



# RINGWAY

## Control & Automation

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## ALARM UNITS

P/Ns – AL24X20; AL24X30; AL48X20; AL48X30

### RINGWAY 24V / 48V ALARM UNITS

#### DESCRIPTION:

Ringway 24V & 48V Alarm Units are low-power high-efficiency dual-state alarm enunciators. Operation simply requires connection to either a 24V or 48V power supply depending on the alarm. The polarity of the supply determines the output function of the alarm. When P1 terminal is positive with respect to P2, a two-tone audible (piezo) alarm sounds while the LED tower flashes red. In the opposite polarity, the LED tower produces a solid green light only.

The Alarms are designed to provide maximum audible and visual presence for minimal power consumption. They are ideal for applications where long distance (up to 8.9km), line-powered alarm indication is required.

The Alarm Units are very reliable, low-maintenance devices that are fully line powered and require no batteries. Competing units require internal batteries, therefore can only offer limited alarm duration capability or must limit the number of alarm units that operate concurrently. All connected Ringway Alarm Units can be operated indefinitely without loss of performance. Overlapping alarm performance is achieved using 100mtr spacing between alarm units (spacing can be reduced to increase the audible level if ambient level is high).

Ringway Alarm Units are designed to work best with Ringway's Alarm Supply/Controllers. These provide both alarm power and state control. The controller's output state is controlled via two 24V inputs, a third 24V input controls the automatic calibration function. Once calibrated, the Controller can detect that all Alarm Units on the system are operating. The Controller also provides three voltage-free outputs that may be used to indicate the output state and confirmation that all connected units are functioning. Refer to the Controller brochure for more information.

Ringway Alarm Units are offered in an Orange, flame retardant, UV stabilized PBT/PC enclosure with screw-in modular components.

#### FEATURES:

- **Simple, robust and functional.**
- **Fully down line powered.**
- **No repeaters – no batteries.**
- Alarm **output duration** = zero to **indefinite.**
- **Dual state** output allows **alarm / warning** as well as **healthy / safe** to be broadcast.

**APPLICATIONS:**

The Alarm Units can be used anywhere that a single or dual state warning or permissive function is required. Typical applications include conveyor pre-start alarm and remote isolation indication, evacuation systems, and remote / distributed security system monitoring. The most popular of these are:

**1: Conveyor / Machine Pre-Start / Operating Warning:** An audible and visual (red flashing) alarm is sounded at each alarm site, while ever voltage is applied across the P1/P2 terminals of units (P1 positive). In this mode up to 90 units can be connected at 100mtr intervals on 4mm<sup>2</sup> cable to provide overlapping performance over the entire length of an 8.9km conveyor. The alternate (green) state lights a solid green light at each alarm site and (if required) can be used to confirm whole current remote isolation.

**2: Evacuation / Keep Clear Alarm:** A large evacuation area can be supervised by a single system. System 'ready' status can be continually broadcast and observed by leaving the system in the Green State. The entire area can be placed on alarm / evacuation footing from a central command. E.G. tunneling or confined work places, Colliery Dolly-car Drifts – lift shafts, etc.

**SPECIFICATIONS:**

- Supply Voltage:** 12.5 to 24V – AL24X#0  
12.5 to 48V– AL48X#0
- Supply Current:** 8.5mA (24V)
- Alarm Tone:** Alternate Two tone  
- 2.8 / 3.7 kHz
- Sound Pressure Level:** 92dB @ 1m nom. (48V/24V)  
90dB @ 1m nom. (12.5V)<sup>1</sup>
- Luminous Intensity:** **Red** 3800 mcd nom.(≥15.5V)  
**Green** 750 mcd nom.(≥15.5V)
- Operating Temp. Range:** -20 → 70°C

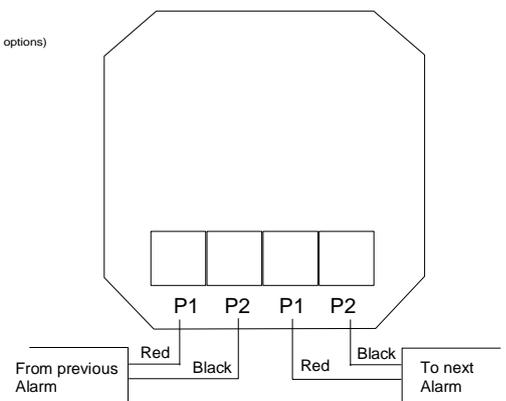
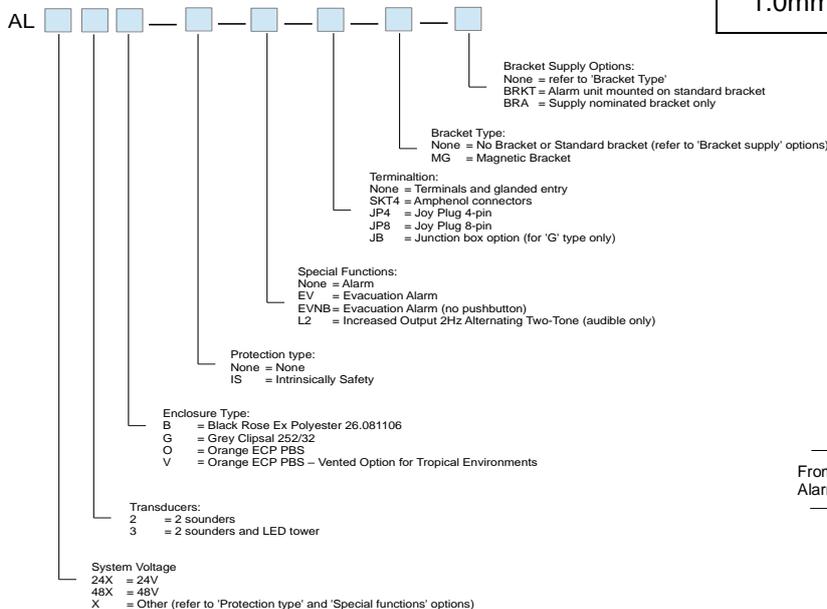
**24V SYSTEM CAPACITIES**

Cable Size	Alarm Spacing	No. of Alarms
4.0mm <sup>2</sup>	100m	50
2.5mm <sup>2</sup>	100m	39
1.5mm <sup>2</sup>	100m	30
1.0mm <sup>2</sup>	100m	25

**48V SYSTEM CAPACITIES**

Cable Size	Alarm Spacing	No. of Alarms
4.0mm <sup>2</sup>	100m	89
2.5mm <sup>2</sup>	100m	70
1.5mm <sup>2</sup>	100m	54
1.0mm <sup>2</sup>	100m	44

**ORDERING INFORMATION:**



Termination to Alarm Unit

<sup>1</sup> Bus voltage does drop with increased loading and distance from the controller. For maximum capacity systems (refer to tables) bus voltage will approach 12.5V.