETAILS OF OPERATION &MAINTENANCE SHEDULES:

The following works / checks are required to be performed on Monthly / Quarterly / Half yearly basis and record all the activities in the log book with date and time which shall be counter signed by the Engineer – in -Charge / competent authority of WBMSCL.

A. Monthly checks:

a) Operational readiness of system during mains failure

b) Check battery water level & Specific Gravity of electrolyte

c) Check the fire circuit of each zone from the panels

d) Check whether signals of fire and fault get transmitted from zonal panel to main panel.

e) Performance check of the hooters shall be done along with the performance check of manual call points.

f) Check smoke detectors, if required cleaning shall be carried out with suitable reagents.

g) Checking of water pressure of the hydrant line & action shall be taken to arrest leakage on urgent basis.

h) Checking of main control panel of fire pump & alarming system

B. Quarterly checks:

a) Check fault circuit of each zone by actually disconnecting wire by removing a detector.

b) Check fire circuits by facilitating actual smoke to one detector of each zone

c) Cleaning of all types of detectors with suitable means.

d) Checking / servicing of major equipments such as Fire pump, Jockey pump, pressure gauges, panels including contactors, valves, main alarm panel, auxiliary panel etc.

e) Checking/ testing of all type of fire extinguishers. Refilling of Fire Extinguisher will be done after the date of expiry. But the cost refilling will be borne by the Agency.

C. Half yearly checks:

a) All the quarterly-checks must be repeated.

b) Greasing of valves, checking of couplings / Impeller and checking of synchronization operation of Main pump, Jockey pump & Diesel pump during mains failure.

c) Oil filtration of Diesel Engine Pump

d) Painting should be done once in year or as per the instruction of EIC.

3) Proper care shall be taken to avoid major breakdown at the system. In the event of any breakdown, the same will be rectified/attended immediately within 24 hours from the time of reporting of the fault. Similarly, if any breakdown takes place due to negligence of contractor

(except force measured), the whole component has to replaced/ rectified to bring it to the original condition immediately (within 24 hours) by the contractor.

4) Any inconvenience caused so far as performance of Fire Fighting, Fire Alarm & Fire Detection System due to negligence in the part of the agency, if detected, will be liable to penalty. Quantum of penalty would be decided in EIC depending on the gravity of situation

5) In case of any problem with the Fire Fighting, Fire Alarm & Fire Detection System, the contractor shall inform Site Engineer of WBMSCL immediately.

6) The routine maintenance and periodical maintenance & routine checking of all the equipment is under the scope of this tender and is to be done with proper care. Necessary preventive maintenance, breakdowns if any is to be attended throughout the day, all 7 days a week, with experienced and qualified personnel.

7) Precaution against any fire hazards, theft or other damages to the Fire Fighting, Fire Alarm & Fire Detection System shall be arranged by the firm. WBMSCL shall remain indemnified by the contractor from any encumbrance /loss on this account.

8) Regular servicing & inspection of the system-equipments should be carried out as per the **maintenance schedule** mentioned earlier by the contractor. The contractor shall perform preventive maintenance to the system-equipments and its accessories as per service manual. The contractor shall also attend any breakdown & emergency call immediately.

9) Any type of system components installed in the network must be kept at site for easy and quick replacement of spares as well as rectification of defects.

10) After carrying out each test, the entry in the register to be got counter signed from the WBMSCL Engineer. Without prior approval, no fitting / material will be removed for repairs; it will be contractor's responsibility to provide alternative temporary arrangement of such items during the period, the item is repaired and put back in to position so that the system remains fully functional all the time.

11) Changing of all spares and machineries attached with the Fire Fighting, Fire Alarm & Fire Detection System are under the AMC contract. The following list must be followed regarding this.

LIST OF APPROVED BRANDS/MANUFACTURERS FOR MATERIALS:

FIRE FIGHTING SYSTEMS		
	Description	**Preferred Brands**
1	BATTERIES	EXIDE / STANDARD / AMARON
2	BATTERY CHARGER	KELTRON/ NELCO/ EXITE/ HBL NIFE

3	DIESEL ENGINE FOR FIRE PUMPS	CUMMINS / CATERPILLAR / KIRLOSKAR / ASHOK LEYLAND
4	FIRE PUMPS	KIRLOSKAR / MATHER & PLATT / KSB/ CROMPTON GREAVES
5	ELECTRIC MOTORS	KIRLOSKAR / SIEMENS / CROMPTON GREAVES / ABB / MARATHON
6	GI PIPES	TATA / JINDAL / SURYA ROSHNI / ZENITH /BANSAL
7	SUPPORTS	HITECH / SAKTHI
8	PIPE FITTINGS – BUTT WELDED	REPUTED MAKE (AS PER IS 1239, Part 2 , Heavy grade)
9	PIPE FITTINGS – SOCKET WELDED	REPUTED MAKE / VENUS / BHARAT FORGE / RAJENDRA FORGE / ASIAN VALVES & TUBES / VS (VIJAY CYCLE AND STEEL INDUSTRIES) / BM (B.M. METER PRIVATE LIMITED) / HP (HINDUSTAN PIPES & FITTINGS)
10	PRIMER, COATING & WRAPPING	IWL (PYPKOTE) / INDOLIT / RUSTEC / EQUIVALENT
11	PAINT	BERGER / ICI / ASIAN PAINTS / NERROLAC / NIPPON / J & N
12	SLUICE VALVE	KOLEY / KALPANA / KARTER / C&P / H.SARKAR / DURGA / KIRLOSKAR / SANT / VENUS / UPADHAYA
13	NON RETURN VALVE	KOLEY / KALPANA / KARTER / C&P / H.SARKAR / DURGA / KIRLOSKAR / SANT / VENUS / UPADHAYA
14	BUTTERFLY VALVE	KOLEY / KALPANA / KARTER / C&P / AUDCO / INTERVALVE / BDK /ADVANCE / H.SARKAR / CRAWL & RAY
15	BALL VALVE	LEADER / SANT / ZOLOTO/ ITAP / NETO / HAWA / RB
16	RUBBER EXPANSION BELLOWS	CORI / KANWAL / RESISTOFLEX
17	STRAINER	PROCEDYNE / SANT / EMERALD /H.SARKAR / VENUS / UPADHAYA / ZOLOTO
18	HYDRANT VALVE, BRANCH PIPE & NOZZLE	ASCO / GEI / FIRE SHIELD / GUARDS / NEWAGE / SUKAN / WINCO / SHAH BHOGILAL / MINIMAX / GHOSH / SAFEX / SAFE FIRE / FIRESHIELD / SEALFIRE / SAFEGUARD
19	FIRE HOSE	CRC / BRG / FIRE SHIELD / NEWAGE / PADMINI / SAFEGUARD
20	HOSE REEL DRUM	ZENITH ENGINEERS / REPUTED MAKE / NEWAGE / EVER SAFE / SHAH BHOGILAL / SAFE FIRE / SAFEX / USHA FIRE / SAFEX / EQUI / SAFEGUARD
21	HOSE BOX	ZENITH ENGINEERS / REPUTED MAKE
22	PRESSURE GAUGE	H.GURU / FIEBIG / WAREE / WIKA / GENERAL INSTRUMENTS
23	PRESSURE SWITCH	INDFOSS / DANFOSS / SWITZER / VERMA TRAFAG

24	SPRINKLERS	TYCO / VIKING / RELIABLE / FIRESAFE / HD FIRE /BEST/GRINELL
25	SPRINKLER FLEXIBLE DROPS	EASYFLEX / DONGA FLEX / RAPIDROP / DEIJIN / HD FIRE
26	ALARM VALVE	HD FIRE / TYCO / VIKING / RELIABLE / FIRESAFE (UL APPROVED)
27	FLOW SWITCH	SWITZER / SYSTEM SENSOR
28	FIRE BRIGADE INLET	ASCO / GEI / FIRE SHIELD / GUARDS / NEWAGE / SUKAN / WINCO / SHAH BHOGILAL / MINIMAX / GHOSH / SAFEX / SAFE FIRE / SAFEGUARD
29	AIR RELEASE VALVES	LEADER / NEWAGE / SHAH BHOGILAL / EQUIVALENT/WINCO
30	FIRE EXTINGUISHER	FIRE SHIELD / OMEX / FIRE LITE / SAFEX / MINIMAX / ZENITH/ ALERT / USHA FIRE / SAFE FIRE / SAFEGUARD
31	PHOTOLUMINESCENT SAFETY SIGNAGES	GLO-LITE / AUTO GLO / BIJOLI STUDIO/ KLIK
32	SWITCH GEAR	L & T / SIEMENS/SCHNEIDER
33	CABLE END TERMINATION	DOWELL / COMET
34	FIRE SEALANT MATERIAL	PROMAT / FIRE MASTER (MMTCL) / 3M / HILTI / VIJAY SYSTEM ENGINEERS (VSE) / NELSON FIRE STOP

Note:-

1. **The above makes are all indicative. In case the Contractor would like to use any other make, he must submit the technical literature about the capabilities of these items and get the approval of Engineer in – charge prior to using the same.**

2. **The items for which no makes are specified, only ISI marked and/ or approved make by Engineer in – Charge shall be used.**

12) In circumstance such that the Contractor fails to attend the breakdown within four normal working hours after notification of the breakdown and where remedial work interrupted during normal working hours for purposes other than obtaining replacement parts, the employer reserves the right to order such action as may be necessary to expedite completion of remedial work which shall be at the Contractors expense without abrogation of the Contractors responsibilities.

13) The contractor will conduct periodical (quarterly or as and when asked by the employer) fire drill at site as per direction of the engineer in charge including imparting training to the staff in the use of fire Extinguishers etc.

14) The mock drill/demonstration of the working of the system shall be given at least once in a month or as and when desired by the engineer in charge or as per his direction.

15) In case of Emergency, The Firm shall give full support for mitigation of fire accident at no extra payment. In case of incident of fire, the contractors available on duty, will ensure adequate operation of system firefighting immediately and will also simultaneously inform Local Fire Office / Hospital Authority/ Maintenance staff of WBMSCL Hospital Security for vacating the area under fire.

16) The firm has to arrange for testing both the fire pumps. The test includes running of the pressurization pumping set in case of loss of pressure of fire hydrant system and running of diesel engine pump by artificial closure of electricity. The pumps shall be tested as to whether the constant pressure is being maintained by creating pressure loss in the pipe lines. Pressure test at the various locations of hydrant valves shall be done by opening the valve at one location. Such test shall be done at least once in every alternate month in the presence of Engineer in charge of WBMSCL.

17) The servicing of major equipments like fire pump, jockey pump, pressure regulator & main fire alarm panel etc. shall be done quarterly. However, all the valves, valve handles, smoke detectors, manual call points, hooters, fire control cable etc. shall be checked and greased if required in every month.

18) Contractor would be bound to execute such additional item/ items which may be essential & necessary (even though not listed in schedule of work) for the effective execution of the work. Rates f o r such extra items of work shall be rationally analyzed / derived & would by binding on the contractor.

19) Cleaning materials such as Vim/ detergent /cotton/pilot lamp for indicating lamp, PVC tape etc. gland dori, grease for pump and Motors etc. required for the execution of services shall be arranged by the Agency on his own.

20) The firm shall maintain all cables from main control panel to local control panel and to detectors for each zone.

21) The system shall be maintained in working condition all the time until completion of contract.

22) The demonstration on the working of system shall be given, once in a fortnight, to the engineer-in-charge.

23) All materials to be used for repair and replacement of parts shall be from the approved list and of ISI make.

24) The check list and test requirements mentioned in the documents are of general nature and indicative only. In case specific checks and additional test, under the overall guidelines of Fire Department are considered necessary for efficient working of the equipment system towards ensuring its functioning all the time. No claim whatsoever shall be entertained for such reasons.

7. Documents to be Maintained:

1) Printed & binded duplicate **LOG-BOOKs** (on daily/weekly basis as per schedule) must be maintained for recording of **parameters** related to Fire Fighting, Fire Alarm & Fire Detection System, **maintenance activities**, **running status of all equipments** & **servicing**. The format of the log-book must be approved by WBMSCL prior to implementation. One copy of those log-sheets are to be submitted to WBMSCL as and when asked to.

2) A **Register** should be maintained by the contractor for call login/site instructions and result/compliance thereafter. The Site Engineer/Technician should have common telephone no by which a user can communicate with him directly.

3) **Certificate for** satisfactory performance of the Fire Fighting, Fire Alarm & Fire Detection System should be submitted to the concerned SAE twice in a month and that has to be countersigned by the AE and to be submitted along with the bill.

8. MANPOWER:

1) The day to day (24 hr X 7 days) operation of the plant is to be done by the experienced and qualified personnel.

2) The agency/firm/contractor shall provide one highly skilled/highly technically expert person for routine visit within every 30 days

3) In case any of staff is not found upto the mark and not able to do work properly, he will have to be changed as per the instruction of WBMSCL and immediately replaced by another qualified staff.

4) The contractor should provide escalation matrix to WBMSCL to lodge complaint of breakdown of Fire Fighting, Fire Alarm & Fire Detection System. In the escalation matrix the contractor has to provide at least 02 mobile no. and e-mail ID. If any changes is made in mobile no. / e-mail ID the same should be notified to WBMSCL in written within 7 working days.

9. Payment Schedule:

1) No advance payment will be made at any circumstances.

2) On successful completion of every quarter, 3 (three) months (1st quarter, 2nd quarter, 3rd quarter and 4th quarter respectively), running account bills can be placed along with certified copies of service reports/check lists, log sheets, compliance register copy or any other work done as per the scope of work mentioned in the tender/contract duly certified by the Concerned Site-in charge of WBMSCL.

3) WBMSCL will make payment to the contractor within a reasonable period after receipt of the certified bills along with all supporting documents (as stated above) and after deduction of applicable taxes/TDS, Security deposit etc.

4) Payment will be made according to the availability of fund from the concerned source. No claim, whatsoever, for delay in payment if any will be entertained.

10. Penalty:

1) The contractor shall rectify/attend any breakdown/complains within 24 hours failing which penalty for non-performance for each @ Rs. 500/- per day of delay subject to a maximum of 10% of the contract price of the respective site/unit will be imposed and in the event of any damage to the property or life arising out of non-performance, contractor will be solely responsible.

2) Any inconvenience caused so far as performance of Fire Fighting, Fire Alarm & Fire Detection System due to negligence in the part of the agency, if detected, will be liable to penalty. Quantum of penalty would be decided in EIC depending on the gravity of situation.

3) The contractor has to obtain NOC/or renewal of NOC from Fire Department on behalf of concern authority. In case of any failure a penalty will be imposed on the contract amount and will be deducted from the final bill.

11. The services required are for a period of One year. As per the willingness of the Contractor, the contract may be extended with same rate and terms & condition subsequently based on performance or till finalization of the next tender. The contract may be terminated at any stage solely at the option of WBMSCL with an advance notice of one month without assigning any reason.

12. WBMSCL authority reserves the right to terminate the contract against three months' notice for the non-satisfactory performance or other administrative reasons.

13. The rates shall be quoted as per the prescribed format of WBMSC (Section-III, Form A). The rates shall be all inclusive of all taxes, transportation charges and duties etc. No extra cost beyond the quoted rate will be admissible.

14. The rates at any stage once quoted shall not be withdrawn.

15. No addition / alteration / deletion in the tender document is allowed.

16. An agreement detailing the terms & conditions shall be executed with the service provider for entering into this contract.

SECTION–III

FORM –A

Sl. No.	Description of Item	Quantity	Unit	Rate (Rs/Unit)	Amount (Rs.)
Comprehensive Annual Operation & Maintenance (with manpower & consumables) Contract for Fire Fighting, Fire Alarm & Fire Detection System installed at various locations of the (G+4) storied Arambagh Super Specialty Hospital buildings (Internal & External) at Arambagh Govt. Medical College campus.					
1.1	Comprehensive Annual Operation & Maintenance (with manpower & consumables) Contract for Fire Fighting, Fire Alarm & Fire Detection System installed at various locations of the (G+4) storied Arambagh Super Specialty Hospital buildings (Internal & External) at Arambagh Govt. Medical College campus.	4	Quarterly		
1.2	Quotation for **getting/availing the FIRE NOC** for "Fire Fighting, Fire Alarm & Fire Detection System installed at various locations of the (G+4) storied Arambagh Super Specialty Hospital buildings (Internal & External) at Arambagh Govt. Medical College campus.	1	lumsum		
				Total=	
In Figure:					

NOTE:

1. Rate/Rates should be inclusive of all taxes.

SECTION–IV
FORM-2911

Issued to (Bidder): ……
Postal Address with Contact No. & e-mail ……..

Price – Free of Cost

West Bengal Form No. 2911
Applicable For Works of value up to Rs 25 (Twenty Five) Crore

TenderNo.WBMSCL/NIQ-05/2022 Date- 04.01.2022

TENDER AND CONTRACT FOR WORKS
GENERAL RULES AND DIRECTIONS FOR GUIDANCE OF BIDDERS/CONTRACTORS

(A) Applicable for off-line tenders up to Tender Value of Rs. 5.0lakh

1. All work proposed for execution by contract will be notified in the form of invitation to tender posted in concerned departmental website, e-procurement portal of the Government of West Bengal (https://wbtenders.gov.in) and to be published in local news paper for wide circulation also in the notice boards at public places signed by the Tender Inviting Authority.

This form will state the work to be carried out, the date for submitting and opening of tenders as well as the time allowed for carrying out the work; also the amount of earnest money to be deposited with the tender, the amount of security deposit to be deposited by the successful bidder and the percentage, if any, to be deducted from bills. Copies of the specification, design & drawings and other documents required in connection with the work, signed for the purpose of identification by the Authority inviting Tender shall also be open for inspection by the contractor at the office of the Tender Inviting Authority during Office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each member thereof, or, in the event of absence of any of the partners, it must be signed on his/her behalf by a person holding a Power-of-Attorney authorizing him/her to do so. Such power-of-attorney is to be produced with the tender, and in the case of a firm carried on by one member of a joint family; it must disclose that the firm is duly registered under the Indian Partnership Act.

3. Acceptance of measurements entered and bills raised on account of a work, when executed by a firm, must also be signed by the several partners, except where the contractors are described in their tender as a firm in which case the receipts must be signed in the name of the firm by one of the partners or by some other person having authority to give effectual receipt for the firm.

4. Any person who submits a tender shall fill up the usual printed form, stating at what rate he or she is willing to undertake the work. Tenders which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort, will be liable to rejection. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit a separate tender for each. Tenders shall have the name and number of the work to which they refer, written outside the sealed envelopes.

5. The Tender Inviting Authority or his/her duly authorized representative will open tenders in presence of intending contractors/bidders who may be present at the time, and

will enter the bid amounts as percentage rates above or below or at par of the tender BOQ of several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt shall thereupon be given to the contractor/bidder who shall thereupon for the purpose of identification, sign copies of specifications and other documents mentioned in the Rules. In the event of a tender being rejected, the earnest money with such unaccepted tender shall be refunded within 10 days from the date on which the tender is decided, provided the contractor(s) present himself/herself before the Tender Inviting Authority to take the earnest money refund.

6. The accepting authority reserves the right to reject any or all of the tenders without assigning any reasons to the participating bidders and he/she will not be bound to accept either the lowest tenderor any of the other tenders.

7. Receipt of an accountant or clerk for any money paid by the contractor/bidder will not be considered as an acknowledgement of payment to the Tender Inviting Authority and the contractor shall be responsible for ensuring that he/she procures a receipt signed by the Tender Inviting Authority, or a duly authorized representative.

8. The Memorandum of work tendered for, and the schedule of materials to be supplied by the executing Department at their supply/issue rates, shall be filled in and completed in the office of the Tender Inviting Authority before the tender form is issued. If a form is issued to an intending bidder/contractor without having been so filled in and completed, he/she shall request the office to have this done before he/she completes and delivers his/her tender.

(B) Applicable for <u>e-tenders</u> of value above Rs. 5.0Lakh

1. All works of tender value above Rs. 5.00 lakh proposed for execution through this contract document are to be notified and published in the form of notice inviting e-tender (e-NIT) in the designated official tender website of Government of West Bengal having URL https://wbtenders.gov.in, and uploaded simultaneously in the URL of concerned Department inviting Tenders. Thus the tender may be seen and downloaded by logg ing into the "e-procurement" link provided therein, digitally signed by the concerned Tender Inviting Authority and its corresponding abridged notice also published on the same date in the print media.

2. This e-Notice Inviting Tender (e-NIT) will state the work to be carried out, the date for encrypting (submitting) and decrypting (opening) of e-tenders, the time allowed for carrying out the work; amount of earnest money to be deposited with the e-tender; procedure for submission of EMD, amount of security to be furnished by the successful bidder/contractor, security/ performance security to be deducted from running account bills, copies of specifications, Bill of Quantities, design and drawings and any other document required in connection with the work, digitally signed for the purpose of identification by the Tender Inviting Authority.

3. Intending contractors/bidders are required to download the e-tender documents directly from the website stated above. Tender is required to be su bmitted online by the intending bidders by authorized e-Tokens provided as DSC. This is the only mode of e-submission of tender and document(s). All information posted in the website consisting of e-NIT, WB Form No. 2911, Tender Bill of Quantities (BOQ), corrigenda notices and drawings etc., if any, shall form part of the Contract. Details of procedure of submission have been explained under "General Terms & Conditions" and Annexure attached with the notice of e-tender (e-NIT).

4. All the documents uploaded by the Tender Inviting Authority forms an integral part of the tender contract/agreement. Contractors/bidders are required to upload the entire set of tender documents along with other related documents as asked for in the e-tender through the above website(s) within the stipulated date and time as given in the e-NIT. Tenders are to be submitted in two folders at a time for each work, one being the 'Technical Bid' and the other 'Financial Bid'. The contractor/ bidder shall carefully go through all the documents and prepare to upload the scanned documents in Portable Document Format (PDF) in the designated link in the web portal as their Technical Bid. He/she needs to fill up the rates of items/percentage in the BOQ downloaded for the work in the designated cell and upload the same again in the designated link in the portal as their Financial Bid. Documents uploaded are virus scanned and digitally signed using the Digital Signature Certificate (DSC). Contractors/bidders should especially take note of all

the addenda and corrigenda related to the e-tender and upload all of these documents also as apart of their tender document.

5. Documents uploaded by the contractors/bidders with all information & rates comprising Technical and Financial bids cannot be changed after last/end date for submission of thee-tender.

6. Deed of Consortium/Partnership Firm, and documents of their registration in the form of certified copy of 'Form No. VIII,' issued under the Indian Partnership Act, 1932 (Act-IX of 1932), GST, & PAN (Permanent Account Number) as per RBI guidelines/above Rs. 50,000/- may be compulsorily furnished for all contracts and all other statutory clearances defined in thee-NIT.

7. The tender evaluation and accepting authorities reserve the right to reject any or all of the tenders without assigning any reasons and he/she will not be bound to accept either the lowest tender or any of the tenders.

8. Withdrawal of e-Tender once the bid has been submitted online and after passing of end date for submission which has been accepted for further processing is not allowed. EMD will be forfeited by the Government and the bidder/contractor penalized in terms of provisions in the notice of the tender.

9. Generally Bids will be valid for 120 days from the date of opening of the financial proposal. However, extension of bid validity may be suitably considered by the Tender Inviting Authority, if required, subject to obtaining a written confirmation of the contractor/bidder(s) to that effect.

TENDER FOR WORKS

I/We on behalf of the Governor hereby tender for the execution of the work specified in the underwritten "Memorandum" within the time specified in such " Memorandum" at the rates specified therein, and in accordance, in all respects within the Rules contained in clauses hereinafter, in all of the annexed General Conditions of Contract (GCC), Special Conditions of Contract (SCC) and with such other materials as are provided for, by and in all other respects in accordance and with such conditions so far as applicable.

MEMORANDUM

(a) General description of work.....

(a) If several sub-works are included, they should be detailed in a separatelist

(b) Estimated cost putto Tender ... Rs

(c) Earnest Money Deposit ... Rs.

(d) Security Deposit (including earnest money) ..... Rs

(e) Percentage, if any, to be deducted from bill ..... Rs .....
(Rupees.....
Percentage.....)

(f) Time allowed for the work from date of written order to Commence ..... calendar months.

For offline tender during submission of bid and during execution of Agreement for online tender

Name of Work Tendered	Amount Put to Tender	Rate Quoted by the Bidder (% above or less or at par)	Tendered Amount (Contract Price both in words & figures)

Should this Tender be accepted, I/we hereby agree to abide by and fulfill all of the terms and provisions of the said conditions of contract annexed hereto so far as applicable, or in default thereof to forfeit and pay to the Governor or his/ her successions in office, the sums of money mentioned in the said conditions.

**Give particulars and numbers*

Strikeout (a) or (b) as applicable.

A sum of Rs ..... * has been furnished through online net banking/RTGS/NEFT transfer as earnest money deposit [(a) the full value of which is to be absolutely forfeited to the Governor or his/her successors in office, without prejudice to any other rights or remedies of the said Governor or his successors in office. Should I/we not deposit the full amount of security specified in the above 'Memorandum' in accordance with clause I(A) of the said conditions of contract, the said sum of Rs ..... shall be retained by the Government as on account of such security as aforesaid:(b) the full value of which shall be retained by Government on account of the security deposit specified in clause I (B) of the said conditions of contract].

T Signature of Contractor before submission of tender

Dated the Day of 20

X T

(Witness)
Address
Occupation

X Signature of Witness to Contractor's signature

XX Signature of the Executive Engineer/AE on behalf of the Department.

The above tender is here by accepted by me for and on behalf of the Governor of the State of West Bengal

XX

Dated the_____Day of_____(Month)_____(Year)

GENERAL CONDITIONS OF CONTRACT

Clause 1 1.1 Earnest Money - The person/persons who intend to participate in the Tender for an Estimated Amount up to Rs. 25 (Twenty Five) Crore shall have to deposit Earnest Money @ 2% (Two percent) of the Estimated Amount put to Tender or Rs 10 Lakh, whichever is lower.

In case of offline tender earnest money is to be submitted in the form of Bank Draft or Bankers Cheque.

In case of Online Tender (e-Tender) earnest money is to be deposited through e-tender portal (https://wbtenders.gov.in) by selecting from either of the following payment modes:

i) Net banking (any of the banks listed in the ICICI Bank Payment gateway) in case of payment through ICICI Bank Payment Gateway.
ii) RTGS/NEFT in case of offline payment through bank account in any Bank with his/her tender/quotation as per Memorandum No. 3975-F(Y) dated: - 28.07.2016 of Secretary to the Government of West Bengal, Finance Department. The L1 bidder shall make the Formal Agreement after getting the Letter of Acceptance (LOA) issued by the Tender Accepting Authority. Failure to make the Formal Agreement within the time period as prescribed in the Letter of Acceptance (LOA) for the purpose, may be construed as an attempt to disturb the tendering process and will be dealt with accordingly in a legal manner as deemed fit including black listing the bidder.

1.2 Security Deposit - While making any payment to the person(s) whose tender has been accepted (hereinafter shall be called the contractor) for work done under the contract, the authority making payment shall deduct such sum which together with the Earnest Money already deposited and converted into security deposit, shall amount to 10% of the value of works executed at the material point of time and paid during the progressive running accounts bills, so that total deduction together with

Earnest Money constitute 10% of the tendered value of work actually done.

In case of excess/and supplementary work over the tendered amount, additional security @ of 10% of such additional amount is to be deposited for all such excess/ and supplementary works beyond the tendered amount before payment of final bill.

Compensation of all other sums of money payable by the contractor to the Government under the terms of the contract may be deducted from the security deposit.

However, even though the earnest money deposited exceeds the prescribed percentage, due to reduction of tendered amount due to any reason whatsoever, such additional earnest money shall be deemed to have been converted into security and further deductions from progressive bills shall be made, taking into consideration the enhanced component of earnest money so converted into security.

Security deduction will not normally be required for hiring of inspection vehicles and boats etc., supply of tools & plants, furniture and computer peripherals. Separate agreement may be required in those cases, particularly for consultancy and RFP for EPC, which shall be made in standard formats to be approved by the Government.

After completion of the work, the Contractor may opt for refund of the Security Deposit by replacing equal amount of Bank Guarantee of scheduled Bank valid up to 3 months beyond the defect liability period.

Additional Performance Security @ 10% of the tendered amount in the form of Bank Guarantee from a Scheduled Bank, valid up to the date of completion of work, shall be obtained from the successful bidder, if the accepted bid value is 80% or less than the estimated amount put to tender.

If the bidder fails to submit Additional Performance Security within 7 (seven) working days from the date of LoA or the time period as approved by the Tender inviting Authority, his Earnest Money will be forfeited.

If the bidder fails to complete the works successfully, the Additional Performance Security along with Security Deposit lying with the Government shall be forfeited at any time during the pendency of contract period as per relevant Clauses of the Contract.

Necessary provisions regarding deductions of Security Deposit from the progressive bills of the Contractor as per relevant clauses of the contract will in no way be affected/ altered by this Additional Performance Security.

Compensation for delay

Clause 2. The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall throughout the stipulated pe riod of the contract be proceeded with all due diligence. Time being deemed to be the essence of the contract on the part of the contractor, the contractor shall be bound in all cases, to achieve the 'Milestones' as defined under Clause 5 and specified in the NIT into various 'Identifiable and quantifiable construction related stages' pertaining to the work. In the event of the contractor failing to comply with any of the conditions related to achieving the 'Milestones' within the specified time period prescribed for such 'Milestone' plus one month, he/she shall be liable to pay compensation.

If the contractor fails to commence and/or maintain required progress viz. Milestones defined in the Notice Inviting Tender over the total time allotted for its full completion and in terms of clause 5 or fails to complete the work and clear the site on or before the end of contract period or extended date of completion, he/she shall, without prejudice to any other right or remedy available under the law on account of such breach, pay as agreed compensation to the implementing Department.

This will also apply to items or group of items for which a separate period of completion has been specified.

Compensation for delay of work: @ 2% (Two percent) of the tendered value of work arrived for each month of delay to be computed on per day basis subject to the ceiling limit of security deposit already withheld or due to be withheld during imposition of the said clause and minimum payable compensation equivalent to the Earnest Money deposited(EMD).

Provided always, that the total amount of compensation for delay, to be paid under this clause shall not exceed 10% of the tendered value of work or the tendered value of the item or group of items of the work, for which a separate period of completion is originally given.

Action when whole of security deposit is forfeited

The amount of compensation may be adjusted or set-off against any sum payable to the contractor under this contract, if the contractor catches up with the progress of work subsequently, part or full of the desired progress as per the cont ract in accordance with the decision of the Tender Accepting Authority, under powers delegated by Government to be communicated by the Engineer-in-Charge, the withheld amount shall be released. However, no interest, what so ever, shall be payable on such with held amount.

Force majeure :-If the work(s) be delayed for the following reasons:-
Due to war, internal emergency and other conditions such as abnormally bad weather, flood, cyclone natural calamity or serious loss or damage by fire or civil commotion, the contractor shall immediately give notice thereof in writing to the Engineer-in-charge but shall nevertheless use constantly his/her best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer- in-charge to proceed with the works.

Contractor remains liable to pay compensation, if action is not taken under Clause3

Clause 3. Subject to other provisions contained in this clause, the Engineer-in-charge with the prior approval of Tender Accepting Authority, may, without prejudice to his/her any other rights, remedy against the Contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provision of the contract or otherwise, and whether the date of completion has or has not been elapsed, by notice in writing, absolutely determine the contract in any of the following cases:

(i) If the Contractor has been given by the Engineer-in-Charge a notice in writing to rectify, reconstruct or replace any defective work or that work is being performed in an inefficient or otherwise improper or un-workman like manner, shall omit to comply with the requirements of such notice for a period of seven days thereafter;

(ii) If the Contractor has without reasonable cause suspended the progress of work, or has failed to proceed with the work with due diligence so that, in the opinion of the Engineer-in-Charge he/she will be unable to secure completion of the work by the schedule date for completion, and continues to do so after a notice of seven days in writing from the Engineer-in-charge;

(iii) If the Contractor fails to complete the work within the stipulated date or the Milestones/items of work within individual dates of completion, if any, stipulated on or before such date(s) of completion and does not complete them or reach the defined Milestones within the period specified in the notice given in writing to that effect by the Engineer-in-charge;

(iv) If the Contractor persistently neglects to carry out his/her obligations under the contract and/or commits default by not complying with any of the terms & conditions of the contract and does not remedy it, or take effective steps to remedy it, within seven days after a notice in writing is given to him/her to that effect by the Engineer-in-Charge;

(v) If the Contractor being an individual, or a firm, or any partner thereof, shall at any time be adjudged insolvent or have a 'Receiving Order' or Order for administration of his/her Estate made against him/her, or take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any Insolvency Act for the time being in force, or make any conveyance or assignment of his/her effects or composition or arrangement for the benefit of his/her creditor or purport to do so, or if any application be made under Insolvency Act for the time being in force for the sequestration of his/her Estate, or if a trust deed is executed by him/her for benefit of his/her creditors;

(vi) If the Contractor being a Company pass a resolution or the court delivers an order of judgement that the Company shall be wound up, or if a receiver or a manager on behalf of a creditor be appointed, or if a circumstance arise which entitle the Court or the creditor to appoint a receiver or a manager or which entitle the court to issue a winding up order;

(vii) If the Contractor shall suffer an execution order being levied on his/her goods and allow sitto be continued for a period of 21 days;

(viii) If the Contractor assigns without prior written approval of the Tender Accepting

Authority, transfers, sublets (engagement of labour on piece work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire work or any portion thereof without prior written approval of the Engineer–in–charge;

(ix) AND THEREFORE, the Contractor has made himself/herself liable for action under any of the cases aforesaid, the Engineer-in-charge on behalf of the Government with the prior approval of Tender Accepting Authority, shall have the powers to adopt any of the following actions, as he/she may deem best suited to the interest of the Government:-

(a) To determine the contract as aforesaid, of which rescission notice in writing and costs to be recovered for works since executed subject to a minimum of the amount of Earnest Money deposited by the Contractor under the hand of Engineer-in-charge, shall be the conclusive evidence. Upon such determination, the Earnest Money Deposit, Security Deposit already recovered for executed works and performance guarantee, if any under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Government.

(b) After giving notice to the Contractor to measure up the work executed and to take such whole or the balance or part thereof, as shall be un-executed out of his/her hands, and to give it to another Contractor to complete the balance work. The Contractor, whose contract is determined or rescinded as above, shall not be allowed to participate in the tendering process for the balance work.

(c) To employ labour paid by the implementing Department, and to supply materials, to carry out the works or any part of the work, debarring the contract or and debiting the cost of labour and price of materials (of the amount of which cost and price determined by certificate of the Engineer-in-Charge shall be final and conclusive against the contractor) and crediting him/her with the value of the work done, in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his/her contract; the certificate of the Executive Engineer as to the value of the work done shall be final and conclusive against the contractor.

Contractors remains liable to pay compensation if action not taken under Clause 3

In the event of above course being adopted by the Engineer-in-charge, the Contractor shall have no claim of compensation for any loss sustained by him/her by reason of his/her having purchased or procured any material or entered into any engagement or made any advances on any account or with a view to execute the work or the performance of the contract. In case, action is taken under any of the provisions aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof actually performed under this contract, unless and until the Engineer-in-charge has certified in writing that the performance of such work and value payable in respect thereof, and he/she shall only been titled to be paid the value so certified.

Clause 3A. In case, the work cannot be started due to reasons not within the control of the Contractor within 1/4th (one fourth) of the stipulated time for completion of the work or 45 days whichever is less, which is accepted as a valid & justified reason by the Tender Accepting Authority, either party viz. Contractor &the Engineer-in-Charge may close the contract with the approval of Tender Accepting Authority. In such an eventuality, the earnest money deposited and the security of the contractor shall be refunded, but no payment on account of interests, loss of profit or damages etc. shall be payable at all.

Clause 3B. In case a continuing work cannot be completed due to reasons beyond the control of the contractor, like Force Majeure enumerated later under Clause 5, the contract may be terminated as stated in clause 3A above by the Engineer-in-Charge with the consent of the contractor and approval of the Tender Accepting Authority.

Clause 4. In cases in which any of the powers conferred upon the Engineer-in- Charge under Clause3 here of shall have become exercisable and the same had not

Power to take possession of or require removal for sell Contractor's plant

been previously exercised, non-exercising thereof shall not constitute as a waiver of any of the conditions hereto, and such powers shall, notwithstanding be exercisable in the event of any future case of default by the contractor, for whic h by any clause or clauses hereof, he/she is declared liable to pay compensation amounting to whole of his/her security deposit, and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the Engineer-in-Charge putting in force either of the powers under ix (a) or (c) vested with him/her under the preceding clause, he/she may if he/she so desires, take possession of all or any tools & plant, materials and stores, in or upon the work, or the site thereof, or belonging to the contractor, or procured by him/her and intended to be used for execution of the work, or any part thereof, paying or allowing for the same in account at the contract rates or in case of these not being applicable, at current market rates to be certified by the Engineer-in-Charge whose certificate thereof, shall be final and binding. Otherwise, the Engineer-in-Charge may deliver notice in writing to the contractor or his/her clerk, foreman or other authorized agent, requiring him/her to remove such tools & plant, materials or stores from the premises within a time to be specified in such notice; and in the event of the contractor failing to comply with any such requisition, the Engineer-in- Charge may remove them at the contractor's expense or sale them by p u b l i c auction or private sale on account of the contractor and at his/her risk, in all respects, and the certificate of the Engineer-in-Charge as to the expense of any such removal, and the amount of the proceeds and expense of any such sale shall be final and conclusive against the contractor.

Clause 5. The time allowed for execution of a work as specified in the 'Schedule of Work' or in the extended time in accordance with the terms and conditions shall be the essence of the contract. Execution of work shall commence from such time period as mentioned in the said schedule, or from the date of handing over of the site to the contractor whichever is later. If the contractor commits default in commencing execution of the work as aforesaid within thirty days, without justifiable reasons included under Force Majeure or other such reasons beyond the control of the contractor, in which case to be reported within seven days by the contractor, considered valid and cogent by the Engineer-in-Charge, the Engineer-in-Charge shall after passing of thirty days from the date of scheduled commencement of work as per work order, with the prior approval of the Tender Accepting Authority, without prejudice to any other right to remedy available in law, be at liberty to apply clause 2 and subsequently clause 3 of the tender document.

As soon as possible after the contract is executed, signed and agreed, the contractor shall submit a 'Time and Progress Chart' for each broad activity (Milestone) and get it approved by the Engineer-in-Charge. The chart shall be prepared in direct relation to the time slated in the Notice Inviting Tender (NIT) document, for completion of items or group of items of the work. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work. This may be amended, as necessary, by an agreement between the Engineer-in-Charge and the contractor within the limitations of time imposed in the NIT document. Further, to ensure good progress during execution of work, the contractor shall in all cases, in which the time allowed for any work exceeds one month (save and except for special jobs for which a separate programme has been agreed upon) to complete the work as per defined 'Milestones' given in such 'Schedule of Work' defined clearly in the NIT itself into various 'Identifiable and quantifiable construction related stages' related with the type and nature of work, and that the 'total time allowed for completion of work' is to be broken up against achievement of those stages during the construction / progress of work to ensure a periodic monitoring of progress and enable the contractor and the Engineer-in-Charge to take corrective measures from time to time.

If the work(s) be delayed by:

Force majeure, due to war, internal emergency and other conditions such as abnormally bad weather, flood, cyclone natural calamity or serious loss or damage by fire or civil commotion, strike or lockout affecting procurement of construction materials or any of the trades employed in the work, or any other cause which in the absolute discretion of the Engineer-in-Charge is beyond the contractor's control, then upon happening of any such event causing delay, the

contractor shall immediately give notice in writing to the Engineer-in-Charge but shall nevertheless use constantly his/her best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-Charge to proceed with the works.

Request for rescheduling of 'Milestones' of various activities and extension of time, to be eligible for consideration, shall be made by the contractor in writing within fourteen days of the happening of the event causing delay in the prescribed form. The contractor may also, if practicable, indicate in such a request the period for which extension is desired.

If any such case the Engineer-in-Charge, with the approval of Tender Accepting Authority, may give a fair and reasonable extension of time and reschedule the activity wise 'Milestones' for completion of the work. Such extension shall be communicated to the contractor by the Engineer-in-Charge with the approval of Tender Accepting Authority in writing within maximum 1 (one) month of the date of receipt of such request.

Final Certificate

Clause 6. On completion of work, the contractor shall be furnished with a certificate by the Engineer-in-Charge of such completion, but no such certificate shall be given, nor shall the work be considered to be completed until and unless the contractor shall have removed from the work premises on which the work is executed, all scaffolding, surplus materials and rubbish, and cleaned off the dirt from wood works, doors, windows, floors, or other parts of any building, upon or about which the work is executed, or of which he may have had possession for the purpose of the execution thereof, nor until the work shall have been measured by the Engineer-in-charge whose measurements shall be binding and conclusive against the contractor. If the contractor shall fail to comply with the requirements of this clause as to removal of scaffolding, surplus materials and rubbish and cleaning off dirt on or before the date fixed for completion of the work, the Engineer-in-charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish, and dispose of the same as he/she thinks fit, and clean off such dirt as aforesaid; and the contractor shall forthwith be bound to pay the amount of all expense so incurred, and shall have no claim in respect of any such scaffolding or surplus materials as aforesaid, except for any sum actually realized by the sale thereof.

Payment on inter- mediate certificates to be regarded asadvances

Clause 7. No running account bill payment shall be normally made for works less than 30 (Thirty) percent of Tendered Value or up to Rs 25.00 lakh, whichever is less, till after the whole of the work shall have been completed and certificate of completion given. For works of tendered value above Rs 25.00 lakh, for running account bill payment, the contractor shall on submitting a bill of at least Rs 25.00 lakh there for, be entitled to receive a payment proportionate to the part thereof, approved and passed by the Engineer-in-charge, whose certificate of such approval and passing of the sum so payable shall be final and conclusive against the contractor. But all such intermediate payments shall be regarded as payments by way of advance against the final measured bill payment only and not as payments for work actually done and completed, and shall not preclude the bad, unsound, and imperfect or unskillful work which is to be removed and taken away and reconstructed, or re-erected or to be considered as an admission of the due performance of the contract, or any part thereof, in any respect, or the accruing of any claim, nor shall it conclude, determine or affect in any way the powers of the Engineer-in-charge under these conditions or any of them as to the final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the contractor within one month of the date fixed for completion of the work, otherwise the Engineer-in-charge's certificate of the measurement and of the total amount payable for the work accordingly shall be final and binding on all parties.

Bills to be submitted monthly

Clause 8. W o r k s bill shall be submitted by the contractor each month, after fulfilling above clause, on or before the date fixed by the Engineer-in-charge, for all works executed during the previous month, and the Engineer-in-charge shall take or cause to take the requisite measurement for the purpose of having the same verified, and the claim as far as admissible adjusted, if possible, before the expiry of fourteen days from the presentation of the bill. If the contractor does not submit the bill within the time fixed as aforesaid, the Engineer-in-charge may depute a Junior Engineer to measure up the said

work in presence of the contractor, whose countersignature in the measurement book will be sufficient warrant; and the Engineer-in-charge may prepare a bill from such list which shall be binding on the contract or in all respects.

Within 10 (Ten) days of completion of work, the contractor shall give notice of such completion to the Engineer-in-charge and within 14 (Fourteen) days of receipt of such notice, the Engineer-in-charge shall inspect the work, and if there is no defect in the work, he/she shall furnish to the contractor a final certificate of completion. Otherwise, a provisional certificate of physical completion indicating defects (a) to be rectified by the Contractor and/or (b) for which payment will be made at reduced rates, shall be issued. Such reduced rate is to be imposed with the approval of Superintending Engineer concerned.

Clause 8A. When annual repair and maintenance work is carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floors, windows shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done without waiting for the actual completion of all the other items of work in the contract. In case, the contractor fails to comply with the requirements of this clause, the Engineer-in-Charge shall have the right to get this work done at the cost of the contractor either Depart mentally or through any other contractor. Before taking such action, the Engineer-in-Charge shall give ten days notice in writing to the contractor.

Clause 8B. The Contractor shall submit completion Plan/Drawing as required in the 'General Specification' for Civil as well as Electrical Works as applicable within 30 days of completion of the work.

Clause 9. The Contractor shall submit all bills in printed forms, as per format prescribed by Government of West Bengal, in the office of the Engineer- in-Charge, and the charges in the bills shall always be entered at the rates specified in tender or in case of any extra work ordered in pursuance of these conditions, and not mentioned or provided for in the tender at rates thereinafter provided for such work.

Payments of contractor's bills to Banks

Clause 9A (1) Payments due to the contractor may, if so desired by him/her be made to his bank through e-Pradan, details of which has to be directly furnished to the Engineer- in-charge.
While the online receipt given by such Banks shall constitute a full and sufficient discharge/acquaintance for the payment, the contractor should wherever possible present his/her bills duly receipted and discharged through his/her Banker/s.

(2) In the case of bills, which the contractor presents for payment direct, and which are not endorsed in favour of the Bank, while efforts will be made to secure payment to the financing Bank, payments made to the contractor should be accepted as full acquaintance so far as the Government is concerned. As a part of the arrangement, the financing Bank should give the Government a letter to this effect.

Note1. The procedure will not affect the usual rights of the Government to deduct from contractor's bill, (whether endorsed in favour of a Bank or not) any sum due to Government of account of penalties, over-payments etc., on this or any other contract with the Governor of the State of West Bengal.

Note2. Nothing contained herein shall operate to create in favour of the Bank any rights, claims or equities vis-à-vis the Governor.

Stores supplied by Government

Clause 10. If the specification or estimate of the work provides for use of any special description of material to be supplied by the Engineer-in-Charge, (such materials & stores and the prices to be charged there for as hereinafter mentioned being so far as practicable for the convenience of the contractor, but not so as in any way to control the meaning or effect of this contract specified in the schedule or 'Memorandum' hereto annexed), the contractor shall be supplied with such materials and stores as is required from time to time to be used by him/her for the purpose of the contract only, and the value of the full quantity of materials and stores so supplied at the rates specified in the said schedule or Memorandum may be set off or deducted from any sums then due, or thereafter to become due to the contractor under the contract, or otherwise or against or from the security deposit, or the proceeds of sale thereof; if the same is held in Government securities, the same or a sufficient portion thereof being in this case sold for

the purpose. All materials supplied to the contractor shall remain the absolute property of Government, and shall not on any account be removed from the site of the work, and shall at all times be open for inspection by the Engineer-in-charge. Any such material unused and in perfectly good condition at the time of the completion or determination of the contract shall be returned to the Engineer-in-charge's store, if by a notice in writing under his/her hand, he/she shall so require; but the contractor shall not be entitled to return any such material unless with such consent, and shall have no claim for compensation on account of any such material so supplied to him/her as aforesaid being un used by him, or for any wastage or damage to any such material.

Work to be executed in accordance with specifications, drawings, orders, etc.

Clause 11. The Contractor shall execute the whole and every part of work in the most substantial and workman like manner, and both, as regards to materials and otherwise, in every respect, in strict accordance with the specifications. The contractor shall also conform exactly, fully and faithfully to the design and drawings, and instructions in writing relating to the work signed by the Engineer-in-Charge and lodged in his/her office, to which the contractor shall be entitled to have access at such office, or on the site of the work for the purpose of inspection during office hours, and the contractor shall, if he/she so require, be entitled at his/her own expense to make or cause to be made copies of the specifications, and of all such design, drawings and instructions as aforesaid.

Alteration in specification and designs do not invalidate contract

Clause 12. The Engineer-in-Charge shall have powers to make any alteration in, omission from, addition to, or substitution for, the original specifications, drawings, designs and instructions, that may appear to him/her to be necessary or recommended by Superintending Engineer or the Chief Engineer during the progress of work, and the contractor shall be at all times be bound to carry out these works, in accordance to any instructions which may be given to him/her in writing, signed by the Engineer-in-charge, and such alterations, omissions, additions or substitutions, shall not invalidate the contract but shall be deemed to have formed a part of the work included in the original tender and any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as a part of the work shall be carried out by the contractor on the same conditions in all respects on which he/she agreed to do the main work, and at the same rates, if any, may be specified in the tender for the main work. Time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work bears to the original work contract, and the certificate of the Engineer-in-charge shall be conclusive as to such proportion. And, if the altered, additional or substituted work includes any class of work, for which no rate is specified in the contract, then such class of work shall be carried out at the rates entered in the schedule of rates of concerned Works Department applicable in the district, which was in force at the time of acceptance of the contract, minus/plus the percentage which the total tendered amount bears to the estimated cost of the entire work put to tender ; and if the altered, additional or substituted work is not entered in the said schedule of rates, payment thereof shall be made by the Engineer-in-charge by determining the rates on analysis worked out from (a) the basic rates of materials and labour provided in the aforesaid schedule of rates, or (b) the current market rates of materials and labour when even basic rates for the work are not available in the schedule. In cases when such rates are determined on analysis by the Engineer-in-charge under (a) above, the stipulated percentage above or below schedule of rates as provided in the contract shall also apply, and in case of rates worked out on analysis under (b) above, payme nt shall be made at the rates so determined without application of the said stipulated percentage. In the event of any dispute regarding rates determined on analysis for any altered, additional or substituted work under this clause, the decision of the Superintending Engineer shall be final and binding.

Rates for works not in tender BOQ/SoR

No compensation for alternation in or restriction of work to be carriedout.

Clause 13. If at any time after the commencement of the work the Governor shall for any reason whatsoever not require the whole thereof as specified in the tender to be carried out, the Engineer-in-charge shall give notice in writing of the fact to the contractor, who shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from execution of the work in full, but which he/she did not derive in consequence of the full amount of the work not having been carried out; neither shall he/she have any claim for compensation by reason of any alterations having been made in the original specifications, drawings, designs and instructions which shall involve any curtailment of the work as originally contemplated.

Action and compensation payable in case of bad work

Clause 14. If it shall appear to the Engineer-in-charge or his/her subordinate engineer in-charge of the work, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials of any inferior description, or that any materials or articles provided by the Contractor, for the execution of the work are unsound, or of a quality inferior to that contracted for, or otherwise not in accordance with the contract, the contractor shall on demand in writing from the Engineer-in-charge specifying the work, materials or articles complained of notwithstanding that the same may have been inadvertently passed, certified and paid for, forthwith rectify or remove and re-construct the work so specified in whole or in part, as the case may require, or as the case may be remove the materials or articles so specified and provide other proper and suitable materials or articles at his/her own proper charge and cost; and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in his/her demand aforesaid, then the contractor shall be liable to pay compensation at the rate of one percent on the amount of the estimate put to tender / on up to date executed work value for every day not exceeding ten days, while his/ her failure to do so shall continue and in the case of any such failure, the Engineer-in-charge may rectify or remove, and re-execute the work or remove and replace with others, the materials or articles complained of as the case may be at the risk and expense in all respects of the contractor.

Work to be open to inspection

Contractor or his/her responsible agent to be present

Clause 15. All work under or in course of execution or executed in pursuance of the contract shall at all times be open to inspection and supervision of the Engineer-in-Charge and all his/her subordinates and also higher Officers / Authority of the Government and the contractor shall at all times during the normal working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge or his/her subordinates to visit the work site shall have been given to the contractor, either himself/herself be present to receive orders and instructions, or have a responsible agent duly accredited in writing present for that purpose. Orders given to the contractor's agent shall be con sidered to have the same force as if it had been given to the contract or himself / herself.

Notice to be given before work is covered up

Clause 16. The Contractor shall give, not less than five days notice in writing to the Engineer-in-charge or his/her subordinate in-charge of the work, before covering up or otherwise placing beyond the reach of measurement any work, in order that the same is so covered up or placed beyond the reach of measurement, and shall not cover up or place beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge or his/her subordinate, in-charge of the work; and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained, the same shall be uncovered at the contractor's expense, or, in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Contractor liable for damage done and for imperfections for 180 days after certificate

Clause 17. If the Contractor or his/her workers or authorized representatives shall break, deface, injure or destroy any part of the structure in which they may be working or any building, road, road curbs, fence, canals, water pipes, cables, drains, electric or telephone posts or wires, trees, grass or grassland or cultivated ground contiguous to the premises on which the work or any part of it is being executed, or if any damage shall happen to the work from any cause whatever or any imperfections become apparent in it at any time, whether during its execution or within a period of six months after issuance of a certificate of its completion by the Engineer-in-Charge, the contractor shall make the same good at his/her own expense, or in default, the Engineer-in-Charge may cause the same to be made good by other workers, and deduct the expenses (of which the certificate of the Engineer-in-Charge shall be final and binding) from any sums, whether under the contract or otherwise, that may be then, or at any time thereafter become due to the contractor by the Government or from his/her security deposit, or the proceeds of sale thereof, or of a sufficient portion thereof, and if the cost in the opinion of the Engineer-in-Charge whose opinion shall be final and conclusive against the contractor, making such damage or imperfections good shall exceed the amount of such security deposit and/or such sums, it shall be lawful for the Government to recover the excess costs from the contractor in accordance with the procedure prescribed by any law for the time being in force.

Clause 17A. The Contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works, and counting, weighing, assisting in the joint measurement or examination at any time and from time to time of the work or materials. Failing his/her so doing the same may be

provided by the Engineer-in-Charge at the expense of the Contractor and the expenses may be deducted from any money due to the contractor under the contract or from his/her Security Deposit or the proceeds of sales thereof or of a sufficient portion thereof. The Contractor shall also provide all necessary fencing / barricading / providing caution boards etc. and light required to protect the public from accident, and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damage and costs which may be awarded in such suit, actions or proceedings to any such persons or which may with the consent of the Contractor be paid to compromise any claim by any such persons.

Clause 18A. In every case in which by virtue of the provisions under sub-section (1) of Section 12, of the Workmen's Compensation Act, 1923, the implementing Department is obliged to pay compensation to a workman employed by the contractor, in execution of the works. The implementing Department will recover from the Contractor the amount of compensation so paid; and without prejudice to the rights of the Department under sub-section (2) of section 12, of the said Act, implementing Department shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by implementing Department to the Contractor whether under this contract or otherwise. The implementing Department shall not be bound to contest any claim made against it under sub-section (1) Section 12, of the said Act, except on the written request of the contractor and upon his/her giving to the implementing Department full security for all costs for which the Department might become liable in consequence of contesting such claims.

Clause 18B. In every case in which by virtue of the provisions under 'The Contract Labour (Regulation & Abolition) Act 1970', and its amendments and rules, the implementing Department is obliged to pay amount of wages to a workman employed by the Contra ctor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules framed by Government from time to time for the protection of health and sanitary arrangements for workers employed by Contractors, executing Department will recover from the Contractor, the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to the rights of the executing Department under sub- section(2) of Section 20, and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, executing Department shall be at liberty to recover such amount or any part thereof by deducting it form the security deposit or from any sum due by Executing Department to the Contractor whether under this contract or otherwise and the executing Department shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of section 21, of the said Act, except on the written request of the Contactor and upon his/her giving to the implementing Department full security for all costs for which the Department might become liable in contesting such claim.

Clause 19. The Contractor shall obtain a valid license under the Contract Labour (Regulation and Abolition) Act, 1970, before the commencement of the work, and continue to have valid licenses until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986, Fatal Accident Act,1855, Personal Injuries (Compensation Insurance) Act,1970.

The Contractor shall also comply with the provisions of the 'Building and Other Construction Workers (Regulation of Employment & Conditions of Service) Act, 1996' and 'The Building and Other Construction Workers Welfare Cess Act, 1996'. Failure to fulfill these requirements shall attract penal provisions of the contract, arising out of the resultant non-implementation of such provisions.

Labour

Clause 19A. No labour/s below the age of eighteen years shall be employed in the work and the contractor shall abide by the provisions of the Child Labour (Prohibition & Regulation) Act, 1986. Employment of female labour/s in works in the neighborhoods of sensitive barracks should be avoided as far as possible.

Payment of minimum Wages to Labour

Clause 19B. The Contractor shall pay to labours employed by him/her either directly or through Sub-Contractors, wages not less than fair wages as defined by the Labour Commissioner of the State Government under 'Minimum Wages Act, 1948', Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and

Abolition) Act, 1970, wherever applicable.

The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him/her.

In respect of all labourers directly or indirectly employed in the works for performance of the Contractor's part of the contract, the contractor shall comply with or cause to be complied with the contractor's Labour Regulations made by the State Government/ Government of India, from time to time in regard to payment of wages, wage period, deductions from wages, recovery of wages not paid and deductions made without authority, maintenance of wage books or wage slips, publication of scale of wage and other terms of employment, inspection and submission of periodical returns and all other matters likewise in nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act,1979, Minimum Wages Act,1948, wherever applicable.

a) The Engineer-in-Charge concerned shall have the right to deduct from the money due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his/her/their wages which are not justified by their terms of the contract or non-observance of the regulations.

b) Under the provision of Weekly Holidays Act, 1986, the contractor is bound to allow to the labours, directly or indirectly employed in the work, one day rest for 6 days of continuous work, and pay wages at the same rate as for duty. In the event of default, the Engineer-in-charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labour and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-charge concerned.

The contractor shall also comply with the provisions of the 'Employees Liability Act, 2008', Workmen's Compensation Act and 'Maternity Benefits Act' or the amendments thereof or any other law relating thereto, and the rules made there under from time to time.
The Contractor shall indemnify and keep indemnified the implementing Department against payments to be made under and for the observance of the laws aforesaid and PW Contractor's Labour Regulations without prejudice to this right to claim indemnity from his/her sub-contractors.
The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.

Whatever is the minimum wage for the time being, or if the wage payable is higher than minimum wage, such wage shall be paid by the contractor to the workers directly without the intervention of any Dafadar, and that Dafadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workers as and by way of commission or otherwise.

The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Dafadar from the wage of workers.

Clause 19C. In respect of all labours directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his/her own expenses, arrange for the safety provisions as framed from time to time by the competent authority, and shall at his/her own expense provide all facilities in connection therewith. In case the contractor fails to make arrangement, and fail to provide necessary facilities as aforesaid, he/she shall be liable to pay a penalty of Rs. 2000/- for each default, and in addition the Engineer-in-Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in their behalf, from the contractor.

Clause 19D. For the works above Rs. 2.0 crore, the Contractor shall submit by the 4th and 19th of every month to the Engineer-in-charge, a true statement showing in respect of the second half of the preceding month and the first half of the current month respec tively-

The number of labourers employed by him/her on the work, their working hours, and the

wages paid to them;

Accidents that had occurred during the said fortnight showing the circumstances under which it had happened, and the extent of damage and injury caused by them, and the number of female workers who have been allowed maternity benefits according to Clause 19F of the contract and the amount paid to them;

Failing which the contractor shall be liable to pay to the Department, a sum not exceeding Rs. 2000/- for each default or materially incorrect statement. The decision of the Engineer-in-charge shall be final in deducting from any bill due to the contractor; the amount levied as fine and would be binding on the contractor.

Clause 19E. In respect of all labours directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be compiled with all the rules framed by the Government from time to time for the protection of health and sanitary arrangements of workers employed by the contractor.

Clause 19F. In the event of the contractor(s) committing a default or breach of any of the provisions of the Contractor's Labour Regulations and Rules for the protection of health and sanitary arrangement for the workers as amended from time to time or furnishing any information or submitting or filing any statement under the provisions of the above Regulations and Rules which is materially incorrect, he/she shall, without prejudice to any other liability, pay to the Department a sum not exceeding Rs. 2000/- for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractors defaulting continuously in this respect, the penalty may be enhanced to Rs. 200/- per day for each day of default subject to a maximum of five per cent of the tendered value. The decision of the Engineer-in-charge shall be final and binding on the parties.

Should it appear to the Engineer-in-charge that the contractor(s) is/are not properly observing and complying to the provisions of the Contractor's Labour Regulations and Rules, The Minimum Wages Act, 1948 and Contract Labour (Regulation and Abolition) Act 1970, for the protection of health and sanitary arrangements for work-people employed by the contractor(s) (hereinafter referred as 'the said Rules') the Engineer-in-charge shall have the power to give notice in writing to the contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work-people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and/or observe the said Rules and to provide the amenities to the work-people as aforesaid, the Engineer-in-charge shall have the power to provide the amenities herein before mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his/her own expense and to approved standards all necessary hutments and sanitary arrangements required for his/her/their work-people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-charge shall have power to give notice in writing to the contractor(s) requiring that the said hutments and sanitary arrangements be remodeled and/or reconstruct such hutments and sanitary arrangements according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such hutments and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer-in-charge shall have the power to remodel or reconstruct such hutments and sanitary arrangements according to approved standards at the cost of the contractor(s).

Clause 19G. The contractor shall comply with all the provisions of The Minimum Wages Act, 1948, Contract Labour (Regulation and Abolition) Act, 1970, Employees Liability Act, Industrial Dispute Act and Maternity Benefit Act, 1961, as amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force by the appropriate authority from time to time.

Clause 19H. The Engineer-in-charge may require the contractor to remove from the site of work, any person or persons engaged/assigned or employed by the contractors upon the work who may be determined as insane or incompetent or misconducts himself/herself, and the contractor shall forth with comply with such requirements.

Clause 19I. It shall be the responsibility of the contractor to see that the

building/structure under construction is not occupied by anybody unauthorized during construction, and is handed over to the Engineer-in-charge with vacant possession free from encumbrances in entirety, If such buildings/structures through completed is occupied illegally, then the Engineer-in-Charge shall have the option to refuse to accept the said building/structure in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay a levy up to 5% of tendered value of work may be imposed by the Engineer-in-charge whose decision shall be final both with regard to the justification and quantum and shall be binding on the contractor.

However, the Engineer-in-charge, through a notice, may require the contractor to remove the illegal occupations, any time on or before construction and delivery.

Work onSundays

Clause 20. No work shall be done on Sundays without the prior sanction of the Engineer-in-charge.

Work not to be sublet. Contract may be rescinded and security deposit forfeited for subletting, bribing, or if contractor becomesinsolvent

Clause 21. The contract shall not be assigned or sublet without specific orders from Government in respect of a specified sub-contractor. And if the contractor shall assign or sublet his contract, or attempt so to do, or become insolvent or commence any in insolvency proceedings or make any composition with his creditor, or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given, promised, or offered by the contractor, or any of his servants or agents to any public officer or person in the employ of Government in any way relating to his office of employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Divisional Officer may thereupon by notice in writing rescind the contract, and the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of Government and the same consequences shall ensure as if the contract had been rescinded under the Clause 3 hereof, and in addition the contractor shall not be entitled to recover or be paid for any work there for actually per formed under the contract.

Sum payable as compensation to be considered as reasonable without reference to actual loss

Clause 22. All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of Government without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

Changes in constitution of firm

Clause 23. Where the contractor is a partnership firm or a consortium, prior approval in writing of the Engineer-in-Charge shall be obtained for any change made in the constitution of the firm/consortium. Where the contractor is an individual or a Hindu Undivided Fam ily (HUF) business concern, such approval as aforesaid shall likewise be obtained, before the contractor enters into any partnership agreement/Memorandum of Articles where under the partnership firm/ consortium would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract is liable to be rescinded.

Works to be under direction of Engineer-in-Charge

Clause 24. All works to be executed under the contract shall be executed under the direction of Engineer-in-Charge. Further instructions/advices, if felt necessary by Superintending Engineer/ Chief Engineer, shall also be binding to be communicated by the Engineer-in-Charge.

Clause 25. Settlement of Disputes and Arbitration:

Settlement of disputes - Dispute Redressal Committee'

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, designs, drawings and instructions hereinbefore mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever, in any way arising out of or relating to the contracts, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works, or the executions or failure to execute the same, whether arising during the progress of the work, or after the completion or abandonment there of shall be dealt with as mentioned herein after:

If the contractor considers any work demanded of him/her to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-Charge or any matter in connection with or arising out of the contract or carrying out of the work to be unacceptable, he/she shall promptly within 15 days request the Chairman of the Departmental Dispute Redressal Committee, in writing, for

written instruction or decision. Thereupon, the Dispute Redressal Committee shall give its written instruction or decision within a period of three months from the date of receipt of the Contractor's letter.

The Dispute Redressal Committee in each of the Works Departments shall be constituted with the following officials as Members:

1	Secretary / Engineer-in-Chief of the Department concerned	Chairman
2	Joint Secretary / Deputy Secretary / any Officer of equivalent rank of the Department	Member
3	One Designated Chief Engineer / Engineer of the Department to be nominated by the Department concerned.	Member Secretary and Convenor
4	One representative of Finance Department of the Government not below the rank of Joint Secretary or Financial Advisor in case of the Works Department where FA system has been introduced.	Member

This provisions will be applicable irrespective of the value of the works to which the dispute may relate.

Clause 26. The contractor shall fully indemnify and keep indemnified the implementing Department against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against implementing Department in respect of any such matter as aforesaid, the contractor shall be immediately notified thereof by the implementing Department and the contractor shall be at liberty, at his/ her own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the implementing Department if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge this behalf.

Lump sum as in estimates

Clause 27. When the estimate on which the tender is made includes lump sums in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of works involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer-in-charge, capable of measurement, certificate in writing of the Engineer-in-charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of this clause.

Action where nospecification

Clause 28. In the case of any class of work for which there is no such specifications as referred to under Clause 11, such work shall be carried out in accordance with the latest Bureau of Indian Standards (BIS) specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per reputed manufacturer's specifications if accepted by the Engineer-in-Charge. If not available, then as per State Government / Union Government accepted and approved specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in- Charge which is approved by the Tender Accepting Authority.

Definition of works

Clause 29. The expression "works" or "work" where used in these conditions shall, unless there be something either in the subject or context repugnant to such construction, be constructed and taken to mean the works by or by virtue of the contract constructed to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

Clause 30. The Contractor(s) shall at his/their own cost provide his/their labour with hutting on an approved site, and shall make arrangements for conservancy and sanitation in the labour camp to the satisfaction of the local Public Health and Medical Authorities. He/they shall also at his/their own cost make arrangements for the laying

of pipe lines for water supply to his/their labour camp from the existing mains wherever available, and shall pay all fees, charges and expenses in connection with there and incidental thereto.

Clause 31. The contractor(s) shall make his/their own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions:-

i) That the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of the Engineer-in-charge;

ii) The Engineer–in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are, in the opinion of the Engineer-in-Charge, unsatisfactory.

Clause 32. The contractor undertakes to make arrangement for the supervision of the work by the firm supplying the construction materials. The Contractor shall collect the total quantity of materials as per approved programme required for the work as per approved programme, before the work is started and shall hypothecate it to the Engineer- in-Charge. If any material remains unused on completion of the work on account of lesser use of materials in actual execution for reasons other than authorized changes of specifications and abandonment of portion of work, a corresponding deduction equivalent to the cost of unused materials as determined by the Engineer-in-Charge shall be made and the material returned to the contractor. Although the materials are hypothecated to Institute, the contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from site of work without the consent of the Engineer-in-Charge in writing.

The contractor shall be responsible for rectifying defects noticed within Defect Liability Period from the date of completion of the work and the portion of the security deposit relating to work shall be refunded after the expiry of Defect Liability Period.

Clause 33. The contractor shall provide all necessary superintendence during execution of the work and as long thereafter as may be necessary for proper fulfilling of the obligations under the contract.

Contractors Superintendence, Supervision, Technical Staff & Employees

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-in-Charge, the name(s), qualifications, experience, age, address(es) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative(s) who will be supervising the work. The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his/her approval or otherwise of such representative(s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative shall be appointed by the contractor soon after receipt of the approval from the Engineer-in-Charge and shall be available at site before start of work.

If the contractor (or any partner in case of firm/company) himself/herself has such qualifications, it will not be necessary for the said contractor to appoint such a principal technical representative but the contractor shall designate and appoint a responsible agent to represent him and to be present at the work whenever the contractor is not in a position to be so present. All the provisions applicable to the principal technical representative under the clause will also be applicable in such a case to the contractor or his responsible agent. The principal technical representative and/or the contractor shall on receiving reasonable notice from the Engineer-in-Charge or his designated representative(s) in charge of the work in writing or in person or otherwise, present himself/herself to the Engineer-in-Charge and/or at the site of work, as required, to take instructions. Instructions given to the principal technical representative or the responsible agent shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and/or the contractor or his/her responsible authorized agent shall be actually available at site especially during important stages of execution of work, during recording of measurement of works and whenever so required by the Engineer-in-Charge by a notice as aforesaid and shall also note down instructions conveyed by the Engineer-in-Charge or his/her designated representative in the site order

book and shall affix his signature in token of noting down the instructions and in token of acceptance of measurements.

If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is/are effectively appointed or is/are effectively attending or fulfilling the provision of this clause, a recovery (non-refundable) shall be effected from the contractor as specified in Schedule and the decision of the Engineer-in-Charge as recorded in the site order book and measurement recorded checked / test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint a suitable technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or are absent by more than two days without duly approved substitute or do not discharge their responsibilities satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) along with every running account bill / final bill and shall produce evidence if at any time so required by the Engineer-in-Charge.

The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work.

The contractor shall provide and employ skilled, semi-skilled and unskilled labour as is necessary for proper and timely execution of the work.

The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who, in his opinion, misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

Clause 34. "Levy / Taxes Payable by Contractor"

(i) GST, Building and other Construction Workers' Welfare Cess or any other tax or Cess in respect of this contract shall be payable by the Contractor and Engineer-in-Charges hall not entertain any claim whatsoever in this respect.

(ii) The contractor shall deposit Government Royalty and obtain necessary permit for supply of the sand, stone chips, red bajri, sand stone, river bed materials etc. from local authorities, if those are directly procured from quarry sites.

In case materials are procured from secondary sources, certificates of quarry owners to the effect of payment of royalties and Cess would have to be furnished. In absence of such certificates towards payment of Royalties and Cess such components shall be deducted from the contractor's bills at prescribed rates and deposited through 'GRIPS' portal or otherwise, in the designated Government Treasuries/PAO.

If pursuant to or under any law, notification or order, any Roya lty, Cess or the like becomes payable by the implementing Department and does not at any time become payable by the contractor to the State Government/Local appropriate authorities in respect of any material used by the contractor in the works then in such a case, it shall be lawful to the Department and it will have the right and be entitled to recover the amount paid in the circumstances as afore said from dues of the contractor.

Clause 35.

(i) All tendered rates shall be inclusive of statutory taxes and levies payable under respective statutes. However, if any further tax or cess is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the contractor thereupon necessarily and properly pays such taxes/levies/cess, the contractor shall be reimbursed the amount so paid. Provided such payments, if any, is not, in the opinion of the Engineer-in-charge (whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.

(ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorized representative of the Department and/or the Engineer-in-Charge

and further shall furnish such other information/document as the Engineer-in-Charge may require from time to time.

(iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy or cess, give a written notice thereof to the Engineer-in-Charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

Clause 36. Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Engineer-in-charge shall have the option of terminating the contract without compensation to the contractor, but would be liable to clear full dues and claims on work done to his/her legal successor/s.

Clause 37. The contractor shall not be permitted to tender for works in which his near relative is posted as in any capacity between the grades of the Executive Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him/her in any capacity or are subsequently employed by him/her and who are near relatives to any Official in the Institute. Any breach of this condition by the contractor would render him/her liable to be removed from the approved list of contractors of the Department. If however the contractor is registered in any other Department, he/she shall be debarred from tendering in the Department for any breach of this condition.

NOTE: By the term "near relatives" is meant wife, husband, own parents and grandparents, own children and grandchildren, own brothers and sisters, own uncles, aunts and first cousins and their corresponding in-laws.

Clause 38. No engineer of Gazetted Rank or other Gazetted Officer employed in engineering or administrative duties in the Government shall work as a contractor or employee of a contractor for a period of one year after his/her retirement from Government service without the previous permission of Government in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of Government as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

Clause 39. The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-Charge and a certificate from him/her to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such payments being in addition to compensation up to the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the Engineer-in-Charge concerned. The contractor shall be paid for the damages/destruction suffered and for the restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the Air Force Officers or the Engineer-in-Charge (b) for any material etc. not on the site of the work or for any tools, plant, machinery, scaffolding, temporary building and other things not intended for the work.

In the event of the contractor having to carry out reconstruction as aforesaid, he/she shall be allowed such extension of time for its completion as is considered reasonable by the Engineer-in-charge.

Clause 40. The contractor shall comply with the provisions of the Apprentices Act, 1961 and the Apprenticeship Rules, 1992 and orders issued there under from time to time. If

he/she fails to do so, his/her failure will be a breach of the contract and the Engineer-in-Charge may, in his/her discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him/her of the provisions of the said Act.

Clause 41. Procedure For Suspension and Debarment of Supplier, Contractors and Consultants

The procedure as laid down below shall govern the suspension/debarment of Suppliers/Contractors/Consultants (Contractors for brevity) involved in Government procurement for offences or violations committed during competitive bidding and contract implementation, for the works under different Departments of Government of West Bengal.

Grounds for Suspension and Debarment:-

(1) Submission of eligibility requirements containing false information or falsified documents.

(2) Submission of Bids that contain false information or falsified documents, or the concealment of such information in the Bids in order to influence the outcome of eligibility screening or any other stage of the bidding process.

(3) Unauthorized use of one's name/digital signature certificate for the purpose of bidding process.

(4) Any documented unsolicited attempt by a bidder (**A Person/Contractor/Agency /Joint Venture/Consortium/Corporation participating in the procurement process and/or a person / Contractor / Agency / Joint Venture / Consortium / Corporation having an agreement/contract for any procurement with the department shall be referred as Bidder**) unduly influencing the outcome of the bidding in his favour.

(5) Refusal or failure to post a self–declaration to the effect of any previous debarment imposed by any other department of State Government and/or Central Government.

(6) All other acts that tend to defeat the purpose of the competitive bidding such as lodging false complain about any Bidder, lodging false complain about any Officer duly authorized by the Department, restraining any interested bidder to participate in the bidding process, etc.

(7) Assignment and subcontracting of the contract or any part thereof without prior written approval of the procuring entity.

(8) Whenever adverse reports related to adverse performance, misbehaviour, direct or indirect involvement in threatening, making false complaints etc. damaging the reputation of the department or any other type complaint considered fit by the competent authority of the department, are received from more than one Officer or on more than one occasion from individual Officer.

(9) Refusal or failure to post the required performance security / earnest money within the prescribed time without justifiable cause.

(10) Failure in deployment of Technical Personnel, Engineers and/or Work Supervisor having requisite license / supervisor certificate of competency as specified in the contract.

(11) Refusal to accept an award after issuance of "Letter of Acceptance" or enter into contract with the Government without justifiable cause.

(12) Failure of the Contractor, due solely to his fault or negligence, to mobilize and start work or performance within the specified period as mentioned in the "Letter of Acceptance", "Letter of Acceptance cum Work Order", "Work Order", "Notice to Proceed", "Award of Contract", etc.

(13) Failure by the Contractor to fully and faithfully comply with its contractual obligations without valid cause, or failure by the Contractor to comply with any written lawful instruction of the Procuring Entity/Authority (the Officer authorized by the Administrative Department, Government of West Bengal for procurement) or its representative(s) pursuant to the implementation of the Contract.

(14) For the procurement of Consultancy Service/Contracts, poor performance by the Consultant of his services arising from his fault or negligence. Any of the following acts by the Consultant shall be construed as poor performance.

(i) Non deployment of competent technical personnel, competent Engineers and/or work supervisors;

(ii) Non-deployment of committed equipment, facilities, support staff and manpower;

(iii) Defective design resulting in substantial corrective works in design and/or construction;

(iv) Failuretodelivercriticaloutputsduetoconsultant'sfaultornegligence;
(v) Specifying materials which are inappropriate and substandard or way above acceptable standards leading to high procurement cost;
(vi) Allowing defective workmanship or works by the Contractor being supervised by the Consultant.

(15) For the procurement of goods, unsatisfactory progress in the delivery of the goods by the manufacturer, supplier, or distributor arising from his fault or negligence and/or unsatisfactoryorinferiorqualityofgoods,vis-à-visaslaiddowninthecontract.

(16) Willful or deliberate abandonment or non-performance of the project or Contract by the Contractor resulting in substantial breach thereof without lawful and/or just cause.

CATEGORY OF OFFENCE :-

(A) First degree of offence: 1 to 16 of the above Clause-41 to be considered as First degree of offence.

(B) Second degree of offence: Any one of the offences as mentioned under 'A' above, committed by a particular Bidder/Contractor/Supplier on more than one occasion, be considered as Second degree of offence.

In addition to the penalty of suspension/debarment, the bid security / earnest money posted by the concerned Bidder or prospective Bidder shall also be forfeited.

PENALTY FOR OFFENCE :-

(I) For committing First degree of offence: Disqualifying a Bidder from participating in any procurement process under the Administrative Department of Government of West Bengal up to 2 (two) years.

(II) For committing Second degree of offence: Disqualifying a Bidder from participating in any procurement process under the Administrative Department of Government of West Bengal up to 3 (three)years.

PROCEDURE OF SUSPENSION AND DEBARMENT DURING THE PROCUREMENT PROCESS

(1) Initiation of Action, Notification and Hearings:
Any Bidder or procurement authority on his own or based on any other information made available to him may invite the process of suspension/debarment proceedings by filing a written application with the **Bid Evaluation Committee** and such filing of written application has to be done within forty eight hours from the date and time of publication of the result of technical evaluation of any bid.

(a) Upon verification of the existence of grounds for suspension/debarment, the Chairperson of **Bid Evaluation Committee** shall immediately notify the bidder concerned either electronically through his registered e-mail or in writing to his postal address, advising him that:
i) A complaint has been filed against him and prima facie material has been found, which may lead to suspension/debarment.
ii) He has been recommended to be placed under suspension/debarment by the suspension committee (as constituted by the respective Administrative Department) stating the ground for such.
iii) The said bidder, within three days from the date of issue of such notification by the Bid Evaluation Committee, may approach the Chairperson of Suspension Committee by submitting all required documents in his favour for hearing. Any application made thereafter would not be entertained.

Such notice should contain the e-mail id and the postal address of the Chairperson of the Suspension Committee.

(b) After receiving the recommendation for suspension from Bid Evaluation Committee, Suspension Committee shall issue a notice to the alleged bidder electronically through his registered e-mail id, to submit all relevant documents in support of his defense within three working days after issuance of the notice of the Suspension Committee. The Suspension Committee will conduct the hearing within seven working days from the date of receipt of the docum ents from the alleged bidder. If no appeal has been received from the alleged bidder or if after hearing sufficient ground for suspension is found, the Suspension Committee, will suspend the alleged bidder from participating in the procurement process under the Administrative Department for a period of six months from the date of issuance of suspension order. The Chairpers on of the

Suspension Committee shall issue the suspension order within seven days from the last date of hearing and shall notify the bidder concerned either electronically through his registered e-mail id or in writing to his postal address. The Chairperson of Suspension Committee shall also inform the decision to all concerned.

If sufficient reason for suspension is not found, the Suspension Committee would reject there commendation of Bid Evaluation Committee and would allow the bidder to take part in the tendering process.

If the bidder is suspended, the Suspension Committee would recommend debarment of the bidder and forward the case with all documents to the Debarment Committee for further action.

(c) The Debarment Committee upon receipt of the recommendation of the Suspension Committee shall scrutinize the documents. The Debarment Committee will hold a hearing of the alleged bidder and issue necessary order within ten working days from the last date of hearing. The Debarment Committee, if satisfied after hearing, shall forward the case to the Department for orders of Debarment. The Department in due course will issue Debarment Order disqualifying/prohibiting the erring bidder from participating in the bidding/procurement of all projects under the Administrative Department for a specified period. The alleged bidder shall be intimated accordingly either electronically through his registered e-mail id or in writing to his postal address. Otherwise the Debarment Committee may reject the recommendation of the Suspension Committee. The Chairperson of Debarment Committee shall also inform the decision to all concerned.

PROCEDURE FOR DEBARMENT DURING THE CONTRACT IMPLEMENTATION STAGE:-

(A) Upon termination of contract due to default of the Bidder, the Engineer-in-Charge shall recommend for debarment to the Bid Evaluation Committee. The Bid Evaluation Committee shall submit his recommendation of debarment of the alleged Bidder along with a detailed report stating clearly the reasons for debarment to the Debarment Committee within 30 (thirty) days from the date of termination of contract. The alleged Bidder shall be intimated accordingly either electronically to his registered e-mail id or in writing to his postal address. The Chairperson of Bid Evaluation Committee shall also inform the decision to all concerned.

(B) The Debarment Committee upon receipt of the recommendation of Bid Evaluat ion Committee shall scrutinize the documents. The Debarment Committee will hold a hearing about the matter from the Bidder and issue necessary order within 10 (ten) working days from the last date of hearing. The Debarment Committee, if satisfied after hearing, shall forward the case to the Department for the order of debarment. The Department in due course will issue debarment order disqualifying/prohibiting the erring Bidder from participating in the bidding/procurement of all projects under the Administrative Department, Government of West Bengal for a specified period. The alleged Bidder shall be intimated accordingly either electronically to his registered e-mail id or in writing to his postal address. Otherwise the Debarment Committee may reject the recommendation of the Bid Evaluation Committee. The Chairperson of Debarment Committee shall also inform the decision to all concerned.

STATUS OF SUSPENDED / DEBARRED BIDDER :-

(a) Bidder placed under Suspension/Debarment by the competent authority will not be allowed to participate in any procurement process under the Administrative Department within the period of suspension/debarment. The earnest money of the suspended Bidder shall stand forfeited to the Government.

(b) If the Suspension/Debarment Order is issued prior to the date of issue of "Letter of Acceptance", "Letter of Acceptance cum Work Order", "Work Order", "Notice to Proceed", "Award of Contract" etc. for any Bid, the Suspended/Debarred Bidder shall not be qualified for Award for the said Bid and such Procurement Process will be dealt with as per existing norms by simply excluding the erring Bidder.

(c) If the Suspension/Debarment Order is issued after award of a Government Project/Contract to the Debarred Bidder, the awarded Project/Contract shall not be prejudiced by the said Order provided that the said offence(s) committed by the Debarred Bidder is not connected with the awarded project/contract.

Clause 42. Executive Engineer of the concerned Division will be the Engineer-in-Charge in respect of the Tender contract and all correspondences concern ingrates, claims, change

in specifications and/or design and similar important matters will be valid only if accepted/recommended by the Engineer-in-Charge. If any correspondence of above tender is made with Officers other than the Engineer-in-charge for speedy execution of works, the same will not be valid unless copies are sent to the Engineer-in-Charge and also approved by him. Instructions given by the Assistant Engineer and the Junior Engineer on behalf of the Engineer-in-Charge (who have been authorized to carry out the work on behalf of the Engineer-in-Charge) regarding specification, supervision, approval of materials and workmanship shall also be valid. In case of dispute relating to specification and work, the decision of Engineer-in-Charge shall be final and binding. The Engineer-in-Charge will however invariably take decisions relating to tender contract or as mentioned in the relevant rules and clauses of the contract document with the approval of the Tender Accepting Authority.

Clause43. Acceptance of the Tender will rest with the Tender Accepting Authority without assigning reason thereof to the bidder. The accepting authority reserves the right to reject any or all of the tenders without as signing any reason thereof to the bidder / contractor.

Clause 44. In the event of acceptance of Lowest Rate, no multiple Lowest Rates will be considered for acceptance by the Department. In such cases, the Tender will be cancelled.

Clause 45. In the event of conflicting different clauses, the clauses in the e-NIT will prevail.

Clause 46. Engineer-in-Charge shall not entertain any claim whatsoever from the Contractor for payment of compensation on account of idle labour on such grounds including non-possession of encumbrance free land.

Clause 47. Engineer-in-Charge shall not be held liable for any compensation due to machines becoming idle or any circumstances including untimely rains, other natural calamities, like strikes etc.

Clause 48. Imposition of any Duty / Tax / Octroi / Royalty etc. whatsoever of its nature (after work order / commencement and before final completion of the work) is to be borne by the contractor / bidder. Original challan of those materials, which are procured by the bidder, may be asked to be submitted for verification.

Clause 49. Cess @ 1% or as amended time to time of the cost of construction works shall be deducted from the Gross value of all Works Bill in terms of Finance Department order. Also it is instructed to register his/her establishment under the Act, with the competent registering Authority, i.e. Assistant Labour Commissioner / Deputy Labour Commissioner of the region.

Clause 50. No Mobilization/Secured Advance will be allowed unless specified otherwise in the contract.

Clause 51. Valid PAN issued by the Income Tax Department, Government of India, valid 15 digit Goods and Services Tax Payer Identification Number (GSTIN) under GST Act 2017, Cess, Royalty of Sand, Stone Chips, Stone Metal Gravel, Boulders, Forest product etc., Toll Tax, Income Tax, Ferry Charges and other Local Taxes, if any, are to be paid by the Contractor/Bidder. No extra payment will be made as a reimbursement or as compensation for these. The rates of supply and finished work items are inclusive of these taxes and charges.

Clause 52. All working Tools & Plants, Scaffolding, Construction of Vats & Platforms and arrangement of Labour Camps will have to be arranged by the Contractor at his/her own cost.

Clause 53. The Contractor shall supply Mazdoors, Bamboos, Ropes, Pegs, Flags etc. for laying out the work and for taking and checking measurements for which no extra payment will be made.

Clause 54. The Contractor/Bidder should see the site of works and Tender Documents, Drawings etc. before submitting e-Tender and satisfy himself/herself regarding the condition and nature of works and ascertain difficulties that might be encountered in executing the work, carrying materials to the site of work, availability of drinking water and

other human requirements & security etc. Work on river banks may be interrupted due to a number of unforeseen reasons e.g. sudden rises in water levels, inundation during flood, inaccessibility of working site for carriage of materials. Engineer-in Charge may order the contractor to suspend work that may be subjected to damage by climate conditions. No claim will be entertained on this account. There may be variation in alignment, height of embankment or depth of cutting, location of revetment, structures etc. due to change of topography, river condition and local requirements etc. between the preparation and execution of the scheme for which the tendered rate and contract will not stand invalid. The Contractor will not be entitled to any claim or extra rate on any of these accounts.

Clause 55. A machine page numbered Site Order Book (with triplicate copy) will have to be maintained at site by the Contractor and the same has got to be issued from the Engineer-in-Charge before commencement of work. Instructions given by inspecting officers not below the rank of Assistant Engineer will be recorded in this book and the contractor must note down the action to be taken by him in this connection as quickly as possible.

Clause 56. The work will have to be completed within the time mentioned in the e-NIT. A suitable Work Programme based on time allowed for completion of work as per e-NIT is to be submitted by the contractor within 7 (seven) days from the date of receipt of work order which should satisfy the time limit of completion. The contractor should inform in writing, within 7 (seven) days from the date of receipt of work order, the names of his authorized representatives who are to remain present at site daily during work execut ion who will receive instructions of the work, sign measurement book, bills and other Government papers etc.

Clause 57. No compensation for idle labour, establishment charge or on other reasons such as variation of price indices etc. will be entertained.

Clause 58. All possible precautions should be taken for the safety of the people and work force deployed at worksite as per safety rule in force. Contractor will remain responsible for his labour in respect of his liabilities under the Workmen's Compensation Act etc. He must deal with such cases as promptly as possible. Proper road signs as per PWD practice or any other sign board for safety purpose as per requirement by the concerned Administrative Department will have to be erected by the Contractor at his own cost while operating in public thorough fares.

Clause 59. The Contractor will have to maintain qualified technical employees and/or Apprentices at site as per prevailing Apprentice Act or as stipulated in the contract.

Clause 60. The Contractor will have to accept the Work Programme as per modifications and priority of work fixed by the Engineer-in-Charge so that most vulnerable reach and/or vulnerable items are completed before impending monsoon or rise in river flood water level or for other suitable reasons.

Clause 61. Quantities of different items of work mentioned in the tender schedule or in work order are only tentative. In actual work, these may vary considerably. Payment will be made on the basis of works actually done in different items and no claim will be entertained for reduction of quantities in some items or for omission of some items. For execution of quantitative excess in any item or supplementary new items of work as decided by the Department, approval of the Superintending Engineer / Chief Engineer / Government would be required, depending on whosoever be the Tender Accepting Authority, before making such payment.

Clause 62. In order to cope up with the present system of e-billing, supply of departmental materials is generally not allowed. However, if in special circumstances, Departmental materials may be issued to the Contractor/Bidder to the extent of requirements as assessed; those may be recovered from the Running Account Bill and/or Final Bill, as applicable.

Clause 63. Any material brought to site by the contractor is subject to approval of the Engineer-in-Charge. The rejected materials must be removed by the contractor from the site at his own cost within 24 hours of issue of the order to that effect. The rates in the schedule are inclusive of cost and carriage of all materials to worksite. The materials will have to be supplied in phase with due intimation to the Assistant Engineer concerned in

conformity with the progress of the work. For special type of materials, i.e. Geo Synthetic Bags, HDPE Bags, Geo Textile Filter, Geo Jute Filter etc., if any, relevant Data Sheet containing the name of the Manufacturers, Test Report etc. will also be submitted on each occasion. Engineer-in-Charge may conduct independent test on the samples drawn randomly before according approval for using the materials at site. In this regard decision of Engineer-in-Charge shall be final and binding.

Clause 64. For all items of contract jobs requiring skilled labour, the contractor shall have to employ 70% (Seventy Percent) of skilled labour locally. In case the Contractor fails to recruit skilled local labour, the Contractor shall employ skilled labour locally secured by Government in the manner indicated above. For bridge works, highly technical works of labour, the contractor may, with the prior permission in writing of the Engineer-in-charge to whom full facts must be placed for such permission, import and employ skilled labour up to 30% (Thirty Percent) of the total requirement. In this case the expression "Imported labour" shall mean "labour imported primarily from other States and secondarily, from the distant districts of the State of West Bengal." In case where the contactor fails to secure unskilled local labour or to engage imported labour, the contractor shall employ labour locally recruited by Government or labour imported by Government at the rate to be decided by the Superintending Engineer of the works concerned, whose decision as to the circumstances in which employment of such labour is of mutual advantage to Government and the contractor, will be final and binding on the parties.

Clause 65. All queries and disputes arising out of the works tender contract is to be brought to the notice of the Chairman of the 'Department Dispute Redressal Committee' in writing for decision within 15 days.

Clause 66. The contractor shall have to make his own arrangements for water, both for the work and use by his workers, etc., for road rollers and for all tools and plant, etc., required on the work.

Clause 67. Contractor will be responsible for the payments of all water charges payable to the Corporation Municipality / Panchayat or any other water works authority including a Government Department concerned.

Clause 68. If the contractors shall desire an extension of the time for completion of the work under clause 5 of the contract, no application for such extension will be entertained if it is not received in sufficient time to allow the Executive Engineer to consider it and the Contractor will be responsible for the consequences arising out of his negligence in this respect.

Clause 69. The Contractor will have to leave ducts in walls and floors to run conduit or cables, where necessary, and he will not be entitled to any extra payment on this account.

Clause 70. Contractors in the course of their work should understand that all materials obtained in the work of Dismantling, Excavation, etc., will be considered Government property and will be disposed of to the best advantage of Government.

Clause 71. In case of very special case of circumstances, if any Departmental materials are issued, there may be delay in obtaining the materials by the Department and the Contractor is, therefore, required to keep himself/herself in touch with the day to day position regarding the supply of materials from the Engineer-in-charge and to so adjust the progress of the work that his labour may not remain idle nor may there be any other claim due to or arising from delay in obtaining the materials. It should be clearly understood that no claim whatsoever shall be entertained by the Department on account of delay in supplying materials.

Clause 72. No compensation for any damage done by rain or traffic during the execution of the work will be made.

Clause 73. Whenever a work is carried out in municipal area, electric lights or electric danger signals whenever available shall be provided by the contractors on the barriers as well as paraffin lights. Facilities for the electric connection will be made by this Department but the Contractor will bear all the expenses.

Clause 74. The Contractor should quote through rate inclusive of cost of materials and carriage to place of working.

Clause 75. The Contractors should give complete specifications showing the method of execution and the quantity and quality of materials they intend to use per hundred square metre area.

Clause 76. In cases where water is used by the Contractor he will be required to deposit in advance with the Executive Engineer the charges for water which are to be calculated in accordance with the schedule of miscellaneous rates in the Canal Act.

Clause 77. It must be clearly understood by the Contractor that no claim on account of enhanced rates on those already accepted, due to fluctuations arising out of any situation will be entertained during the currency of this contract for the work as per schedule attached to the agreement and the additional work, if any, under Clause12 of the contract.

Clause 78. In the event of emergency the Contractor will be required to pay his labour everyday and if this is not done, Government shall make the requisite payments as would have been paid by the contractor and recover the cost from the contractors.

INCONVENIENCE OF THE PUBLIC

Clause 79. The Contractor(s) shall not deposit material on any site which will seriously inconvenience the public. The Engineer-in-charge may require the Contractor(s) to remove any materials, which are considered by him to be a danger or inconvenience to the public or cause them to be removed at the contractor's cost.

Clause 80. The Contractor undertakes to have the site clean, free from rubbish to the satisfaction of the Engineer-in-charge. All surplus materials, rubbish etc. will be removed to the places fixed by the Engineer-in-charge and nothing extra will be paid.

Clause 81. The Contractor shall not allow any rubbish or debris to remain on the premises during or after repairs, but shall remove the same and keep the place neat and tidy during the progress of the work. The Engineer-in-charge may get the site premises cleared of debris etc. And recover the cost from the bill of the contractor, if the latter shows slackness in observing this clause.

Clause-82. Construction materials brought at site shall not be stacked at random. The contractor shall stack all these materials as directed by the Engineer-in-charge.

INTERPRETATION OF CLAUSES

Governor means the Governor of the State of West Bengal and his/her successors.

The Government means Government in the concerned Works Department.

The Department means the Secretary of the concerned Department or his/her authorized representative.

The Divisional Officer means the Executive Engineer of the concerned Works Department for the time being of the Division concerned, also identified as the Engineer-in-Charge.

The Sub-divisional Officer means the Assistant Engineer of the concerned Works Department for the time being of the Sub-division concerned. Junior Engineer equivalent to Section Officer of the Section concerned.

Superintending Engineer in the concerned works Department is the final Authority regarding Schedule of Rates and also the acceptance of Non-scheduled item rates arrived on the basis of market rate analysis for supplementary items, and the authority for approval of Reduced Rates and Part Rates. He is also the Tender Accepting Authority for works of value above Rs. 45.00 lakh and up to Rs. 2.00 crore under existing delegated power.

Chief Engineer in the concerned Works Department is the technical head of the Directorate and is also the Tender Accepting Authority for all works of value above Rs.

2.00 crore. Excess work over individual items comprising the original tender may be exceeded beyond 10% with the approval of concerned tender accepting authority and verified by the Superintending Engineer/ Chief Engineer subject to the total value of work upon completion is within the technically sanctioned cost and that there is no major deviation from original scope of work in the tender. **Any supplementary tender/item/work in connection with the main tender is to be taken up with the approval of the Tender Accepting Authority not below the rank of Executive Engineer**. Such supplementary tenders above 10% of BOQ are to be executed only with the approval of appropriate Government irrespective of the value of tender.

Words importing the singular number only include the plural number and vice versa.

Irrespective of the accepting authority, Divisional officer shall be the authority signing agreement for all tenders of value more than Rs. 3.00 lakh up to any amount on behalf of the State.

Schedule showing (approximately) materials to be supplied by the Engineer-in-Charge under clause 10:

Particulars	Rates at which the materials will be charged to the contractor			Place of delivery
	Unit	**Rs.**	**P.**	

Note 1- The person or firm submitting the tender should see that the rates in the above schedule are filled up by the Engineer-in-charge on the issue of the form prior to the submission of the tender.

(Name in full)
*Signature of Contractor/Agency with official seal containing Principal office address

(Name in full)
*Signature of Executive Engineer/Assistant Engineer on behalf of the Governor of the State of West Bengal with official seal containing designation &address

* To be authenticated on each and every page of the contract document by all parties.

GOVERNMENT OF WEST BENGAL
OFFICE OF THE DIRECTOR GENERAL
WEST BENGAL FIRE & EMERGENCY SERVICES
13-D Mirza Ghalib Street, Kolkata- 700 016

Memo No : IND/WB/FES/20192020/50553 DATE: 17/05/2019

From :
The Director
Fire Prevention Wing,
West Bengal Fire & Emergency Services.

To :
SISIR NASKAR
ARAMBAGH SUPER SPECIALITY
HOSPITAL
PO : ARAMBAGH
DIST: HOOGHLY,
PIN : 712601
Arambag F.S., Arambag,
Hooghly - 712601 .

Sub :Fire Safety Recommendation for proposed G+IV storied under group Institutional Building in the name of 'ARAMBAGH SUPER SPECIALITY HOSPITAL' at the premises no. ARAMBAGH SUPER SPECIALITY HOSPITAL PO : ARAMBAGH DIST: HOOGHLY, PIN : 712601.

This is in reference to your Application No. IND/WB/FES/20192020/50553,dated 17/05/2019, regarding the Fire Safety Measure for proposed G+IV storied under group Institutional Building in the name of 'ARAMBAGH SUPER SPECIALITY HOSPITAL' at the premises no. ARAMBAGH SUPER SPECIALITY HOSPITAL PO : ARAMBAGH DIST: HOOGHLY, PIN : 712601..

The plan submitted by you was scrutinized and marked as found necessary from Fire Safety point of view. In returning one set of plan with recommendation, this is issuing Fire Safety Recommendation in favour of the aforesaid building subject to the compliance of the following fire safety measure.

Recommendation:

FIRE FIGHTING WATER:

Underground water reservoir having water capacity of 100000 ltrs.Overhead water reservoir having water capacity of 20000 ltrs. exclusively for fire-fighting purpose with replenishing arrangements @ 1000 ltrs/min. preferably from two different sources of water supply shall be provided. The water reservoirs shall have overflow arrangement with the domestic water reservoir as well as to avoid stagnancy of water. The water reservoir shall be kept full at all time.

HYDRANT SYSTEM:

1.The building shall be provided with Wet Riser of 150 mm. internal diameter pipe line with provision of landing valves at the staircase landings/half landings at the rate of one such riser for 1000 sqm. of floor area. The system shall be so designed that shall be kept charged with water all the time under pressure and capable to discharge 2280ltrs /min. at the ground level outlet and minimum 900 ltrs/min. at the farthest most outlet. In both cases the running pressure shall not be less than 3.5 kgs/sq.cm. All other requirements shall conforming I.S. specification.

2.Provision for Hose Reel in conjunction with Wet Riser shall be made at each floor level and conforming the relevant I.S. Specifications.

3.Ring Main Hydrant with provision of adequate numbers hydrant with one number of Fire Service Inlet shall be installed surrounding the building in accordance with relevant I.S. specifications.

SPRINKLER INSTALLATION:

The automatic sprinkler installation shall be provided in all floors of the building as per I.S. specification. Alarm Gong to be incorporated along with the sprinkler system.

FIRE PUMP:

1.Provision of the Fire Pump shall have to be made to supply water at the rate-designed pressure and discharge into to the Water based system, which shall be installed in the building. One such pump shall always be kept on stand-by preferably be of diesel driven type.

2.A Separate Fire Pump shall preferably be made for the total Sprinkler Installation of the building. Provision of the two sets Jockey Pump shall also have to be made to keep the water based system under pressurized condition at all the time. All the pumps shall be incorporated with both manual and auto starting facilities. The suction of pumps shall preferably of positive type or in case of negative suction the system shall be wet riser-cum down comer with suitable terrace pump with overhead tank.

and vulnerable locations of the premises shall be made in accordance with I.S. 2190-1992.

GENERAL RECOMMENDATIONS:

1.Fire License shall have to be obtained for proposed storing and processing with L.P.G. and other highly combustible articles.

2.Fire Notice for Fire Fighting and evacuation from the building shall be prepared and be displayed at all vulnerable places of the building.

3.Floor numbers and directional sign of escape route shall be displayed prominently.

4.The employees and security staffs shall be conversant with installed Fire Fighting Equipments of the building and to operate in the event of Fire and Testing.

5.Arrangement shall be made for regular checking, testing and proper maintenance of all the Fire Safety installation and equipments installed in the building to keep them in perfectly good working conditions at all times.

6.A crew of trained Fireman under the experienced Fire Officer shall be maintained round the clock for safety of the building.

7.Mock Fire practice and Evacuation Drill shall be performed periodically with participation of all occupants of the building.

8.Certificate is to be obtained from the Director General, West Bengal Fire &Emergency Services certifying about the satisfactory services, performance of all the Life and Fire Safety arrangements installation of the building.

On compliance of all the above Life and Fire Safety Recommendation, the Director General, West Bengal Fire & Emergency Services shall be approved for necessary inspection and testing of all the installation, Fire Safety Certificate in favour of the occupancy shall be issued on being satisfied with the tests and performances of safety aspects of installation of the building.

N.B. : Any deviation and changes the nature of use of the building in respect of the approved plan drawing, without obtaining prior permission from this office, this Fire Safety Recommendation will be treated as cancelled.

Validity unknown
Digitally signed by TARUN KUMAR SINHA
Date: 2019.05.17 15:40:24 IST

Director
West Bengal Fire & Emergency Services

STANDARD OPERATING PROCEDURE

FIRE PROTECTION AND DETECTION SYSTEM

SP – FIRE / D-301

Organization: Shapoorji Pallonji Design and Build		**Document Number** SP – FIRE / D-301
Process Owner Anup Maiti	**Approved by** Tapan Kumar	**Revision** R-0

Table of Content

A. PROJECT BRIEF:

West Bengal Medical Services Corporation Limited (WBMSCL) on behalf of Govt. of West Bengal constructed Multi-Storied Super-Speciality Hospital Buildings complete with medical equipment and facilities at 6 different locations across the State of West Bengal.

Shapoorji Pallonji & Co. Pvt. Ltd. (SPCPL) has constructed these hospitals on turnkey basis under Package -D of WBMSCL as follows:

Package	Sl. No.	Hospitals / Location	No. of Stories / Construction Area per Bid Document	No. of Beds
D	1	Basirhat	5-storied 80,000 sft	300
D	2	Bongaon	5-storied 80,000 sft	300
D	3	Arambag	5-storied 80,000 sft	300
D	4	Asansol	5-storied 80,000 sft	300
D	5	Srirampur	7-storied 1,07,000 sft	300
D	6	Kalna	5-storied 80,000Sft	300

B. PROJECT PARTICULARS

ARAMBAG

District	**HOOGLY.**
Total Build up area	**80,000 Sq. Ft.**
No. Of Floors	**5**
Super Speciality	**ENT & ORTHO**

ASANSOL

District	Paschim Bardhaman
Total Build up area	**80,000 Sq. Ft.**
No. Of Floors	**5**
Super Speciality	**ENT & OPTHALMOLOGY**

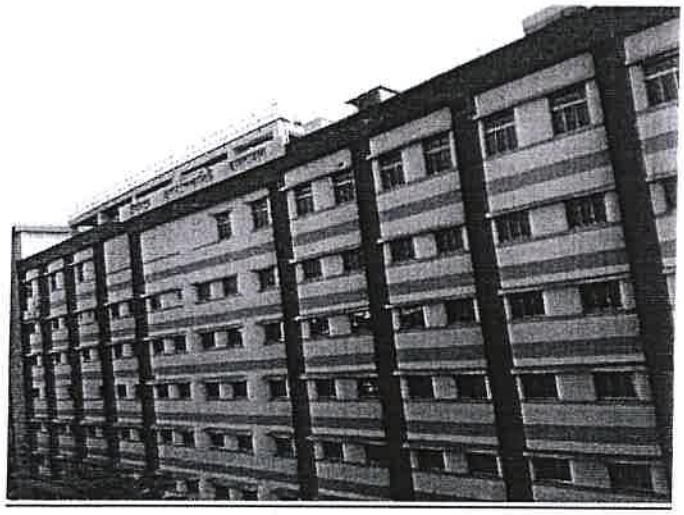
BASIRHAT

District	North 24 Parganas
Total Build up area	**80,000 Sq. Ft.**
No. Of Floors	5
Super Speciality	**TRAUMA CARE & ENT**

BONGAON

District	North 24 Parganas
Total Build up area	**80,000 Sq. Ft.**
No. Of Floors	**5**
Super Speciality	**ORTHO & OPTHALMOLOGY**

SRIRAMPUR



District	**HOOGHLY**
Total Build up area	**1,07,000 Sq. Ft.**
No. Of Floors	**7**
Super Speciality	**DIALYSIS & OPTHALMOLOGY**

KALNA

District	Purba Bardhaman
Total Build up area	**80,000 Sq. Ft.**
No. Of Floors	**5**
Super Speciality	**ENT & DIALYSIS**

A. PURPOSE:

This document covers the standard operating procedure of Fire protection system provided in the above mentioned hospitals. This includes the following services:

1. Fire Fighting system
    a. Underground storage tanks
    b. Pump room
    c. External Hydrant system
    d. Internal Hydrant system
    e. Sprinkler system
2. Fire detection system
3. Public address evacuation system
4. Guidelines for Fire drill and evacuation procedure

B. FIRE FIGHTING SYSTEM:

Water shall be drawn from underground fire reservoirs by the help of fire pumps and jockey pumps along with Diesel Engine Driven pump as standby. All the pumps are having separate suction line from the fire suction header and delivery is connected to the discharge header.

The function of pumps shall be to maintain 3.5 kg/sq.cm pressure at the farthest and/or highest point. Jockey pump shall operate intermittently in order to take care of hydraulic and pressure losses in the system and shall maintain the minimum pressure respectively in wet risers & in the sprinkler system. Jockey pumps shall also compensate for minor pressure drops due to line leakages in the hydrant and sprinkler system. In the event of extra water requirement, pressure in the system will drop and electrical motor driven main fire pump will start automatically. When the system pressure is restored pump will stop automatically with the help of the pressure switch.

Installation control valve (ICV) has been provided for sprinkler system at ground floor in suitable location for alarming in case of fire

The sequence of system operation is defined in SOP-301.

a) UNDERGROUND STORAGE TANKS:

Underground storage tanks have been constructed as per the following capacities:

Sl.No.	Type of Storage	Storage Capacity	
		5-Storied Building	7-Storied Building
1.	Underground Reservoir	1,00,000 Ltrs.	1,50,000 Ltrs.
2.	Overhead Reservoir	20,000 Ltrs.	20,000 Ltrs.

There are 2 nos underground storage tanks of capacity 50 KL each. Water supply from borewell is connected directly to these underground fire storage tanks no 1 & 2. After filling of these tanks, then only water will overflow to the domestic water tank. Only fire pumps are connected to these fire tanks so as to ensure that this water is exclusively available for firefighting purposes. The standard operating procedure for underground storage tank is attached in annexure SOP- 302.

b) OPERATION OF PUMPS:

Common electrical driven pump for hydrant & sprinkler system has been provided for 5-storeyed building along with jockey pump. However, the diesel engine driven pump for both the system is installed common for all hospitals.

The jockey pump shut down is automatic, whereas the main pumps and the diesel engine for the system have manual shut down.

Fire pumps test connection with flow measuring device has been provided on delivery header to recirculate the pump's discharge to Fire-reserve tank.

Following configuration of the fire pumps are summarized:

- Common electrical driven pump for hydrant systems and sprinkler systems (5-storey)
- One common Jockey pump for Hydrant and Sprinkler system (5-storey & 7 story)
- One common Diesel Engine-Driven Pump as standby for both Systems (5-storey & -7 story)
- Separate Electrical driven Pump for Hydrant system and Sprinkler System (7 story)

SYSTEM OPERATION:

When the Sprinkler head, hydrant valve or hose reel opens the pressure drop in respective piping network will be sensed by pressure switches installed on delivery header of the pumping system. This in turn will switch on the jockey pump automatically to make up the minor pressure drop. In case of further drop in pressure, the main pump will start automatically to meet the water requirement. Jockey pump will start and shut down automatically as per the pressure gauge settings whereas the separate main pump for both the systems and common for the diesel engine driven pump will start automatically but shut down has to be done manually. The piping should have deliberate bleeding of water at suitable point so that the jockey pump operates at least twice a day by default.

The Operating Logic of Fire-Pumps is given in Table below:

Operating Logic of Fire-Pumps

Sl. No.	Event	5 -storied Building	7 -storied Building
(i)	Small Leakage or drop in system pressure.	Jockey starts	Jockey starts
(ii)	System pressure restored.	Jockey stops	Jockey stops
(iii)	Big leakage or Hydrant opened	Hydrant (common) pump starts	Hydrant (separate) pump starts
(iv)	Big leakage or Sprinkler/s burst	Hydrant (common) pump starts	Sprinkler (separate) pump starts
(v)	System pressure down, but Hydrant or Sprinkler pump fail to start	Common standby Diesel pump starts	Common standby Diesel pump starts
(vi)	Stopping of Fire Service pumps	Manually	Manually

The sequential operation will be by pressure-switches with pre-set values.

The standard operating procedure for fire pumps are attached in annexure SOP- 303 to 305.

c) EXTERNAL HYDRANT SYSTEM:

External hydrant pipe line (ring main & branch hydrant line) from fire water tank is surrounded all around the main building. External hydrants is provided at 45.0 m intervals (max.) and all these Yard Hydrants are located near to the face of the building (not less than 2.5 mtr & not more than 15m away). Each hydrant has been provided with single landing valve, 2 nos. 63 mm dia. hose and 1 no. Branch pipe.

Three-way fire brigade inlet connection at ground level is provided at suitable location of ring main to fill the rising mains of hydrant system in case of failure of pumps. A suction outlet is also provided directly to the tank so as enable the fire brigade to draw water from tanks in case of an emergency situation.

External Fire Hose Cabinets- This type of fire hose cabinets has been fabricated from M.S sheet of appropriate thickness and having locking arrangement of size approx. 1000 mm x 750 mm x 400 mm. Each fire hose cabinet accommodates a hydrant valve, two nos. 15 mtrs long hose pipes and one no. branch pipe with nozzle as described earlier.

The standard operating procedure for external hydrant system are attached in annexure SOP- 306.

d) INTERNAL HYDRANT SYSTEM:

Internal hydrants have been provided at each staircase landing. The hydrants comprise of single landing valve, 1 nos first aid hose reel with drum painted RED, 2 nos. 63 mm dia. hose and 1 no. Branch pipe. This is enclosed in a fire shaft with a lockable fire door.

The standard operating procedure for external hydrant system are attached in annexure SOP- 307.

e) SPRINKLER SYSTEM:

Sprinkler water supply line will come from. fire water storage tank in water works through suitable piping with sprinklers

For 5-storied building, common delivery header & wet riser for hydrants & sprinklers has been provided, whereas, for 10-storied building, sprinkler system are having separate delivery header & wet risers from separate sprinkler pump.

The purpose of the automatic sprinkler system is to control the growth and spread of fire and to provide increased protection to occupants and the building structure.

The sprinklers have been provided in all areas **except** in electrical room, transformer room, plant room and switch room. All sprinklers have a bursting temperature of 68 deg Celsius.

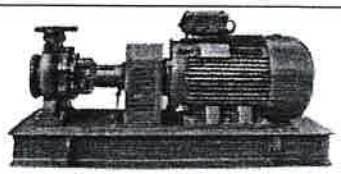
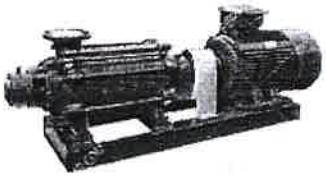
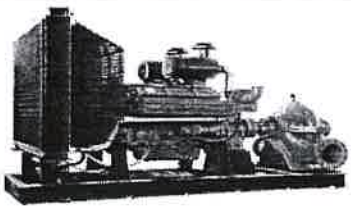
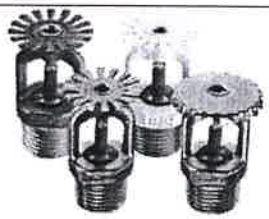
All sprinkler floor branches have Isolation valve with flow switches.

Wherever the false-ceiling with clear height above 800 mm are having sprinklers in upright type.

In case of fire the red bulb of the sprinkler bursts and the pressurized water is sprinkled over the affected area. An evacuation alarm is raised with the help of the flow switch which is connected to the fire alarm panel. After any such case of bursting, water is to be drained out by closing of the butterfly valve in the sprinkler supply pipe and opening of the ball valve on the drain line.

The standard operating procedure for sprinkler system are attached in annexure SOP- 308.

f) **FIRE FIGHTING ITEM LIST:**

ITEM DESCRIPTION	TECHNICAL	PHOTOGRAPH
MAIN FIRE PUMP	10 STORIED- 2850 LPM @ 88 METERS HEAD (2 NOS) 5- STORIED- 2850 LPM @ 70 METERS HEAD (1 NOS)	
JOCKEY PUMP	10 STORIED- 180 LPM @ 88 METERS HEAD (1 NOS) 5- STORIED- 180 LPM @ 70 METERS HEAD (1 NOS)	
DIESEL PUMP	10 STORIED- 2850 LPM @ 88 METERS HEAD (2 NOS) 5- STORIED- 2850 LPM @ 70 METERS HEAD (1 NOS)	
SPRINKLER- PENDENT AND UPRIGHT	20 MM DIA SIZE K FACTOR- 80 RESPONSE TYPE- STANDARD RESPONSE TEMP.- 68°C	
SS HYDRANT VALVES	80 MM DIA FLANGED INLET & 63 MM DIA INSTANANEOUS TYPE FEMALE OUTLET CONFORMING TO IS-5290	

ITEM DESCRIPTION	TECHNICAL	PHOTOGRAPH
FIRST AID HOSE REEL	RED COLOUR DRUM WITH 37 MTS LONG AND 20 MM DIA HEAVY DUTY RUBBER WATER HOSE, NOZZLE OF 6MM OUTLET WITH SHUT OFF VALVE	
15 METERS FIRE RRL HOSE PIPE	HOSE PIPE (AS PER IS: 636) OF 63 MM DIA, BRUST PRESSURE OF 35.7 KG/SQCM, SS MALE & FEMALE COUPLING (IS:903)	
SS NOZZLE	63 MM DIA INSTANTANEOUS PATTERN BRANCH SHORT SS PIPE, 20 MM DIA NOZZLE CONFORMING TO IS 903	
FIRE HOSE CABINET	LOCKABLE CABINET OF SIZE NOT LESS THAN 1 X 0.75 X 0.40 MTR MADE OUT OF MS SHEET OF 20 GAUGE THICKNESS HAVING CENTRAL OPENING AND 4 MM THICK GLAZED GLASS DOORS (TWO NOS.)	
FIREMAN'S AXE	FIREMANS AXE WITH HEAVY RUBBER HANDLE.	

C. FIRE DETECTION SYSTEM:

The purpose of the Fire Alarm System is to detect fire at the earliest practicable moment and give an alarm so that appropriate action can be taken to prevent outbreak of fire. The alarm system can be used to activate the extinguishing system automatically. The system can also be used for alarming, evacuation of people, summoning the fire fighting organization, triggering the extinguishing process etc.

Automatic Fire detection and alarm system consists of Fire detectors and manual call points placed at strategic locations and connected by cabling to the Fire Alarm panel. Fire detectors detect the presence of Heat or Smoke generated during the early stages of fire and gives an alarm signal to the controller. Detectors are placed in all the areas of the building. Additionally, manual call stations are located typically at the staircase landings.

The fire alarm system mainly consists of following components:

1. Fire alarm panel
2. Fire detectors (Smoke detectors, Heat detectors)
3. Manual call points
4. Hooters & Hooter Cum Strobes
5. Relay modules (to automatically activate various systems like tripping of AHUs, Access control etc.)
6. Control Modules (To control AHU, Lift etc.)
7. Monitor Modules

Make List of FDA systems:

1. Arambag, Asansol, Basirhat, Bongaon, Kalna and Srirampur - UTC (GST)

1. TECHNICAL DATASHEETS (COOPER)

Analogue Addressable Optical Smoke Detector		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**CAP320**
3	Type	Analogue Addressable Optical Smoke Detector
4	Area Coverage	100m2
5	Indication	360° visibility light pipe
6	Addressing mode	Auto address
7	Operating voltage	18 to 30 V dc
8	Current	Standby: 220µA Alarm: 5mA
9	Operating Conditions	Temperature: -20°C to 60°C Humidity: 0 to 95% (non-condensing)
10	Material of Construction	ABS
11	Color	White
12	Dimensions	104mm x 45mm (Including Bases)
13	Mounting base	Standard Base, CAB300
14	Standards & Approval	EN-54, LPCB, CE

Analogue Addressable Heat Detector		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**CAH330**
3	Type	Analogue Addressable Heat Detector
4	Area Coverage	50m2
5	Indication	360° visibility light pipe
6	Addressing mode	Auto address
7	Operating voltage	18 to 30 V dc
8	Current	Standby: 220µA Alarm: 5mA
9	Rate of rise	Fixed 60°C
10	Alarm temperature (static)	77°C
11	Operating Conditions	Temperature: -20°C to 60°C Humidity: 0 to 95% (non-condensing)
12	Material of Construction	ABS
13	Color	White
14	Dimensions	104mm x 55mm (Including Bases)
15	Mounting base	Standard Base, CAB300
16	Standards	EN-54, LPCB, CE

Standard Base		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**CAB300**
3	Type	Standard Bases
4	Indication	Positive "lock"
5	Construction	PC/ABS
6	Color	White
7	Dimensions (Dia x D)	104mm x 22mm
8	Suitable for use with	Cooper Intelligent Addressable Sensor / Detectors

Response Indicator		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Agni**
2	Model	**AD-301/MW**
3	Type	Response Indicator
4	Voltage	6- 26 VDC
5	Alarm Current	16mA
6	Dimensions	55 x 60 x 35mm
7	Color	White
8	Material of Construction	FR Ploymer

Intelligent Addressable Call Points		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**CBG370S**
3	Type	Break glass type Intelligent Addressable Call Points
4	Operating Voltage	17V dc to 32V dc
5	Quiescent Current	< 250µA
6	Operating Temperature	-10°C to +55°C
7	Humidity	0 to 93% RH (Non Condensing)
8	Construction	PC/ABS
9	Color	Red
10	Mounting	Surface / Flush Mounting Call point
11	Dimensions (H x W x D)	87mm x 87mm x 57mm (36mm flush)
12	Ingress Protection	IP42
13	Standards	EN-54

Addressable Single Input Micro Module		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**MCIM**
3	Type	Addressable Single Input Micro Module
4	Loop Load	Quiescent current: 310µA
5	Operating voltage	18 to 30VDC
6	Addressing	Soft Addressing
7	Operating Temperature	-10 to 60C
8	Humidity (non-condensing)	95% RH
9	Material	PC/ABS
10	Ingress protection	IP40
11	Standards	EN54

Addressable Single Output Micro Module		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**MCOM**
3	Type	Addressable Single Output Micro Module
4	Loop Load	Quiescent current: 310µA
5	Switching voltage	24 to 30VDC
6	Contact Rating	1A
7	Switching Power	30W
8	Addressing	Soft Addressing
9	Operating Temperature	-10 to 60C
10	Humidity (non-condensing)	95% RH
11	Material	PC/ABS
12	Ingress protection	IP40
13	Standards	EN54

Intelligent Addressable Wall Sounders		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**CAS381**
3	Type	Intelligent Loop Powered Addressable Wall Sounders
4	Operating Voltage	17V dc to 32V dc
5	Standby Current	< 320µA
6	Tones	Continuous: 984Hz Pulsed: 984Hz / 0Hz pulse 1Hz Two tone: 644 / 984Hz at 1Hz cycle Slow whoop: 500-1200Hz in 3.5 seconds/0.5secs gap
7	Sound Output at +/-3dB	Low volume : 87dB at < 2mA Medium volume : 93dB at < 3mA High volume: 100dB at < 6mA
8	Operating Temperature	-10°C to +55°C
9	Humidity (Non Condensing)	0 to 95% RH
10	Construction	PC/ABS
11	Color	Red
12	Dimensions (H x W x D)	105mm x 105mm x 95mm
13	Ingress Protection	IP42
14	Standards	EN54 Pt3

4 Loop Analogue Control Panel with Network Card		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**CF30004GNC**
3	Type	4 Loop Analogue Control Panel
4	Addresses per Loop	200nos (Detector + Devices)
5	Display	Large Multifunctional touch screen
6	Maximum Number of Loops	4 Loops
7	Panel sounder circuits	4 outputs
8	Maximum Network Nodes	127nos of Panels
9	Auxiliary relay	One set of change over contacts, operated in the event of fire activation
10	Event History Buffer	9,999 events with Date/Time stamp
11	Output ports	RS485 and RS232 (for connection of repeaters etc)
12	Mains input voltage	230V ac +10% / -15%
13	System operating voltage	24V dc
14	IP rating	IP30, -5°C to +40°C, 75% RH (non-condensing)
15	Dimensions (W x H x D)	395mm x 495mm x 125mm
16	Certifications	VdS, BOSEC, CNBOP
17	Approvals	LPCB, EN-54

1Loop & 2Loop Analogue Networked Control Panel		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**CF1100NC (1Loop) & CF1200NC (2Loop)**
3	Type	1/2 Loop Analogue Control Panel
4	Addresses per Loop	200nos Detector + Devices
5	Maximum Number of Loops	2 Loops
6	Panel sounder circuits	2nos
7	Auxiliary relay	One set of change over contacts, operated in the event of fire activation
8	Output ports	RS485 and RS232 (for connection of repeaters etc)
9	Mains input voltage	230V ac +10% / -15%
10	System operating voltage	24V dc
11	Environmental rating	IP30, -5°C to +40°C, 75% RH (non-condensing)
12	Dimensions (W x H x D)	375mm x 357mm x 50mm
13	Certifications	VdS, BOSEC, CNBOP
14	Approvals	LPCB, EN-54

Passive Network connected Repeater Panel		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**CF3000PRGNC**
3	Type	Passive Network connected Repeater Panel
4	Display	2 x 40 character backlit LCD
5	System indicators	power on, fire, fault, test, disable and scroll
6	System controls	silence alarms, evacuate and reset
7	Input ports	RS232 (for connection of programmer)
8	Mains input voltage	230 V ac +10% / -15%
9	System operating voltage	24 V dc 24 V dc
10	Operating temperature	0°C to 25°C, 75% RH (non-condensing)
11	Construction	ABS, rating - UL94V0
12	Dimensions (W x H x D)	332mm x 270mm x 92mm
13	IP rating	IP30
14	Standards	EN45: Pt 4 & EMC

Graph pack software		
Sr. No.	**PROPERTY**	**DATA**
1	Make	**Cooper**
2	Model	**GRAPHPACK1-2**
3	Type	Graphic Monitoring Station
4	Display	Through Monitor (Workstation)
5	Graphic indicators	Alarm, Healthy.
6	Control Panel Control from Graphics Pages	Yes
7	Graphics Page per input	1
8	Reset Page per input	1
9	Loops/Zones per Node	255
10	Event Types	32000
11	Graphics Pages	32000
12	Symbols	32000
13	Sounds	2000
14	Standards	EN54

TECHNICAL DESCRIPTION SHEET

Heat Detector

Sr. No.	PROPERTY	DATA
1	Make	**GST**
2	Model	**I-9103**
3	Type	Intelligent Rate of Rise and Fixed Temperature Heat Detector
4	Operating Voltage	Loop 24V (16V~28V)
5	Current	Standby: ≤0.8mA Alarm: ≤1.4mA
6	Indicators	Red (Flashes in normal condition. Lights when fire reported.)
7	Indicators LED View	Twin LED for 360° view
8	Detecting range	30 sqm for normal area; and 20 sqm for high risk
9	Action/Alarm Temperature	Fixed: 54°C to 80°C (adjustable) Rate of Rise: 6°C per minute
10	Programming Method	Electronically programming
11	Code Range	One address within 1~242.
12	Ambient Temperature	-10°C~+80°C
13	Relative Humidity	≤95%, non-condensing
14	Field Programmable sensitivity	3 level
15	Material and Color of Enclosure	ABS, white (RAL 9016)
16	Dimensions	Diameter 100mm, Height 58mm (with base)
17	Mounting Hole Distance	45mm~75mm
18	Base	Short Circuit Isolator Base
19	Compliance	EN 54-5 standard, LPCB, CE
20	Self-diagnostic	It diagnostic the system health
21	Action Temperature	58^0C (It's mentioned as 68^0 C in RFP)
22	ROR	5^0C per min
23	Max Operating Temperature	
24	IP Rating	IP33 As per EN
25	Option of calibration	Yes
26	Built in Barriers	Yes

TECHNICAL DESCRIPTION SHEET

Duct Detector Housing

Sr. No.	PROPERTY	DATA
1	Make	**GST**
2	Model	**SIGA-DH**
3	Type	Duct Detector Housing
4	Detector	Smoke Detector (I-9102) with Isolator Base (C-9504F)
5	Nozzle	**6261-002**
6	Nozzle Type	24 inch (600mm) Air Sampling Inlet Tube

TECHNICAL DESCRIPTION SHEET

Response Indicator

Sr. No.	PROPERTY	DATA
1	Make	**Agni**
2	Model	**AD-301/MW**
3	Type	Response Indicator
4	Voltage	6- 26 VDC
5	Alarm Current	16mA
6	Dimensions	55 x 60 x 35mm
7	Color	White
8	Material of Construction	FR Ploymer

TECHNICAL DESCRIPTION SHEET

Addressable Input Module

Sr. No.	PROPERTY	DATA
1	Make	GST
2	Model	I-9300
3	Type	Addressable Monitor/Input Module
4	Operating Voltage	Loop 24V(16V~28V)
5	Working Mode	Normally open, Normally closed and normally open cable monitor through programmer.
6	Current	≤1mA Average
7	Programming Method	Electronically addressed
8	Code Range	One address is within 1~242.
9	Indicator	Red, flashes when polling. Illuminates in action
10	Operating Temperature	0℃~+49℃
11	Relative Humidity	≤93%, non-condensing
12	Material of Enclosure	ABS
13	Dimension	120mm×80mm×39mm (L×W×H)
14	Compliance	EN 54 standard, LPCB, CE
15	Isolator	External; Base Mount Short Circuit Isolator
16	Isolator Model	C-9504E

TECHNICAL DESCRIPTION SHEET

SINGLE I/O MODULE

Sr. No.	PROPERTY	DATA
1	Make	GST
2	Model	I-9301
3	Type	Addressable Control Relay Module
4	Operating Voltage	Signal Loop 24V(16V~28V) Power 24VDC(20VDC~28VDC)
5	Current	Standby: Loop≤1mA ; Power≤5mA Action: Loop≤3mA ; Power≤20mA
6	Output Capacity	Two-wire mode: 24VDC/2A
7	Output Control Type	Two-wire mode: Relay normally open normally closed volt-free contact output
8	Programming Method	Electronically addressed
9	Code Range	One address within 1~242.
10	Indicators	Active Indicator: Red, flashes when polling. Illuminates in action. Fault Indicator: Yellow, illuminates in fault.
11	Operating Temperature	-10℃~+55℃
12	Relative Humidity	≤93%, non-condensing
13	Material of Enclosure	ABS
14	Dimension	120mm×80mm×43mm (with back box)
15	Compliance	EN 54 standard, LPCB, CE
16	Isolator	External; Base Mount Short Circuit Isolator
17	Isolator Model	C-9504E

TECHNICAL DESCRIPTION SHEET

Sounder Strobe

Sr. No.	PROPERTY	DATA
1	Make	GST
2	Model	I-9403
3	Type	Intelligent Loop Powered Sounder Strobe
4	Operating Voltage	Loop: 24V (20V~28V) Power: 24V (20V~28V)
5	Standby Current	Normal mode: ☐ Loop powered- Loop monitor current≤2mA; Start current≤35mA ☐ External- Loop monitor current≤1mA Start current≤2mA; Power monitor current≤1mA; Start current≤35mA
6	Flash Frequency	☐ Single address: 1.4×(1±20%) Hz ☐ Dual addresses: First address activated: 0.7×(1±20%) Hz Second address activated: 1.4×(1±20%) Hz
7	Tones	16 tones As per EN
8	Programming Method	Single / dual address
9	Programming Range	1~242
10	Operating Temperature	-10℃~+50℃
11	Relative Humanity	≤95%, non-condensing
12	Enclosure Material	ABS
13	Dimension	ϕ110mm×97.5mm (deep base)
14	Mounting Hole Spacing	55mm~80mm
15	Compliance	EN 54-3 standard, LPCB, CE
16	Isolator	External; Base Mount Short Circuit Isolator
17	Isolator Model	C-9504E
18	Volume Level	8
19	Frequency Range	95 DB@ 3 MT As per EN
20	IP Rating	IP33 As per EN

TECHNICAL DESCRIPTION SHEET

Addressable Fire Alarm Panel

Sr. No.	PROPERTY	DATA
1	Make	**GST**
2	Model	**GST-IFP8**
3	Type	Intelligent Networked Fire Alarm Panel
4	Main Input Voltage	220/230VAC, 50/60 Hz
5	Input Current Rating	1A Totally
6	Operating Temperature	0°C~+40°C
7	Relative Humidity	95%
8	Maximum Loop Capacity of Panel	8 Loops
9	Display	600 character, 40 x15 lines Color Graphical LED Display
10	Loop Capacity	242nos of Detectors or Devices
11	Programmable Zones	Up to 999/240 As per EN
12	Key Features	• Auto Programming Day and Night Mode • Enable and Disable function • PAS and Acknowledge Function • Dirty Detector Reporting • Duplicate Address Checking • Walk Test Function with optional silent mode • Can edit device detailed and programmed • Programmable from PC or Panel
13	Loop Length/Cable	1.5mm²-1000m-Full Load
14	Output Circuits	• Fire Alarm Routing • F.P.E. Output • Sounder Circuit Output • Fault Output
15	Standby Batteries	Twin 12 VDC Bat; 28AH – 38AH, as per load calculation Maximum Charge Current: 2.1A Maximum Charge Voltage: 27.6 Type: Sealed lead acid batteries
16	Dimension	Outer: 850 x 484 x 185 mm Inner: 804 x 440 x 150 mm
17	Dual Loop Card	**LCIFP8**
18	Description for Dual Loop Card	Dual Loop Card - 484 Addressable devices capacity

TECHNICAL DESCRIPTION SHEET

19	Modbus Communication Card	**P-9935**
20	Description for Modbus Communication Card	Compatible with USB and Serial Port, RS 232 Communication Card for System Commissioning and GMC connection
21	Loop Network Card	**P-9945A**
22	Description for Loop Network Card	RS 485 Network Card, Connection (Class A or B) 1.2 Km between Panels
23	Approval	LPCB, CE
24	Certification	EN54 parts 2 and 4, BS5839 Par 4. And CPD
25	Node	242
26	Feature	Test normal alarm acknowledge

TECHNICAL DESCRIPTION SHEET

Network Repeater Panel

Sr. No.	PROPERTY	DATA
1	Make	**GST**
2	Model	**GST-NRP01**
3	Type	Network LCD Repeater Panel
4	Operating voltage	24Vdc (20-27Vdc)
5	Power Consumption	Standby power: 350mA Maximum: 550mA
6	Display	4x36 characters
7	Control Key	for Evacuate, Reset, Silence and Panel Mute
8	Protection	Password Protected
9	Network Connection	Through RS-485
10	Operating Temperature	0°C to +40°C
11	Relative Humidity	95%
12	Cable Length	1.2Km between panels
13	Dimensions	390 x 270 x 100 mm

TECHNICAL DESCRIPTION SHEET

Isolator Base

Sr. No.	PROPERTY	DATA
1	Make	GST
2	Model	C-9504
3	Type	Base Mount Short Circuit Isolator for Detectors, Modules, MCP & sounders
4	Application	Isolation of short circuit, automatically restore when short circuit is corrected, Used as detector base.
5	Operating Voltage	24VDC(16VDC~28VDC)
6	Current	Standby: ≤100μ A Alarm: ≤8mA
7	Indicator	Yellow (turns off in normal standby state, constantly illuminates in action)
8	Environmental Temperature	-10℃~+50℃
9	Relative Humidity	≤95%, non-condensing
10	Material and Color of Enclosure	ABS, white (RAL 9016)
11	Dimension	ϕ 103mm×20mm
12	Mounting Hole Distance	45mm~75mm
13	Standard & Approval	EN 54 standard, LPCB
14	IP Rating	IP22 As per EN

TECHNICAL DESCRIPTION SHEET

Hand Held Programmer

Sr. No.	PROPERTY	DATA
1	Make	**GST**
2	Model	**P-9910B**
3	Type	Portable programming tool for addressing and testing of intelligent devices
4	Programming	Digital
5	Power supply	one 9V battery
6	Working current	≤8mA
7	Standby current	≤50μA
8	Operating Temperature	-20 C to +70 C
9	Relative humidity	≤95 % 40±2°C
10	Physical Dimensions	164mm×64mm×24mm

TECHNICAL DESCRIPTION SHEET

Workstation for GUI Software

Sr. No.	PROPERTY	DATA
1	Make	**HP**
2	Process	Intel® Core™ i5-4130 Processor (3M Cache processor, 3.4 GHz)
3	Memory	4GB Single Channel DDR3 1600MHz - 1 DIMM
4	Harddisk	500GB 7200 rpm SATA 6Gb/s Hard Drive
5	Graphics Cards	2GB Video Card
6	Monitor	21" LCD Monitor
15	Other Components	Keyboard & Mouse

D. SCHEDULE OF STANDARD OPERATING PROCEDURE

SOP NO	SOP DESCRIPTION
SOP-301	FIRE FIGHTING SYSTEM GENERAL CHECKLIST
SOP-302	UNDERGROUND AND OVERHEAD FIRE WATER RESERVOIRS
SOP-303	FIRE FIGHTING MAIN PUMP
SOP-304	FIRE FIGHTING JOCKEY PUMP
SOP-305	FIRE FIGHTING DIESEL PUMP
SOP-306	FIRE FIGHTING EXTERNAL HYDRANT SYSTEM
SOP-307	FIRE FIGHTING INTERNAL HYDRANT SYSTEM
SOP-308	FIRE FIGHTING SPRINKLER SYSTEM
SOP-309	FIRE DETECTION SYSTEM- SMOKE ALARM MAINTENANCE CHECKLIST
SOP-310	FIRE DETECTION SYSTEM- FIRE ALARM PANEL MAINTENANCE CHECKLIST

SOP-305: FIRE FIGHTING DIESEL PUMP			
Sl. No.	**Description**	**Frequency**	**Remarks**
1	Check Main pump by opening the test line valve fully	Daily	
2	Check for Noise	Daily	
3	Check for Vibration	Daily	
4	Check for Current	Daily	
5	Check Auto ON and OFF	Daily	
6	Check the voltage in the Fire Panel- 415 V +/- 10%	Daily	
7	Check the tightness of the motor terminal	Daily	

Name and Title:
Agency:
Signature:
Date:

SOP-307: FIRE FIGHTING INTERNAL HYDRANT SYSTEM			
Sl. No.	Description	Frequency	Remarks
1	Check that the Painting of Hydrant pipes and first aid drum should be RED	Yearly	
2	Remove all caps and check the threads	Monthly	
3	Open a sample hydrant SLOWLY to allow time for the air to escape from the hydrant barrel. Then SLOWLY open hydrant to the full open position to check operation.	Monthly	
4	Check for leakage at the flanges, operating nut, nozzles and nozzle caps	Daily	
5	Conduct fire drill with hose pipes	Bi-yearly	
6	Clean the fire shaft	Twice a month	

Name and Title:
Agency:
Signature:
Date:

SOP-308: FIRE FIGHTING SPRINKLER SYSTEM			
Sl. No.	Description	Frequency	Remarks
1	Check all valves in the fire shaft at all landings	Weekly	
2	Open the drain valve to check the continuity of water flow in the sprinkler line	Monthly	
3	Open the drain valve to observe alarm being raised from flow s	Monthly	
4	Check painting of fire pipes	Yearly	

Name and Title:
Agency:
Signature:
Date:

SOP-309: FIRE DETECTION SYSTEM- SMOKE ALARM MAINTENANCE CHECKLIST			
Sl. No.	**Description**	**Frequency**	**Remarks**
1	Smoke alarm is securely fastened to the wall or ceiling	Daily	
2	Smoke alarm shows no evidence of physical damage, paint application, or excessive grease and dirt accumulations	Daily	
3	Ventilation holes on the smoke alarm are clean and free of obstructions	Daily	
4	Smoke alarm signal sounds when the test device is operated	Daily	
5	Smoke alarm has been vacuumed	Yearly	
6	Smoke alarm signal sounds when the smoke alarm is tested using smoke produced from a burning incence stick/ punk stick/ cotton string	Twice in a year	
7	Smoke alarm to be replaced in the following scenario: 1. Failure to sound alarm during test 2. Physical damage 3. Painted exterior case 4. Excessive stains, grease or dirt accumulations 5. Frequent false alarms 6. Battery leakage 7. age	In Case	

Name and Title:

Agency:

Signature:

SOP-310: FIRE DETECTION SYSTEM- FIRE ALARM PANEL MAINTENANCE CHECKLIST			
Sl. No.	Description	Frequency	Remarks
1	Check that only the green "POWER ON" indicator shows. Inspect for any fault indication. Notify any faults to a system supervisior.	Daily	
2	Check indicators	Weekly	
3	Press Supervisor mode on the top left of the touch screen. Enter passcode. Select "others" tab. Press the button labeled weekly test, confirm you wish to perform the test and the amber "System Test" LED will light. The panel will stay in the weekly test mode for 5mins before resetting. During the weekly test, trigger a smoke detector or call point and check the fire panel registers the device and illuminates the correct zonal indicator. Trigger a different device every time a weekly test is performed ensuring devices are tested in rotation until all have been checked. It is advisable to develop a detailed a building plan highlighting devices and locations to aid testing. The panel will reset automatically once the 5mins have elapsed. If no devices are triggered during the weekly test the panel will abort the test and reset after 5mins. Record weekly test in the table provided in this log book.	Weekly	
4	Check all previous log book entries and verify that remedial action has been taken.	Quarterly	
5	Carry out the weekly test. Visually examine the batteries and their connections, by loosening the screws behind printer door and opening the hinged front from the right hand side	Quarterly	
6	Disconnect the mains supply and check that the battery is capable of supplying the alarm sounders, by operating a call point.	Quarterly	

7	As Weekly Test and Quarterly Test above. Additionally test all sensors and call points and check operation.	Annual	
8	Replace or return the smoke detectors for cleaning to ensure correct operation and freedom from false alarms. Special equipment is required for cleaning smoke detectors.	2-3 Years	
9	Replace sealed lead acid battery	5 Years	
10	When cleaning the panel, use a moist cloth. Do not use solvents or harsh abrasives.	Daily	

Name and Title:
Agency:
Signature:
Date:

WEST BENGAL MEDICAL SERVICES CORPORATION LIMITED (PACKAGE D)

PLANNING, DESIGN AND CONSTRUCTION OF TERTIARY HEALTHCARE HOSPITALS

ALONG WITH SUPPLY OF MEDICAL EQUIPMENTS AND HOSPITAL FURNITURE IN THE STATE OF WEST BENGAL ON TURNKEY BASIS

FIRE DETECTON AND ALARM- TECHNICAL SUBMITTALS

ASANSOL, ARAMBAG, KALNA, BASIRHAT, BONGAON AND SRIRAMPUR

DIEBOLD SYSTEMS PVT. LTD - Security Solutions
ADDRESS: P-99/1A, LAKE TERRACE, KOLKATA-700 029, WEST BENGAL, INDIA
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SHAPOORJI PALLONJI AND CO. PVT. LTD.
DESIGN & BUILD DIVISION
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FAS SYSTEM DESCRIPTION

GENERAL

The purpose of the Fire Alarm System is to detect fire at the earliest practicable moment and give an alarm so that appropriate action can be taken to prevent outbreak of fire. The alarm system can be used to activate the extinguishing system automatically. The system can also be used for alarming, evacuation of people, summoning the fire fighting organization, triggering the extinguishing process etc.

Automatic Fire detection and alarm system consists of Fire detectors and manual call points placed at strategic locations and connected by cabling to the Fire Alarm panel. Fire detectors detect the presence of Heat or Smoke generated during the early stages of fire and gives an alarm signal to the controller. Detectors are placed in all the areas of the building. Additionally, manual call stations are located typically at the staircase landings or in areas of common access such that distance travelled to reach any such call points is not more than 22.50m from any point.

The fire alarm system mainly consists of following components:

- Fire alarm panel
- Fire detectors (Smoke detectors, Heat detectors, Multisensor Detectors)
- Manual call points
- Hooters & Hooter Cum Strobes
- Control Modules (to automatically activate various systems like tripping of AHUs, Access control, Toilet exhaust/smoke evacuation)
- Monitor Modules (to automatically activate Flow Point)

EN 54 and LPCB Details: GST became one of the biggest and most advanced production bases for electronic products in buildings. GST has obtained various national and international certificates, including CCCF, LPCB, UL, CE, PSB, SAI and HKFSD, etc. In the meanwhile, GST serves a variety of customer segments from government institutions, infrastructure, banks, and hotels, commercial and residential buildings. Since joined the family of UTC in the August of 2009, GST is keen on providing the most efficient one-stop solution of fire and security system, to both domestic and international customers, to improve life quality and facilitate community development of the region.

Sl. No.	Item Description
1	**Analogue addressable Photoelectric smoke detector having base built-in isolator** complying to EN-54 standard with removable cover and chamber. Detectors shall have 360 degree viewing bi-colour LED. The detectors should have 6 alarm sensitivity levels. **UTC-GST Model no. I-9102+C-9504E (EN54 Complied and LPCB Approved)**
2	**Analogue addressable Rate of Rise & Fixed Temparature Heat detector having base built-in isolator** complying to **EN-54 standard** with removable cover and chamber. Detectors shall have 360 degree viewing bi-colour LED. **UTC-GST Model No.I-9103+C-9504E (EN54 Complied and LPCB Approved)**
3	**Analogue addressable Duct smoke detector having base built-in isolator** nozzle complying to **EN-54 standard** with removable cover and chamber for sensing smoke in the HVAC ducts per floor as define in technical specification. The detectors shall be suitable to operate satisfactorily upto a temperature of 80 degree C & 95% RH complete **UTC-GST Model no. SIGA-DH+I-9102+C-9504E(EN54 Complied and LPCB Approved)**
4	Response Indicator complete with all accessories. Make-~~AGNI~~ UTC - C9314P
5	**Analogue addressable Manual Call Point having built-in isolator with MS Box** complying to **EN-54 standard.** The Manual Call Point shall have status LED. **UTC-GST Model No. DI-9204E+C-9504E(EN54 Complied and LPCB Approved)**
6	**Addressable Monitor Module having base built-in isolator** complying to **EN-54 standard** for Sprinkler Flow Switch, Pressure Switch, Fire Pump contacts as required. **UTC-GST Model No. I-9300+C-9504E (EN54 Complied and LPCB Approved)**
7	**Addressable Control Relay Module having base built-in isolator** complying to **EN-54 standard** for controlling devices as may be required **UTC-GST Model No. I-9301+C-9504E(EN54 Complied and LPCB Approved)**
8	**Addressable Wall mounted loop powered Sounder with built-in isolator** complying to **EN-54 standard.** All Sounders shall be 24V DC operated. **UTC-GST Model No. I-9403+C-9504E (EN54 Complied and LPCB Approved)**
9	**Microprocessor based Main Fire alarm control panel** complying to **EN-54 standard** with required loop capacity having Qwerty keypad with 640 character LCD display. **UTC-GST Model No. GST-IFP8 (EN54 Complied and LPCB Approved)**
10	**Repeater Panel** conforming to **EN-54 standard** which can connect to RS 232 or RS-485 peripheral Bus **UTC-GST Model No. GST-NRP01 (EN54 Complied and LPCB Approved)**
11	**Grapahical Software** for Fire Detection and Alarm System confirming to **EN-54 standard** to be connected to the main fire alarm panel. **UTC-GST Model No. GST GMC 3.0 (EN54 Complied and LPCB Approved)**
12	5th Generation Intel® Core™ I5-4130 Processor (3M Cache processor, 3.4 GHz), Memory 4GB Single Channel DDR3 1600MHz - 1 DIMM, 500GB 7200 rpm SATA 6Gb/s Hard Drive, **Make HP HP400G2-K2T76PA.**
13	2C x 1.5 Sq.mm, Multistrand Copper, FRLS Armoured Cable laid on surface with GI saddle (Red in Colour) **POLYCAB.**
14	**Printer- HP Deskjet 1010**

Consultant Project Eng. (Elect.)
West Bengal Medical Services Corporation Ltd.

Shapoorji Pallonji And Company Private Limited
DN-27, Salt Lake, Kolkata

DIEBOLD SYSTEMS PVT. LTD.

DATA SHEET

TECHNICAL DESCRIPTION SHEET

Photoelectric Smoke Detector

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**I-9102**
3	Type	Intelligent Photoelectric Smoke Detector
4	Operating Voltage	Loop 24V (16V~28V)
5	Current	Standby: ≤0.6mA Alarm: ≤2mA
6	Indicators	Red (Flashes in normal condition. Lights when fire reported.)
7	Indicators LED View	Twin LED for 360° view
8	Detecting range	100 sqm elevated than 6m, 80 sqm less than 6m
9	Programming Method	Electronically programming
10	Code Range	One address within 1~242.
11	Ambient Temperature	-10℃~+50℃
12	Relative Humidity	≤95%, non-condensing
13	Field Programmable sensitivity	0.10dB/m to 0.56dB/m – 3 level
14	Material and Color of Enclosure	ABS, off-white (RAL 9016)
15	Dimensions	Diameter 100mm, Height 56mm (with base)
16	Mounting Hole Distance	45mm~75mm
17	Base	Short Circuit Isolator Base
18	Standard & Approval	EN 54-7 standard, LPCB, CE
19	IP Rating	IP23

Consultant Project Eng. (Elect.)
West Bengal Medical Services Corporation Ltd.

TECHNICAL DESCRIPTION SHEET

Heat Detector

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**I-9103**
3	Type	Intelligent Rate of Rise and Fixed Temperature Heat Detector
4	Operating Voltage	Loop 24V (16V~28V)
5	Current	Standby: ≤0.8mA Alarm: ≤1.4mA
6	Indicators	Red (Flashes in normal condition. Lights when fire reported.)
7	Indicators LED View	Twin LED for 360° view
8	Detecting range	30 sqm for normal area; and 20 sqm for high risk
9	Action/Alarm Temperature	Fixed: 58°C to 80°C Rate of Rise: 6°C per minute
10	Programming Method	Electronically programming
11	Code Range	One address within 1~242.
12	Ambient Temperature	-10℃~+80℃
13	Relative Humidity	≤95%, non-condensing
14	Field Programmable sensitivity	3 level
15	Material and Color of Enclosure	ABS, white (RAL 9016)
16	Dimensions	Diameter 100mm, Height 58mm (with base)
17	Mounting Hole Distance	45mm~75mm
18	Base	Short Circuit Isolator Base
19	Compliance	EN 54-5 standard, LPCB, CE
20	Self-diagnostic	It diagnostic the system health
21	Action Temperature	58^0 C (It's mentioned as 68^0 C in RFP)
22	ROR	5^0 C per min
23	Max Operating Temperature	98^0 C
24	IP Rating	IP33
25	Option of calibration	Yes
26	Standard & Approval	EN 54-5 standard, LPCB, CE

Consultant Project Eng. (Elect.)
West Bengal Medical Services Corporation Ltd.

TECHNICAL DESCRIPTION SHEET

Isolator Base

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**C-9504E**
3	Type	Base Mount Short Circuit Isolator for Detectors, Modules, CM, MM, MCP & sounders
4	Application	Isolation of short circuit, automatically restore when short circuit is corrected, Used as detector base.
5	Operating Voltage	24VDC (16VDC~28VDC)
6	Current	Standby: ≤100μ A Alarm: ≤8mA
7	Indicator	Yellow (turns off in normal standby state, constantly illuminates in action)
8	Environmental Temperature	-10℃~+50℃
9	Relative Humidity	≤95%, non-condensing
10	Material and Color of Enclosure	ABS, white (RAL 9016)
11	Dimension	ф 103mm×20mm
12	Mounting Hole Distance	45mm ~75mm
13	Standard & Approval	EN 54 - 17 standard, LPCB, CE
14	IP Rating	IP 33 (with cover)

DIEBOLD SYSTEMS PVT. LTD. KOLKATA

Consultant Project Engg. (Elect.)
West Bengal Medical Services Corporation Ltd.

Shapoorji Pallonji And Company Private Limited

TECHNICAL DESCRIPTION SHEET

Duct Detector Housing

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**SIGA-DH**
3	Type	Duct Detector Housing
4	Detector	Smoke Detector (I-9102) with Isolator Base (C-9504)
5	Nozzle	6261-002
6	Nozzle Type	24 inch (600mm) Air Sampling Inlet Tube

Consultant Project Eng. (Elect.)
West Bengal Medical Services Corporation Ltd.

Shapoorji Pallonji And Company Private Limited
DN-27, Salt Lake, Kolkata-91

DIEBOLD SYSTEMS (I) PVT. LTD. KOLKATA

TECHNICAL DESCRIPTION SHEET

Response Indicator

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**C-9314P**
3	Type	Response Indicator
4	Voltage	2.0 – 3.0 VDC
5	Alarm Current	≤30mA
6	Indicator	Red. It turns off when monitoring normally, but constantly illuminates in action.
7	Operating Temperature	-10°C ~ +50°C
8	Relative Humidity	≤95%, non-condensing
9	Dimensions (L×W×H)	64.5mm×64.5mm×31.4mm
10	Color	ABS, White (RAL 9016)
11	Material of Construction	FR Polymer.

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DIEBOLD SYSTEMS PVT. LTD.

TECHNICAL DESCRIPTION SHEET

Manual Call Point

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**DI-9204E**
3	Type	Reusable Plate type Manual Call Point
4	Operating Voltage	Loop 24V (16V~28V)
5	Current	Standby: ≤0.6mA Alarm: ≤1.8mA
6	Indicator	Red (Flashes every 3s normally. Illuminates after alarming0
7	Type of Initiating Part	Reusable
8	Programming Mode	Electronically addressed
9	Address Range	One address within 1~242
10	Environmental Temperature	-10℃~+55℃
11	Relative Humidity	≤95%, non-condensing
12	Material of Enclosure	ABS, Red
13	IP Rating	IP 43
14	Dimension (L×W×H)	87.1mm×87.1mm×23.5mm (without back box)
15	Mounting Hole Distance	60mm
16	Compliance	EN 54-11 standard, LPCB, CE
17	Isolator	External; Base Mount Short Circuit Isolator
18	Isolator Model	**C-9504E**

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TECHNICAL DESCRIPTION SHEET

Addressable Input Module

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**I-9300**
3	Type	Addressable Monitor/Input Module
4	Operating Voltage	Loop 24V(16V~28V)
5	Working Mode	Normally open, Normally closed and normally open cable monitor.
6	Current	≤1mA Average
7	Programming Method	Electronically addressed
8	Code Range	One address is within 1~242.
9	Indicator	Red, flashes when polling. Illuminates in action
10	Operating Temperature	0℃ ~ +49℃
11	Relative Humidity	≤93%, non-condensing
12	IP Rating	IP 30
13	Material of Enclosure	ABS
14	Dimension	120mm×80mm×39mm (L×W×H)
15	Compliance	EN 54 – 18 standard, LPCB, CE
16	Isolator	External; Base Mount Short Circuit Isolator
17	Isolator Model	**C-9504E**

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TECHNICAL DESCRIPTION SHEET

SINGLE I/O MODULE

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**I-9301**
3	Type	Addressable Control Relay Module
4	Operating Voltage	Signal Loop 24V(16V~28V) Power 24VDC(20VDC~28VDC)
5	Current	Standby: Loop≤1mA ; Power≤5mA Action: Loop≤3mA ; Power≤20mA
6	Output Capacity	Two-wire mode: 24VDC/2A
7	Output Control Type	Two-wire mode: Relay normally open normally closed volt-free contact output
8	Programming Method	Electronically addressed
9	Code Range	One address within 1~242.
10	Indicators	Active Indicator: Red, flashes when polling. Illuminates in action. Fault Indicator: Yellow, illuminates in fault.
11	Operating Temperature	-10℃~+55℃
12	Relative Humidity	≤93%, non-condensing
13	Material of Enclosure	ABS
14	IP rating	IP 30
15	Dimension	120mm×80mm×43mm (with back box)
16	Compliance	EN 54 – 18 standard, LPCB, CE.
17	Isolator	External; Base Mount Short Circuit Isolator
18	Isolator Model	**C-9504E**

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TECHNICAL DESCRIPTION SHEET

Sounder Strobe

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**I-9403**
3	Type	Intelligent Loop Powered Sounder Strobe
4	Operating Voltage	Loop: 24V (20V~28V) Power: 24V (20V~28V)
5	Standby Current	Normal mode: ☐ Loop powered- Loop monitor current≤2mA; Start current≤35mA ☐ External- Loop monitor current≤1mA Start current≤2mA; Power monitor current≤1mA; Start current≤35mA
6	Flash Frequency	☐ Single address: 1.4×(1±20%) Hz ☐ Dual addresses: First address activated: 0.7×(1±20%) Hz Second address activated: 1.4×(1±20%) Hz
7	Tones	16 tones As per EN
8	Programming Method	Single / dual address
9	Programming Range	1~242
10	Operating Temperature	-10℃~+50℃
11	Relative Humanity	≤95%, non-condensing
12	Enclosure Material	ABS
13	Dimension	ϕ110mm×97.5mm (deep base)
14	Mounting Hole Spacing	55mm~80mm
15	Compliance	EN 54-3 standard, LPCB, CE
16	Isolator	External; Base Mount Short Circuit Isolator
17	Isolator Model	**C-9504E**
18	Volume Level	**8** (all tones EN54-3 compatible)
19	Frequency Range	**85-115 DB@ 3 MT AHEAD**
20	IP Rating	**IP33**

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TECHNICAL DESCRIPTION SHEET

Addressable Fire Alarm Panel

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**GST-IFP8**
3	Type	Intelligent Networked Fire Alarm Panel
4	Main Input Voltage	220/230VAC, 50/60 Hz
5	Input Current Rating	1A Totally
6	Operating Temperature	0°C~+40°C
7	Relative Humidity	95% non-condensing
8	Maximum Loop Capacity of Panel	8 Loops
9	Display	600 character, 40 x15 lines Color Graphical LCD Display
10	Loop Capacity	242nos of Detectors or Devices per loop
11	Programmable Zones	Up to 999 / 240 As per EN
12	Key Features	• Auto Programming Day and Night Mode • Enable and Disable function • PAS and Acknowledge Function • Dirty Detector Reporting • Duplicate Address Checking • Walk Test Function with optional silent mode • Can edit device detailed and programmed • Programmable from PC or Panel
13	Loop Length/Cable	1.5mm²-1000m-Full Load
14	Output Circuits	• Fire Alarm Routing • F.P.E. Output • Sounder Circuit Output • Fault Output
15	Standby Batteries	Twin 12 VDC Bat; 28AH – 38AH, as per load calculation Maximum Charge Current: 2.1A Maximum Charge Voltage: 27.6 Type: Sealed lead acid batteries
16	IP Rating	IP 30
17	Standards	CE / EN54-2 / EN54-4, LPCB
18	Dimension	Outer: 850 x 484 x 185 mm Inner: 804 x 440 x 150 mm

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TECHNICAL DESCRIPTION SHEET		
19	Dual Loop Card	**LCIFP8**
20	Description for Dual Loop Card	Dual Loop Card - 484 Addressable devices capacity; Insert into typical slot of GST-IFP8
21	Modbus Communication Card	**P-9935**
22	Description for Modbus Communication Card	Compatible with USB and Serial Port, RS 232 Communication Card for System Commissioning and GMC connection
23	Loop Network Card	**P-9945A**
24	Description for Loop Network Card	RS 485 Network Card, Connection (Class A or B) 1.2 Km between two neighbor nodes
25	Baud Rate	4800bps
26	Network Capacity	Maximum 32 UTC GST series control panels for networking.
27	Ambient Temperature	0℃ ~+40℃
28	Relative Humidity	≤95%, non condensing

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TECHNICAL DESCRIPTION SHEET

Network Repeater Panel

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**GST-NRP01**
3	Type	Network LCD Repeater Panel
4	Operating voltage	24Vdc (20-27Vdc)
5	Power Consumption	Standby power: 350mA Maximum: 550mA
6	Display	4x36 characters
7	Control Key	for Evacuate, Reset, Silence and Panel Mute
8	Protection	Password Protected
9	Network Connection	Through RS-485
10	Operating Temperature	0°C to +40°C
11	Relative Humidity	95%
12	Cable Length	1.2Km between panels
13	Dimensions	390 x 270 x 100 mm
14	IP Rating	IP 30

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TECHNICAL DESCRIPTION SHEET

Graphical User Interface Software

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**GSTGMC3.0**
3	Type	Graphic Monitor Center
4	Client Station Supported	8nos of Clients
5	Key Features	• self-reacting communication • operator can test the communication • monitor stations can be set locally or through LAN or even through WAN • Multi-level password control • Simple, direct and complete user graphics view interface • Complete functions of database management and data copy

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TECHNICAL DESCRIPTION SHEET

Workstation for GUI Software

Sr. No.	PROPERTY	DATA
1	Make	**HP / Dell**
2	Processor	Intel® Core™ i5-4130 Processor (3M Cache processor, 3.4 GHz)
3	Memory	4GB Single Channel DDR3 1600MHz - 1 DIMM
4	Harddisk	500GB 7200 rpm SATA 6Gb/s Hard Drive
5	Graphics Cards	2GB Video Card
6	Monitor	21" LCD Monitor
15	Other Components	Keyboard & Mouse

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TECHNICAL DESCRIPTION SHEET

Printer for GUI Software

Sr. No.	PROPERTY	DATA
1	Make	**HP**
2	Funtions	Print only
3	Print Resolution	Black (best): Up to 600 x 600 optimized dpi;
4	Print technology	HP Thermal Inkjet
5	Standard connectivity	1 USB 2.0
6	Duty cycle (monthly)	Up to 1,000 pages
7	Power consumption	10 watts maximum
8	Recommended temperature range	59 to 86º F (15 to 30º C)
9	Operating humidity range	20 to 80% RH (non-condensing)

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TECHNICAL DESCRIPTION SHEET

Hand Held Programmer

Sr. No.	PROPERTY	DATA
1	Make	**UTC**
2	Model	**P-9910B**
3	Type	Portable programming tool for addressing and testing of intelligent devices
4	Programming	Digital
5	Power supply	one 9V battery
6	Working current	≤8mA
7	Standby current	≤50µA
8	Operating Temperature	-20 C to +70 C
9	Relative humidity	≤95 % 40±2°C
10	Physical Dimensions	164mm×64mm×24mm

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CATALOGUES

United Technologies
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I-9102

Intelligent Photoelectric Smoke Detector

LPCB
548d/02

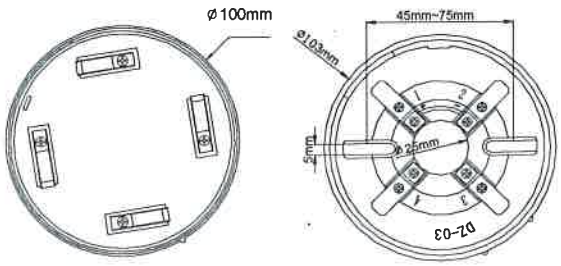
CE
0832-CPD-0524

Description

I-9102 Intelligent Photoelectric Smoke Detector is an addressable fire alarm device cooperating with GST intelligent fire alarm control panels to build a fire detection system. Using infrared scattering technology, the smoke density can be detected. The detector receives very weak infrared light under normal smokeless condition. If smoke particles enter the chamber, the received light signal will increase by scattering. When smoke density reaches a pre-set level, the detector will alarm out. In order to reduce interference and power consumption, the emitting circuit works in pulse mode to prolong the life of IR LED.

Terminals and Installation Holes

Below figures show the detector bottom and terminals of the base.



There are four terminals with marks on the base.
1&3: Loop connection (non-polarized)
2: Positive terminal of remote indicator
4: Negative terminal of remote indicator
The base is suitable to be installed onto standard European embedded back box, with hole-distance 45mm to 75mm

Features and Benefits

- Twin LED for 360° view
- Electronically addressed in field
- Built-in microprocessor stores 14 history data
- Drift compensation to suit environment changing extensively
- Reporting dirt fault for contaminated chamber
- Self-diagnostic
- Remote indicator output available
- LPCB approved at EN 54-7

Certificates and Compliance

- Standards: CE / CPD / EN54-7:2000 + A1:2002 + A2:2006
- Certifications: LPCB
- BS5839-1 Compliant

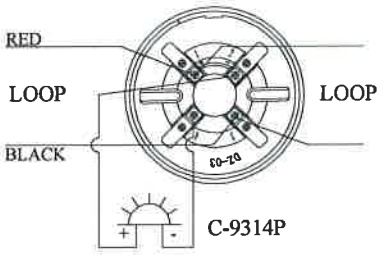
Recommended Cabling

1.0mm^2 or above fire cable is recommended, but subject to local codes.

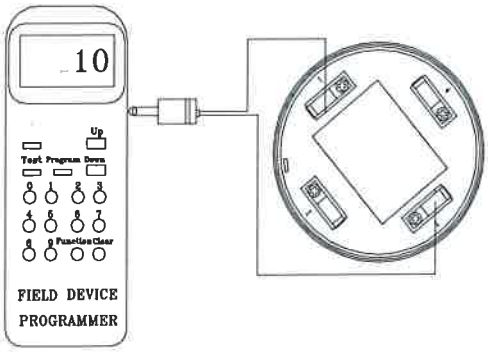
Note: Specifications are subject to change without notice.

Application

The typical wiring diagram is shown below.



Address can be set through P-9910B programmer.



Technical Specification

Operating Voltage	Loop 24V (16V~28V)
Standby Current	≤0.8mA
Alarm Current	≤5.0mA
Indicators	Red. Flashes in normal condition, and illuminates in alarming
Remote indicator output	Directly connect to remote indicator (built-in 5.1kΩ resistor in series. Max. output current is 5.0mA). Quiet In normal condition. Illuminates in alarming.
Programming Method	Electronically programming
Code Range	One address within 1~242.
Wiring	Non-polarized 2-core for loop. Polarized 2-core for remote indicator.
Ingress Protection Rating	IP23
Ambient Temperature	-10°C ~+50°C
Relative Humidity	≤95%, non condensing
Material and Color of Enclosure	ABS, white (RAL 9016)
Dimensions	Diameter: 100mm Height: 58mm (with base)
Mounting Hole Distance	45mm~75mm
Weight	About 120g

Ordering Information and Compatible Products

Part No.	I-9102
Device Name	Intelligent Photoelectric Smoke Detector
Order Code	1022913
Compatible Products	GST100 Intelligent Fire Alarm Control Panel GST200-2 Intelligent Fire Alarm Control Panel GST- IFP8 Intelligent Fire Alarm Control Panel

Accessories and Tools

Part No.: DZ-03
Device name: Standard Base
Order Code: 4044898

Part No.: C-9504E
Device name: Base Mount Isolator
Order Code: 1245091

Part No.: C-9314P
Device name: Remote Indicator
Order Code: 2132339

Part No.: P-9910B
Device name: Handhold Programmer
Order Code: 1274894

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I-9103

Intelligent Rate of Rise and Fixed Temperature Heat Detector

LPCB 548c/02

CE 0832-CPD-0525

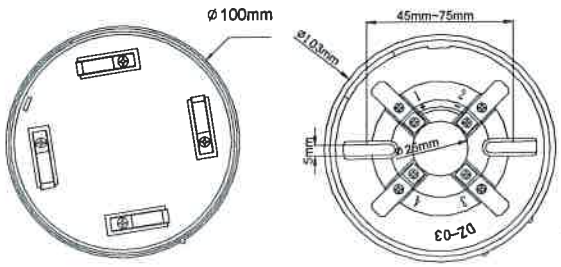
Description

I-9103 Intelligent Rate of Rise and Fixed Temperature Heat Detector is an addressable fire alarm device cooperating with GST intelligent fire alarm control panels to build a fire detection system.

The detector shows fire alarm by the LED indicators. It uses thermistor as its sensor and transmits the signal to a microprocessor which, after voltage transfer, processes the signal using intelligent arithmetic and sends any fire alarm to the control panel. The LED indicators will then be lit by the control panel.

Terminals and Installation Holes

Below figures show the detector bottom and terminals of the base.



There are four terminals with marks on the base.

1&3: Loop connection (non-polarized)

2: Positive terminal of remote indicator

4: Negative terminal of remote indicator

The base is suitable to be installed onto standard European embedded back box, with hole-distance 45mm to 75mm

Features and Benefits

- Twin LED for 360° view
- Electronically addressed in field
- Built-in microprocessor stores 14 history data
- Rate of rise and fixed temperature alarm modes
- Self-diagnostic
- Remote indicator output available
- LPCB approved at EN 54-5

Certificates and Compliance

- Standards: CE / CPD / EN54-5
- Certifications: LPCB
- BS5839-1 Compliant
- WEEE & RoHS Compliant

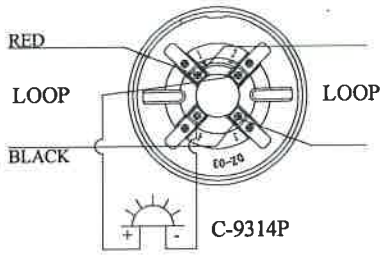
Recommended Cabling

1.0mm^2 or above fire cable is recommended, but subject to local codes.

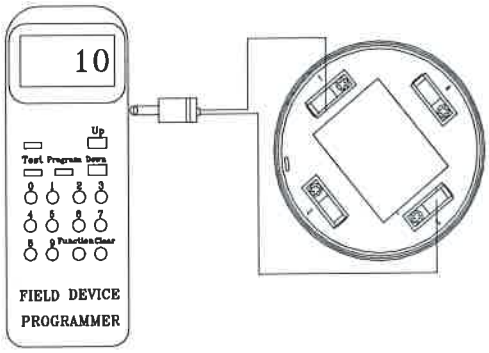
Note: Specifications are subject to change without notice.

Application

The typical wiring diagram is shown below.



Address can be set through P-9910B programmer.



Technical Specification

Operating Voltage	Loop 24V (16V~28V)
Standby Current	≤0.8mA
Alarm Current	≤5.0mA
Indicators	Red. Flashes in normal condition, and illuminates in alarming
Remote indicator output	Directly connect to remote indicator (built-in 5.1kΩ resistor in series. Max. output current is 5.0mA). Quiet in normal condition. Illuminates in alarming.
Action Temperature	58℃
Class	A1R
Programming Method	Electronically programming
Code Range	Address within 1~242.
Wiring	Non-polarized 2-core for loop. Polarized 2-core for remote indicator.
Ingress Protection Rating	IP33
Ambient Temperature	-10°C ~ +50°C
Relative Humidity	≤95%, non condensing
Material and Color of Enclosure	ABS, white (RAL 9016)
Dimensions	Diameter: 100mm Height: 58mm (with base)
Mounting Hole Distance	45mm~75mm
Weight	About 120g

Ordering Information and Compatible Products

Part No.	I-9103
Device Name	Intelligent Rate of Rise and Fixed Temperature Heat Detector
Order Code	1032911
Compatible Products	GST100 Intelligent Fire Alarm Control Panel GST200-2 Intelligent Fire Alarm Control Panel GST- IFP8 Intelligent Fire Alarm Control Panel

Accessories and Tools

Part No.: DZ-03
Device name: Standard Base
Order Code: 4044898

Part No.: C-9504E
Device name: Base Mount Isolator
Order Code: 1245091

Part No.: C-9314P
Device name: Remote Indicator
Order Code: 2132339

Part No.: P-9910B
Device name: Handhold Programmer
Order Code: 1274894

Note: Specifications are subject to change without notice.

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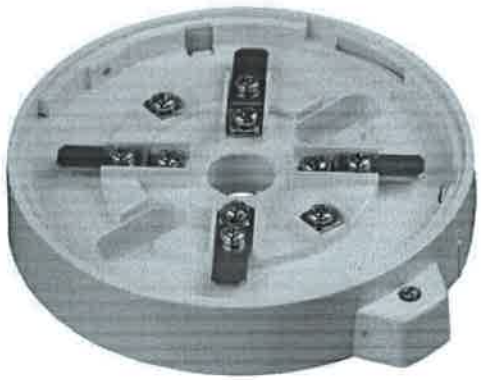


C-9504E
Base Mount Short Circuit Isolator

LPCB 548n/02

CE 0832-CPR-F0034

Description

In loop type fire alarm system, it often occurs that partial short circuit of loop affects the whole system. C-9504E Loop Isolator can isolate the shorted circuit from the complete loop to ensure normal operation of other parts and locate the isolated part.

The isolator is applicable to all kinds of loop fire alarm systems, suitable for Class A and Class B.

As a base type, the isolator can be used to replace a common base, to save installation and cabling.

Features and Benefits

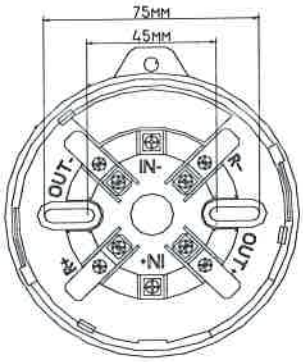
- Polarity-sensitive external connections. Input and output can be used inversely without direction.
- Delayed power-up to output end devices, avoids strong transient current when the load is heavy.
- Plug-in structure.

Certificates and Compliance

- Standards: CE / CPD / EN54-17
- Certifications: LPCB
- BS5839-1 Compliant
- WEEE & RoHS Compliant

Terminals and Installation Holes

Below figure shows terminals on the isolator base.



IN+, IN-: Input cable from previous device, IN+ is positive, and IN- is negative.

OUT+, OUT-: Output cable to next device. OUT+ is positive, and OUT- is negative.

R+, R-: Remote indicator output. R+ is positive, and R- is negative.

Recommended Cabling

1.0mm^2 or above fire cable is recommended, but subject to local codes.

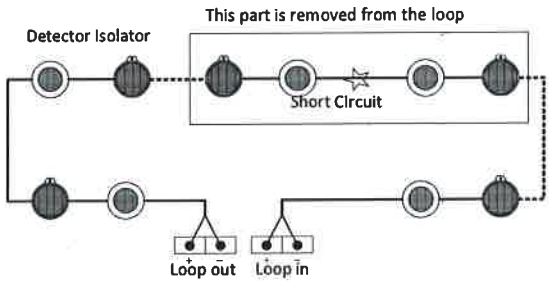
Application

The base mount isolator is usually installed instead of a detector base, and also can be mounted alone with a cover.

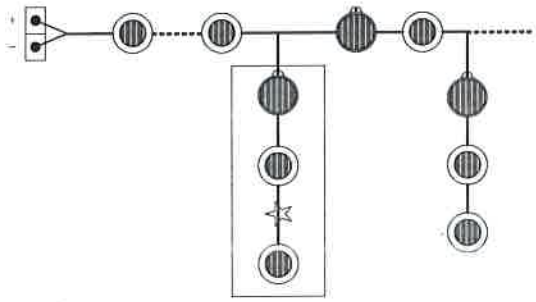
To ensure the operation of isolator and follow the EN54-17 standard, maximum 32 devices can be connected between each 2 isolators.

The loop can be Class A or Class B mode. Below figures show the loop schematic.

Class A:



Class B:



Technical Specification

Operating Voltage	24VDC
Standby Current	≤100uA
Capacity	Maximum 32 devices between every two isolators Maximum 128 isolators per loop
Indicator	Yellow, flashes when polling, illuminates in action.
Ingress Protection Rating	IP33 (with cover)
Operating Temperature	-10°C ~ +40°C
Relative Humidity	≤95%, non condensing
Material of Enclosure	ABS
Dimension	103mm X 20mm
Weight	About 85g

Ordering Information and Compatible Products

Part No.	C-9504E
Device Name	Loop Isolator
Order Code	1245091
Compatible Panels	GST100 Intelligent Fire Panel GST200 Intelligent Fire Panel GST200-2 Intelligent Fire Panel GST200N Intelligent Fire Panel GST-IFP8 Intelligent Fire Panel GST5000W Intelligent Fire Panel GST5000R Intelligent Fire Panel
Compatible Detectors	I series intelligent detectors

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C-9314P
Passive Remote Indicator

Description

C-9314P Passive Remote Indicator is a duplicate indication for detector. It is directly controlled with the relative detector, transmitting the fire alarm signal to the conspicuous place so that people can find the alarming detector easily. It is suitable for detectors installed in residential department, dangerous area, under false floor or above false ceiling.

Technical Specification

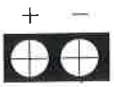
Operating Voltage	2.0VDC ~ 3.0VDC
Operating Current	Standby current : 0mA Action current ≤30mA
Indicator	Red. It turns off when monitoring normally, but constantly illuminates in action.
Operating Temperature	-10°C ~ +50°C
Relative Humidity	≤95%, non condensing
Material of Enclosure	ABS, White (RAL 9016)
Dimension (L×W×H)	64.5mm×64.5mm×31.4mm

Order Information

Part No.	C-9314P
Device Name	Passive Remote Indicator
Order Code	2132339
Compatible Products	I-9101/I-9102/I-9103 DI-9101E/DI-9102E/DI-9103E C-9101/C-9102/C-9103 DC-9101E/DC-9102E/DC-9103E

Terminals

Terminals are shown below.

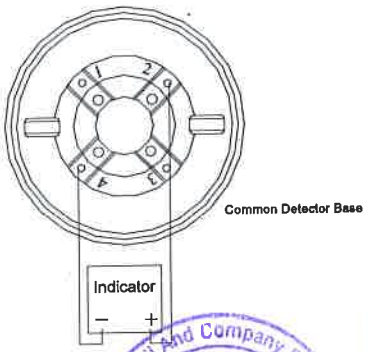


+: From positive end of detector RI output

-: From negative end of detector RI output

Application

The C-9314P indicator can be connected to compatible detector. Here shows the connection with common detector base DZ-03 as a sample.



Note: Specifications are subject to change without notice.

Overview

The SIGA-DH Duct Smoke Detector Housing is specially engineered to exploit all the capabilities of Signature Series intelligent photoelectric and multisensor smoke detectors. GE Security Signature Series detectors gather analog information from each of their one or more sensing elements and converts it into digital signals. The detector's onboard microprocessor measures and analyzes these signals. It compares them to historical readings, time patterns and known characteristics to make an alarm decision. Digital f lters and complex Algorithms are applied for optimum detector accuracy. Unwanted alarms are virtually eliminated.

Each duct housing is packaged with detailed installation instructions, gaskets and a self-adhesive drilling template for locating and mounting the detector. The large access door is completely removable to allow fast detector installation and f eld wiring connections. The 16 gauge steel housing is f nished in red baked enamel for easy identif cation. Five one-gang knockouts on the housing provide a convenient location for mounting intelligent Signature Series modules.

The SIGA-DH Duct Housing comes with a 6 inch (150 mm) exhaust tube. Air sampling tubes are available in lengths from 8 inches (200 mm) to 10 feet (3048 mm) and must be ordered separately. Compatible smoke detectors, mounting bases, and accessories are listed in the Ordering Information. Refer to individual device catalog literature pages for more detail.

Standard Features

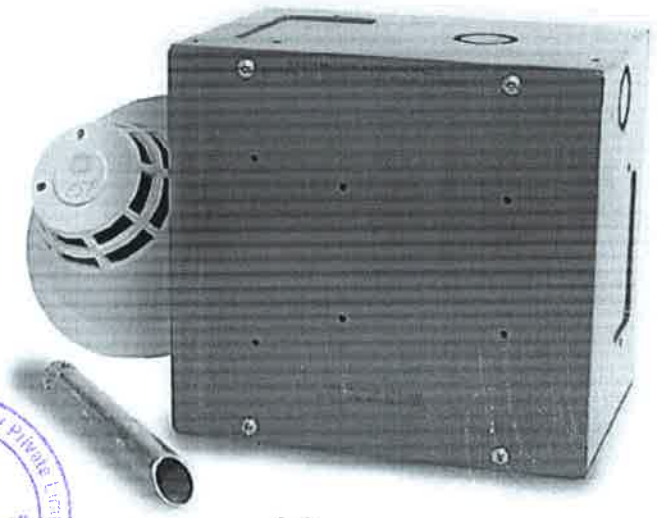
- Suitable for high air velocity duct applications
  Up to 4000 ft/min. (20.3 m/sec.) with Photoelectric Detector.
- Standard Signature Series detectors
  Designed for use with standard 4D, 3D, and Photoelectric Signature Series smoke detectors. Does not require "special" duct smoke heads.
- Standard, relay, or isolator detector base
  Detector plugs-in to base then easily installs into housing.
- Install in ducts up to 10 ft. (3.05 m) wide
- Remote LED and test station accessories
- Designed and manufactured to ISO 9001 standards

Typical Wiring

The detector mounting bases and test station will accept #18 AWG (0.75mm), #16 (1.0mm), #14 AWG (1.50mm) and #12 AWG (2.5 mm²) wire sizes. Note: #14 AWG (1.5 mm) is not recommended due to diff culty of installation. See Loop Controller and Detector catalog sheets for detailed wiring requirement specif cations.

Intelligent Duct Smoke Detector Housing

SIGA-DH



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Ordering Information

Catalog Number	Description	Ship Wt lb. (kg)
SIGA-DH	Duct Detector Housing	6.5 (3.0)
Sampling Tubes		
6261-001	8 inch (200mm) Air Sampling Inlet Tube	0.25 (0.1)
6261-002	24 inch (600mm) Air Sampling Inlet Tube	0.5 (0.2)
6261-003	42 inch (1060mm) Air Sampling Inlet Tube	1.6 (0.8)
6261-006	78 inch (1980mm) Air Sampling Inlet Tube	2.2 (1.0)
6261-010	120 inch (3048mm) Air Sampling Inlet Tube	4.4 (2.0)
Compatible Detectors and Bases		
SIGA-IPHS	4D Multisensor Detector	0.5 (0.23)
SIGA-PHS	3D Multisensor Detector	0.5 (0.23)
SIGA-PS	Photoelectric Detector	0.5 (0.23)
SIGA-SB	Standard Base	0.2 (0.09)
SIGA-RB	Relay Base	0.2 (0.09)
SIGA-IB	Isolator Base	0.2 (0.09)
Annunciation and Testing		
SIGA-LED	Alarm LED Indicator	0.2 (.09)
SIGA-DTS	Duct Test Station	0.4 (.18)
6263-SG	Duct Air Velocity Test Kit	

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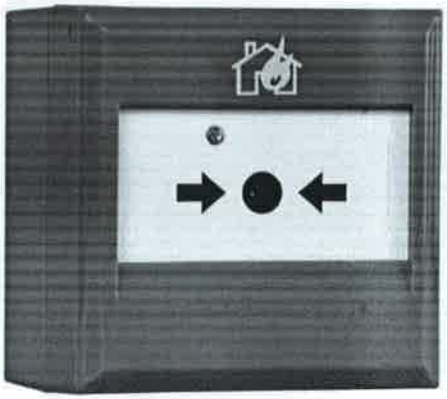


DI-9204E

Digital Manual Call Point

LPCB 548/08

CE 0832-CPR-F0130

Description

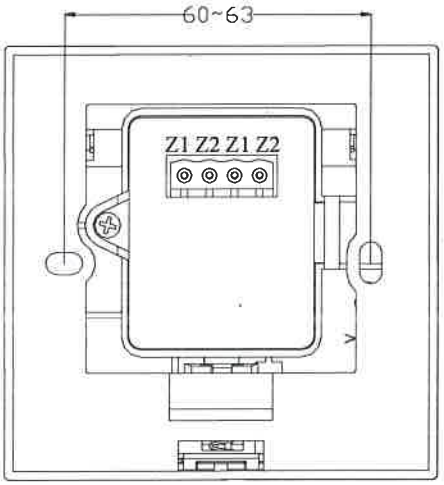
Connecting to the loop of GST fire alarm system, DI-9204E Digital Manual Call Point is suitable for public places. When there is fire, pressing the action plate on the MCP can send the alarm signal to fire alarm control panel. After receiving the signal, the control panel will show address information of the MCP and generate alarm sound.

Features and Benefits

- Electronically addressed by programmer.
- Alarming by pressing, reset by a special key.
- Plug-in structure.
- Certified by LPCB for EN54-11:2001+A1:2005.

Terminals and Installation Holes

Terminals on the MCP are shown below.



Z1, Z2: Connecting to the loop of control panel, non-polarized.

Certificates and Compliance

- Standards: CE / CPD / EN54-11
- Certifications: LPCB
- BS5839-1 Compliant
- WEEE & RoHS Compliant

Recommended Cabling

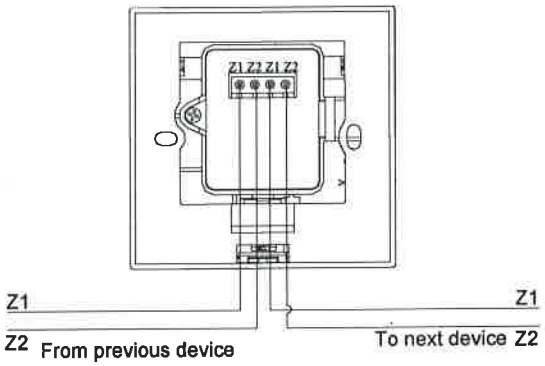
1.0mm^2 or above fire cable is recommended, but subject to local codes.

DS1054854-3

Note: Specifications are subject to change without notice.

Application

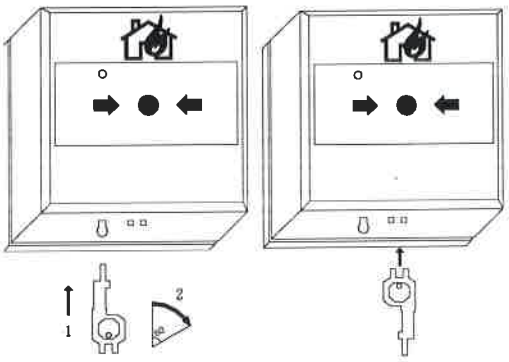
The typical connection of the MCP is shown below.



A key is provided to reset and unlock the MCP

To reset the pushed MCP, vertically insert the key into the key-hole, push in and turn it clockwise, the glass should be rebounded.

To unlock (uninstall) the MCP body, insert the forked key and pushing it home. Then the body will be separated from the base or the back box.



A test tool is provided as spare part. The test tool is used to keep continuity during commissioning or maintenance when MCP is not installed, so that cable test can be carried out easily and make the circuit completed.

Technical Specification

Operating Voltage	Loop 24V (16V ~ 28V)
Standby Current	≤0.6mA
Alarm Current	≤1.8mA
Type of Initiating Part	Reusable
Initiating Mode	Pressing the action plate manually
Resuming Mode	Manually resumed by a special key
Programming Mode	Electronically addressed
Code Range	One address within 1~242
Wiring	Two-wire, polarity-insensitive
Class	Type A, indoor use
Ingress Protection Rating	IP43
Ambient Temperature	-10°C ~ +55°C
Relative Humidity	≤95%, non condensing
Material of Enclosure	ABS
Dimension (L×W×H)	87.1mm×87.1mm×58mm (with back box) 87.1mm×87.1mm×23mm (without back box)
Mounting Hole Distance	60mm
Weight	About 160g (with back box) About 107g (without back box)

Ordering Information and Compatible Products

Part No.	DI-9204E
Device Name	Digital Manual Call Point
Order Code	1054854
Compatible Products	GST100 Intelligent Fire Alarm Control Panel GST200-2 Intelligent Fire Alarm Control Panel GST- IFP8 Intelligent Fire Alarm Control Panel

Accessories and Tools

Part No.: D-92FC
Device name: Flip Cover
Order Code: 4556356

Part No.: D-92WPB
Device name: Water Proof Box
Order Code: 4556520

Part No.: P-9910B
Device name: Handhold Programmer
Order Code: 1274894

DS1054854-3

Note: Specifications are subject to change without notice.

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I-9300

Addressable Input Module

LPCB 546m/01

CE 0832-CPD-0837

Description

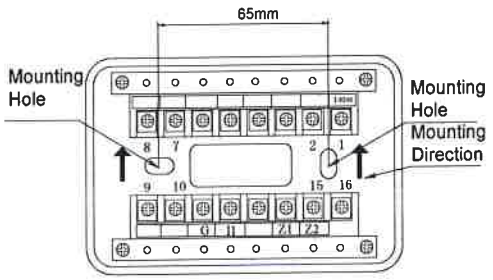
I-9300 Addressable Input Module is designed to receive normally open or normally closed switch signal, and transmits these messages to fire alarm control panel. When a device is activated, the module can send the output signal through signal loop to FACP to alarm or activate relative devices.

Features and Benefits

- Working mode can be set to normally open, normally closed or normally open with cable monitoring through programmer.
- Electronically addressed. The address can be modified by programmer.
- Built-in microprocessor processes messages intelligently.
- Insulation technology for input signal, better anti-interference ability
- Plug-in structure
- Comply with EN54-18:2005 standard. LPCB/CPD approved.

Terminals and Installation

Below figures show the module base appearance.



Z1, Z2: Loop, non-polarized.

I1, G: Input terminal, default at normally open mode (closed to activate), can be set to normally closed or normally open with cable monitoring mode.

Certificates and Compliance

- Standards: CE / CPD / EN54-18
- Certifications: LPCB
- BS5839-1 Compliant
- WEEE & RoHS Compliant

Recommended Cabling

1.0mm^2 or above fire cable is recommended, but subject to local codes.

DS1212296-2

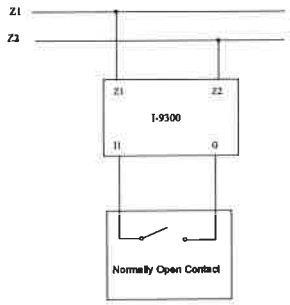
Note: Specifications are subject to change without notice.

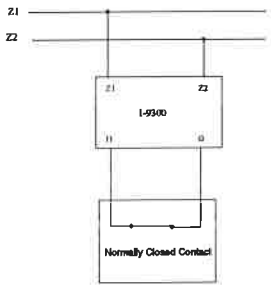
Application

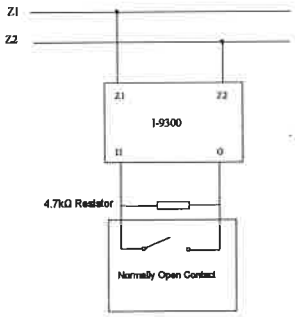
The module is designed to connect with active equipment in field such as water flow switch, pressure switch, position switch, signal valve and devices capable to transmit switch signals. Address and working mode can be set through handhold programmer.

Module Code	Input Mode
4	Normally-open
7	Normally-closed
1	Normally-open with cable monitoring

The typical connections are shown below.







Technical Specification

Operating Voltage	Loop 24V(16V~28V)
Average Current	≤1mA
Programming Method	Electronically addressed
Code Range	One address is within 1~42.
Indicator	Red, flashes when polling. Illuminates in action.
Ingress Protection Rating	IP30
Operating Temperature	0°C ~ 49°C
Relative Humidity	≤93%, non condensing
Material of Enclosure	ABS
Dimension (L×W×H)	120mm×80mm×39mm (with base)
Weight	About 181g (with base)

Ordering Information and Compatible Products

Part No.	I-9300
Device Name	Addressable Input Module
Order Code	1212296
Compatible Products	GST200-2 Intelligent Fire Alarm Control Panel GST- IFP8 Intelligent Fire Alarm Control Panel

Accessories and Tools

Part No.: P-9910B
Device name: Handhold Programmer
Order Code: 1274894

Note: Specifications are subject to change without notice.

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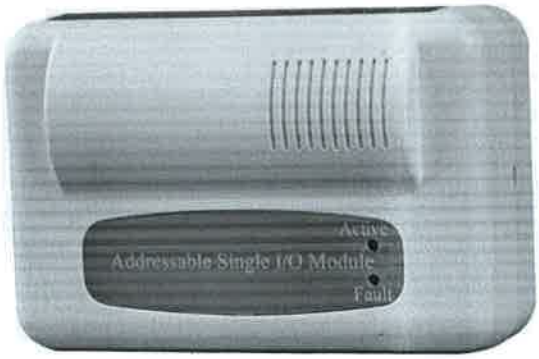


I-9301

Addressable Single I/O Module

LPCB 548m/02

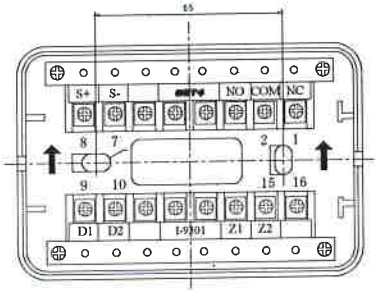
CE 0832-CPD-0838

Description

With a microprocessor, the I-9301 Addressable Single I/O Module can communicate with fire alarm control panel, monitor the power supply, control the output and show conditions by LED indicator. The module energizes the output relay and illuminates the indicator when receiving start command from FACP. In 4-wire mode, the output cable is monitored for fault of open circuit and short circuit.

Terminals and Installation

Below figures show the module base appearance.



Z1, Z2: Loop, non-polarized.
D1, D2: 24VDC power supply, non-polarized.
S+, S-: Active output, for 4-wire mode only, polarized.
NC, COM, NO: Normally closed or normally open relay output, for 2-wire mode only.

Features and Benefits

- Electronically addressed. The address can be modified by programmer.
- Built-in microprocessor processes messages intelligently.
- 2-wire and 4-wire modes can be set through hand held programmer.
- Monitoring power supply in 4-wire mode.
- Plug-in structure
- Comply with EN 54-18:2005 standard. LPCB/CPD approved.

Certificates and Compliance

- Standards: CE / CPD / EN54-18
- Certifications: LPCB
- BS5839-1 Compliant
- WEEE & RoHS Compliant

Recommended Cabling

1.0mm^2 or above fire cable is recommended, but subject to local codes.

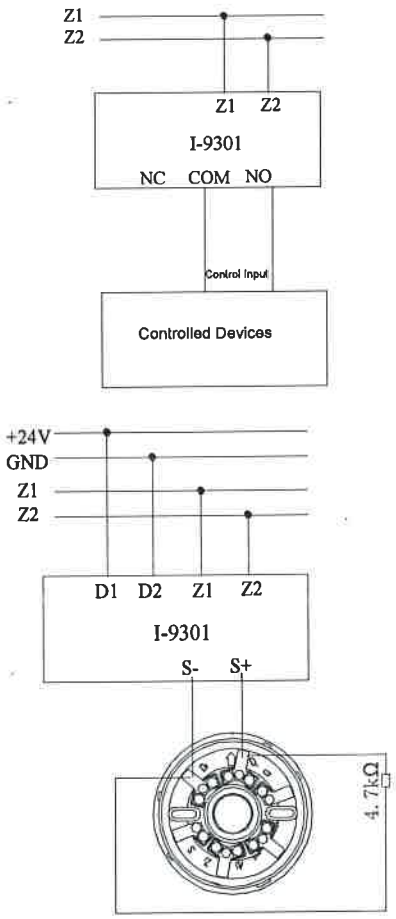
Note: Specifications are subject to change without notice.

Application

The module is designed for 2 types of working modes for different application. The working mode and address can be set through handhold programmer. Factory defaults at 2-wire mode.

Module Code	Working Mode
2	2-Wire
1	4-Wire

The typical connections of 2-wire and 4-wire modes are shown below. Connect C-9403 conventional sounder as the sample.



In 4-wire mode, there is an input port can be applied between terminal 11 & 12, which accepts Normally-Open contact signal.

Technical Specification

Operating Voltage	Loop: 24V (16V~28V) Power: 24VDC (20VDC~28VDC)
Standby Current	Loop≤1mA Power≤5mA
Action Current	Loop≤3mA Power≤20mA
Output Capacity	4-wire mode: 24VDC/1A 2-wire mode: 24VDC/2A
Programming Method	Electronically addressed
Code Range	One address within 1~242.
Indicator	Active Indicator: Red, flashes when polling. Illuminates in action. Fault Indicator: Yellow, illuminates in fault.
Ingress Protection Rating	IP30
Operating Temperature	-10°C~+55°C
Relative Humidity	≤93%, non condensing
Material of Enclosure	ABS
Dimension (L×W×H)	120mm×80mm×39mm (with base)
Weight	About 194g (with base)

Ordering Information and Compatible Products

Part No.	I-9301
Device Name	Addressable Single I/O Module
Order Code	1224614
Compatible Products	GST200-2 Intelligent Fire Alarm Control Panel GST- IFP8 Intelligent Fire Alarm Control Panel

Accessories and Tools

Part No.: P-9910B
Device name: Handhold Programmer
Order Code: 1274894

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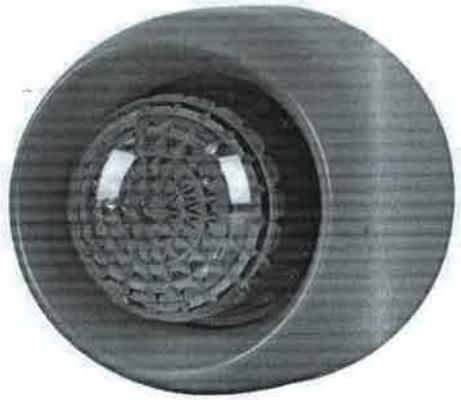


I-9403

Intelligent Sounder Strobe

LPCB 548e/02

CE 0832-CPD-0448

Description

I-9403 Intelligent Sounder Strobe is an audible and visual notification device, which can be activated by fire alarm control panel. In case of fire condition, by command from the control panel, the sounder strobe will generate strong audible and visual alarm signal to warn people evacuate from the building.

Features and Benefits

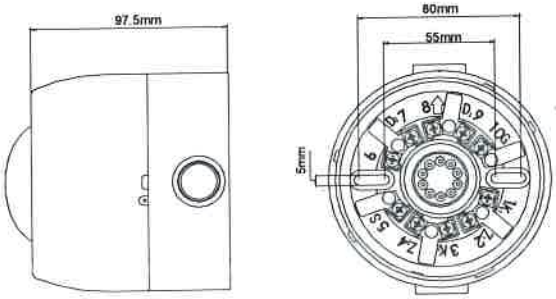
- Two parts construction with base mounted termination allows easy installation
- 16 programmable alarm tones
- Optional Evacuate + Alert mode
- Strobe provided by high intensity LED cluster
- Switch off Light or Sound output for special applications
- Optional loop powered or external 24VDC powering
- Optional power saving mode or hi-consumption mode
- Electronically addressed
- Comply with EN54-3:2001 + A1:2002 + A2:2006 standard. LPCB/CPD approved.

Certificates and Compliance

- BS5839-1 Compliant
- WEEE & RoHS Compliant
- Standards: CE / CPD / EN54-3
- Certifications: LPCB

Terminals and Installation Holes

Terminals and dimensions of the sounder are shown below.



Z1 (2), Z2 (4): Loop, non-polarized
D1 (9), D2 (7): 24VDC, non-polarized

Recommended Cabling

1.5mm^2 or above fire cable is recommended, but subject to local codes.

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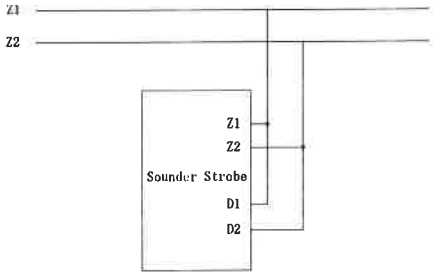
Application

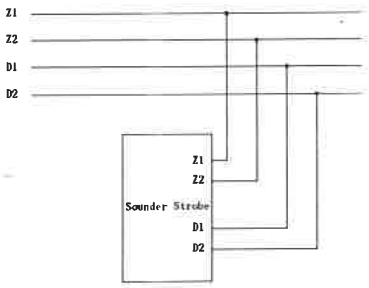
The Address, tones and working modes can be set through P-9910B handhold programmer. The factory default is tone 14, single address, normal consumption mode.

Mode Code	Tone	Address Quantity	Pre-alarm	Working Mode
1-16	1-16	1	No	Power Saving
17-32	1-16	2	Yes	Normal
33-48	1-16	1	No	Power Saving
49-64	1-16	2	Yes	Normal

When the sounder takes 2 addresses, the 1st address will sound in pre-alarm tone.

The sounder sits in GST addressable loop. It can be loop powered or powered by external 24VDC. In loop power mode, the capacity is maximum 20 pieces per loop. Below figures show the typical connection for loop power and external 24VDC power.





For surface cabling project, an optional deep base can be applied.

Technical Specification

Operating Voltage	Loop: 24V (20V~28V) Power: 24V (20V~28V)
Standby Current	Power-saving mode: ✧ Loop-powered: Loop monitor current≤2mA Start current≤9mA ✧ External 24V powered Loop monitor current≤1mA Start current≤2mA Power monitor current≤1mA Start current≤9mA Normal mode: ✧ Loop powered Loop monitor current≤2mA Start current≤35mA ✧ External 24V powered Loop monitor current≤1mA Start current≤2mA Power monitor current≤1mA Start current≤35mA
Programming Mode	Electronically addressed
Programming Range	1~242
Ingress Protection Rating	IP33
Operating Temperature	-10°C ~ +50°C
Relative Humanity	≤95%, non condensing
Enclosure	ABS
Dimension	110mm×83mm (shallow base)
Weight	About 327.2g

Ordering Information and Compatible Products

Part No.	I-9403
Device Name	Addressable base mount sounder
Order Code	1112408
Compatible Panels	GST100 Intelligent Fire Alarm Control Panel GST200-2 Intelligent Fire Alarm Control Panel GST- IFP8 Intelligent Fire Alarm Control Panel
Compatible Detectors	I series digital detectors (DZ-03 base)

Accessories and Tools

Part No.: P-9910B
Device name: Handhold Programmer
Order Code: 1274894

Part No.: C-94DB
Device name: Deep Base
Order Code: 4553792

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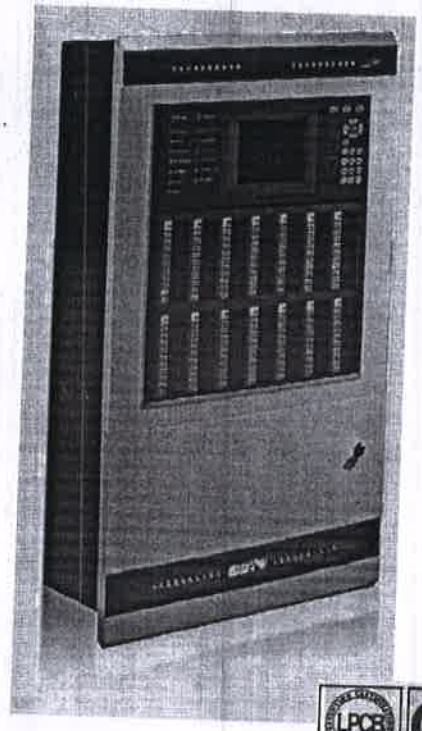

Intelligent 8 Loop **Fire Alarm Control** Panel

GST-IFP8

548p(d-5) 0832-CPD-1215

Description

The GST-IFP8 is an intelligent fire alarm control panel. Flush-mounted type housing, dual redundant processor technology capable of connecting over 1900 devices, provides the perfect solution for all medium to large systems.

The system is compatible with the complete range of GST Intelligent detectors, sounders, call points, and interfaces, including intrinsically safe and gaseous extinguishing controls. The IFP8 is manufactured and certified to EN54 parts 2 and 4, BS5839 Par 4. And CPD

The GST programming facilities enables advanced and complex cause and effects to be programmed with ease, including phased and cascade evacuation scenarios.

Added commission features such as duplicate address checking, device mismatch, editing device details and programmed through the control panel that has proved to be highly rated by both commissioning and service engineers.

By utilizing the GST protocol the GST-IFP8 can be networked with up to 240 panels, making this the perfect solution for large decentralized systems such as shopping centers, military camps, industrial complexes, holiday villages etc.

Features and Benefits

- Listed to LPCB
- 8 x Loops (242) capacity (1936) addressable points
- Maximum 10 Loops Standalone
- Modular constructed for future expansion
- 40 x15 lines Colour Graphical LCD Display
- Up to 999 programmable zones and 140 zone indication
- Auto Programming Day and Night Mode
- Enable and Disable function
- PAS and Acknowledge Function
- Dirty Detector Reporting
- Duplicate Address Checking
- Walk Test Function with optional silent mode
- Can edit device detailed and programmed
- Programmable from PC or Panel
- History record-999 fire incident only and 999 event capacity in non-volatile memory Fully simulation of Cause and Effect
- Advanced user friendly programming software including 'Fuzzy Logic'
- Networked with all GST Intelligent Fire panels up to 64 panels, Optional CAN BUS, Fiber Optic and LAN Network Interface
- RS 485 mimic and repeater output up 64
- RS 232-USB CRT interface, including GSTGMC graphic, Epson commercial printer, and BMS
- Built in Fire Alarm, FPE, Fault and Alarm Router output
- 80 column Panel Printer included
- Built in Battery charger

Note: Specifications are subject to change without notice.

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Technical Specifications

• **Standard:**	EN54 Part 2/4; BS5839 Part 4
• **Approvals:**	LPCB, CPD
• **Main Input Voltage:**	220/230 ± 10% VAC 50/60 Hz
• **Input Current Rating:**	500A, Fuse: 2A delay
• **Operating Temperature**	0°C- 40°C /95% relative humidity
• **Protection:**	IP 30
• **Application:**	Indoor installation
• **Programming:**	Laptop using GST Defining Software/P-9935 or Panel Keypad
• **Zone Capacity:**	999 Zones programmable
• **Loop Parameter:**	Optional Loop card (LC-IFP8)
Loop Capacity:	**Loop:** 242(Address)
Loop Topology:	Class A or B
Loop Voltage:	24 VDC Nominal (21-27 VDC)
Loop Current:	0-300mA
Loop Length/Cable:	1.00mm²-800m-Full Load 1.5mm²-1000m-Full Load
• **Output Circuits:**	**Fire Alarm Routing:** Monitored (4.7Kohm) Voltage: Standby: -9to-11VDC; Alarm: 21 to 27Vdc Current: 200mA Relay Contact: Optional C-9302 Module (C-9302:5A/220/24; 26mA alarm Current) **F.P.E. Output:** Monitored (4.7Kohm) Voltage: Standby: -9to-11VDC; Alarm: 21 to 27Vdc Current: 500mA Relay Contact: Optional C-9302 Module (C-9302:5A/220/24; 26mA alarm Current) **Sounder Circuit Output:** Monitored (4.7Kohm) Voltage: Standby: -9to-11VDC; Alarm: 21 to 27Vdc Current: 1 A (Output circuit cable length: 1.00mm²- 1000m) **Fault Output:** Non-monitored Relay Contact: NO/COM/NC; rating: 24V/1A
• **Standby Batteries:**	Twin 12 VDC Bat; 28AH – 38AH, as per load calculation Maximum Charge Current: 2.1A Maximum Charge Voltage: 27.6 Type: Sealed lead acid batteries Recommended model: Yuasa NP38-12I Maximum Internal Resistance: 0.7Ω Quiescent Current under Full-loaded Condition: 1.4A Maximum Battery Operating Current: 4.2A
• **RS484 Port:**	**Optional Repeater Card (P-9946)** Up to 64 Repeater or Mimic panel Cable length: 1.5mm²- 1000m **Optional Network card (P-9945A)** Normal 64 panels Cable Length: 1.5mm²- 1200m between panels Topology: Class A
• **CANBUS:**	**Optional CANBUS Communication card (P-9965)** Network Capacity 240 panels (CANBUS HUB Required) Cable Length: 3Km Topology: STAR Connection
• **RS232 Port:**	**(Serial/USB) Optional Communication card (P-9935)** Cable Length: 15m (cable Supplied)
• **Panel Printer:**	**Type:** Thermal/ASCII Code Voltage: 5Vdc
• **Dimension (HLW):**	**Outer:** 850 x 484 x 185 mm **Inner:** 804 x 440 x 150 mm

United Technologies
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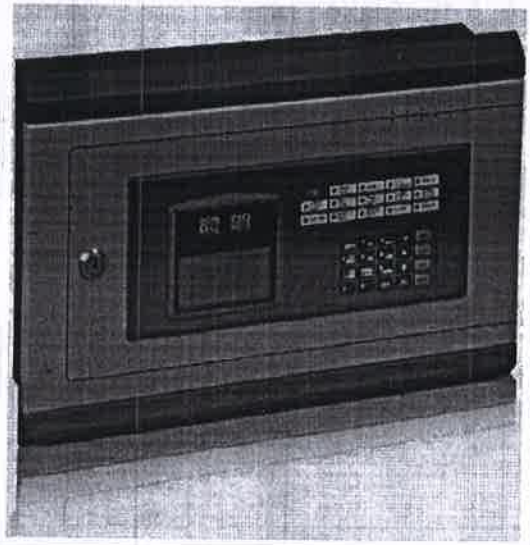
GST



Network Repeater Panel

GST-NRP01

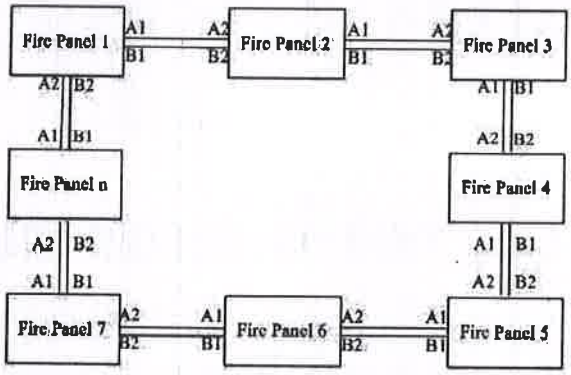
Description

GST-NRPO1 Network LCD Repeater Panel is designed to control and reset the alarm remotely and display fire, fault, action and supervisory. This repeater panel can display the location numbers and information of the detectors and sends out audible and optical signals. Through RS485 communication network the repeater can be connected to all GST Intelligent fire alarm controllers. Compact size and easy to install. The repeater can be used whenever there is a need to relay information to multipoint informing key personnel.

Features and Benefits

- Display exact message from the networked panel
- Control key for Evacuate, Reset, Silence and Panel Mute
- Extending Network distance up to 2.4Km
- Built In Sounder
- Password protected
- Back Lit LCD displays
- Connected to network RS 485 Class A
- Easy to Install

Networking



Technical Specifications

- Operating voltage: 24Vdc (20-27Vdc)
- Power Consumption: Standby power: 350mA
  Maximum: 550mA
- Display: 4x36 characters
- Operating temperature: 0°C to +40°C
- Relative humidity: 95%
- Protection Rating: IP30
- Application: Indoor use
- Material and colour:
- Wiring: 1 pair PSU supply and 1 pair Network data signal Class A
- Cable Length: 1.2Km between panels
- Dimensions: 390 x 270 x 100 mm

Selection of Compatible panels

Compatible with all GST Intelligent fire alarm panel.

Ordering Information

Part Number: GST-NRP01
Description: Network Repeater Panel
Weight / Kg.: 3.3
Pack Qty. per Box: 1

MANUFACTURED IN ACCORDANCE WITH

LPCB

DIEBOLD SYSTEMS LTD.

Shapoorji Pallonji And Company Private Limited

United Technologies
Climate | Controls | Security

GST

GSTGMC3.0 Graphic Monitor Center

Description

GstGMC3.0 Graphic Monitor Centre is a fire alarm system monitoring software. With friendly interface, the software may support 8 remote client stations plus local monitor station, making complete monitoring and control. Also with OLE for Process Control (OPC), the communication with fire alarm control panel can also be integrated into other systems. The related FACP includes GST200, GST200-2, GST200N, GST5000 and GST-IFP8.

Technical Specification

- Based on pc, software provides Simple, direct and complete user graphics view interface
- Shifting between device layouts of different monitoring zones.
- Popup of off-normal information automatically, with devices in alarm, action, fault or disabled condition flashing in different colors.
- Multi-level password control.
- One local operator and maximum 8 remote users
- Supports multi-languages. The language displayed is the same as that of the operating system.

System Requirements

- **Hardware**

  CPU: Pentium IV 1.7G Hz or above

  Minimum free Hard disk: 10GB

  Memory: 512M or above

- **Software**

  Windows XP Professional（IE6.0 or above）

  Windows 7

Order Information

Part No.	GST-DEF-KEY
Device Name	USB Dongle
Order Code	5670138

Datasheet

HP ProDesk 400 G2 Microtower PC

Grow your business with the HP ProDesk 400 G2 MT equipped with the tools you need for everyday business.

HP recommends Windows.

Windows 8.1 Pro or other operating systems available

Configurations for today and tomorrow.

Meet your needs and your budget with a reasonably priced business desktop with optional bundled displays[2] ready for expansion and upgrades.

Designed with work in mind.

The newly designed HP ProDesk 400 G2 MT provides easy access to components through the tool-less chassis, front USB 3.0 ports for quick connections and support for legacy ports to support your business.

Perform at the speed of work.

Enjoy the business ready performance of the 4th generation Intel® Core™ processors[3] equipped with a powerful chipset, processor support and robust memory.

Safeguard data and devices.

Help keep sensitive data secure with comprehensive security features like HP Client Security[4] and HP BIOS Protection.[5]

Features

Guard your data, device and identity with HP Client Security.[4]
HP BIOS Protection's[5] automated recovery restores a copy of the BIOS from a partition on the hard drive if crisis strikes.
Rest easy with a ProDesk that endures 115,000 hours of testing to help ensure reliability in the most demanding work environments.
Rest easy and work confidently with dependable support options including a parts/labor/on-site limited warranty[6] and parts availability for up to 5 years.
Optional HP Care Pack with Accidental Damage Protection helps you avoid out-of-pocket repair or replacement costs and delivers service right to your door.[7]

Relax. You're backed by expert support when you extend and expand beyond your standard limited warranty with optional HP Care Packs.[7]
Easily share your internet connection with devices or colleagues to get productive fast.[4]
Start up in an instant, quickly switch between applications, and manage files with the quick and fluid Windows 8.1.[1]

Datasheet

HP ProDesk 400 G2 Microtower PC

HP recommends Windows.

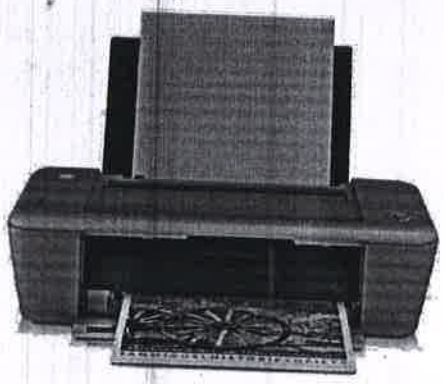


Form Factor	Microtower
Operating System	Windows 8.1 Pro 64[1] Windows 8.1 64[1] Windows 7 Professional 64[2] Windows 7 Professional 32[2] Windows 7 Professional 64 (available through downgrade rights from Windows 8.1 Pro)[3] Windows 7 Professional 32 (available through downgrade rights from Windows 8.1 Pro)[3] FreeDOS 2.0 Ubuntu
Processor Family	Intel® Core™ i7 processor; Intel® Core™ i5 processor; Intel® Core™ i3 processor; Intel® Pentium® processor; Intel® Celeron® processor[4]
Processor	Intel® Core™ i7-4790 with Intel HD Graphics 4600 (3.6 GHz, 8 MB cache, 4 cores); Intel® Core™ i7-4790S with Intel HD Graphics 4600 (3.2 GHz, 8 MB cache, 4 cores), Intel® Core™ i7-4771 with Intel HD Graphics 4600 (3.5 GHz, 8 MB cache, 4 cores); Intel® Core™ i7-4770 with Intel HD Graphics 4600 (3.4 GHz, 8 MB cache, 4 cores); Intel® Core™ i7-4770S with Intel HD Graphics 4600 (3.1 GHz, 8 MB cache, 4 cores); Intel® Core™ i5-4690 with Intel HD Graphics 4600 (3.5 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4690S with Intel HD Graphics 4600 (3.2 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4670 with Intel HD Graphics 4600 (3.4 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4670S with Intel HD Graphics 4600 (3.1 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4590 with Intel HD Graphics 4600 (3.3 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4590S with Intel HD Graphics 4600 (3 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4570 with Intel HD Graphics 4600 (3.2 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4570S with Intel HD Graphics 4600 (2.9 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4430 with Intel HD Graphics 4600 (3 GHz, 6 MB cache, 4 cores); Intel® Core™ i5-4430S with Intel HD Graphics 4600 (2.7 GHz, 6 MB cache, 4 cores); Intel® Core™ i3-4370 with Intel HD Graphics 4600 (3.8 GHz, 4 MB cache, 2 cores); Intel® Core™ i3-4360 with Intel HD Graphics 4600 (3.7 GHz, 4 MB cache, 2 cores); Intel® Core™ i3-4350 with Intel HD Graphics 4600 (3.6 GHz, 4 MB cache, 2 cores); Intel® Core™ i3-4160 with Intel HD Graphics 4400 (3.6 GHz, 3 MB cache, 2 cores); Intel® Core™ i3-4340 with Intel HD Graphics 4600 (3.6 GHz, 4 MB cache, 2 cores); Intel® Core™ i3-4330 with Intel HD Graphics 4600 (3.5 GHz, 4 MB cache, 2 cores); Intel® Core™ i3-4150 with Intel HD Graphics 4400 (3.5 GHz, 3 MB cache, 2 cores); Intel® Core™ i3-4130 with Intel HD Graphics 4400 (3.4 GHz, 3 MB cache, 2 cores); Intel® Pentium® G3460 with Intel HD Graphics (3.5 GHz, 3 MB cache, 2 cores); Intel® Pentium® G3450 with Intel HD Graphics (3.4 GHz, 3 MB cache, 2 cores); Intel® Pentium® G3440 with Intel HD Graphics (3.3 GHz, 3 MB cache, 2 cores); Intel® Pentium® G3430 with Intel HD Graphics (3.3 GHz, 3 MB cache, 2 cores); Intel® Pentium® G3420 with Intel HD Graphics (3.2 GHz, 3 MB cache, 2 cores); Intel® Pentium® G3250 with Intel HD Graphics (3.2 GHz, 3 MB cache, 2 cores); Intel® Pentium® G3240 with Intel HD Graphics (3.1 GHz, 3 MB cache, 2 cores); Intel® Pentium® G3220 with Intel HD Graphics (3 GHz, 3 MB cache, 2 cores); Intel® Celeron® G1850 with Intel HD Graphics (2.9 GHz, 2 MB cache, 2 cores); Intel® Celeron® G1840 with Intel HD Graphics (2.8 GHz, 2 MB cache, 2 cores); Intel® Celeron® G1830 with Intel HD Graphics (2.8 GHz, 2 MB cache, 2 cores); Intel® Celeron™ G1820 with Intel HD Graphics (2.7 GHz, 2 MB cache, 2 cores)
Chipset	Intel® H81 Express
Memory	Up to 16 GB 1600 MHz DDR3 SDRAM[5] Memory slots: 2 DIMM
Storage	Internal drive bays Two 3.5" External drive bays 1 SD reader (optional); 1 slim ODD up to 128 GB, SATA SSD[6] 120 GB, up to 500 GB, SATA SE SSD[6] 500 GB, up to 1 TB, SATA SSHD[6] 500 GB, up to 2 TB, SATA (7200 rpm)[6]
Removable Media	Slim SATA Blu-ray BDXL Writer; Slim SATA SuperMulti DVD writer; Slim SATA DVD-ROM[7,8]
Graphics	Intel HD Graphics; Intel HD Graphics 4400; Intel HD Graphics 4600[10,11,17]
Audio	DTS Sound+ audio management technology, HD audio with Realtek ALC221 codec (all ports are stereo), microphone and headphone front ports (3.5 mm), line out rear port (3.5 mm), multi-streaming capable, internal speaker
Communications	Integrated Realtek RTL8151GH-CG GbE LOM; Intel I210-T1 PCIe GbE (optional); Intel Dual Band Wireless-N 7260 802.11 a/b/g/n PCIe (optional); HP 802.11a/b/g/n 2x2 Wireless Dual Band Mini Card with Bluetooth® (optional)[9]
Expansion Slots	3 full-height PCIe (x1) (optional); 1 full-height PCIe x16 (optional)
Ports and Connectors	Front: 2 USB 3.0; 1 microphone; 1 headphone Back: 2 USB 3.0; 4 USB 2.0; 1 serial; 2 PS/2 (keyboard and mouse); 1 VGA; 1 audio line in; 1 audio line out; 1 RJ-45; 1 DisplayPort 1.2; 1 serial (optional); 1 parallel (optional)
Input Devices	HP PS/2 Keyboard; HP USB Keyboard; HP USB Smart Card (CCID) Keyboard; HP USB and PS/2 Washable Keyboard; HP Wireless Keyboard and Mouse combo[12] HP PS/2 Mouse; HP USB Mouse; HP USB 1000 dpi Laser Mouse; HP USB and PS/2 Washable Mouse[12]
Security	Trusted Platform Module (TPM) 1.2 (Common Criteria EAL4+ certified); SATA port disablement (via BIOS); Serial, parallel, USB enable/disable (via BIOS); USB port disable at factory (optional); Removable media write/boot control, Power-on password (via BIOS); Administrator password (via BIOS); HP Chassis (1 bay) Security Kit; Support for chassis padlocks and cable lock devices[12]
Software (Windows OS only)	HP business PCs are shipped with a variety of software titles including HP Client Security, HP Drive Encryption, HP Password Manager, Microsoft Security Essentials, CyberLink Power DVD BD, HP ePrint Driver, HP PageLift, Box 50 GB Offer, Foxit PhantomPDF Express. Please refer to this product's quick spec document for a full list of preinstalled software[14,15,16]
Manageability Features	Fully manageable and supported by industry-standard HP Client Management Solutions. Optional LANDesk management tools available.
Dimensions	16.5 x 35.88 x 35.5 cm Without stand
Weight	6.5 kg Configured with 1 HDD & 1 ODD. Weight will vary by configuration.
Operating Humidity Range	10 to 90% RH
Operating Temperature Range	10 to 35°C
Energy Efficiency Compliance	ENERGY STAR® certified and EPEAT® registered configurations available Low halogen[13]
Power	180 W standard efficiency, active PFC; 300 W standard efficiency, active PFC; 180 W up to 85% efficient, active PFC; 300 W, up to 85% efficient, active PFC
Warranty	On-site warranty: One-year (1-1-1) limited warranty delivers one year of on-site, next business day service for parts and labor and includes free telephone support 24 x 7. One-year onsite and labor are not available in all countries. Service offers terms up to 5 years by choosing a Care Pack. To choose the right level of service for your HP product, visit HP Care Pack Central: www.hp.com/go/cpc

Deskjet 1010 Printer

This HP Deskjet offers affordable, easy, everyday printing. Simply print what you need, when you need it, and use optional high-capacity cartridges for extra value.[1] Save space with this compact design that fits in small spaces.

ISO speed: Up to 7 ppm black, up to 4 ppm color
Maximum print speed: Up to 20 ppm black, up to 16 ppm color
Connectivity: 1 USB 2.0
Control panel: 1 Control (Power)
Paper handling: 60 sheet input tray, 25 sheet output tray
Media types supported: Paper (brochure, inkjet, plain), photo paper, envelopes, labels, cards (greeting)
Media sizes supported: Letter, legal, 4 x 6 in, 5 x 7 in, 8 x 10 in, No. 10 envelopes



Affordable, everyday printing

- Designed for everyday ease—this printer was designed to be simple so you can print without worries.
- Lock in a better value, using optional high-capacity cartridges.[1]

Simply printing

- Get right to it—start printing right out of the box with quick and easy setup.

Fits right in

- Save your space with a compact printer designed to fit where you need it.

Reduce your impact

- Designed to conserve. Save energy, using a printer that's Energy Star® qualified.
- Easily recycle your Original HP ink cartridges for free through HP Planet Partners.[2]

[1]High-capacity Original HP 61XL, 301XL, 122XL, and 802 Ink Cartridges not included; please purchase separately. Less cost per page compared with standard capacity Original HP 61, 301, 122, and 802 Ink Cartridges.
[2]Program availability varies. Original HP cartridge return and recycling is currently available in more than 50 countries, territories, and regions in Asia, Europe, and North and South America through the HP Planet Partners program. For more information, visit www.hp.com/recycle

ENERGY STAR

Windows 7

Windows Vista

Mac

ColorLok

Easy access USB

HP Deskjet 1010 Printer

TECHNICAL SPECIFICATIONS

Functions	Print only
Duplex print options	Manual (driver support provided)
Print speed[1]	**ISO speed:** Up to 7 ppm black, Up to 4 ppm color; **Maximum print speed:** Up to 20 ppm black, Up to 16 ppm color
First page out	**Black (ready):** As fast as 17 sec; **Color (ready):** As fast as 24 sec
Print resolution	**Black (best):** Up to 600 x 600 optimized dpi; **Color (best):** Up to 600 x 600 optimized dpi
Print technology	HP Thermal Inkjet
Print cartridges number	2 (1 black, 1 Tri-color [cyan, magenta, yellow])
Printer smart software features	Manual Duplex
Borderless printing	No
Standard print languages	HP PCL3 GUI
Vertical alignment accuracy	+/- 0.0002 in (+/- 0.00508 mm)
Standard connectivity	1 USB 2.0
Wireless capability	No
Memory	Integrated
Duty cycle (monthly)	Up to 1,000 pages
Recommended monthly page volume	Up to 50 to 200 pages
Paper handling	60-sheet input tray, 25-sheet output tray **Input capacity:** Up to 20 cards, Up to 60 sheets legal, Up to 10 sheets label, Up to 5 envelopes, Up to 20 sheets photo paper, Up to 20 sheets 4 X 6 Photo **Output capacity:** Up to 20 cards, Up to 25 sheets legal, Up to 10 sheets label, Up to 5 envelopes, Up to 20 sheets photo paper
Media type	Paper (brochure, inkjet, plain), photo paper, envelopes, labels, cards (greeting)
Media weight	**Letter:** 16 to 32 lb; **HP envelopes:** 20 to 24 lb; **HP cards:** up to 110 lb; **HP 4 x 6 inch photo paper:** up to 145 lb
Media sizes	Letter; legal; 4 x 6 in; 5 x 7 in; 8 x 10 in; No. 10 envelopes
Dimensions	16.65 x 8.54 x 5.0 in (423.95 x 217 x 127 mm) **Maximum:** 16.65 x 20.04 x 10.01 in (422.95 x 509.12 x 254.32 mm) with Input & Output Tray / Extension extended
Weight	4.55 lb (2.06 kg)
What´s in the box	HP Deskjet 1010 Printer; HP 61 Black Ink Cartridge (~190 pages); HP 61 Tri-color Ink Cartridge (~165 pages); Software CD; Setup Guide; power supply; power cord. [Average based on ISO/IEC 24711 or HP testing methodology and continuous printing. Actual yield varies considerably based on content of printed pages and other factors. For details see **www.hp.com/go/learnaboutsupplies**]
box cable	No, please purchase USB cable separately
Replacement cartridges	HP 61 Black Ink Cartridge (~190 pages) HP 61 Tri-color Ink Cartridge (~165 pages) HP 61XL Black Ink Cartridge (~480 pages) HP 61XL Tri-color Ink Cartridge (~330 pages) [Average based on ISO/IEC 24711 or HP testing methodology and continuous printing. Actual yield varies considerably based on content of printed pages and other factors. For details see **www.hp.com/go/learnaboutsupplies**]
Warranty features	With services, software, solutions and support from HP Total Care, you can use, protect and enjoy your HP Technology. Comes with one-year technical phone support; one-year limited hardware warranty and access to 24/7 award-winning support services through **www.hp.com/support**
Energy savings feature technology	HP Auto-Off Technology
Compatible operating systems	Windows 8, Windows 7, Windows Vista, Windows XP (SP3)* or higher (32-bit only); Mac OS X v10.6, Lion, Mountain Lion
Minimum system requirements	**PC:** Windows 8: 1 GHz 32-bit (x86) or 64-bit (x64) processor, 2 GB available hard disk space, CD-ROM/DVD drive or Internet connection, USB port, Internet Explorer; Windows Vista: 800 MHz 32-bit (x86) or 64-bit (x64) processor, 2 GB available hard disk space, CD-ROM/DVD drive or Internet connection, USB port, Internet Explorer; Windows XP SP3 or higher (32-bit only): any Intel® Pentium® II, Celeron® or compatible processor, 233 MHz or higher, 750 MB available hard disk space, CD-ROM/DVD drive or Internet connection, USB port, Internet Explorer 6 or higher; **Mac:** OS X v10.6, OS X Lion, OS X Mountain Lion; Intel® Core™ Processor; 1 GB available hard disk space; CD-ROM/DVD or Internet; USB
Control panel	1 Control (Power)
Display	None
Power	**Power supply type:** External **Power supply required:** Input voltage 100 to 240 VAC (+/- 10%), 50/60 Hz (+/- 3 Hz) **Power consumption:[2]** 10 watts maximum, 10 watts (Active), 0.2 watts (Off), 1.6 watts (Standby), 0.8 watt (Sleep)
Acoustic	**Acoustic power emissions:** 6.3 B (A) **Acoustic pressure emissions:** 50 dB (A)
Operating environment	**Non-operating humidity range:** 15 to 80% RH (non-condensing) **Operating humidity range:** 20 to 80% RH (non-condensing) **Recommended operating humidity range:** 5 to 90% RH (non-condensing) **Operating temperature range:** 41 to 104° F (5 to 40° C) **Recommended operating temperature range:** 59 to 86° F (15 to 30° C) **Storage temperature range:** -40 to 140° F (-40 to 60° C)

For more information visit our website at www.hp.com

HP Deskjet 1010 Printer Product Number: CX015A

GY STAR® qualified models; see http://www.hp.com/go/energystar

[1]Either after first page or after first set of ISO test pages. For details see **www.hp.com/go/printerclaims.**

[2]er requirements are based on the country/region where the printer is sold. Do not convert operating voltages. This will damage the printer and void the product warranty.

POLYCAB

Customer: Diebold Systems Pvt Ltd

Technical Datasheet

S.No	Particulars	2 X 1.5	2 X 1.5
1	Name of Manufacturer	Polycab Wires Pvt. Ltd, Daman	
2	Type of cable	YWY	
3	Voltage Grade V	1100	
4	No of cores X size in sqmm	2 X 1.5	
5	**Conductor**		
a)	Material	Plain annealed Copper as per Class 2 of IS:8130/84	
b)	Max. d.c. resistance of conductor at 20° C (ohm/km)	12.10	12.10
c)	Shape of the conductor	Stranded Circular	Stranded Circular
6	**Insulation**		
a)	Material	PVC Type 'A' as per IS:5831/84	
b)	Nominal thickness (mm)	0.8	0.8
c)	Minimum thickness (mm)	0.62	0.62
d)	Core Identification	**Red & Black**	
7	**Inner Sheath**		
a)	Material	Extruded PVC Type ST1 to IS:5831/84	
b)	Minimum thickness (mm)	0.3	0.3
8	**Armouring**		
a)	Material	Gal.Steel	Gal.Steel
b)	Type of armouring	Round Wire	Round Wire
c)	Nominal size of armour (mm)	1.40	1.40
9	**Outer Sheath**		
a)	Material	Extruded **FRLS** PVC Type ST1 to IS:5831/84	
b)	Thickness (mm)	1.24 (Min.)	1.24 (Min.)
c)	Colour of outer sheath.	**Black**	**Red**
d)	**FRLS PROPERTIES**		
	Oxygen Index	Min. 29% as per ASTM D- 2863	
	Temperature Index	Min. 250 Deg.C as per ASTM D- 2863	
	Smoke Density Rating	Max. 60% as per ASTM D- 2843	
	Acid Gas Generation	Max. 20% as per IEC- 754- 1	
	Flammability Test	As per IEC:332-I	
10	**Electrical Parameters**		
a)	Max. a.c. resistance of conductor at 70°C (ohm/km)	14.5	14.5
b)	Calculated Cable reactance (ohm/km)	0.110	0.110
c)	Impedance of cable (ohm/km)	14.5	14.5
d	Approx. Cable Capacitance (mfd/km)	0.40	0.40
11	Maximum conductor temperature under normal operating conditions	70°C	
12	Maximum conductor temperature at the termination of short circuit	160°C	
13	Short Circuit rating of conductor for the duration of 1 sec (kA)	0.17	0.17
14	Continuous Current carrying capacities for standard conditions :-		
(a)	In Ground at 30°C (A)	23	23
(b)	In Air at 40°C (A)	20	20
15	Applicable Standard	IS 8130/84,IS 1554 Part I/88, IS 5831/84, IS 3975/88 etc. with latest up to date amendments	
16	Approx. overall diameter of the cable in mm	**13.0**	**13.0**
17	Minimum bending radius	12 times Overall diameter	
18	Max. Tensile strength		
(i)	for Cables pulled with stocking (Newtons)	9 x D², D is the cable OD in mm	
ii)	for Cables pulled with pulling eyes (N)	150	150
19	Embossing	**POLYCAB ELECTRIC 1100 VOLTS GRADE FRLS**	
20	Printing	**YEAR POLYCAB ELECTRIC 1100 VOLTS GRADE FRLS No of Core x Sqmm, CABLE TYPE WITH SEQUANTIAL MARKING** at every one meter of interval.	

GTP NO-151104.3447
Himansu

Shapoorji Pallonji And Company Private Limited * Shapoorji Pallonji House * Salt Lake, Kolkata-91 *

DIEBOLD SYSTEMS PVT. LTD. * KOLKATA *

LPCB®

www.redbooklive.com

Certificate of Product Approval

Certificate Number: 548d

Issue: 11

Gulf Security Technology Co.,Ltd.

No 80 Changjiang East Road
QETDZ
Qinhuangdao, Hebei Province
066004
China

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirement(s) of the standards as detailed below:

Products
Smoke Detectors

C-9102
I-9102
DC-9102E
DI-9102E
(refer to Appendix for details)

Standards
EN 54-7: 2000 + A1: 2002 + A2: 2006

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

Signed for LPCB	S Pattrick Verifier	13 August 2014 Date of Issue	02 August 2000 Date of First Issue

This certificate and appendix remain the property of BRE Global Ltd and are issued subject to terms and conditions (for details visit www.redbooklive.com/terms).

To check the validity of this certificate and appendix please visit www.redbooklive.com/check, scan the QR tag or contact us.

LPCB is part of BRE Global Ltd, Garston, Watford, WD25 9XX
T: +44 (0)1923 664100 F: +44 (0)1923 664603 E: enquiries@breglobal.com

LPCB®

Appendix to Certificate No: 548d

Issue: 11

Gulf Security Technology Co.,Ltd.

Certified Product	Description	LPCB Ref.No.
C-9102	Conventional Photoelectric Smoke Detector (DZ-03 Base) Note: 1. Meets the requirements of EN 54-7:2000 for 1 sensitivity setting only	548d/01
I-9102	Intelligent Photoelectric Smoke Detector (DZ-03 Base) Note: 1. Meets the requirements of EN 54-7:2000 for 1 sensitivity setting only	548d/02
DC-9102E	Conventional Photoelectric Smoke Detector (DB-01 & DB-01D Bases and DP-9907 Unit) Note: 1. Meets the requirements of EN 54-7:2000 at sensitivity level 1 (default) setting only	548d/03
DI-9102E	Intelligent Photoelectric Smoke Detector (DB-01 Base) Note: 1. Meets the requirements of EN 54-7:2000 at sensitivity level 1 (default) setting only	548d/04

Additional Information:

DZ-03	Standard Detector Base
DB-01	Standard Base
DB-01D	Diode Unit
DP-9907	Active End of Line Unit

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

Signed for LPCB	S Pattrick Verifier	13 August 2014 Date of Issue	02 August 2000 Date of First Issue

LPCB is part of BRE Global Ltd, Garston, Watford, WD25 9XX
T: +44 (0)1923 664100 F: +44 (0)1923 664603 E: enquiries@breglobal.com

LPCB®

Appendix to Certificate No: 548d

Issue: 11

Gulf Security Technology Co.,Ltd.

Alternative Model Numbers and Labelling

LPCB Ref No.	Model No.	Alternative Model No./Label	Cross-listed Company	Cross-Listed Co Cert./ Ref No.
548d/01	C-9102	FX9102	Emirates Fire Protections Equip. Factory. TR. Section	548d-(cl-3)
548d/01	C-9102	D-C401	SHIELD FIRE, SAFETY AND SECURITY LTD	548d-(cl-4)
548d/01	C-9102	DET-C102	Multron Systems Pte Ltd	548d-(cl-6)
548d/02	I-9102	FX9102I	Emirates Fire Protections Equip. Factory. TR. Section	548d-(cl-3)
548d/02	I-9102	D-A411	SHIELD FIRE, SAFETY AND SECURITY LTD	548d-(cl-4)
548d/02	I-9102	DET-A102	Multron Systems Pte Ltd	548d-(cl-6)

Bases

548	DZ-03	DZ-03	Emirates Fire Protections Equip. Factory. TR. Section	548
548	DZ-03	DZ-03	Multron Systems Pte Ltd	548
548	DZ-03	DZ-03	SHIELD FIRE, SAFETY AND SECURITY LTD	548

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

Signed for LPCB	S Pattrick Verifier	13 August 2014 Date of Issue	02 August 2000 Date of First Issue

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Certificate of Product Approval

Certificate Number: 548c Issue: 11

Gulf Security Technology Co., Ltd.

No. 80 Changjiang East Road
QETDZ
Qinhuangdao, Hebei Provence
066004
China

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirement(s) of the standards as detailed below:

Products
Heat Detectors

C-9103
I-9103
DC-9103E
DI-9103E
(refer to Appendix for details)

Standards
EN 54-5: 2000 + A1: 2002

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

Signed for LPCB	S Pattrick	13 August 2014	02 August 2000
	Verifier	Date of Issue	Date of First Issue

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Appendix to Certificate No: 548c

Issue: 11

Gulf Security Technology Co., Ltd.

Certified Product	Description	LPCB Ref.No.
C-9103	Conventional Class A1R Heat Detector (DZ-03 Base) Note: 1. Meets the requirements of EN 54-5:2000 for Class A1R	548c/01
I-9103	Intelligent Class A1R Heat Detector (DZ-03 Base) Note: 1. Meets the requirements of EN 54-5:2000 for Class A1R	548c/02
DC-9103E	Conventional Rate of Rise and Fixed Temperature Heat Detector (DB-01 & DB-01D Bases and DP-9907 Unit) Note: 1. Meets the requirements of EN 54-5:2000 for Class A1R, A2S & BS	548c/03
DI-9103E	Intelligent Rate of Rise and Fixed Temperature Heat Detector (DB-01 Base) Note: 1. Meets the requirements of EN 54-5:2000 for Class A1R, A2S & BS	548c/04

Additional Information:

DZ-03	Standard Detector Base
DB-01	Standard Base
DB-01D	Diode Base
DP-9907	Active End of Line Unit

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Appendix to Certificate No: 548c

Gulf Security Technology Co., Ltd.

Issue: 11

Alternative Model Numbers and Labelling

LPCB Ref No.	Model No.	Alternative Model No./Label	Cross-listed Company	Cross-Listed Co Cert./ Ref No.
548c/01	C9103	FX9103I	Emirates Fire Protections Equip. Factory. TR. Section	548c-(cl-3)
548c/01	C9103	D-C402	SHIELD FIRE, SAFETY AND SECURITY LTD	548c-(cl-4)
548c/01	C-9103	DET-C103	Multron Systems Pte Ltd	548c-(cl-6)
548c/02	I-9103	FX9103I	Emirates Fire Protections Equip. Factory. TR. Section	548c-(cl-3)
548c/02	I-9103	D-A412	SHIELD FIRE, SAFETY AND SECURITY LTD	548c-(cl-4)
548c/02	I-9103	DET-A103	Multron Systems Pte Ltd	548c-(cl-6)

Bases

548	DZ-03	DZ-03	Multron Systems Pte Ltd	548
548	DZ-03	DZ-03	SHIELD FIRE, SAFETY AND SECURITY LTD	548

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Certificate of Product Approval

Certificate Number: 548g

Issue: 13

Gulf Security Technology Co., Ltd.

No 80 Changjiang East Road
QETDZ
Qinhuangdao, Hebei Province
066004
China

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirement(s) of the standards as detailed below:

Products

Manual Call Points

C-9202
I-9202
DC-9204
DI-9204
DC-9204 (10103213)
DI-9204 (10103212)
DC-9204E
DI-9204E
DC-9204E-HK
DI-9204E-HK
(Refer to appendix for details)

Standards

EN 54-11:2001 + A1:2005

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Signed for LPCB	M McCullagh Verifier	12 September 2014 Date of Issue	01 September 2006 Date of First Issue

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Appendix to Certificate No: 548g

Issue: 13

Gulf Security Technology Co., Ltd.

Certified Product	Description	LPCB Ref.No.
C-9202	Conventional Type A Manual Call Point	548g/01
I-9202	Intelligent Type A Manual Call Point	548g/02
DC-9204	Conventional Re-settable Indoor Manual Call Point, Surface and Flush Mounting (D-92FC)	548g/03
DI-9204	Digital Addressable Re-settable Indoor Manual Call Point, Surface and Flush Mounting (D-92FC)	548g/04
DC-9204 (10103213)	Traditional Chinese Text Variant Conventional Re-settable Type A Indoor Manual Call Point, Surface and Flush Mounting (D-92FC)	548g/05
DI-9204 (10103212)	Traditional Chinese Variant Digital Addressable Re-settable Type A Indoor Manual Call Point, Surface and Flush Mounting (D-92FC)	548g/06
DC-9204E	Conventional Innovation Type A Indoor Manual Call Point, Surface and Flush Mounting	548g/07
DI-9204E	Digital Addressable Type A Indoor Manual Call Point, Surface and Flush Mounting	548g/08
DC-9204E-HK	Conventional Innovation Type A Indoor Manual Call Point, Surface and Flush Mounting	548g/09
DI-9204E-HK	Digital Addressable Type A Indoor Manual Call Point, Surface and Flush Mounting	548g/10

Products Extras

Accessories:

D-92FC Transparent Cover

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Appendix to Certificate No: 548g

Gulf Security Technology Co., Ltd.

Issue: 13

Alternative Model Numbers and Labelling

LPCB Ref No.	Model No.	Model No./Label	Cross-listed company	Cross-Listed Co Cert./ Ref No.
548g/01	C-9202	BG-C440	SHIELD FIRE, SAFETY AND SECURITY LTD	548g-(cl-4)
548g/02	I-9202	BG-A450	SHIELD FIRE, SAFETY AND SECURITY LTD	548g-(cl-4)
548g/03	DC-9204	FX9204	Emirates Fire Protections Equip. Factory. TR. Section	548g-(cl-3)
548g/03	DC-9204	MCP-C204	Multron Systems Pte Ltd	548g-(cl-6)
548g/04	DI-9204	FX9204I	Emirates Fire Protections Equip. Factory. TR. Section	548g-(cl-3)
548g/04	DI-9204	MCP-A204	Multron Systems Pte Ltd	548g-(cl-6)
548g/07	DC-9204E	BG-C440F	SHIELD FIRE, SAFETY AND SECURITY LTD	548g-(cl-4)
548g/07	DC-9204E	FX9204E	Emirates Fire Protections Equip. Factory. TR. Section	548g-(cl-3)
548g/08	DI-9204E	BG-I450F	SHIELD FIRE, SAFETY AND SECURITY LTD	548g-(cl-4)
548g/08	DI-9204E	FX9204EI	Emirates Fire Protections Equip. Factory. TR. Section	548g-(cl-3)
548g/08	DI-9204E	MCP-A204E	Multron Systems Pte Ltd	548g-(cl-6)

Accessories:

548	D-92FC	D-92FC	Multron Systems Pte Ltd	548
548	D-92FC	D-92FC	Emirates Fire Protections Equip. Factory. TR. Section	548

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Certificate of Product Approval

Certificate Number: 548n

Issue: 08

Gulf Security Technology Co., Ltd.

No 80 Changjiang East Road
QETDZ
Qinhuangdao, Hebei Provence
066004
China

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirement(s) of the standards as detailed below:

Products	Standards
Line Units C-9503 C-9504E	EN 54-17: 2005

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

Signed for LPCB

Martin McCullagh
Verifier

05 June 2014
Date of Issue

17 November 2008
Date of First Issue

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Appendix to Certificate No: 548n

Gulf Security Technology Co., Ltd.

Issue: 08

Certified Product	Description	LPCB Ref.No.
C-9503	Loop Isolator	548n/01
C-9504E	Base Mount Short Circuit Isolator	548n/02

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Signed for LPCB

Martin McCullagh
Verifier

05 June 2014
Date of Issue

17 November 2008
Date of First Issue

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Appendix to Certificate No: 548n

Gulf Security Technology Co., Ltd.

Issue: 08

Alternative Model Numbers and Labelling

LPCB Ref No.	Model No.	Model No./Label	Cross-listed company	Cross-Listed Co Cert./ Ref No.
548n/01	C-9503	FX9503	Emirates Fire Protections Equip. Factory. TR. Section	548n-(cl-3)
548n/01	C-9503	AI-520	SHIELD FIRE, SAFETY AND SECURITY LTD	548n-(cl-4)
548n/01	C-9503	MOD-A503	Multron Systems Pte Ltd	548n-(cl-5)

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Signed for LPCB

Martin McCullagh
Verifier

05 June 2014
Date of Issue

17 November 2008
Date of First Issue

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Certificate of Product Approval

Certificate Number: 548m Issue: 07

Gulf Security Technology Co., Ltd.

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Qinhuangdao, Hebei Province
066004
China

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirements of the standard(s) as detailed below:

Products:	Standards:
Line Units	EN 54-18: 2005
I-9300 I-9301 I-9319 (refer to Appendix for details)	

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

Signed for LPCB	Verifier	Date of Issue	Date of First Issue
	Martin McCullagh	23 December 2013	17 November 2008

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Appendix to Certificate Number: 548m

Gulf Security Technology Co., Ltd.

Issue: 07

Certified Products	Description	LPCB Ref. No.
I-9300	Analogue Addressable Input Module	548m/01
I-9301	Analogue Addressable Single Input/Output Module (DZ-03 base) Notes: 1. 4 Wire Mode, 24v active output (Default) 2. 2 Wire Mode, volt free changeover contact output	548m/02
I-9319	Addressable Zone Monitor Unit	548m/03

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Signed for LPCB	Verifier	Date of Issue	Date of First Issue
	Martin McCullagh	23 December 2013	17 November 2008

Appendix to Certificate Number: 548m

Issue: 07

Gulf Security Technology Co., Ltd.

Alternative Model Numbers and Labelling

LPCB Ref No.	Model No.	Alternative Model No./Label	Cross-listed Company	Cross-listed Co. Cert/Ref No.
548m/01	I-9300	FX9300I	Emirates Fire Protections Equip. Factory. TR. Section	548m-(cl-3)
548m/01	I-9300	AI-500	SHIELD FIRE, SAFETY AND SECURITY LTD	548m-(cl-4)
548m/01	I-9300	MOD-A300	Multron Systems Pte Ltd	548m-(cl-5)
548m/02	I-9301	FX9301I	Emirates Fire Protections Equip. Factory. TR. Section	548m-(cl-3)
548m/02	I-9301	AI-510	SHIELD FIRE, SAFETY AND SECURITY LTD	548m-(cl-4)
548m/02	I-9301	MOD-A301	Multron Systems Pte Ltd	548m-(cl-5)
548m/03	I-9319	FX9319I	Emirates Fire Protections Equip. Factory. TR. Section	548m-(cl-3)
548m/03	I-9319	AI-515	SHIELD FIRE, SAFETY AND SECURITY LTD	548m-(cl-4)

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Signed for LPCB	Verifier	Date of Issue	Date of First Issue
	Martin McCullagh	23 December 2013	17 November 2008

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Certificate of Product Approval

Certificate Number: 548e Issue: 14

Gulf Security Technology Co., Ltd.

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066004
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is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirement(s) of the standards as detailed below:

Products
Audible Warning Devices

C-9403
I-9403
I-9406
C-9404
I-9404
DI-9405
DI-9406
(refer to Appendix for details)

Standards
EN 54-3:2001 + A1:2002 + A2:2006

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Appendix to Certificate No: 548e

Issue: 14

Gulf Security Technology Co., Ltd.

Certified Product	Description	LPCB Ref.No.
C-9403	Conventional Sounder Strobe (Shallow Base and C-94DB Base) Notes: 1. Meets the requirements of EN 54-3: 2001 at the following tones: Tone 01 2800Hz 0.34s off / 0.4s on Tone 02 2400Hz – 2900Hz @3Hz 2. The strobe function is not in the scope of the approval.	548e/01
I-9403	Intelligent Sounder Strobe (Shallow Base and C-94DB Base) Notes: 1. Meets the requirements of EN 54-3: 2001 at the following tones: Tone 14 2400Hz-2900Hz @ 3Hz Tone 16 500Hz-1200Hz, 3.75s on / 0.25s off Pre Alarm 800Hz, 1s on / 1s off 2. Approved in both normal and power saving mode 3. The strobe function is not in the scope of the approval 4. Approved with single address and dual address (pre-alarm and main alarm)	548e/02
I-9406	Analogue Addressable Indoor Sounder Beacon Base (I-9102, I-9103 Detectors and DZ-03 Base) Notes: 1. Meets the requirements of EN 54-3: 2001 at the following tones: Tone 14 2400Hz-2900Hz @ 3Hz Tone 16 500Hz-1200Hz, 3.75s on / 0.25s off 2. The beacon function is not in the scope of this approval 3. Approved with P-9907 cover plate 4. Approved with I-9103 heat detector and I-9102 smoke detector	548e/03
C-9404	Conventional Type A Sounder (Shallow Base, C-94DB Deep Base) Note: 1. Meets the requirements of EN 54-3: 2001 at the following tones: Tone 01 2800Hz 0.34s off / 0.4s on Tone 02 2400Hz – 2900Hz @3Hz	548e/04

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Appendix to Certificate No: 548e

Issue: 14

Gulf Security Technology Co., Ltd.

Certified Product	Description	LPCB Ref.No.
I-9404	Intelligent Type A Sounder (Shallow Base, C-94DB Deep Base) Note: 1. Meets the requirements of EN 54-3: 2001 at the following tones: Tone 14 2400Hz-2900Hz @ 3Hz Tone 16 500Hz-1200Hz, 3.75s on / 0.25s off Pre Alarm 800Hz, 1s on / 1s off	548e/05
DI-9405	Analogue Addressable Type A Sounder Base (DB-01) Notes: 1. Meets the requirements of EN 54-3: 2001 at the following tones: Tone 14 2400Hz-2900Hz @ 3Hz Tone 16 500Hz-1200Hz, 3.75s on / 0.25s off 2. Approved with DI-9103 heat detector and DI-9102 smoke detector	548e/06
DI-9406	Analogue Addressable Type A Flashing Sounder Beacon Base (DB-01 base) Notes: 1. Meets the requirements of EN 54-3: 2001 at the following tones: Tone 14 2400Hz-2900Hz @ 3Hz Tone 16 500Hz-1200Hz, 3.75s on / 0.25s off 2. Approved with DI-9103 heat detector and DI-9102 smoke detector 3. The visual alarm function is not in the scope of this approval	548e/07

Products Extras

Bases:

DZ-03	Standard Base
Shallow Base	Standard Base
C-94DB	Deep Base
DB-01	Mounting Base

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Appendix to Certificate No: 548e

Issue: 14

Gulf Security Technology Co., Ltd.

Alternative Model Numbers and Labelling

LPCB Ref No.	Model No.	Model No./Label	Cross-listed company	Cross-Listed Co Cert./ Ref No.
548e/01	C-9403	FX9403	Emirates Fire Protections Equip. Factory. TR. Section	548e-(cl-3)
548e/01	C-9403	S-C481	SHIELD FIRE, SAFETY AND SECURITY LTD	548e-(cl-4)
548e/01	C-9403	AVD-C403	Multron Systems Pte Ltd	548e-(cl-6)
548e/02	I-9403	FX9403I	Emirates Fire Protections Equip. Factory. TR. Section	548e-(cl-3)
548e/02	I-9403	S-A491	SHIELD FIRE, SAFETY AND SECURITY LTD	548e-(cl-4)
548e/02	I-9403	AVD-A403	Multron Systems Pte Ltd	548e-(cl-6)
548e/03	I-9406	FX9406I	Emirates Fire Protections Equip. Factory. TR. Section	548e-(cl-3)
548e/03	I-9406	S-A496	SHIELD FIRE, SAFETY AND SECURITY LTD	548e-(cl-4)
548e/04	C-9404	FX9404	Emirates Fire Protections Equip. Factory. TR. Section	548e-(cl-3)
548e/04	C-9404	S-C480	SHIELD FIRE, SAFETY AND SECURITY LTD	548e-(cl-4)
548e/05	I-9404	FX9404I	Emirates Fire Protections Equip. Factory. TR. Section	548e-(cl-3)
548e/05	I-9404	S-A490	SHIELD FIRE, SAFETY AND SECURITY LTD	548e-(cl-4)

Bases

548	C-94DB	C-94DB	Multron Systems Pte Ltd	548

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Appendix to Certificate No: 548e

Issue: 14

Gulf Security Technology Co., Ltd.

548	Shallow base	Shallow base	Multron Systems Pte Ltd	548
548	DZ-03	DZ-03	SHIELD FIRE, SAFETY AND SECURITY LTD	548
548	Shallow base	Shallow base	SHIELD FIRE, SAFETY AND SECURITY LTD	548
548	C-94DB	S-49DB	SHIELD FIRE, SAFETY AND SECURITY LTD	548
548	C-94DB	FX94DB	Emirates Fire Protections Equip. Factory. TR. Section	548
548	DZ-03	DZ-03	Emirates Fire Protections Equip. Factory. TR. Section	548
548	Shallow base	Shallow base	Emirates Fire Protections Equip. Factory. TR. Section	548

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Signed for LPCB	S Pattrick Verifier	13 August 2014 Date of Issue	21 June 2006 Date of First Issue

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Certificate of Product Approval

Certificate Number: 548p Issue: 13

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Qinhuangdao, Hebei Province
066004
China

is authorised to use the LPCB mark in association with the product(s) listed in this certificate and appendix having complied with the requirements of the standard(s) as detailed below:

Products:

Control and indicating equipment

GST200-2
GST-IFP8
GST102A
GST104A
GST108A
GST116A
GST200N
GST200-2/1
(refer to Appendix for details)

Standards:

EN 54-2: 1997 + A1: 2006
EN 54-4: 1997 + A1: 2002 + A2: 2006

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

W. Hunukumbure

Signed for LPCB	Verifier	Date of Issue	Date of First Issue
	Wasantha Hunukumbure	19 March 2014	08 May 2009

Appendix to Certificate Number: 548p

Gulf Security Technology Co., Ltd.

Issue: 13

Certified Products	Description	LPCB Ref. No.
GST200-2	Intelligent 2 Loop, 30 Zone Analogue Addressable Control and Indicating Equipment Incorporating the following units: MB-220/ F7.820.826 Main board SB-220/ F7.820.827 Switch board TB-220/ F7.820.828 Loop interface board PS-220/ F7.820.829b Power supply unit ZP-220/ F7.820.312d Zone indication and intervention board LC200/ F7.820.1125 Loop board Incorporating as optional modular units: P-9930/ F7.820.913a RS-232 board for configuration P-9901A Printer module kit Certified with the following options with requirements from EN 54 part 2: 7.8 Output to Fire Alarm Devices 7.10.1 Output to automatic Fire Protection Equipment Type A 7.11 Delays to outputs 8.3 Fault signals from points 9.5 Disablement of addressable points	548p/01
GST-IFP8	Intelligent 8 Loop, 140 Zone Analogue Addressable Control and Indicating Equipment Incorporating the following units: SB-800/ F7.820.1238 Indication board LCIFP8/ F7.820.1239 Loop board PB-800/ F7.820.1311 Power board ZP-800/ F7.820.1312 ZCP board KB-800/ F7.820.1326 Keypad board MB-800/ F7.820.1237 Main board MO-800/ F7.820.1310 Mother board	548p/02

This Certificate is maintained and held in force through regular surveillance activities and subject to the corresponding ISO 9001 Certificate being maintained.

Signed for LPCB	Verifier	Date of Issue	Date of First Issue
	Wasantha Hunukumbure	19 March 2014	08 May 2009

ANNEXURE-A
Mandate Form for e-Payment

To
The Managing Director,
WBMSCL, Swahstya Sathi,
Swasthya Bhawan Complex,
GN-29, Sev-V, Salt Lake,
Kolata - 700091

Subject: Payment through electronic mode.

Sir/Madam,
I/We am/are giving option for availing the facility of e-Payment. Kindly arrange to remit the amount to my /our Bank Account hereinafter. The details of my/our particulars are furnished below:

1. (a) Name of the claimant /Payee /Receipt: …….. (Capital Letters)

   (b) Address:……

   (c) Contact. Land Line: …….. Mobile: …….

   (d) Email Address:…….....

   (e) ID No.**……. Nature of ID**…….....

   (f) PAN No:……

2. (a) Name of Bank: ……. ...

   (b) Name of Bank Branch……..…….

   (c) Account Type: Saving /Current / Cash-Credit Account…….....

   (d) Bank Account No. (CBS allotted a/c no.):

   (e) Branch IFSC (11 digits):

   The Bank particulars furnished above is correct and true.

   I/We hereby declare that I /We and my/ our heirs and successors accept the liability of making good to Government the overpayment, if any, made to me /us under the scheme.

   I/WE hereby authorize …… Branch (name of the Branch) of the …….. Bank to receive amount on my / our behalf for credit to my/ our account as stated above and further authorize that the receipt of credit given by the bank for the amount for my /our account shall be treated as legal quittance.

Yours faithfully,

(Signature of the claimant /payee/recipient)

(To be accepted by the Head of Office)

Signature of the Head of Office
(Office Seal)

Date:

N.B. (a) ID No. & Nature of ID: ID No. (i) For Individual: It should be the Voter Card / Aadhar Card / PAN Card / Any other Identity card issued by State Government / Central Government / Government Autonomous Bodies /Local Bodies, (ii) For Autonomous Body /Firm/Company: Registration No./ PAN / TN Number or Trade License.

(b) Verification of Bank Particular: Copy of 1st Page of the Pass-Book along with a copy of cancelled cheque or certified by the concerned Bank Branch.