

MICRO ALARM is an intelligent Alarm Annunciator based on the latest single chip microcontroller technology. Use of LED type window facia ensures low power consumption (less than 50mW per window), heat dissipation, choice of color windows and almost infinite life of LEDs. All standard features like opto isolated input circuitry, sequence selection from standard ISA sequences, NO/NC type of fault input are available in MICRO ALARM. Serial communication is optionally available to communicate the alarm status to PLC/SCADA/DCS. Following are the different types and architectures available in MICRO ALARM.



Hardwired Type

This is the conventional type annunciator, where the field inputs are connected to the annunciator and the unit senses change of state in each of the inputs and initiates the annunciation sequence and hooter for audio alarm.

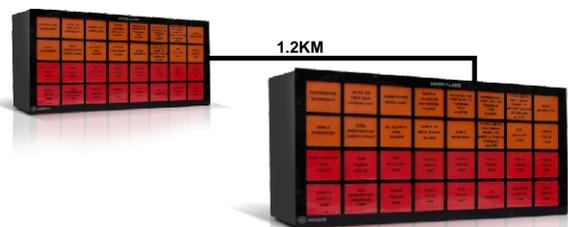
Non Hardwired Type

This is a unique type in which there is no need to connect any field input to the annunciator. The fault status of the field inputs which are already connected to any PLC/SCADA/DCS can be transmitted to the MICRO ALARM through the communication port just by a pair of wires and

MICRO ALARM initiates the annunciation sequence and audio alarm hooter contact. This scheme greatly reduces the cost of the project by the saving in duplicating contacts and expensive cabling and panel space. The distance between the PLC/SCADA/DCS and the MICRO ALARM can be as high as 1.2 Km.

Remote Annunciation Type

By combining the above 2 schemes one annunciator can be located in the field and another at a remote place and the fault status of local one can be transmitted to the remote unit through RS485 port. The distance between local and remote units can be as high as 1.2 Km.



Integral & Split Architecture

In integral type the CPU, input circuits, output drivers, power supply and window facia are housed in a single enclosure. In split architecture the window facia with just LED lamps housed in a sleek enclosure is mounted on the panel front and all other circuits housed in another enclosure is mounted inside the panel. The window drive signals are carried by a core cable from the main unit to facia unit. The split architecture is suitable for applications where panel depth and load on the panel front are the limiting factors.

Field Selection

MICRO ALARM offers site selection by way of DIP switches for selecting the required sequence of operation, NO/NC type of input, station number, baud rate and parity in case of communication.

Main Features

- ⇒ Single chip microcontroller technology.
- ⇒ Opto isolated input circuitry for fault input
- ⇒ 4 nos. super bright LEDs per window.
- ⇒ Choice of color windows
- ⇒ NO/NC type of faults selectable at site.
- ⇒ Annunciation sequence field selectable from one of the four following
 - (a) Manual Reset, (b) Auto Reset, (c) First Out, (d) Ringback.
- ⇒ Any other custom built sequence can be made on request.
- ⇒ Window size 45 x 45mm.
- ⇒ Interrogation supply 24V DC.
- ⇒ Provision to connect 2 hooters for Trip & Non-Trip.
- ⇒ Optional DC fail feature and 3rd NO contact for connecting DC fail hooter.
- ⇒ Photo negative or photo positive legends.
- ⇒ Individual legends for each window, replaceable from the front.
- ⇒ Optional communication feature with MODBUS RTU slave protocol.
- ⇒ High Noise immunity.

| Confiq | R X C | Overall Dim. L x H x D | Cutout Dim. L x H |
|--------|-------|---------------------------|----------------------|
| 8W | 2 x 4 | 219 x 123 x 180 | 206 x 110 |
| 10W | 2 x 5 | 267 x 123 x 180 | 254 x 110 |
| 12W | 3 x 4 | 219 x 171 x 180 | 206 x 158 |
| 16W | 4 x 4 | 219 x 219 x 180 | 206 x 206 |
| 20W | 4 x 5 | 267 x 219 x 180 | 254 x 206 |
| 24W | 4 x 6 | 315 x 219 x 180 | 302 x 206 |
| 30W | 5 x 6 | 315 x 267 x 180 | 302 x 254 |
| 32W | 4 x 8 | 411 x 219 x 180 | 398 x 206 |
| 40W | 5 x 8 | 411 x 267 x 180 | 398 x 254 |
| 48W | 6 x 8 | 411 x 315 x 180 | 398 x 302 |
| 64W | 8 x 8 | 411 x 411 x 180 | 398 x 398 |

All Dimensions are in mm

Technical Specifications

| | |
|-----------------------------------|---|
| Type | Single chip microcontroller based |
| Window Size | 45 x 45 mm |
| Display Device | 4 nos. Super bright LEDs per window |
| No. of windows | 8 to 64 in a single enclosure |
| Window color | Red - standard; Amber on request for non-trip type |
| Legend | Photo positive or negative; individual window legends replaceable from front. |
| Fault Inputs | Opto isolated |
| Input contact type | NO/NC type field selectable through DIP switches |
| Trip / Alarm type input | Factory programmed |
| Interrogation supply | 24V DC |
| Outputs for Hooter | Two NO contacts; one for Trip & one for Non-Trip faults; Optional 3rd output for DC fail |
| Output contacts rating | 5 Amps at 230V AC/DC (Max 100VA cont) |
| Operational Sequence | Manual/Auto reset; First out; Ringback - selectable through DIP switch; Any other custom sequence can be built in optionally |
| Architecture | Integral - standard. Split type - optional |
| Models | Hardwired - Inputs sensed from field contacts. Non hardwired - Fault Input status received through communication channel. Remote Indication - Field Unit for sensing faults at field and Remote Unit for repeat annunciation through communication channel. |
| Power Supply | 90 to 270V AC/DC; Optional 24V DC / 48V DC/ 30 - 110V DC |
| Termination | Through TBs provided in the unit. |
| Environment condition | 0 - 55 °C; 95% Rh. |
| Enclosure | MS powder coated |
| Communication port | RS232C/RS485/RS422. |
| Communication protocol & settings | MODBUS RTU slave protocol for communicating with PLC/DCS/SCADA Station Number , Baud Rate , Parity - selectable through DIP switches. |
| DC Fail | Automatic change over of power supply from DC to AC so that the annunciator operates even during DC fail |



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Information in this Catalogue is subject to change without notice

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