



The Preface Of The Advanced Fire Detector Cum Electric Supply Disconnect System

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In these modern days Science and Technology are developing much faster beyond of our imagination constantly day by day. Various electronics fields like power electronics, consumer electronics, automotive electronics are constantly improving, developing newest, advance systems to upgrade themselves for beautiful service for customers of today's modern civilization. These developing are too much important for modern science age but parallelly continuous risk of fire are also increasing day by day In these advance modern age. Some examples are like high power and high wattage S.M.P.S system, Inverter system, A.C machine, Lift or elevator motor gear and control system room, Large Workshop machines, Automobile sector short circuiting electrical wiring etc. If we observe carefully our daily news updates through news paper, news channels then very often we get the massive fire disasters updates. When we observe those carefully, then many times we can see most of the cases are related to short circuiting due to over loading, over running period without proper rest and poor maintenance and these causes are related to all fields almost directly and indirectly but till now proper solution is not applied for the safety and so as a result when these massive fire disasters are happening huge amount of property and life lose are happening and during control process of the fire the fire brigade is facing various problems like water crisis to space management but if the fire is detect in a very basic level then it can be control easily and massive fire disasters can be avoid easily. My designed device do this same job easily. If this device or system is installed in the electrical, electronics devices, motor system, automobile fields with proper management then the safety degree can be increas in these field much efficiently. The device can detect fire and smoke easily through it's sensors and disconnect the underobserve machinery from the electric supply and also active an alarm to alert local people. This way the fire can be terminate in a basic level and can save property, life efficiently.

The Working Principle Of The Advanced Fire Detector Cum Electric Supply Disconnect System And How To Apply The System Properly In Various Fields = The total system is divided in few functional blocks.

1/ Power Supply Block

The 230 v A.C. I/p is going to the power supply block section and it step down the A.C. to a low volt regulated DC 5 volt and unregulated 12 volt D C supply.

2/ Smoke Detector And IR Fire Detector Module Functional Block Section =

The smoke and fire detector module get 5 volt D C regulated supply from the power supply block section. The function of the smoke detector module is detecting the presence of smoke into the machine compartment or enclosure. If any smoke condition is appearing through any machine part of the system then the module detect it and send command signal to the controller section block and then the necessary action is taken by the main controller section for protection.

The Function of the IR fire detector module is almost same. First the IR fire detector module is getting the regulated 5 volt supply from the power supply block section. The IR Detector Module is also fitted into the

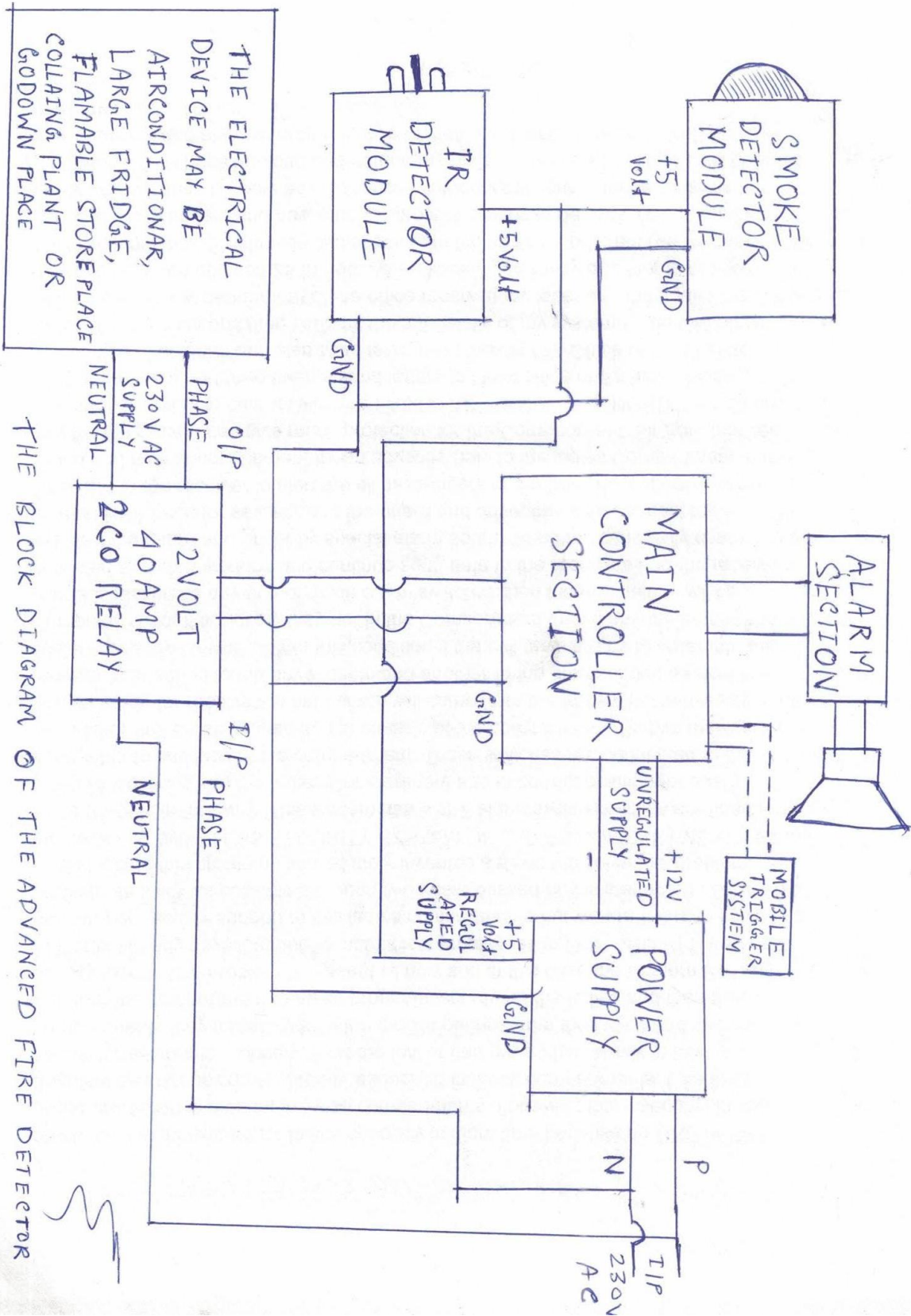
machine compartment or enclosure in correct position like the smoke detector module. The Fire Detector is continuously monitoring the inner atmosphere of the machine enclosure properly. If suddenly any kind of spark or fire or small candle light type fire is arrived in any machine part of the system then the IR Detector detects it and sends a command signal to the main controller section and the main controller section takes the necessary step for protection.

Main Controller Section Functional Block = The Main Controller Section is the center of the system. This section controls the total system. When the respected command signals come to the main controller section for processing during emergency condition then the controller section processes these signals and disconnects the electric supply to the underobservation defected device to avoid large fire disaster and the section also switches on the alarm to alert the local people. A mobile phone trigger system can also be attached to the main controller section block to send an emergency call to a preset number to a correct authority. The main advantage of the controller section is once the controller section disconnects the electric supply to the defected device during emergency condition, the electric supply remains disconnected from the defected device until the main switch is switched off or the reset button is not pressed. In this situation the alarm is continuous on.

The 12 volt 40 Amp relay is used here to connect and disconnect the electric supply to the underobservation system according to emergency and non-emergency condition.

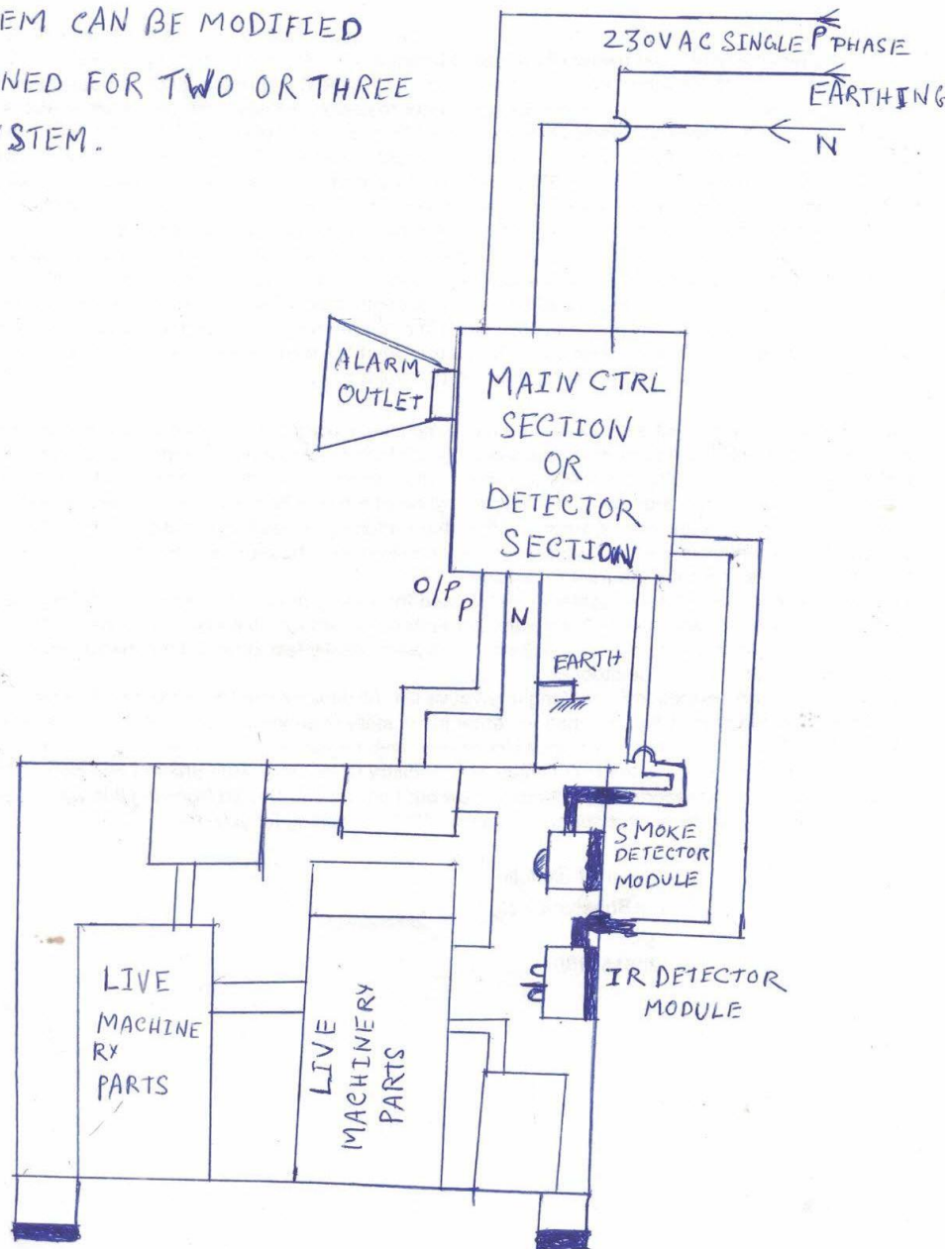
Apply the system properly in the various fields is not so tough but very easy.

The smoke detector and the IR fire detector is just inserted into the underobservation device or machine. The machine may be an AC machine or may be a large fridge's compressor-blower enclosure. The detector device may be kept wall mounted, the sensors which are inserted into the machine enclosure are connected to the detector device through cables and the underobserve machine is getting power through the detector device. This is the full wiring of the total system for proper working. If any kind of spark, fire or smoky condition appears in the AC machine or in the compressor enclosure of a cooling system or a fridge, or may be a computer server room or may be a complicated electrical wiring system or any system specially in those places where continuous risk of fire is present all time. Through this arrangement these both sensors can detect the fire and smoke easily and send the command signal to the main controller section which is fitted outside of the underobservation system or machine. This system quickly processes the signal and disconnects the AC supply to the machine and also switches on the alarm to alert the local staff for better protection. This way the system prevents massive fire disaster in a very basic level and protects the property and life very efficiently. This can also be attached with the power electronics systems like large power supplies, Power inverter, converter and also in SMPS, computer server room in various ways and the system can be kept in underobservation to protect them from large fire disaster and also save the property and life surrounding them very easily.



THE WIRING DIAGRAM OF THE ADVANCED FIRE DETECTOR CUM ELECTRIC SUPPLY DISCONNECT SYSTEM.

THIS SYSTEM CAN BE MODIFIED AND DESIGNED FOR TWO OR THREE PHASE SYSTEM.



THE UNDEROBSERVE SYSTEM MAY BE LARGE POWER SUPPLY, A.C. MACHINE, COMPUTER SERVER ROOM, LIFT OR ELEVATOR CONTROL SECTION LIKE THE MOTOR GEAR ROOM.

FIRE ACCIDENT

Major fire at plastic factory in Kolkata

None injured, adjacent buildings vacated as precaution

PTI | PUBLISHED 12.12.22, 01:52 PM



Firefighters gauge the damage at the scene

<https://www.telegraphindia.com/my-kolkata/news/major-fire-at-plastic-factory-in-kolkata/cid/1903411>

Ashim Paul/My Kolkata

A major fire broke out on Monday morning at a plastic factory at Tangra in southeast Kolkata where inflammable materials were stored, an official said.

At least six fire tenders were pressed into service. The flames were first spotted around 11.30am, he said.

No injury has been reported so far, the official stated.

"Fire brigade officials are trying to bring the blaze under control. Establishments adjacent to the plastic factory have been vacated as a precautionary measure since the entire area is congested. There are inflammable materials in the factory," he said.

The cause of the blaze is yet to be ascertained, he added.

Kolkata building fire: Nine including four firefighters, cop dead; railways orders probe

The blaze broke out at the New Koilaghat building, which is shared by the Eastern Railway and the South Eastern Railway, Eastern Railway spokesman Kamal Deo Das said.



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Fire breaks out at the 13th floor of a multi-storeyed building in Kolkata, Monday, March 8, 2021. (Photo | PTI)

By [Online Desk](#)

KOLKATA: Nine persons, including four firefighters, a railway official, an RPF constable and an assistant sub-inspector of Kolkata police died in a fire that broke out on the 13th floor of a multi-storeyed building in Kolkata on Monday night.

The blaze broke out at the New Koilaghat building, which is shared by the Eastern Railway and the South Eastern Railway, Eastern Railway spokesman Kamal Deo Das said.

The fire is now under control and the cooling process is on, said Sujit Bose, MIC Fire and Emergency Services, Government of West Bengal.

The death toll may increase as a few other persons are missing and efforts are on to find them out.

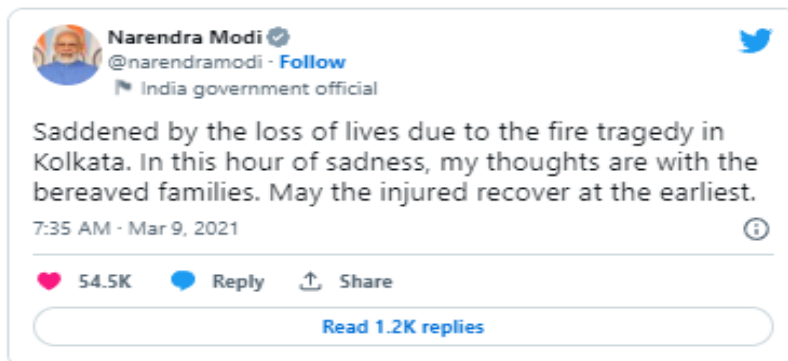
Chief Minister Mamata Banerjee, who rushed to the spot in the city's central business district, announced the state government will pay a compensation of Rs 10 lakh to the families of those killed in the blaze and government job to the kin of each victim.

"It seems, the deceased got trapped in the elevator and they died. We are yet to get the layout of the building. No senior railway officials arrived here though it is their property. I do not want to do politics over a mishap," said Mamata while overseeing the rescue operation till midnight.

The chief minister alleged that not a single official of the Railways could be seen during the fire incident.

"The building belongs to the Railways. But I have come to know that no one from the Railways arrived reached the spot till now. Our fire department asked for the building map from them in order to get inside the premises but there was no cooperation from them," she said.

Banerjee, however, said she does not want to indulge in politics with a mishap.



The CM also went to the SSKM Hospital where the bodies, which are in "very bad shape", were sent for post-mortem examination.

At least 20 fire tenders and two hydraulic ladders were pressed into service to douse the blaze at the building which also has a computerised ticket booking centre in the ground floor.

The four firefighters who died were identified as Girish Dey, Gourav Bej, Aniruddha Jana and Biman Purkayat, a senior official of the state government said.

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"PM Narendra Modi has approved an ex-gratia of Rs 2 lakhs each from Prime Minister's National Relief Fund for the next of kin of those who have lost their lives due to the tragic fire in Kolkata. Rs 50,000 would be given to those seriously injured," said the PMO.

"Sincere condolences to the families of the nine brave deceased including the four firefighters, two railways personnel and a police ASI who were fighting the fire at the Eastern Railways Strand road office in Kolkata. All possible assistance has been provided by Railways to state government during this unfortunate fire accident. A high-level inquiry consisting of four Principal heads of Railway departments has been ordered to ascertain cause of fire," said Union Railway Minister Piyush Goyal.

(With inputs from Pronab Mondal in Kolkata)

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SSKM fire: Probe hints at AC in USG room

DWAIPAYAN GHOSH

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Forensic experts visited the hospital on Friday; the floor being cleaned up after last night's blaze

KOLKATA: The fire in one of the units at Institute of Post Graduate Medical Education & Research (IPGMER) on late on Thursday did not disrupt patient care services at the state-run hospital on Friday.

No one was injured in the incident but a CT scan machine was completely destroyed in the flames and three USG machines were damaged. The hospital has constituted a five-member committee for an internal probe into the cause of the fire, apart from the investigations being carried out by police and the fire department. "A forensic examination is being conducted and police are probing the case to find the cause of the fire. As far as radiology services are concerned, we have additional three CT scan machines and seven USG machines and the government is giving us another USG machine. So, we are able to run the radiology services without any interruption," said Manimoy Banerjee, director at IPGMER.

The blaze engulfed three rooms on the first floor of the emergency building. The floor does not house any patient ward and is used for radiology services, including that for CT scans, USG and X-ray. It being late at night, no patient had been taken there for any of those tests. Forensic experts who visited the spot on Friday morning said primary investigations had not indicated that the fire had originated from the CT scan room. It looked like it started in the adjoining room that houses USG machines. "The fire had most probably originated from an AC," stated a police source. The forensic experts also picked up evidence from the spot. "The impact of the fire has been studied and the area video-graphed for further analysis," said an officer.

SSKM fire: Probe hints at AC in USG room | Ko

A detective department team, led by a DCP, also visited the spot. "The team is likely to speak to some firemen and hospital employees," said a senior cop. "A fire broke out at SSKM Hospital around 10.30pm and fire engines were called. Locals joined in the evacuation operation. Forensic experts are further probing the case," said Kolkata Police commissioner Vineet Kumar Goyal. Ten fire engines reached the spot and the blaze was brought under control after around 140 minutes, almost an hour after midnight, a Lalbazar officer said. "Since no complaint has been received so far, no FIR has been drawn up. A high-level enquiry is being conducted to ascertain the cause," he added.

The floor above houses the casualty block. Even though firemen managed to contain the flames on the first floor, 50 patients in the casualty block were evacuated as a safety measure. The 50 patients were initially shifted to Mackenzie Ward and later, taken to Trauma Care Centre. They will continue to get medical care there till fire personnel declare the building safe to return.