# ALARM ANNUNCIATORS

Low power,
super bright
White LEDs

Choice of 3 window sizes
and 6 window colours

EMI/EMC
compliant

Space saving due to
lower depth


Wide fault
input range

4 Relay
Outputs

RS485 Modbus
communication interface

## Features

- Standard models available from 2 to 32 windows
- Choice of 3 window sizes (Small, Medium, Large)
- Available in six window colours – Red, Yellow, Blue, Green, Amber and White
- Optically isolated fault inputs with wide fault input voltage range (12V – 240V AC/DC +/-10%)
- Field selection for NO / NC fault input contacts, grouping of alarms, window size configuration
- Space saving due to lower depth of only 100mm
- Integral push buttons for Test, Acknowledge, Mute and Reset operations
- Four SPDT relay outputs (2 for grouping, 1 for external hooter,1 for ring back sequence)
- Low power, super bright White LEDs for window illumination
- Replaceable windows and window legends
- Low power consumption of 0.5 W per window
- 6 Field selectable operation sequences as per ISA standard
- Integral buzzer for audible alarm output of 90 dB
- Communication interface with RS485 Modbus RTU protocol
- EMI/EMC compliant as per IEC standards


## Working Principle

Whenever there is a change of input contacts from Normally Open to Close or from Normally Close to Open position, annunciator changes from rest condition to alarm condition.

Hence there is an immediate recognition of fault input which will have a corresponding visual and audio alarm as per the particular selected program sequence.

The base unit of alarm annunciator has four programmable keys for Mute, Acknowledge, Reset & Test function. On pressing the Mute key the internal buzzer can be deactivated. Acknowledge key is used to accept the fault condition, Reset key enables to reset the alarm annunciator to its default state and Test key helps to perform the complete test of the system.

# Technical Specifications

| Parameters | |
|---|---|
| Supply Voltage (⏚) | 110 V - 240 V AC/DC |
| Supply Variation | - 20% to +10% (of ⏚) |
| Supply Frequency | 50/60 Hz |
| Power Consumption | 0.5 W per window |
| LED Indication (Green) | ON - Healthy<br>Blinking - Error (Wrong window configuration OR Number of windows > Number of fault inputs) |
| No. Of Windows | 2 to 32 windows in different configurations |
| Window Size | Small: 34.3x31.55mm, Medium: 68.8x31.55mm, Large: 68.8x63.3mm |
| Window Colour | Red, Yellow, Blue, Green, Amber and White |
| Illumination | Low power super bright white LEDs |
| Fault Input Signal | Potential free (NO/NC field selectable) |
| Fault Input Voltage | Internal : 12V DC / External: 12V – 240V AC/DC (+/-10%) |
| Response Time | 130 msec |
| Scan Time | 100 msec |
| Flash Rate | 1) Fast flash – 0.5 Sec ON / 0.5 Sec OFF (60 flashes/Min)<br>2) Slow flash – 0.5 Sec ON / 1.5 Sec OFF (30 flashes/Min) |
| Terminal | Pluggable terminal blocks for conductor up to 2.5mm² |
| Output Relay Contact (1C/O) | 4 Relays (2 for grouping + 1 for external hooter + 1 for ring back sequence) |
| Relay Contact Rating | NO - 5A / NC - 3A @250V AC & NO - 5A / NC - 3A @30V DC (resistive) |
| Audible Alarm Output | 90 dB |
| Facia Type | Individual window lens, replaceable from front |
| Alarm Sequences | As per ISA standard (Field configurable)<br>1) Manual Reset (M-1) 2) Auto Reset (A-1)<br>3) Ring Back (R-1-12) 4) Auto Reset with No lock in (A-1-4)<br>5) Manual reset first out with no subsequent alarm flashing and silence push button (F2M-1)<br>6) Auto reset first out with no subsequent alarm flashing and silence push button (F2A-1) |
| Push Button Controls | Integral Push buttons for Test, Mute, Acknowledge and Reset functions. Provision of output connections for remote access of push buttons |
| Communication Port | Computer interface with RS485 Modbus RTU protocol |
| Operating Temperature | -10°C to +55°C |
| Storage Temperature | -15°C to +60°C |
| Humidity | 95% R.H. |
| Weight (packed) Approx | 1D= 580 g, 2D= 950 g, 3D= 1320 g, 4D= 1690 g |
| Mounting Type | Panel Mounting |
| Terminal Connection | For Output Relay, Fault Input, Remote Keys,<br>Power Supply Connection: AWG 28 to 12, Ph1-⌀3.5mm, Torque 0.5Nm(4.5lb.in)<br>For Internal 12V supply, RS485 Connection: AWG 28 to 16, Flat-⌀2.5mm, Torque 0.2Nm(1.77lb.in) |
| Communication Port | RS 485 communication with Modbus RTU |
| Certification | CE RoHS Compliant |
| Degree of Protection | Front panel IP40, Rear panel IP20 |

**EMI / EMC Compliance**

| | |
|---|---|
| Harmonic Current Emissions | IEC 61000-3-2 Class A |
| ESD | IEC 61000-4-2 Level II Class A |
| Radiated Susceptibility | IEC 61000-4-3 Level III Class A |
| Electrical Fast Transient | IEC 61000-4-4 Level III (Power Supply and Input Signal with external supply),<br>IEC 61000-4-4 Level III (Capacitive coupled on Input Signal and Remote keys with internal 12V supply),<br>IEC 61000-4-4 Level II (Capacitive coupled on Communication) |
| Surge | IEC 61000-4-5 Level IV (Power supply and Input Signal with external supply) |
| Conducted Susceptibility | IEC 61000-4-6 Level III Class A |
| Voltage Dips and Interruptions(AC) | IEC61000-4-11 All VII Level Pass |
| Conducted Emission | CISPR 11 / CISPR 14-1 Class A |
| Radiated Emission | CISPR 11 / CISPR 14-1 Class A |

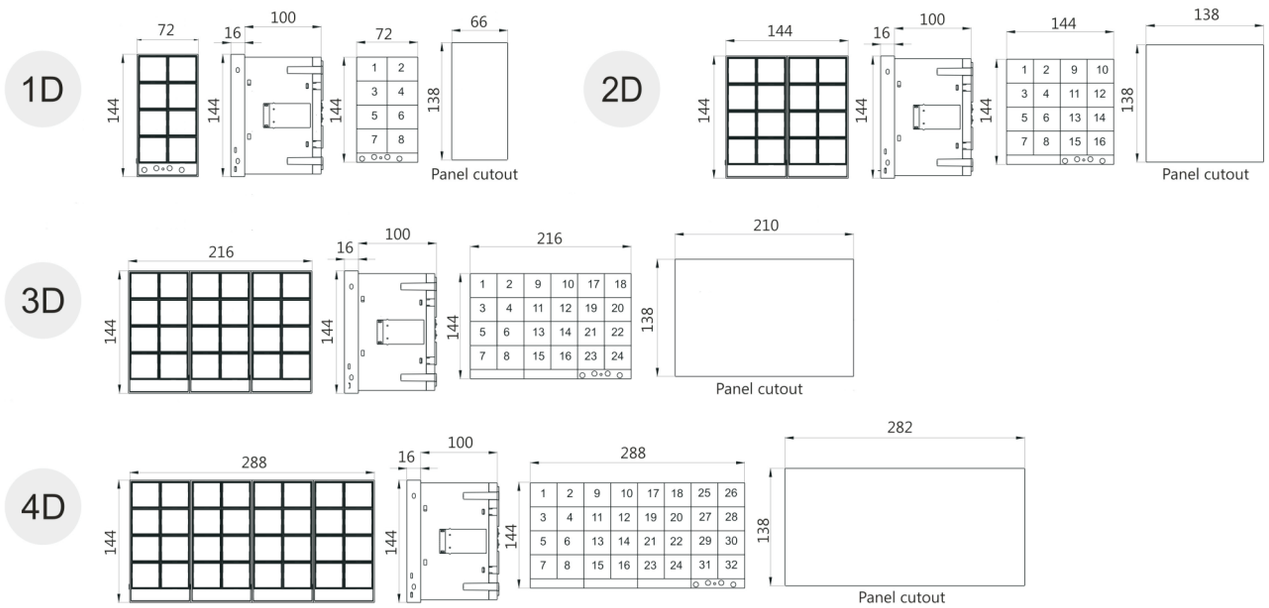
**Safety Compliance**

| | |
|---|---|
| Test Voltage Between I/P and O/P | IEC 60255-5, 2.5kV, 50Hz, 1Min |
| Impulse Voltage Between I/P And O/P | IEC 60255-5, 5kV, 1.2/50us, 0.5J |
| Single Fault Test | IEC 61010-1 |
| Insulation Resistance | UL 508 > 50 kΩ |
| Leakage Current | UL 508 < 3.5 mA |
| Pollution Degree | II |

**Environmental Compliance**

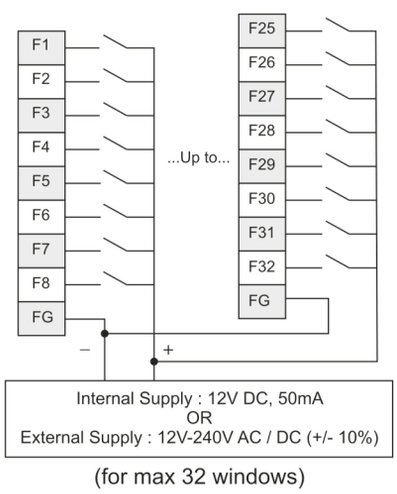
| | |
|---|---|
| Cold Heat | IEC 60068-2-1 |
| Dry Heat | IEC 60068-2-2 |
| Vibration | IEC 60068-2-6, 10 to 55Hz |

## Mounting Dimensions (mm)



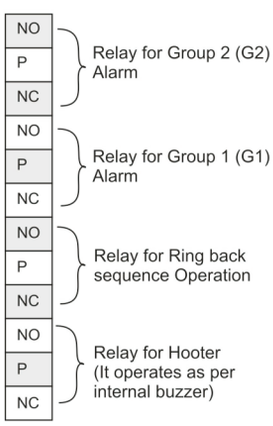

## Connection Diagram

**Fault Input Connections:**

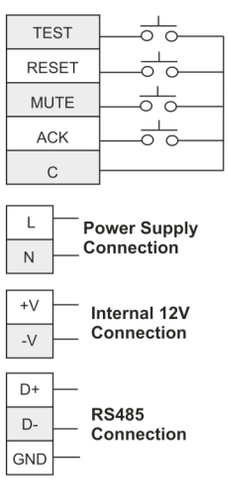



(for max 32 windows)

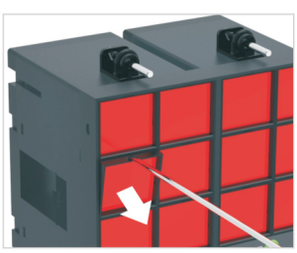
**Output Relay Connections:**



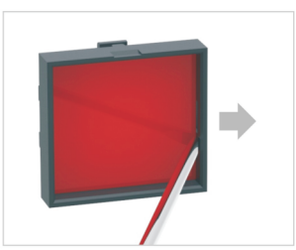

**Push Button Connections For Remote Access:**



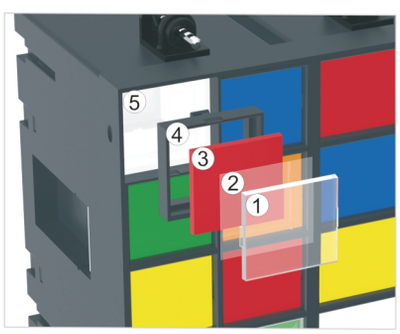

## Front Panel



1. For inserting legends, please remove the specific window by inserting a flat screwdriver tip (less than 5mm) into the window cover groove and lever up slightly, as indicated.



2. To separate the window and window housing, insert the tip of a flat screwdriver into one of the grooves on either of the sides as shown in the picture. Once finished with inserting the legend between diffusor and window, the whole assembly can be press fitted into the original position.



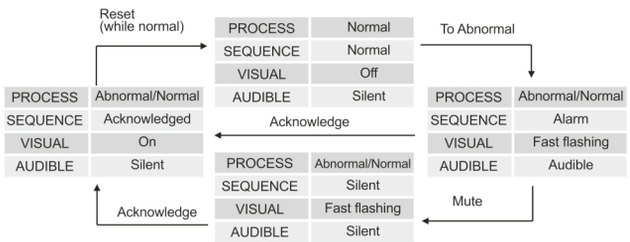

① Window
② Legend*
③ Diffusor
④ Window Housing
⑤ LED with Reflector

*Legend templates in Microsoft Excel are available on our website: **www.gicindia.com**

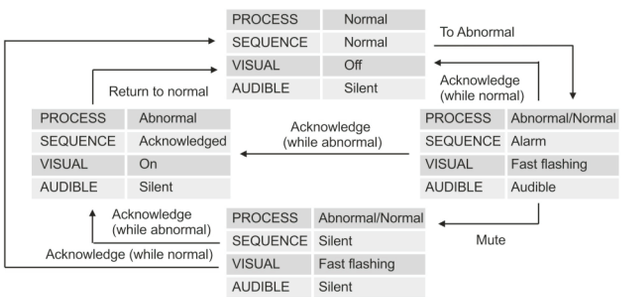
# Standard Alarm Sequences : (As per ISA Standard)

**Alarm annunciators can be configured to operate as per one of the following standard sequences.**

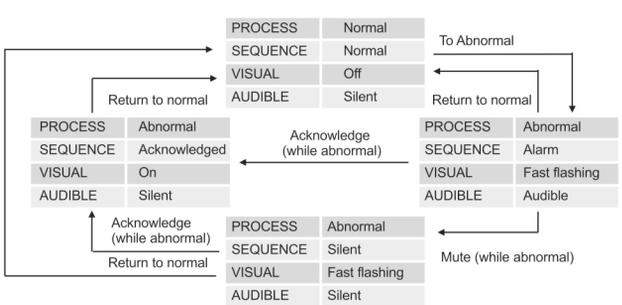
## Manual Reset : (ISA M-1)



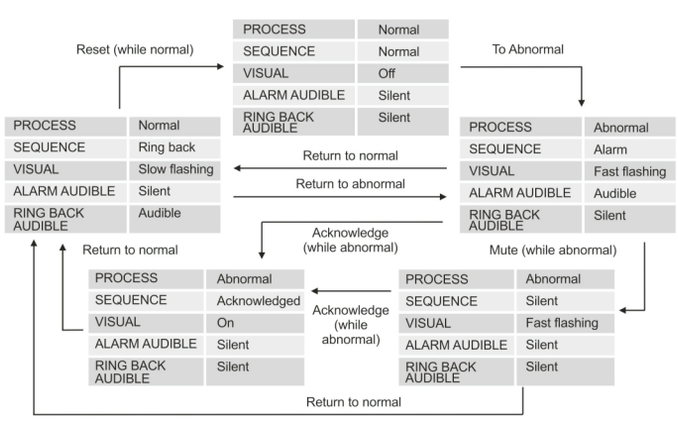

## Auto Reset : (ISA A-1)



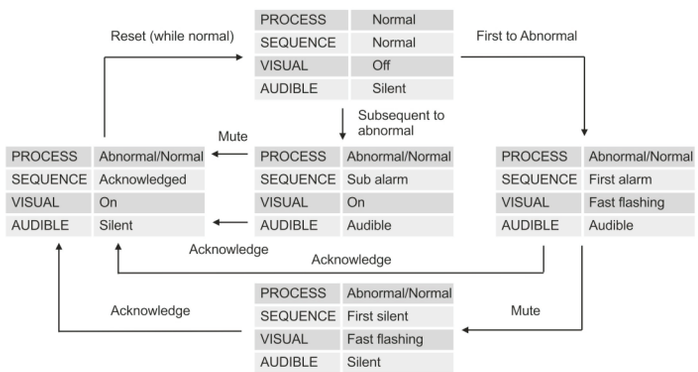

## Auto Reset with no lock in : (ISA A-1-4)



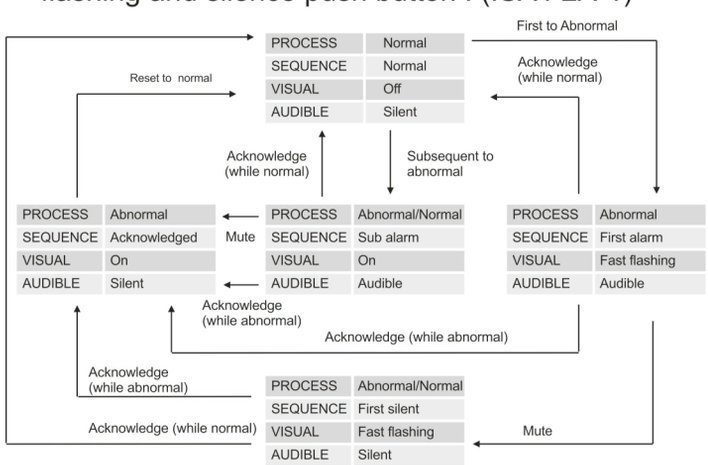

## Ring Back : (ISA R-1-12)



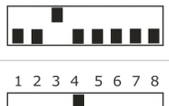
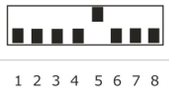

## Manual reset first out with no subsequent alarm flashing and silence push button : (ISA F2M-1)



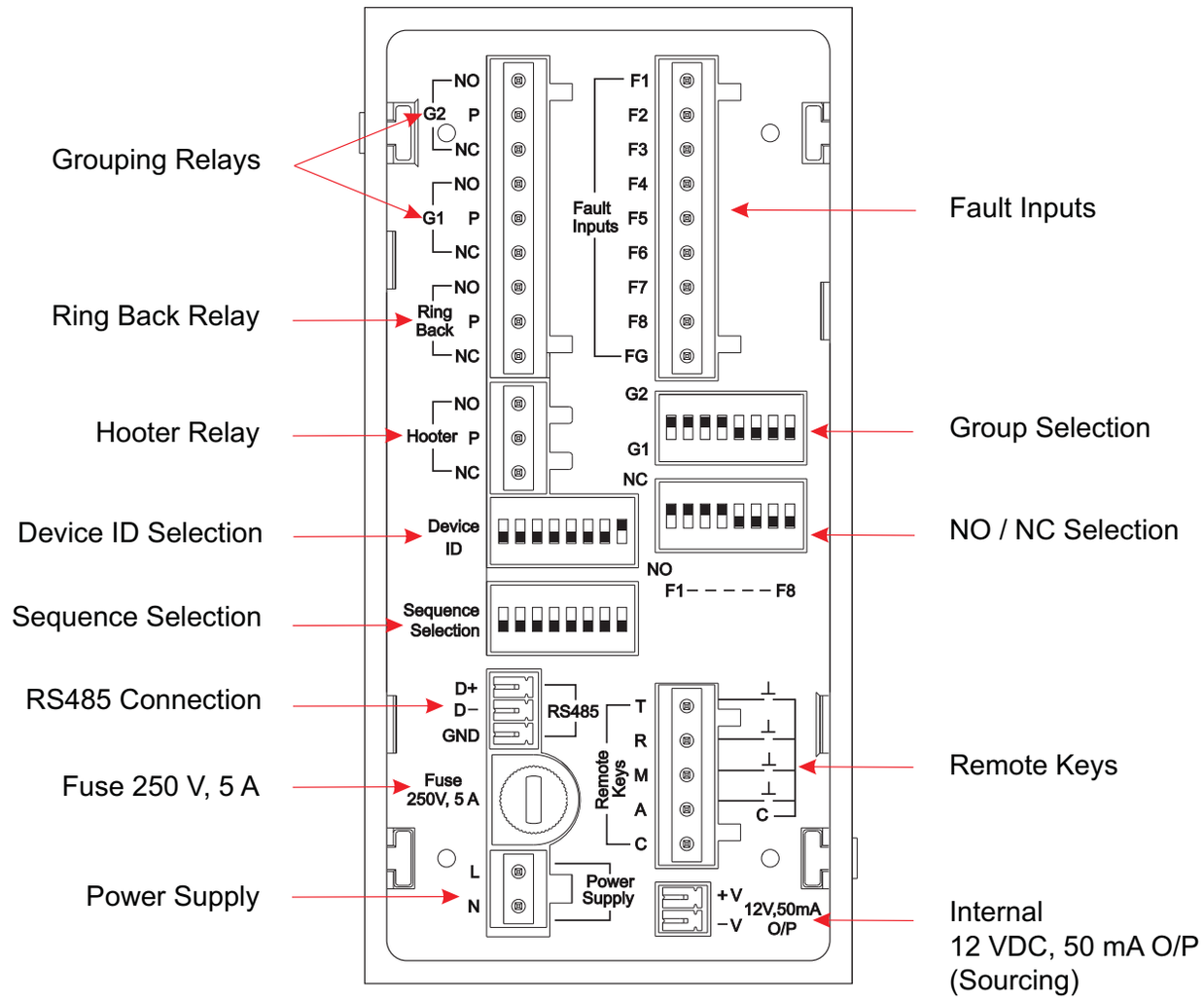

## Auto reset first out with no subsequent alarm flashing and silence push button : (ISA F2A-1)



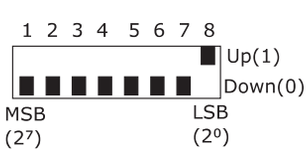

## DIP Switch Setting For Sequence Selection :

| | | |
|---|---|---|
| To configure alarm sequences<br><br>**Note:**<br>Any other DIP switch combination will be considered as Auto reset with no lock in (A-1-4) |  | Manual Reset (M-1) |
| |  | Auto Reset (A-1) |
| |  | Ring Back (R-1-12) |
| |  | Manual reset first out with no subsequent alarm flashing and silence push button (F2M-1) |
| |  | Auto reset first out with no subsequent alarm flashing and silence push button (F2A-1) |
| |  | Auto reset with no lock in (A-1-4) |

## Configuration and Connections




## DIP Switch Settings

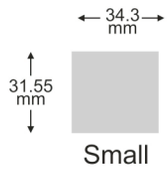
| DIP SWITCH | SETTING | FUNCTION |
|---|---|---|
| For fault contact configuration (NO / NC) |   | Each individual fault input can be selected as NO or NC based on DIP switch position. If any of the DIP switch is set upwards then it is selected as NC fault contact and if it is set downwards then it is selected as NO fault contact. NO contact closes to indicate alarm and NC contact opens to indicate alarm. |
| To configure fault inputs as Group 1 or Group 2 |   | Each individual alarm can be assigned to group 1 or group 2 based on DIP switch position. If any of the DIP switch is set upwards then it is selected as group 2 alarm and if it is set downwards then it is selected as group 1 alarm. |
| To select device ID for RS485 communication |   | Device ID can be assigned from 1 to 247. Device ID represented in binary information with respect to switch position. for example, |

| Device ID | Switch Setting |
|---|---|
| 1 | 00000001 |
| 15 | 00001111 |
| 225 | 11100001 |

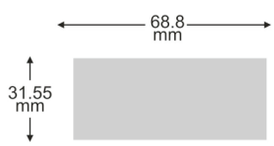
## Ordering Information

| Cat. No. | Product Size | No. of Windows | Window Size | Keys |
|---|---|---|---|---|
| **AU1D8S** | 1D | **8** | Small | Small |
| **AU1D6SP** | | **6** | | Big |
| **AU2D16S** | 2D | **16** | Small | Small |
| **AU2D14SP** | | **14** | | Big |
| **AU3D24S** | 3D | **24** | Small | Small |
| **AU3D22SP** | | **22** | | Big |
| **AU4D32S** | 4D | **32** | Small | Small |
| **AU4D30SP** | | **30** | | Big |
| **AU1D4M** | 1D | **4** | Medium | Small |
| **AU1D3MP** | | **3** | | Big |
| **AU2D8M** | 2D | **8** | Medium | Small |
| **AU2D7MP** | | **7** | | Big |
| **AU3D12M** | 3D | **12** | Medium | Small |
| **AU3D11MP** | | **11** | | Big |
| **AU4D16M** | 4D | **16** | Medium | Small |
| **AU4D15MP** | | **15** | | Big |
| **AU1D2L** | 1D | **2** | Large | Small |
| **AU2D4L** | 2D | **4** | Large | Small |
| **AU3D6L** | 3D | **6** | Large | Small |
| **AU4D8L** | 4D | **8** | Large | Small |

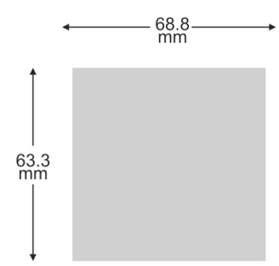
### Window Dimensions



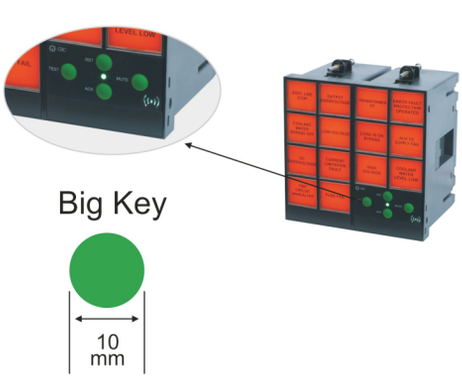
Small



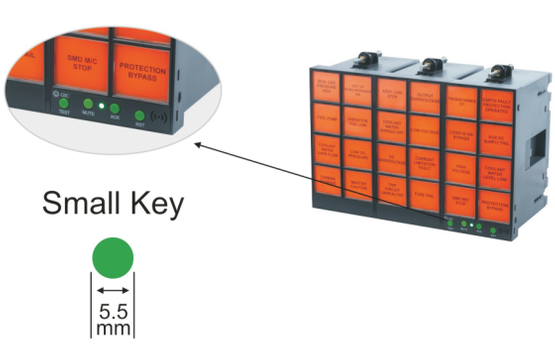
Medium



Large



Big Key



Small Key

*Live product configurator and enquiry request form available on our website: **www.gicindia.com**

# ALARM ANNUNCIATORS

**Note:**

- Innovation being a continuous process, design and specifications are subject to change without prior notice.
- User is recommended to ensure the suitability of the products for intended application.
- GIC is not responsible for consequential damage out of use of its products.


GIC

General Industrial Controls Private Limited

T-107, M.I.D.C., Bhosari, Pune 411026, Maharashtra, INDIA

**Tel.** : +91 20 30680003 / 04 / 11 / 31

**Fax** : +91 20 27122574

**Email** : marketing@gicindia.com | sales@gicindia.com | export@gicindia.com

**Web** : **www.gicindia.com**



sas | www.sascomm.in | 201701 |