GAS SUPRESSION CONTROL PANEL:

MODEL NAME: **DELTA**

COMPANY: **ASES Security Pvt Ltd**

ABOUT THE PRODUCT

ASES is very proud of to introduce **DELTA** the completely digital microprocessor based panel in Indian fire industry by using the digital technology. This model is for gas suppression control system and it can give you accuracy in its performance. For the ease of user there are visually identify as LED indications. There are control switches in front of panel for handling ALARM ACKNOWLEDGE, LAMP TEST AND RESET. There are LED display for MAINS ON, SYSTEM ON, LOW BATT, FIRE, CHARGER ON and Fault conditions in the panel.
This panel is totally based on specifications that are necessary for gas suppression systems.

The size & look of this panel is designed by our Engineers keeping in mind that even a single thing not to disturb attraction of the location.

ASES hope the satisfaction from user of this panel.

FEATURERS:

1. Fully confirms IS 2189
2. Operates on 230 V AC, 50 Hz AC supply
3. Battery backup with built in charger
4. Zone wise fire / fault status in unambiguous colored LED indications.
5. System On, AC fail, silence visual indications.
6. Battery Low& Common fire/fault indications
7. Two mode selection facility (Auto/Manual).
8. Cross zoning facility.
9. Gas Inhibition and Instant Release Facility
10. Manual Gas Release without timer
11. Actuator Pressure Low Sensing
12. Feather touch switches for auto/manual mode selection, manual release, manual abort, Disable operations.
13. UP/DOWN switch for delay time setting
14. External s/w for reset, Silence, Lamp test.
15. Sov line monitoring facility and line status through LED display
16. LED indication for valve operations and gas discharged.
17. 7-segment display for discharged delay time setting.
18. Key lock for enabling and disabling of control switches
19. Relay O/P for actuators.
20. Common fire, fault and predischarge potential free contacts.
21. Enough inside space for battery
22. Attachable with all types of fire detectors.
23. Rugged CRCA sheet with powder coated finish

MECHANICAL CONSTRUCTION

The enclosure of the Panel is constructed by CRCA sheet with powder coated finish. The20mm knock outs are given for cable entry at the top of the cabinet . The panel also has a built in battery provision to accommodate 2 Nos. of 12v, 7Ah batteries.

The front side of the panel consists of the following:
a. Tactile switches.
b. LED indications
c. 7 segment display

INSTALLATION AND COMMISSIONING:

INSTALLATION:

The installation of the fire detection and alarm should comply with:

a. The Institute of Electrical Engineers (IEE) wiring regulation.
b. The Indian Standard of Fire Detection and Alarm for building.
c. The installation cable should not be in the area of proximity of high voltage cable or induce electrical interference. Place the panel in its mounting position and fix the panel to the wall using the slots of the four screws. Ensure the enclosure and the inner parts of the panel are given sufficient protection during installation period. All external cables are to be entered via the □20mm preformed knockouts located at the top of the panel. When the installation of all the cables has been completed, clean the interior of the enclosure ensuring all
masonry debris and drilling swords are removed.

COMMISSIONING:

Check the all entered wiring is correctly identified and also check the cables are free from fault conditions by a multimeter. Connect the external wiring into their
respective terminals and ensure the End Of Line (EOL) resistor is placed at the last device of circuit.
Prior to the initial power up of the panel, conduct the following preliminary checks:
a. Check for any external signs of damage caused during installation
b. Check all the PCBs are secure in its monitoring position
c. Check the cables are secure and correctly connected.
d. Check all the cable termination is tight & secure.
e. Connect the batteries ensuring the correct polarity.

All damages/faults must be rectified before proceeding.
Switch ON the Panel. During this period the following LED's have to glow to ensure system is in healthy condition.

A. SYSTEM ON

Note: Apart from the above green LED's if any other amber or red LED is ON, it is indicating respective fire or faults. Rectify the fire or faults before proceeding to any other operation.

INDICATORS AND CONTROLS

INDICATORS:

SYSTEM ON: In the Normal Condition only SYSTEM ON green LED will be illuminated. There should be no other amber/red LED visual indication or audible tone.

POWER FAULT: When power fault conditions like mains fail the AC FAIL amber LED will glow and SYSTEM ON will be off.

BATTERY LOW: When battery voltage goes bellow a certain voltage then BATT LOW amber LED will glow.

SILENCE: When ever silence switch is pressed to mute internal/external sounder, the amber color SILENCE LED will glow.

ZONE FAULT: When the fault OPEN/SHORT is occurred in the zone, it will be identified by zone fault LED and common FAULT LED. The fault zone LED will glow continuously until the fault is rectified.
Note: During the above fault condition, apart from the specific fault identification LED, common fault relay and Local buzzer with intermittent tone will be activated.
During this time, if SILENCE is activated, intermittent tone will be silenced.

FIRE: When Fire is detected by the control panel via the Detector/MCP, the corresponding zone fire red LED will be illuminated along with the common fire red LED. By the time hooter, potential free contact and local buzzer (continuous tone) will be activated. If SILENCE is accepted by the panel after the fire, it will mute the external hooters and internal buzzer. It can be identified by silenced LED ON.
The FIRE LED indication will remain ON condition till the panel is RESET.

AUTO/MANUAL: Green AUTO LED will glow when the panel's all the operations work in automatic condition. Amber MANUAL LED will glow when panel is in manual mode.

MAN REALS: This amber LED will glow when manual release switch is pressed to release the gas.
ABORT: This amber LED will glow when abort switch is pressed to stop gas floating.

Disable: This amber LED will glow when disable switch is pressed to disable panels operations.

GAS DISCHARGED: This amber LED will glow when the Gas in the cylinder starts flowing through the discharge pipe.

SOV Operated: This amber LED will glow when timer counting is over and 24VDC supply is on at SOV line.

SOV line open: This amber LED will glow when the continuity of the actuator valve line is beaked.

CONTROLS:

RESET Key: This key is used to reset the entire system. While in reset condition, all detector loop voltages are cut off up to 2 seconds for Detector and MCP become reset and then voltages are put ON to the loop.
Note: We strongly recommend to avoid to do the RESET unless there is fire in the zone.

SILENCE Key: While in the faults condition, when it is pressed, the local buzzer will be silenced. During in fire condition, the SILENCE Key press mutes the external hooters and silence LED Glows.
LAMP TEST Key: As long as we are keeping this key in hold condition, all the LED's will glow to identify whether all the LED's are in working condition or not.

AUTO/MANUAL LED: This toggle switch is used to select the operating mode of the panel. By default AUTO mode is selected.

MANUAL RELEAS: This switch is used to release the gas manually in manual mode of the panel only. There is no ABORT OR TIMER facility for release of the gas in manual release mode.

ABORT: This switch is used to stop the Gas floating. When ever this switch is on, timer will stop counting, gas discharge valve will not operate. This switch will turn off after the panel is reset. Abort switch will not operate in manual operation mode of the panel.

DISABLE: This switch is used to disable the gas floating part of the panel. In this mode the panel will only function as simple fire alarm control panel, i.e. sensors will sense fire and the sounder will starts sounding, but no gas discharge section will activate.

UP/DOWN: These to switches are used to set the delay time for gas discharge. Steps to set the delay time:

a) Press the UP switch for 5 sec continuously, display will blink once.
b) Now press UP/DOWN to select the delay time.
c) Press DOWN switch for 5sec continuously, display will blink once and the delay time is saved in memory.

KEY LOCK: This lock is used to enable or disable the control switches at the front of the panel. When key is in ON condition, all the control switches of the panel is in active condition. When key is in OFF condition, RESET, LAMPTEST, SILENCE switches will function in normal condition but DISABLE, ABORT, MANUAL RELEAS, AUTO/MANUAL switches not be in active condition.

TECHNICAL DATA

Panel Operating Condition Operating Voltage
AC Power : 220v AC, 50Hz ± 10%
Standby : 24v DC
Operating Temperature : 0°C to 40°C
Operating Humidity : 95% (non-condensing)

Zone Operating Condition
Normal Loop Voltage : 23v DC
Open Threshold Current : 4.4 mA
Short Threshold Current : 35 mA
Fire Threshold Current : 15 – 35 mA
Alarm Outputs Hooter Output : 750mA @24v DC (Normal)
NB: Hooter output current can be increased as per customer requirement.
Remote Outputs
Fire Contact1 (C,NO,NC) : 240v AC@2A /24v DC@ 5A
Fault Contact (C,NO,NC) : 240v AC@2A /24v DC@ 5A

General
Weight : 4 Kgs (without battery)
Size : 14” x 10” x 4” mm
(width x height x depth)
Color : Broken white

CONNECTION DIAGRAM:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
20	21	22	23	24	25													

1 = zone1 +ve
2 = GND
3= zone2 +ve
4= GND
5= Common hooter +ve
6= GND
7= SOV +ve
8= SOV –ve
9= Abort +ve
10= Abort –ve
11= Manual release +ve
12= Manual release –ve
13= Gas discharged +ve
14= Gas discharged -ve
15= Low pressure +ve
16= Low pressure –ve
17= Com
18= N/C Common fire potential free contact
19= N/O
20=Com
21=N/C Common fault potential free contact
22=N/O
23=Com
24=N/C Predischarge potential free contact
25=N/O

DO'S:

* The panel and detectors should be within the temperature range of 0°C to 40°C.
* We strongly recommends you to check the panel on daily basis and the detectors on weekly basis.
*Ensure 230 ±10% voltage input level before switching ON the Panel. If the voltage fluctuation is more than 10% use UPS supply or voltage stabilizer.

DON'T:

*Don't fix the panel/ detector in high range of vibrating area
*Don't put the panel cables near to the high voltage area
*Don't fix the panel in highly moisture surrounded area
*Don't connect the power cable wrongly, this will brake the warranty