



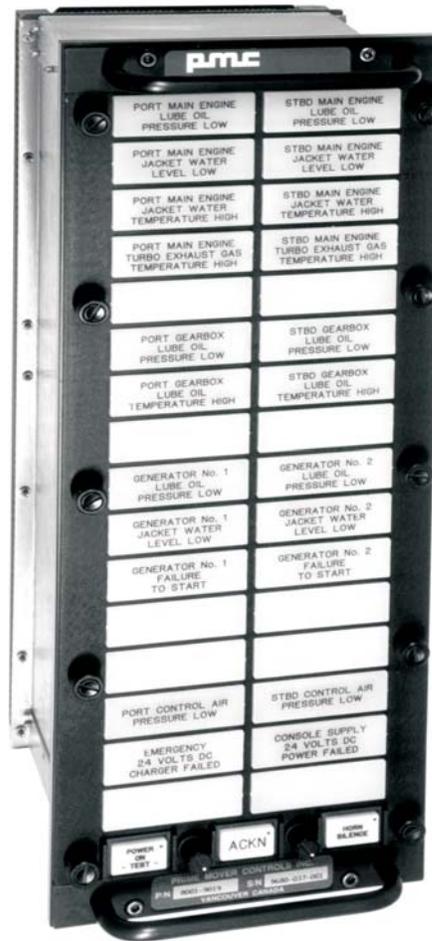
Type 8001

FEATURES

- 16 or 32 alarm points per flush mount enclosure
- Displays are backlit with long life LEDs and engraved to suit
- Dimmer controls built in
- Microprocessor controlled logic
- Incoming faults are captured (after time delay) and auto reset when acknowledged and fault is cleared
- Displays are RED when a fault is displayed and white when inactive
- Essential and semi-essential horn and beacon outputs are included
- New alarms flash red until acknowledged and remain steady on until reset
- Audible alarms can be silenced without acknowledging visual alarm
- Field programmable options for each point include:
 - › Time delays (½ to 99 sec)
 - › NO, NC and NO with end of line resistor fault contact inputs
 - › Disable groups
 - › First out groups
 - › Bridge repeater groups
 - › Repeater reflash output
 - › Remote display outputs
 - › Essential and semi-essential alarm outputs
 - › Internal horn operation
 - › Alarm sequence
- Flashing silence button indicates which panel is annunciating
- Output to printer for data logging
- Communication to graphics computer
- Conformally coated printed circuit boards
- Suitable for use on UMS vessels
- Marine approvals

ALARM ANNUNCIATOR

TYPE 8001



PRIME MOVER CONTROLS INC.

GENERAL

The type 8001 Alarm Annunciator is designed specifically for the marine industry. It is a compact, solid state alarm panel for operation with digital (on-off) sensors. Operating voltage is 12VDC through 32VDC nominal, direct from ships batteries or from regulated power supplies.

Highly visible engraved displays offer a large white engraving surface which becomes a brilliant red when turned on.

Either 16 or 32 alarm points are provided per alarm annunciator. The 32 point annunciator has backlit displays sized 0.85"(22mm) x 2.5"(63mm). The 16 point annunciator has backlit displays sized 1.85"(47mm) x 2.5"(63mm). Computerized dimming control is provided. The dimmer has been designed to be very adjustable in the low intensity region for greater control at night on the bridge.

The lenses are front removable without tools. The fuse is accessible from the rear of the annunciator. All PC boards have computer generated artwork, and are cleaned, conformal coated and tested prior to shipment.

OPERATION

Remote fault contacts may be normally open (close on fault) or normally closed (open on fault). Also, using an optional end of line resistor, open circuits, line shorts and status changes can be detected. Annunciation of each fault is delayed by an adjustable time period of 1/2 through 99 seconds. Any fault which persists longer than the set time delay is captured until acknowledged. Automatic reset occurs after the fault has been acknowledged and is corrected.

The front display will flash for new faults until acknowledged and will remain on steady while the fault persists. Individual alarm points can be programmed such that their displays do not revert to steady after acknowledgment. This feature can be used to emphasize the critical alarm points.

Faults can be programmed to turn on the internal horn, internal Semi-Essential alarm relay, internal Essential alarm relay, or a secondary open collector output for each alarm point. Individual alarm points can be programmed to turn all, some or none of these devices. The Semi-Essential and Essential relays can be used to control external audible and visual devices.

The Silence button is used to deactivate the external alarms and the internal horn. The Acknowledge button performs the same function as the silence button and also causes the alarm display to change from flashing to steady. If silenced first, the alarm display will continue to flash until it is acknowledged. When a new fault occurs, the silence pushbutton restarts to flash to provide a quick visual indication of which enclosure is annunciating the alarm in multiple annunciator installations.

A test pushbutton is provided which, while it is pressed, will insert a fictitious fault into the input of all points. Internal time delays are also checked by pushing the button. Testing may occur at any time without altering the status of existing alarm displays.

FEATURES

Additional features which are included as standard, and which may be field programmed, include:

- **Disarm groups:** Each point may be disarmed individually or as part of a group by an external N.O. contact. While disarmed the alarm point will stay off.
- **First out groups:** Each point may be included in a first out group so that the first fault which appears in the group will cause its front display to flash normally. Subsequent faults which occur before the first is acknowledged will cause their front displays to flash at a rate different than normal (intermittently).
- **Repeater groups:** Each point may be included in a repeater group. When any point in the group is in a fault mode a signal is sent to the remote group repeater, which then indicates that a fault exists in that group.
- **Repeater reflash:** any new fault in a group will cause the remote repeater to begin flashing and also re-trigger the horn.
- **Secondary display outputs:** Any point may be set to provide an output signal which follows the horn, or the display light or the input fault status.

The 8001 Alarm annunciator comes complete with an RS-232C or RS-485 serial port for communication with remote computers or alarm repeaters and a centronics compatible printer port for a log printer.

All programming is done through the rear mounted display. The annunciator is easily programmed through this display and is designed to stand alone, or can be configured to work with a group of alarm panels.

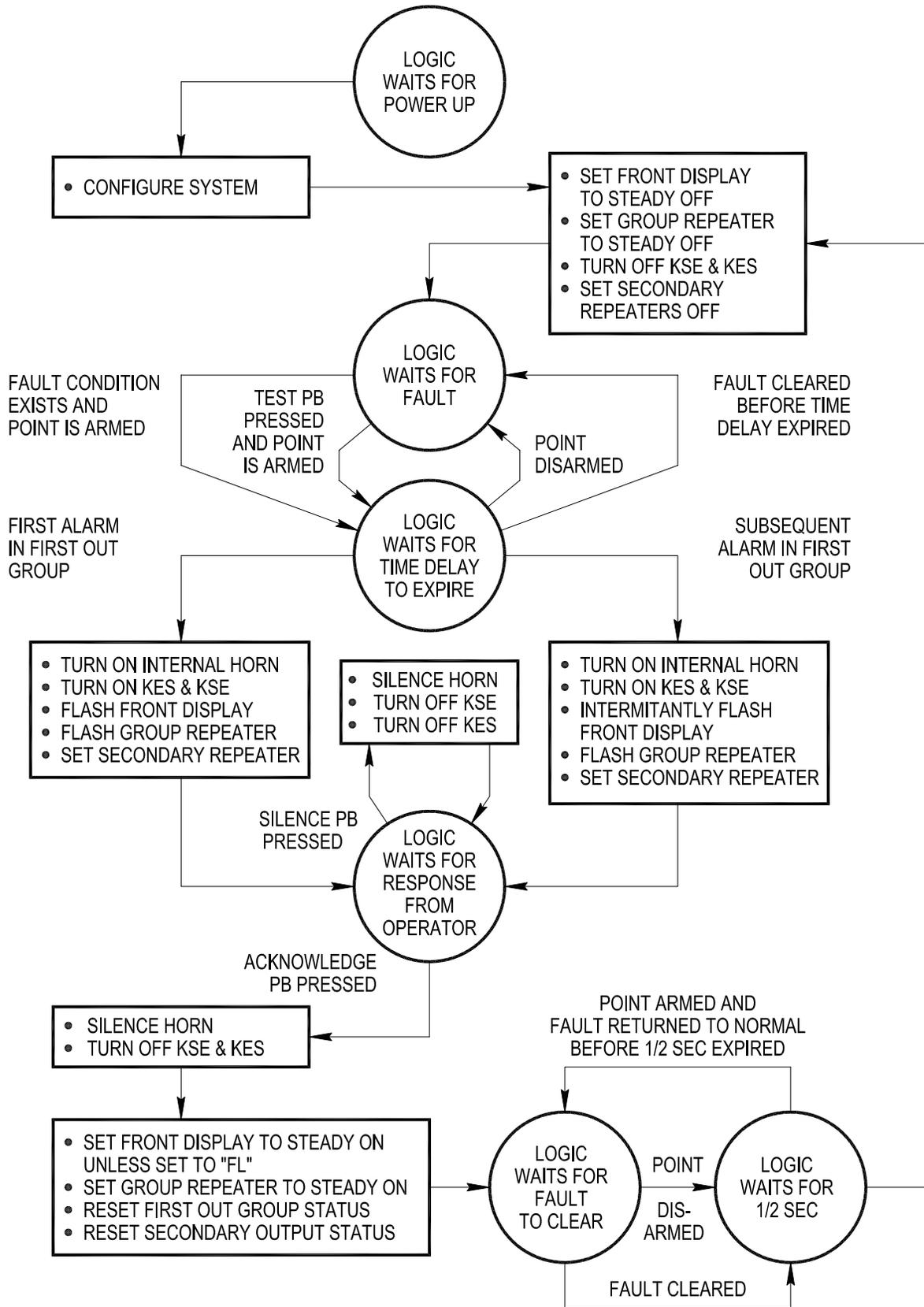
EQUIPMENT

Additional equipment is available to complete the alarm system including: remote group alarm repeaters, single point displays, cabin repeaters, watch keeping systems, air horns, overload alarms, electric horns, rotating beacons, bells, etc.

A repeater panel specifically designed to repeat alarms or groups of alarms from 8001 Alarm Annunciators is available. The type 8101 Alarm Repeater is based on the 8001 Alarm Annunciator. Up to eight 8001 alarm panels and eight 8101 alarm repeater panels can communicate over a single two wire bus. Using the RS-485 communication standard in the multidrop configuration, transmission distances are up to 4000 feet. See SB-8101 for more information on these repeater panels.

ALARM SEQUENCE DIAGRAM

EXECUTED CONCURRENTLY FOR ALL 32 POINTS



KEY
 KES: ESSENTIAL RELAY
 KSE: SEMI-ESSENTIAL RELAY
 "FL": FLASH ONLY OPTION

FIELD SELECTABLE OPTIONS PROVIDED FOR EACH ALARM POINT

FUNCTION	STANDARD FACTORY SETTINGS	PROGRAMMABLE OR REAR TERMINAL OPTIONS
First Out Group	Disabled	Created by connecting specific rear terminals together
Repeater Group	Disabled	Created by connecting specific rear terminals together
Disable Group	Disabled	Created by connecting specific rear terminals together
Time Delay	Minimum value of 1/2 second	Time delays are programmable through the rear keyboard and display; time intervals can be set from 1/2 second to 99 seconds in one second intervals
Alarm Field Contact	NC Normally closed contact - opens on fault	<ul style="list-style-type: none"> - NC Normally Closed, opens on fault - NO Normally Open, closes on fault - NO+ELR Normally Open with End of Line resistor, close on fault (open circuit and line short are also treated as faults)
Disable Input or Secondary Output	Disable Input	<ul style="list-style-type: none"> - Disable input; connect terminal to common negative line to disable alarm point - Secondary Open Collector output, with the following three optional drive capabilities: <ol style="list-style-type: none"> 1. Output Follows Display - output is active low when the front alarm display is on and high impedance when the display is off; output flashes high/low when the front display flashes 2. Output Follows Alarm - output is steady active low while front display is flashing; output is high impedance when display is steady on or off 3. Output Follows Fault - output is steady active low while remote alarm field contact remains in fault mode (while front display is flashing or steady on); when fault contact is normal the output is high impedance
Internal Horn	Enabled	<ul style="list-style-type: none"> - Enabled: the internal alarm horn operates for each new incoming alarm condition - Disabled: the internal alarm horn does not operate for each new incoming alarm condition
Alarm Priority	Essential	<ul style="list-style-type: none"> - Essential: a new alarm actuates the KES essential alarm relay which remains on until the alarm is silenced or acknowledged - Semi-Essential: a new alarm actuates the KSE semi-essential relay; it remains on until the alarm is silenced or acknowledged
Display Sequence	Standard Sequence	<ul style="list-style-type: none"> - Standard Sequence: alarm display flashes for new faults and is steady for acknowledged faults - Flash Only: alarm display flashes for new and acknowledged faults - Display Only: alarm display is steady on for new and acknowledged faults

LENS OPTIONS - SHOWN FULL SCALE WITH TYPICAL ENGRAVING

**No.1 AUXILIARY DIESEL
 JACKET WATER
 TEMPERATURE HIGH**

LENS SIZE 0.85" x 2.5" (22 x 63)

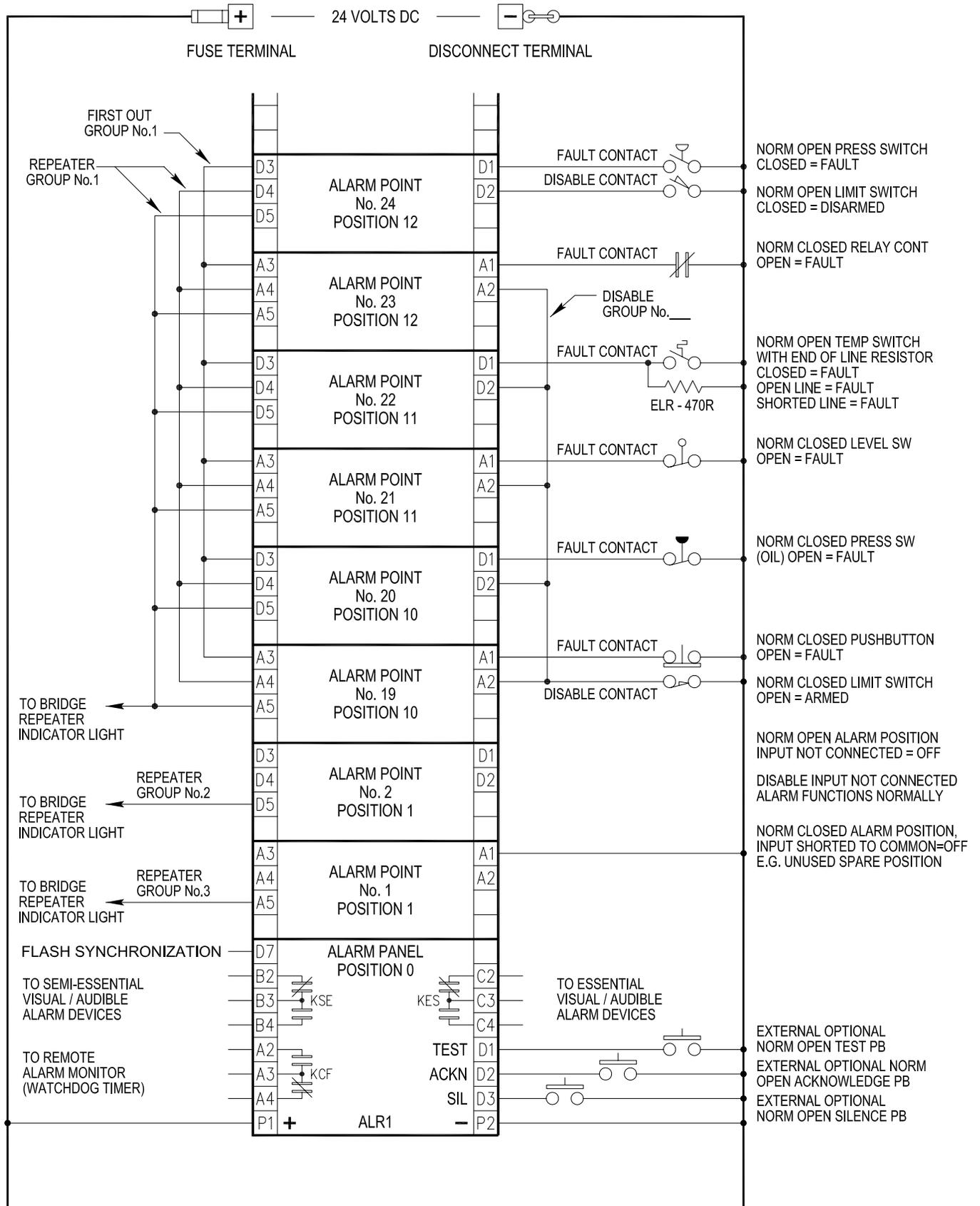
- LENSES ARE FRONT REMOVABLE
- BACKGROUND COLOR IS WHITE WHEN INACTIVE
- BACKGROUND COLOR IS RED WHEN DISPLAYING FAULT
- ENGRAVING COLOR IS BLACK

**PORT MAIN ENGINE
 LUBE OIL PRESSURE
 EXTREME LOW
 -SHUT DOWN ENGINE-**

LENS SIZE 1.85" x 2.5" (47 x 63)

8001-1-03 Rev. 0

TYPICAL ELECTRICAL CONNECTIONS FOR 8001 ALARM ANNUNCIATOR

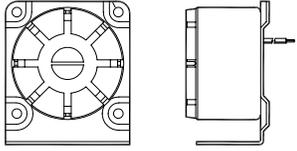


ALARM SYSTEM ACCESSORIES

- ALL ITEMS SHOWN QUARTER SCALE -

ELECTRONIC HORN

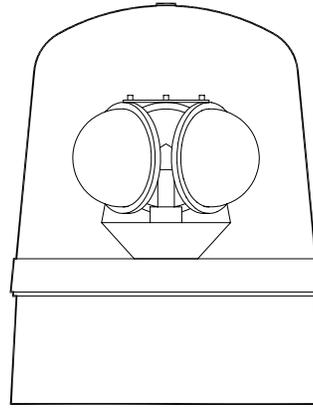
PMC
PART No.
8540-1311



RATED
112 dBA
AT 10'

12VDC / 24VDC OPERATION

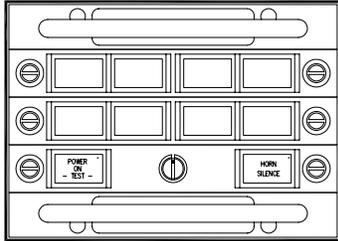
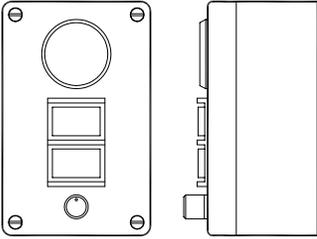
ROTATING BEACON



HOOD
COLORS:
RED
GREEN
AMBER
BLUE
CLEAR

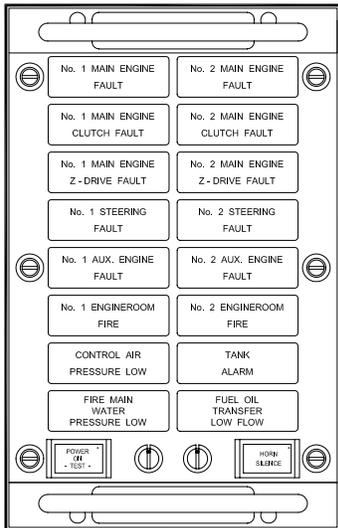
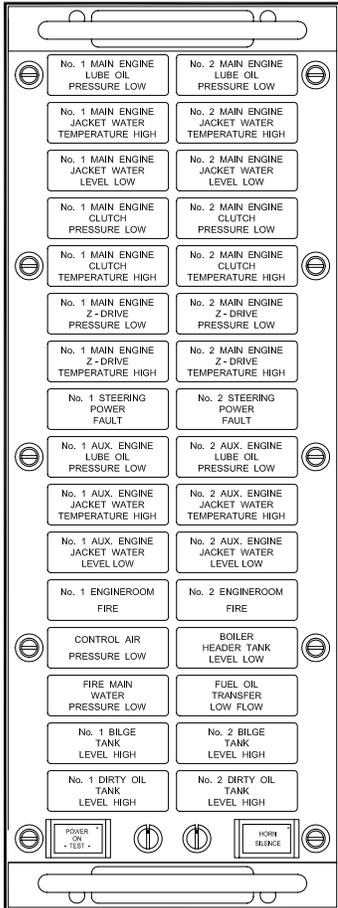
PMC PART No. 8540-1400
12VDC / 24VDC / 120VAC OPERATION AT 70 W.

REMOTE ALARM REPEATERS AND DISPLAYS



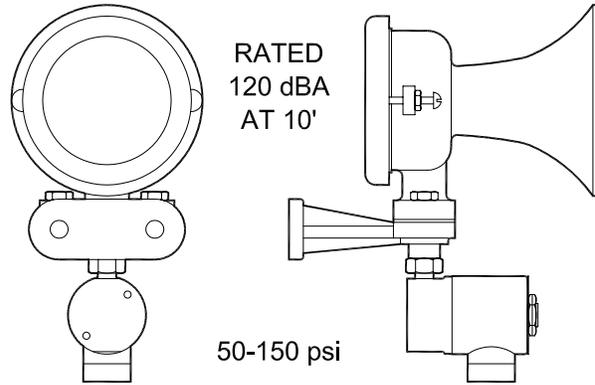
SINGLE POINT DISPLAY
PMC PART No. 8121-2000

CABIN ALARM
WATCHKEEPING
PMC PART No. 8421



BRIDGE ALARM REPEATER
PMC PART No. 8101
12VDC / 24VDC OPERATION

SOLENOID ACTUATED AIR HORN

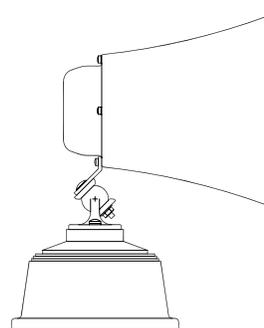


RATED
120 dBA
AT 10'

50-150 psi

PMC PART No. 8540-1310
12VDC / 24VDC / 120VAC OPERATION

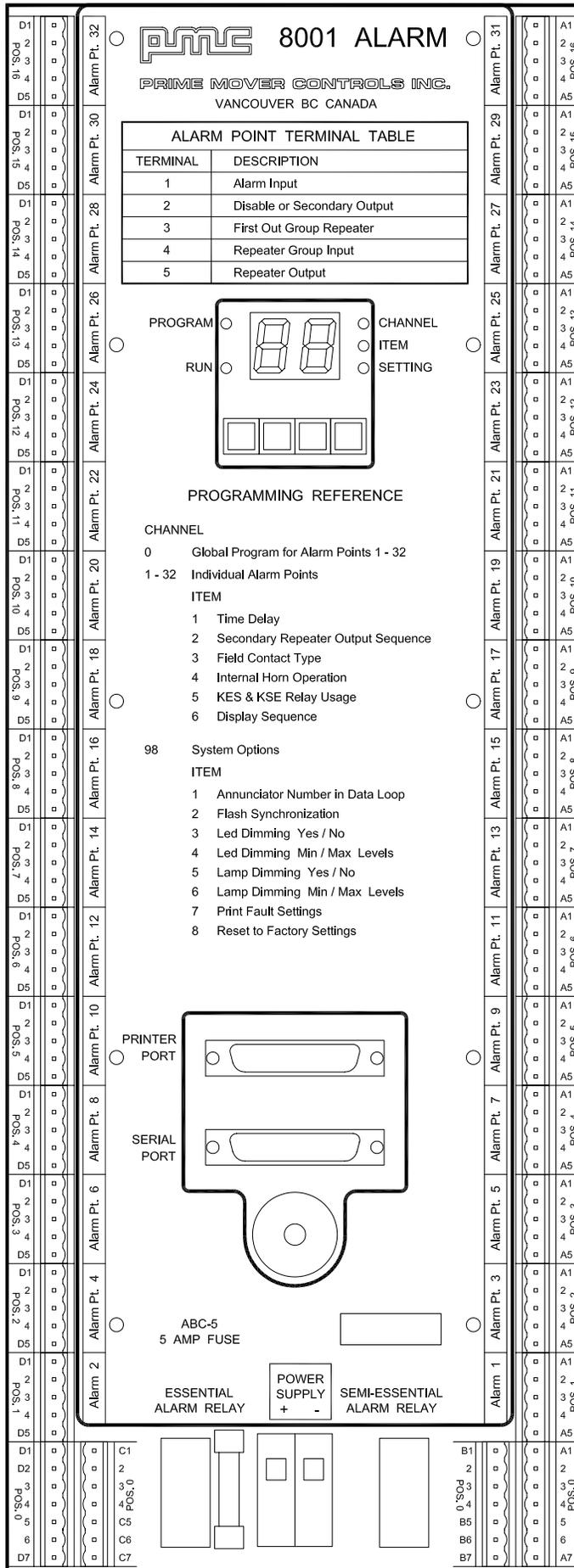
ELECTRIC HORN - SIREN



RATED
112 dBA
AT 10'

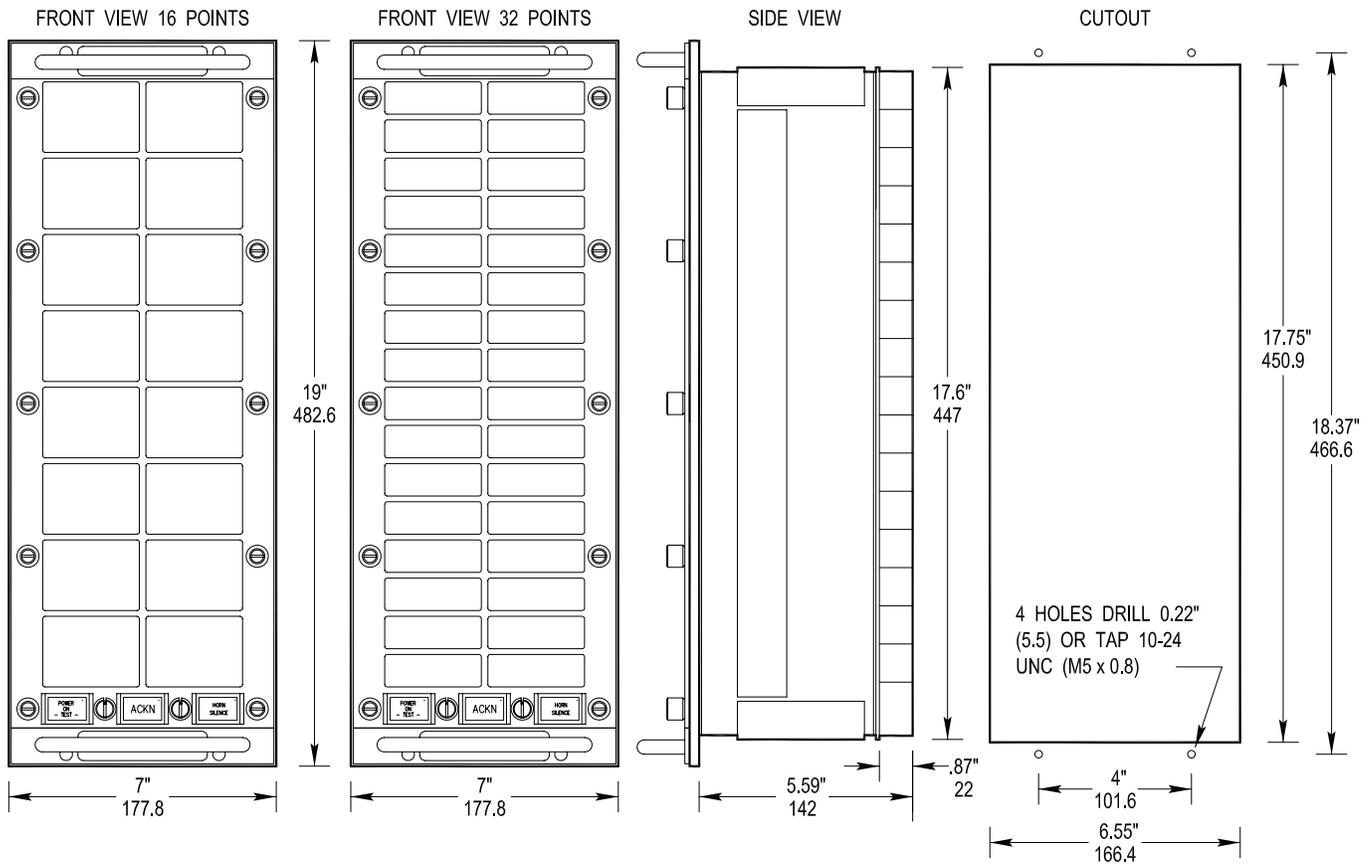
PMC PART No. 8540-1314
1 : 8 SCALE
24VDC / 120VAC OPERATION

8001-1-04 Rev. 0



REAR VIEW OF PANEL

ARRANGEMENTS , DIMENSIONS AND CUTOUT FOR 8001 ALARM ANNUNCIATOR



One mounting hardware kit, Part No. 8800-9045 (8800-9046 metric) is included with each panel and consists of 4 socket cap machine screws, nuts and washers

SPECIFICATIONS

- | | |
|---|--|
| <p>Display:</p> <ul style="list-style-type: none"> - engraved translucent front replaceable lens backlit by LED diffused packages - display flash rate synchronization available between multiple enclosures <p>Power Input:</p> <ul style="list-style-type: none"> - nominal 12 to 32 volts DC - range 10.8 to 38.4 volts DC - input current, 3 amps nominal, 5 amps surge - reverse and overvoltage protection to 120 VAC - input power fuse, 5 amps, type ABC-5 | <p>Illumination:</p> <ul style="list-style-type: none"> - backlit LED display shows white when off and brilliant red when powered - with full range internal computer dimming circuits <p>Environmental:</p> <ul style="list-style-type: none"> - storage -40°C to +75°C - operating 0°C to +55°C <p>Physical:</p> <ul style="list-style-type: none"> - dimensions 19"Hx7"Wx6"D (483x178x152mm) - weight 10 lbs (4.5 kg) |
|---|--|

8001-1-05 Rev. 0

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