



Omni 2S Slave Alarm Annunciator

Model C1191A Omni2S Slave Alarm Display

DATASHEET

Features

- LED Beacon Visual Alert
- Connects to multiple Radiation Monitors
- Audible Alert with selectable tone
- High reliability, fully dual redundant alarm circuit
- IEC61508 SIL2 level safety rating
- Environmentally Protected to IP55 (IP65 Optional)
- Mute pushbutton to silence Alarms
- Two repeat outputs provided
- Instrument failure output provided
- Aesthetic wall-mount design
- Low Power consumption
- 85-264Vac Powered
- Battery backup



Overview

The Omni 2S slave alarm annunciator is a compact visual alarm indicator designed for radiation and airborne activity hazard warning.

The Omni 2S is used to warn personnel about abnormal or hazardous radiological conditions.

Typical Application

Position the Omni 2S on the wall inside the area of potential radiation hazard or contamination. Ensure the beacon is visible to personnel. Connect the Omni 2S to the area monitors, and if airborne contamination or high radiation conditions are detected, a flashing LED beacon provides visual warning of the hazard, and a warning to exit the area. The sounder tone can be selected to indicate type of contamination.

High Reliability Design

The Omni 2S features dual redundant design, providing a highly reliable alarm system, meeting or exceeding the functional safety requirements of these critical applications.

The Omni 2S is designed to meet SIL2 requirements as defined in IEC61508.

Operation

Once an alarm has occurred, the Red LED beacon light will continue to flash, and the audible alert will continue to sound until muted by the pushbutton. The alarm

warning turns off and the mute pushbutton resets if the alarm condition returns to normal.

The internal audible warning will give a warning of a dangerous condition, even if the display is out of sight of the personnel.

The unit can be latched or unlatched remotely.

Testability

The Omni 2S provides features to allow easy routine testing of the alarm system. A green beacon light provides indication that the unit is healthy. If mains supply fails or if a fault is detected in the redundant alarm circuit, this indicator will extinguish, and the instrument failure output will activate. In addition, the Mute pushbutton can be used to test the red beacon. If the Mute pushbutton is activated while no alarm is present, the red beacon will illuminate.

Installation

The Omni 2 is housed in an aesthetic low profile wall mount enclosure that has an IP55 (IP65 Optional) protection rating (according to EN 60529). Options for mechanical mounting include internal mounting holes or external mounting brackets (supplied).

Wiring entry is provided through the bottom or rear of the unit via up to four 20mm glands.





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SPECIFICATIONS

Power Supply

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

Alarm Inputs

Input Type	Volt Free Contacts
Action	Normally closed; Open to alarm.
Input Contact Quantity	Terminals provided for up to five input contacts wired in series. (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	2.5mm ² (17SWG/15.5SWG) max.

Alarm Latch Input

Input Type	Specifications same as alarm input
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Operator Controls

Type	One illuminated pushbutton
Function	Alarm Mute /Lamp Test

Alarm Visual Display

Quantity	1 Alarm beacon
Type	Bright Red/Green Solid State (LED)
Alarm indication	Red section flashing at 1-1.4Hz
Healthy indication	Green section steady (not illuminated in case of circuit failure or mains power failure)

Audible Alert

Type	Internal Piezo Sounder
Tone Selection	Tone selectable with an internal link (970Hz cont. or 833/625Hz alternating)

Relay Contact Outputs

Outputs provided	2 x Repeat Alarm Output Contact 1 x Instrument Fail Output Contact.
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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 (Battery Optional)

Float Voltage (at 25°C)	13.7V-13.9V (12Volt Battery , trickle charger)
Charging Current	0.1Amp Max

Mechanical

Outside Dimensions	Width: 230mm Height: 413mm 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
Emissions	EN55011:1997 Group I Class A
Immunity – ESD	IEC 61000-4-2:1995, 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.

Ordering Information

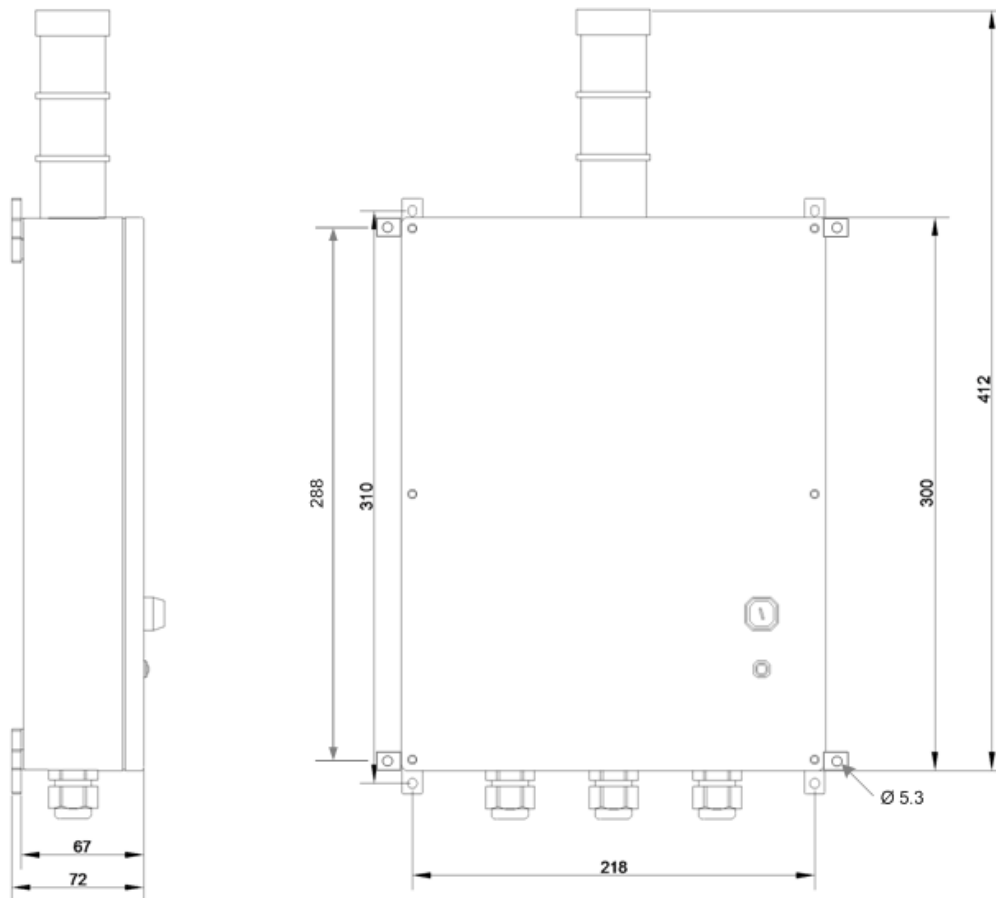
Order Code	Description
C1191A	Omni 2S Slave Alarm Annunciator (IP55)
C1191A-1	Omni 2S Slave Alarm Annunciator (IP65)



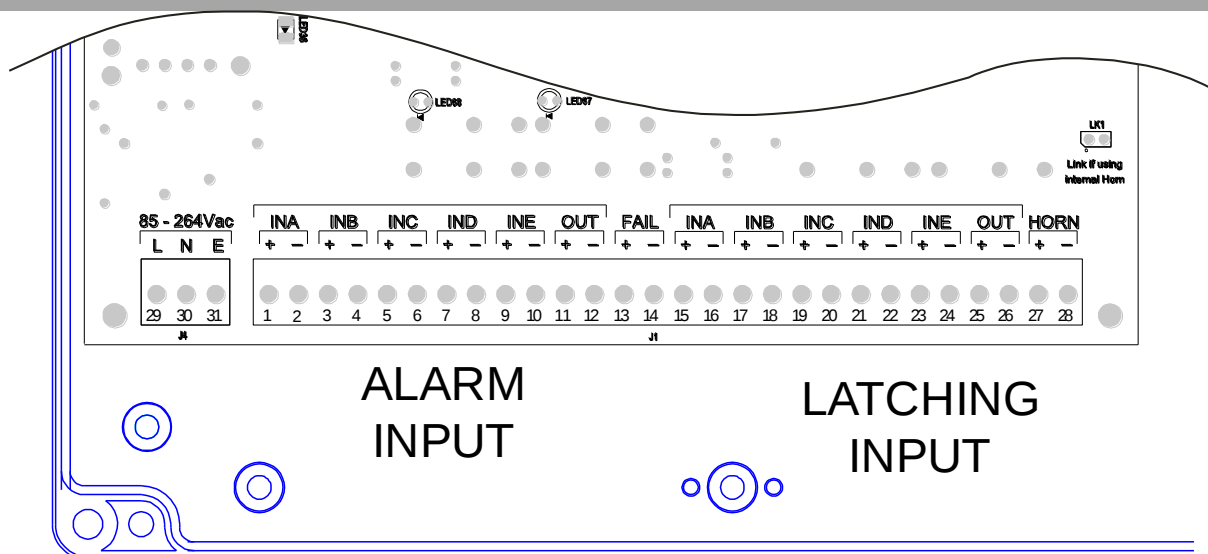
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MECHANICAL DETAILS



ELECTRICAL TERMINAL LAYOUT

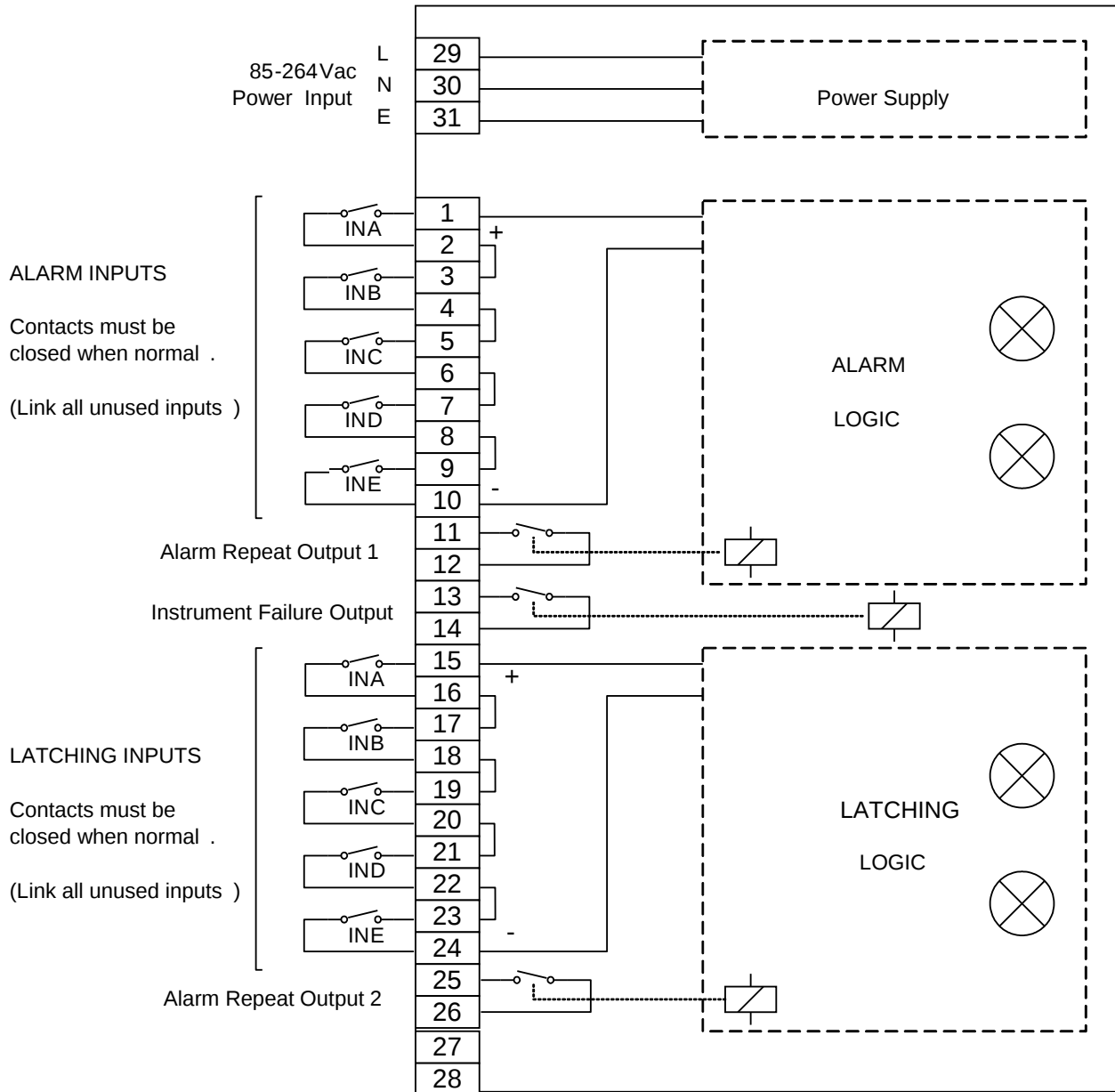




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ELECTRICAL CONNECTION DIAGRAM



NOTE : All output contacts are closed when normal