



Omni16C Intrinsically Safe Annunciator

Model C1480B-EX Ex ic Omni16 Intrinsically Safe Backlit Annunciator

DATASHEET

- Approved for use in Hazardous areas IEC60079-11 Ex ic I/IIC T4
- 24Vdc Powered
- Panel Mounted
- IP54 Rated enclosure
- Low Power Backlit LED displays
- SIL 1 Rated to IEC61508
- Atex Rated: Ex II 3G Ex ic IICT4 Gc



FEATURES

- 24Vdc Powered
- Selection of Backlit LED Board Colours
- 16 Potential Free Contact Inputs
- 27 Standard Alarm Sequences
- User printed legends on laser printer
- Complies with IEC 60079-0 / IEC 60079-11 Ex ic I/IIC T4

Overview

The Omni16 C1480B-EX Annunciator is an intrinsically safe backlit annunciator suitable for use in hazardous environments. The Omni16 once mounted is fully enclosed in a protective enclosure to allow location in the hazardous area.

Configuration

The Omni16 accepts 16 potential free inputs and are individually DIP switch configured for N.O. or N.C. operation and a choice of 27 standard sequences. The four output relays can be configured as group alarm, horn output or watchdog. The group alarms can be configured to one of four functions ie. Follows Input, Follows Alarm, Multiple Reflash and Ringback Horn.

The entire operation of the unit is configured via DIP switches in "Switch-Set" mode. In "Soft-Set" mode the operation of the unit is configured using Omniflex's Omniset Software.

Mechanical

The enclosure mounts around a panel cut-out which is made to accommodate the Omni16. The Omni16 is secured with jacking bars and stud holes are drilled surrounding the cut-out to accommodate the gasketed front cover. Once the Annunciator is mounted into the panel cut-out the gasketed rear enclosure is then bolted over the Annunciator from behind the panel ensuring a good seal on the front and rear of the panel.

Electrical

The wiring and electrical connections are identical to the standard Omni16 except they enter the enclosure via glands on the housing. Up to 256 points can be combined into an alarm system.

Pushbutton and Horns

Suitable Rated Pushbuttons for Silence, Acknowledge, Reset, Test (ordered separately) are accommodated by wiring through the glands to the Omni16 Terminals.

Horns and beacons are accommodated the same way.

Compliance to Standards

The Omni16 C1480B-EX annunciator complies with the same standards as the standard Omni16 and has been assessed as suitable for use in SIL1 applications as specified in IEC61508.

The additional standards that the C1480B-EX complies with are the Explosion Protection standards: IEC60079-0 and IEC60079-11 (Ex ic) and the Atex standard: Ex II 3G Ex ic IICT4 Gc

Backlit LED Display Boards

The C1480B-EX is only available in the 24Vdc backlit LED version. These LED Boards are available in Red, Yellow, White, Blue and Green.

Repeat Relay Outputs

The optional Repeat Relay Board is NOT available in the C1480B-EX.



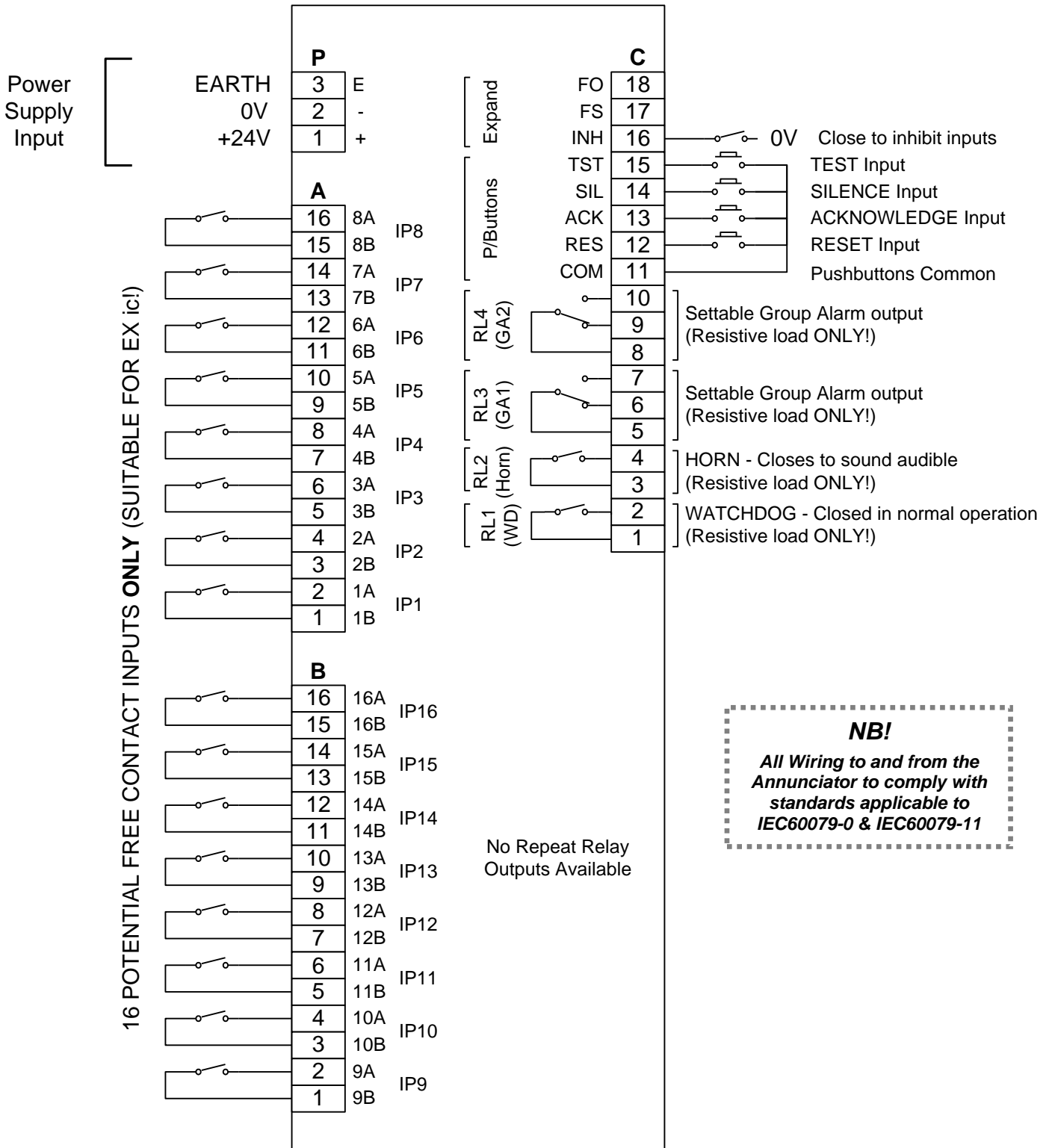


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Electrical Connection Diagram





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Specifications

Power Supply

Voltage	21.6Vdc – 27Vdc Um = 27Vdc (absolute maximum)
Max. Ripple	2% peak to peak
Current Consumption	100mA typical (all lamps off) 1100mA (all lamps on)
Connection	Terminal Block
Wire Size	1,5mm ² (17SWG/15AWG) recommended 2.5mm ² (15SWG/13AWG) max.

Alarm Inputs

Quantity /Type	16 / binary (contact)
Sense	Normally Open (N/O) or Normally Closed (N/C) , selectable by DIP switch
Maximum Open Circuit Voltage	27V dc
Loop Resistance	100 ohms maximum
Contact wetting	Approx. 4mA at zero loop resistance
Scan Time	8ms
Connection	Terminal Block
Wire Size	0.4 mm ² (22SWG/21AWG) recommended 1.5mm ² (17 SWG/15.5 AWG) max.

Push Buttons

Quantity / Type	4 / N/O contacts
Maximum Open Circuit	27V
Loop Resistance	100 ohms maximum
Contact Wetting	4mA
Functions	Silence, Acknowledge, Reset, Test
Connection	Terminal Block
Wire Size	0.4 mm ² (22SWG/21AWG) recommended 2.5mm ² (15SWG/13AWG) max.

Inhibit Input

Quantity / Type	1 / Binary (contact)
Sense	Normally Open (N/O) or Normally closed (N/C) ; selectable by DIP switch
Maximum Open Circuit Voltage	27V dc
Loop Resistance	100 ohms maximum
Contact Wetting	4mA
Connection	via Lever Clamp Terminals
Wire Size	0.4 mm ² (22SWG/21AWG) recommended 2.5mm ² (15SWG/13AWG) max.

Group Alarm Output

Quantity / Type	2 Changeover contact outputs
Absolute Maximum Voltage	27Vdc*
Absolute Maximum Current	500mA*
Connection	Terminal Block
Wire Size	0.5 mm ² (22SWG/21AWG) recommended 2.5mm ² (15SWG/13AWG) max.

Horn Output

Quantity / Type	1 Normally Open contact output
Absolute Maximum Voltage	27Vdc*
Absolute Maximum Current	500mA*
Connection	Terminal Block
Wire Size	0.5 mm ² (22SWG/21AWG) recommended 2.5mm ² (15SWG/13AWG) max.

Warning: outputs must only be wired to non-reactive (resistive) loads

Environmental

Operating Temperature	0°C to 60°C (32°F - 140°F)
Humidity	Up to 90% RH, non condensing is recommended
Storage Temperature	-25°C to 70°C (-13°F to 158°F)
Humidity	Less than 40% RH recommended

Mechanical

Mounting	Panel mounted
Recommended Panel thickness	1,6mm (0.0630") minimum
Cut-out	280mm(11.02") horizontal 112mm (4.41") vertical
Overall	181mm (7.12") height 352mm (13.86") width 142mm (5.59) depth behind panel
Weight (Unpacked)	7.4kg (16.31 lbs)

Compliance to Standards

Atex Rating	⊕ II 3G Ex ic IIC T4 Gc
Explosion Protection	IEC60079-0 IEC60079-11 Ex ic I/IIC T4
Functional Safety	IEC61508 SIL1
Safety	EN 60950:1995
Emissions	EN55011:1997 Group I Class A
Immunity - ESD	IEC 61000-4-2:2002, level 3
Immunity – RF Fields	IEC 61000-4-3:2003, level 3
Immunity – Fast Transients	IEC 61000-4-4:2004 2 kV – DC power port 1 kV – input/output lines
Supply Variations	IEC 61000-4-7: 1991, 24Vdc + 15% -10%
Ingress Protection (IP)	IP54
Vibration	IEC60068-2-6: 10-150Hz. 1g

Ordering Information

ORDER CODE	DESCRIPTION
C1480B-EX	Omni16C Ex ic Backlit 24 Vdc (No LED Boards) 24V COMM STD
C1150	Omni8/16 Red Backlit LED Board
C1151	Omni8/16 Yellow Backlit LED Board
C1152	Omni8/16 Green Backlit LED Board
C1153	Omni8/16 Blue Backlit LED Board
C1154	Omni8/16 Orange Backlit LED Board
C1155	Omni8/16 White Backlit LED Board
C1415A	Omni16 Remote Pushbutton Station

**Note:All loads and wiring must comply to the Ex ic standards*

