ELECTRONICS SYSTEMS AND DEVICES

Process Control Instrumentation

ALARM ANNUNCIATORS N123 & N163





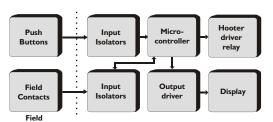
## INTRODUCTION

Annunciation systems are used to give audio and visual indication of fault conditions. Annunciators play an important role of watching the fault conditions and indicating them to help in speedy location and correction.

ESD's "ALERT" series alarm annunciator system is suitable for 4/6/8/12/16/24/32/48 inputs and is available in different DIN standard cutouts or 19" racks. The series is designed using powerful microcontroller and highly reliable electronic components.

The Annunciators are connected to potential free field contacts (as inputs). When a fault condition occurs in any one of the connected inputs, annunciator indicates the fault by flashing the respective window (visual indication) and also gives signal to the Hooter (audio indication).

## **PRINCIPLE OF OPERATION**



The single chip microcontroller of the Alert series continuously monitors all the connected inputs. If a fault occurs in any of the inputs, then it is detected by the CPU. According to the nature of the fault, the CPU will decide the status of the window and hooter. Faults are classified as :

I. Persisting fault but not accepted

- 2. Persisting fault, but accepted.
- 3. Momentary fault disappeared before accepting

The Alert series accepts potential free contacts as its inputs, with a selection facility for 'NO' (make to alarm) and 'NC' (break to alarm). User can connect a hooter through relay for audio alarm. Facility to connect external 'Test & Accept' push buttons is available. Multiple flashing rates are provided for differentiating various fault types.

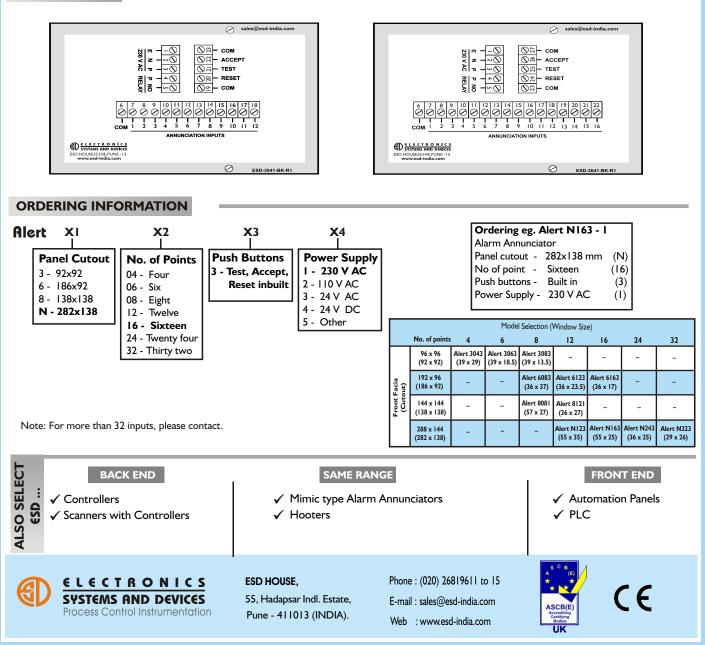
## FEATURES

- ✓ Highly compact and light weight
- ✓ LED Indicators consume 90% less power as compared to lamps & hence avoid heat generation
- ✓ Unlimited LED life, no replacement required
- ✓ Super bright LEDs for long distance visibility
- ✓ Fault condition setting site selectable
- ✓ Fast response time
- Three flashing rates indicate different types of faults
- ✓ Facility to connect hooter
- ✓ Optically isolated inputs
- ✓ Various sizes & fonts for window inscription.
- ✓ Choice for Photo positive or Photo negative
- ✓ Window inscription
- ✓ Auto reset / manual reset / First Up site selectable
- ✓ System Healthy indication by continuous flashing green LED on front facia
- ✓ Wide range of window sizes and configurations
- ✓ Fail safe logic for hooter relay

## SPECIFICATIONS

Model	: Alert N123 / Alert N163	Ambient temperature	≥:0 to 55°C
No of points	: l2 pt / l6 pt	System healthy	: Continuously flashing GREEN LED
Contact type	: Make or Break to alarm individually selectable	Push Buttons	: NO type push buttons for Test, Accept
Indication	: Super bright RED LEDs		And Reset to be connected externally in
Window intensity	: 60 Lux +/-10%		12 point & internal / external in 16 point
Window size	: 55x35 mm for Alert N123	Logic	: Microcontroller based
	55x25 mm for Alert N163	Response time	: 10 milliseconds
Window inscription	: Photo positive or Photo negative	Operating sequence	: 4 ISA standard sequences
Window configuration : 4x3 for Alert N123 A			A) Auto reset (ISA : I B) Factory set
(Rows x Columns)	4x4 for Alert N163		B) Manual reset (ISA : 2C)
Flash rate	: 22 flashes per minute (blink)		C) Auto reset first up (ISA : 4A)
	40 flashes per minute (Fast blink, available		D) Manual reset first up (ISA : 4A1)
	only for first-up models)	Facia size	: ABS plastic having size 288 x 144 mm
Output-I	: Relay change over contact for hooter,	Mounting	: Flush panel
-	I Amp resistive at 230 V AC	Enclosure	: Mild steel CRCA sheet with powder
Output-2 (optional)	: Relay change over contact for system		coating
	healthy , I amp resistive at 230 V AC	Panel cutout	: 282 x I 38 mm
Power supply	: 230 V AC, +/- 10 %, 50 Hz with earth	Depth	: 165 mm (including terminals)
Power consumption	: 6 VA total, 0.3 VA per window	Termination	: Screwed type suitable for 2.5mm <sup>2</sup> wire
Relative humidity	: Less than 90% non condensing		

INSTALLATION



Unspecified dimensions are in mm. Photos not to the scale. Due to continuous development above details are likely to change.