



Omni2 Door Warning Sign Alarm Annunciator

Model C1190B Door Warning Sign

DATASHEET

Features

- Connects to multiple sensing instruments
- One/Two Channel Device
- Bright solid state LED Alarm Display
- Audible Alert (internal and external)
- High reliability, fully dual redundant alarm circuits
- IEC61508 SIL2 level safety rating
- Environmentally Protected to IP54
- RoHS Compliance to 2011/65/EU (RoHS2)
- Reset/Test/Mute key switch
- Remotely Mute and Reset Alarms
- Repeat outputs provided per alarm.
- Instrument failure output provided
- Aesthetic wall-mount design.
- Low power consumption.
- 85-264Vac or optional 24Vdc powered; both with duplicate terminals
- Battery backup built-in for AC units

Overview

The Omni2 alarm annunciator is a compact wall mounted visual alarm indicator designed to safeguard against personnel inadvertently entering plant areas where abnormal conditions are present.

Typical Applications Include:

- Warning of airborne contamination & high radiation conditions in the nuclear industry
- Warning of Oxygen deficiency
- Warning of other hazardous environments and unsafe conditions.

Position the Omni2 on the wall adjacent to the entrance to an environmentally segregated area & connect the Omni2 to the monitoring instrument. If hazardous conditions are present in the area, a large bright flashing visual warning of the hazard is displayed, to deter entry to the area.

High Reliability Design

The Omni2 features full dual redundant design for each of the two alarms, solid state logic and visual display, providing a highly reliable alarm system, meeting or exceeding the functional safety requirements of these critical applications.

The Omni2 is designed to meet the requirements of SIL2 safety systems as defined in IEC61508.



Operation

Once an alarm has occurred, the visual display will continue to flash, and the audible alert will continue to sound until reset by the key-switch OR by the Remote Reset. The alarm cannot be reset if the alarm condition is still present. The internal audible will give a warning of a dangerous condition, even if the display is out of sight of the personnel.

Testability

The Omni2 provides features to allow easy routine testing of the alarm system. A green indicator light on the front of the unit provides indication that the unit is healthy. If a fault is detected in either of the dual redundant alarms, this indicator will extinguish, and the instrument failure output will activate warning of the failure. In addition, the Reset key-switch AND the Remote Reset can be used to test the alarm display. If the reset key-switch OR the Remote Reset is activated while no alarm is present, the alarm displays will illuminate.

Installation

The Omni2 is housed in an aesthetic low profile wall mount enclosure that has an IP54 protection rating (according to EN 60529) and provides battery venting.

Options for mechanical mounting include internal mounting holes or external mounting brackets (supplied). Wiring entry is provided through the bottom of the unit via up to five 20mm glands.





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SPECIFICATIONS

Power Supply

85-264Vac (Standard version)

Supply Voltage	85-264Vac 47-63Hz
Input Supply Current	< 0.1A/230V < 0.15A/115V
Switch-on Inrush current	< 1A (50Hz half cycle duration)

24Vdc (optional version)

Supply Voltage	21,6-27,6Vdc at 0.7A
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Alarm Inputs

Input Type	Potential Free Contacts
Action	Normally closed; Open to alarm.
Input Contact Quantity	Terminals provided for up to five input contacts wired in series per alarm. (see wiring diagram)
Input Open Circuit Voltage	15Vdc maximum
Input Short Circuit Current	5mA maximum
Maximum Closed Circuit Loop Resistance	<200 ohms total per alarm point.
Minimum Open Circuit Loop Resistance	>100kohms to guarantee open contact detection
Wire size	1.5mm ² (17SWG/15.5SWG) max.

Operator Controls

Type	One spring-loaded Key-switch for both alarm points.
Function	Reset / Test / Mute

Alarm Window Display

Quantity	2 Alarm windows
Lamp Type	Bright Backlit Solid State (LED)
Window Size	180mm x 70mm
Window Legend	Standard legend. (Legend can be specified when ordering)

Audible Alert (Internal)

Type	Internal Piezo Sounder
Audible Selection	User can enable/disable via link.

Audible Alert (External)

Rating	12V 100mA max.
Connection	Via terminals 27 and 28

Relay Contact Outputs

Outputs provided	2 x Repeat Alarm Output Contacts 1 x Instrument Fail Output Contact.
Contact Type	Potential free - Form A contact (Contact closed while normal, opens on alarm/fault)
Contact Rating	3A/30Vdc, 3A/250Vac, 90W
Isolation	1000Vac from contact to other circuits

Temperature Range

Operating Temperature	-20°C – 60 °C (-4°F – 140°F)
Storage Temperature	-10°C – 70 °C (+14°F – 158°F)

Battery Charger with built-in Battery*

Float Voltage (at 25°C)	13.7V-13.9V (12Volt Battery, trickle charger)
Battery Quantity & Type	1 off 12V 0.8Ah
Dimensions (L x W x H)	96 mm x 25 mm x 62mm
Charging Current	0.1Amp Max
Battery venting	Yes, IP54

*Battery charger and battery not included in DC versions

Mechanical

Outside Dimensions	Width: 230mm Height: 300mm Depth: 66mm
Mounting	Can be mounted using external mounting feet or through holes within the housing.

Weight

Unpacked/Packed	1.3kg/1.6kg approx.
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Compliance to Standards

Safety	EN 60950:1995
Emissions	EN55011:2008 Group I Class A
Immunity – ESD	IEC 61000-4-2: 2001, level 3
Immunity – RF Fields	IEC 61000-4-3: 2003, level 3
Immunity – Fast Transients	IEC 61000-4-4: 2004 2 kV – AC power port 1 kV – input/output lines
Vibration	IEC60068-2-6: 1995 10-150Hz. 1g
Functional Safety	Designed to meet IEC61508 SIL2.
RoHS Compliance	2011/65/EU (RoHS2)
Ingress Protection (I.P.)	IP54

Ordering Information

Order Code*	Description			
C1190B	Omni2 Standard 85-264Vac Supply Door Warning Sign Single Channel Alarm Annunciator with Yellow "Danger" Window (Top) & White "Keep Out" Window (Bottom). For non standard options, refer to table below			
Model	Window Text	Window Colours	Power Supply	Channel
C1190B	-X	-X	-X	-X
	0=Std ¹	0=Std ²	0=85-264Vac	0=Single
	1=Custom ³	1=Custom ³	2=24Vdc	1=Dual

Note:

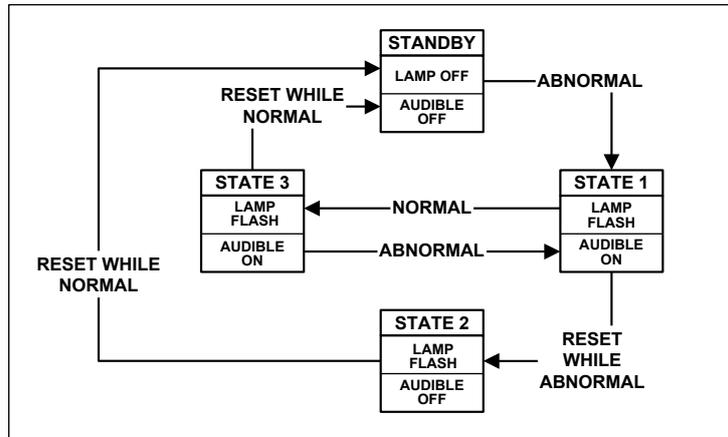
- Standard Top Window Text is "Danger" and standard Bottom Window Text is "Keep Out".
- Standard Top Window Colour is Yellow and standard Bottom Window Colour is White.
- For Custom Window text and colours, please specify both text and colours (choice of White or Yellow) for EACH of the windows.
- Typical custom order code C1190B-1-1-0-1 would be an Omni2 Door Warning Sign Dual Channel Alarm Annunciator with Custom Window Text (specify for each window), Custom Window Colour (specify for each window [White or Yellow]) and 85-264Vac Power Supply.



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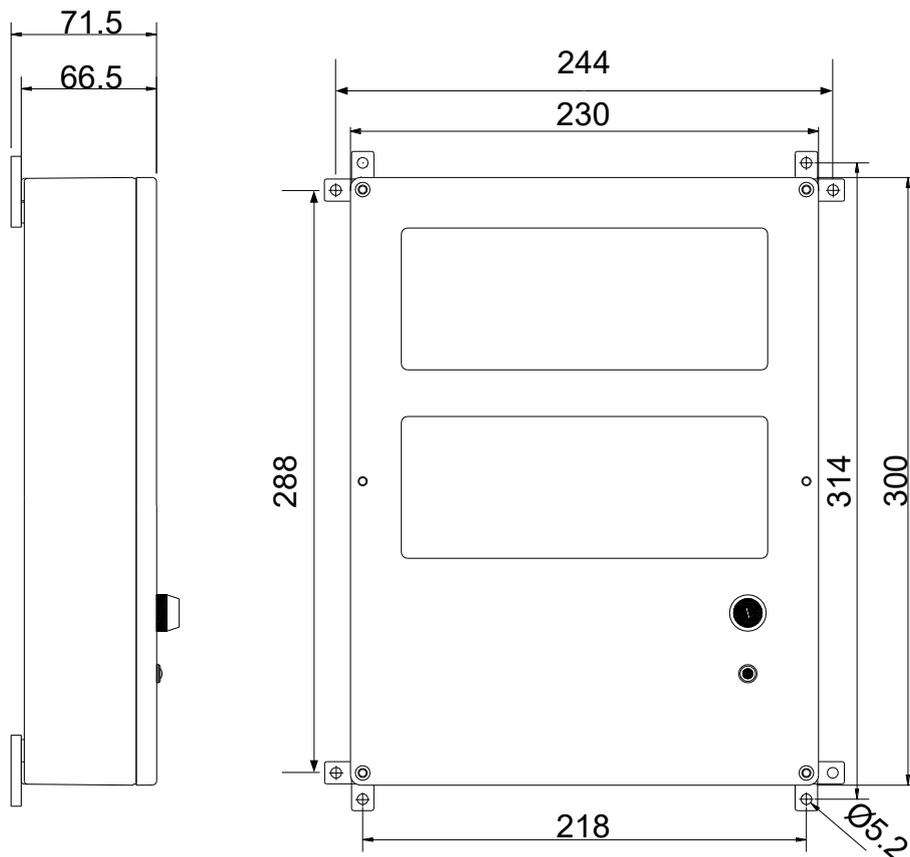
Model C1190B Door Warning Sign

ALARM SEQUENCE STATE DIAGRAM



Alarm Flashing Sequence - Momentary (Fleeting) Alarm, Manual Reset

MECHANICAL DETAILS

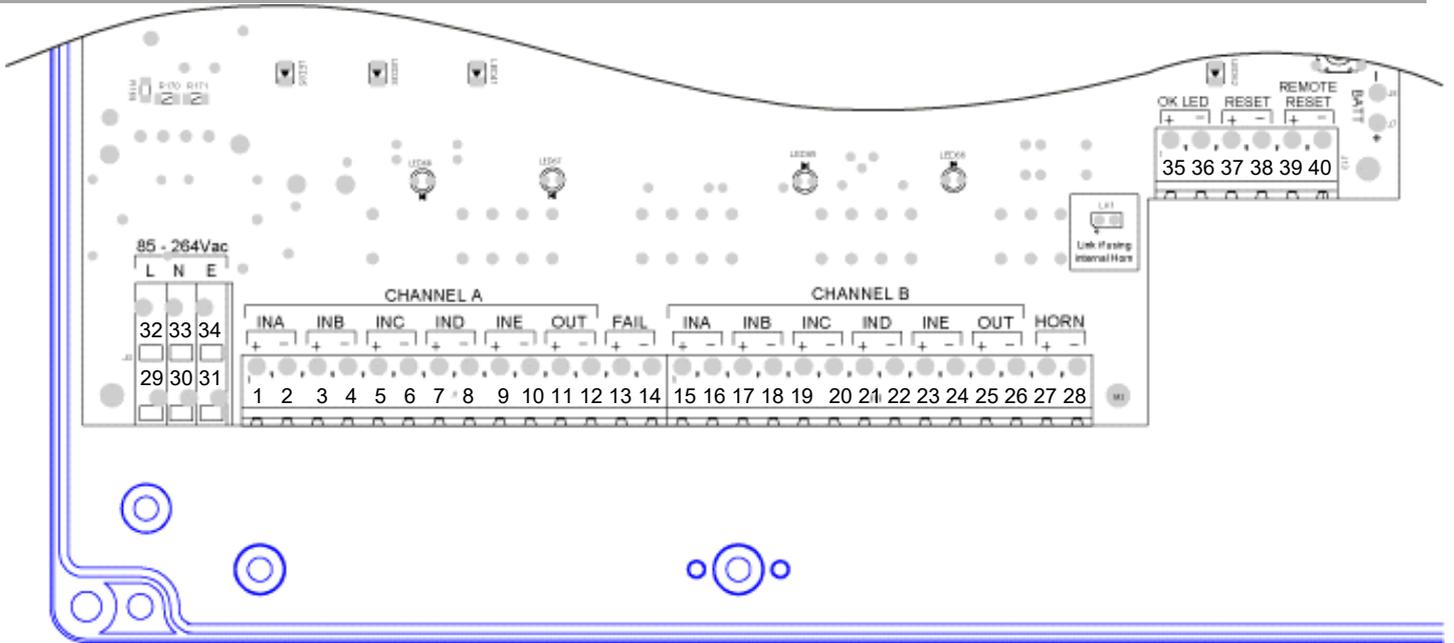




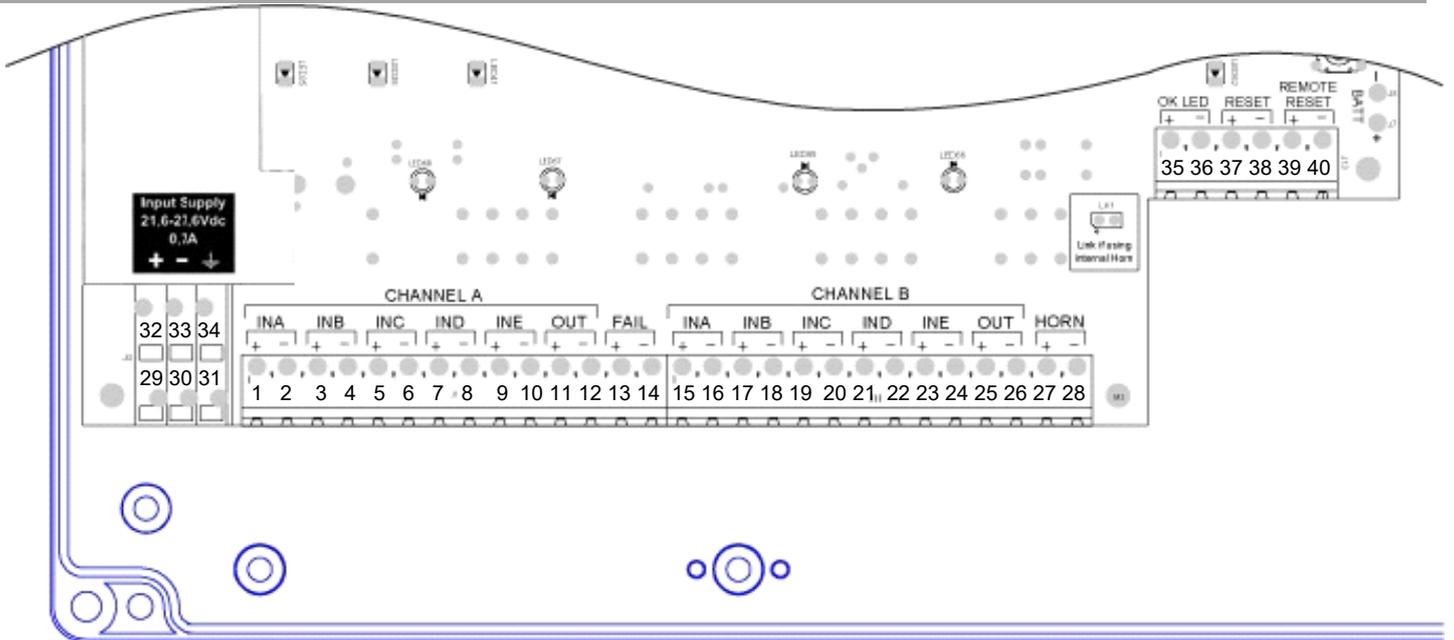
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ELECTRICAL TERMINAL LAYOUT (220V/110Vac version)



ELECTRICAL TERMINAL LAYOUT (24Vdc version)

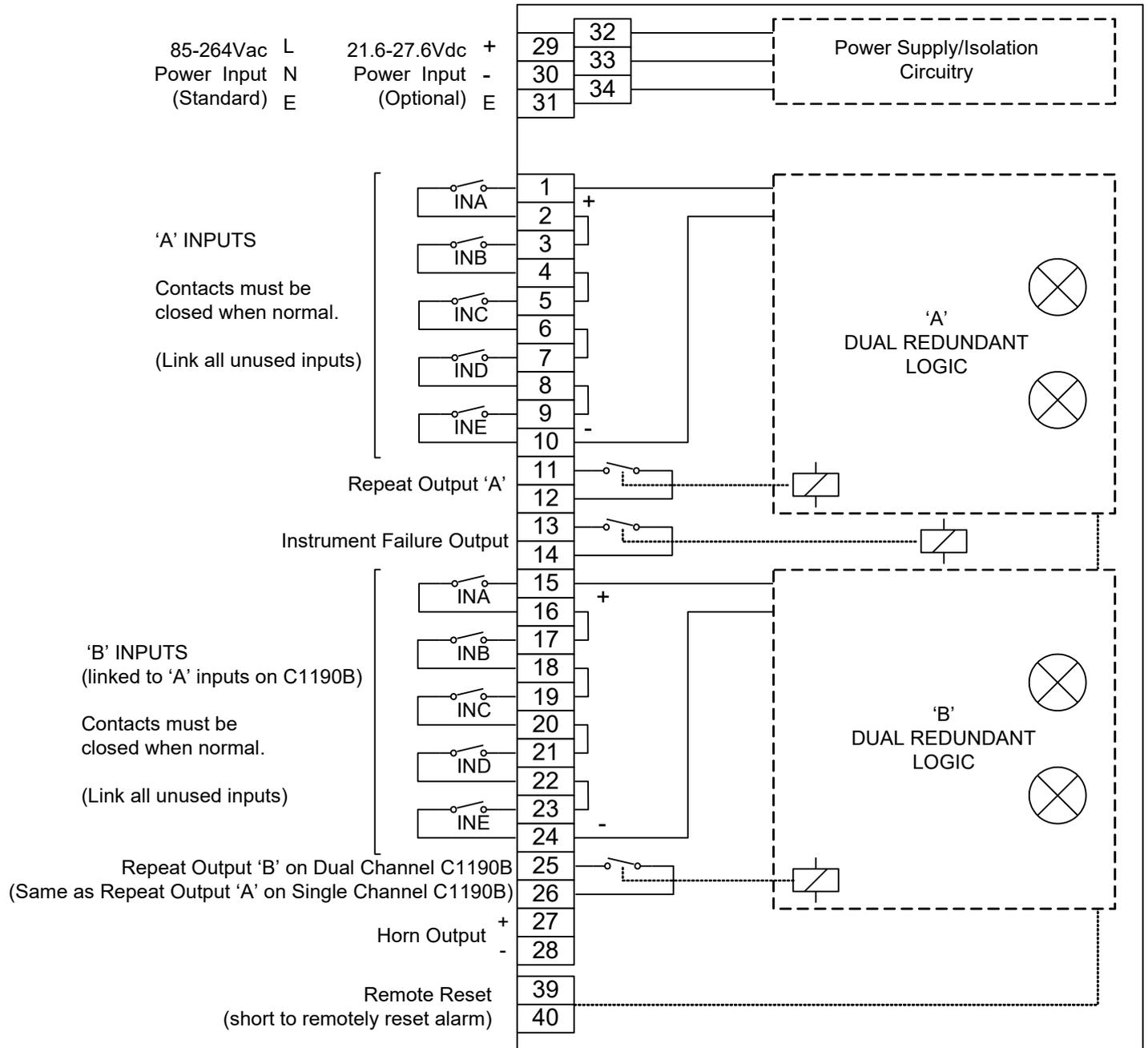




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ELECTRICAL CONNECTION DIAGRAM



- NOTE: 1. All output contacts are closed when normal
2. For 24Vdc input option, connecting either the positive or the negative of the supply to earth will not affect Omni2 operation