

FIXED SINGLE / MULTI GAS MONITORING

The fixed monitoring system consists of two parts:

1. Monitoring Model gaZalarm
2. Sensing Model gaZsens

1. Model gaZalarm The monitoring unit consists of:

- a) Power Supply Card: Size - 220 mm X 100 mm Supplies Power (9 V DC to 24 V DC) to complete system including gas detector assembly (Field Unit) with a current carrying capacity of one card is maximum up to 5 Amp. This can cater up to 10 cards in one rack. Multiple numbers of cards in multiple numbers of Racks in one panel can be provided if the numbers of channels are more than ten.
- b) Control card: Control card provides fixed voltage & current required to the field unit. It also accepts 4-20 mA signal from field unit. This signal is then processed by control card using instrumentation amplifier. The processed signal corresponding to the gas concentration available in the field is displayed by two or three digit 7 segments LED on control card display section. Two level alarms (latching/non latching type) are generated if the gas concentration is above preset limit. Fault alarm also is provided on the control card in case of sensor open/ short, cable from sensor is open/ short & under range/ over range conditions appear. The control card also delivers 4-20 mA.(repeater) output Signal for PLC / DCS.
- c) Facility Card: This card receives the alarm condition signal from control card. Depending upon the alarm conditions it activates the relays mounted on it & hoots the buzzer or siren or sends control signal to the pre-desired device. It also consists of alarm ACCEPT, RESET & LAMP TEST conditions. The Push buttons are provided on the fascia plate to achieve the desired job.
- d) Mother Board: This board is provided on the back of 19" rack. The Mother Board PCB is provided with the copper tracks & Euro Connectors to hold all the cards like Control Card, Power Supply Card & Facility card. With the help of proper design reduces the back panel wiring of all cards & makes the system work efficiently.
- e) 19" DIN standard Rack: All the above cards are housed in the 19: DIN standard control rack. This rack is then fitted in the control panel.
- f) Control Panel: The 19" rack is fitted in the control panel. Panel also is incorporated to house step-down transformer, Local hooter required wiring with elmech connectors & Relays for controlling. Control panels are available in wall mounting type or free standing floor mounting type.

PPS MANUFACTURES FIXED MONITORING SYSTEMS FOR SINGLE OR MULTI CHANNEL MONITORING MODEL gaZmon



2. Model gaZsens The gas detector assembly (Field Unit) consists of:

- a) Gas Sensor: Gas sensors are imported from UK, Korea, Japan etc. Different gas sensors are then mounted on sensor PCB & then housed in sensor housing.
- b) CCOE Approved Explosion Proof Sensor Housing: In the industry, as per the safety regulations any equipment fitted in the hazardous area should be Explosion proof. Hence, these sensors housed in sensor housing are supposed to be tested & approved. PPS make sensor housing Model: gaZsens SH is tested by CMRI for Explosion proof as per IS 2148 & approved by CCOE both Indian government authorized bodies.
- c) Flame Proof Junction Box: The sensor Housing is then fitted with Flame proof Junction box IP 65, which also is tested by CMRI a government approved body.
- d) 4-20 mA. Transmitter: 4-20 mA Transmitters are developed by PPS like all the other units & cards. These transmitters are of two types:
 - A. Two wire 4-20 mA transmitters: Used for Toxic & Oxygen monitoring system.
 - B. Three wire 4- 20 mA transmitters: Used for Combustible Gas Monitoring system.
- e) Flame Proof Cable Glands: Tested & approved by CMRI & are used for Cable entry in the Junction Box.