



# Omni16C 16 Point Alarm Annunciator

16 contact input Annunciator with Backlit LED display

Model Number  
**C1480B**

## DATASHEET

- 24Vdc Panel Mount 16 Point Alarm Annunciator
- Expandable up to 256 points
- Multiple Alarm Sequences easily set by "DIP" switches
- IP42 Front Panel Protection:
- All Round Compliance:
  - IEC61508 SIL1 Compliant
  - RoHS Compliant



### Features

- Backlit LED Display
- 24Vdc Powered (20-60Vdc or 85-264Vac/dc options)
- Small, compact, panel mounted and easy to use
- 16 Potential Free Contact or Ribbon Inputs
- Normally Open/Closed Selectable via DIP switch
- Optional Serial Port - Modbus/PLC compatible
- User printed legends on inkjet/laser
- 27 Standard Sequences
- Four function Group Alarm output contacts
- Optional repeat relay outputs per input
- Fully "DIP" Switch Configurable
- Certified to IEC61508 SIL1 Safety Standard
- RoHS Compliance to 2011/65/EU (RoHS2)
- IP42 Compliant Front Panel

### Overview

The **Omni16C** alarm annunciator is a standard off-the-shelf product using Backlit LED windows. The Omni16C is panel mounted with optional integral Test, Silence, Acknowledge, and Reset Pushbuttons (sacrificing one alarm window) or using an externally wired pushbutton station.

The 16 inputs accept potential free inputs and are individually DIP switch configured for N.O. or N.C. operation. Inputs are wired to terminals at the rear of the annunciator. Optional Inputs boards for common negative (PLC compatible) or fully isolated 19-60Vdc or 90-150 Vac/dc are also available as well as ribbon header input (Common 24V or 0V). The alarm sequence for the 16 inputs is also configured by DIP switch

with a choice of 27 standard sequences. Four output relays can be configured as group alarm, horn output and watchdog with a change over contact at the terminals. The group alarm can be set to one of four functions, Follows input, Follows alarm, Multiple reflash, Ringback horn.

The Omni16C can be combined into alarm systems up to 256 points.

Input repeats and Lamp repeats are available using an optional ribbon header terminal board C1426. The Omni16C compliments PLCs in applications where alarm annunciation is required using serial communications via Modbus.

The Omni16C has been assessed as suitable for use in SIL1 applications as specified in IEC61508.



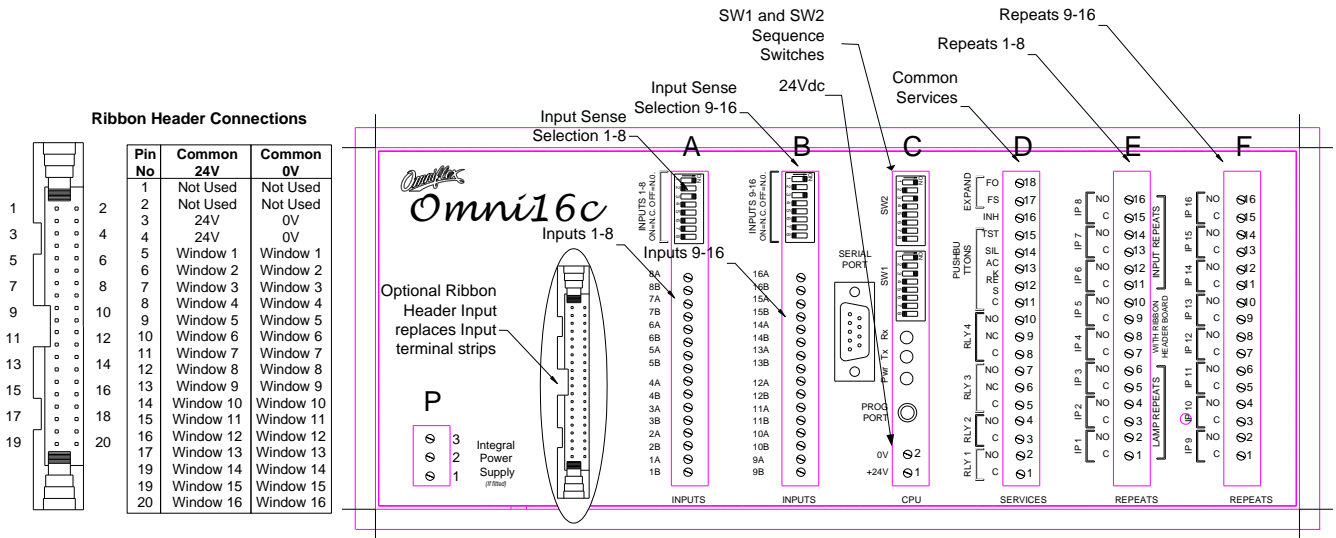


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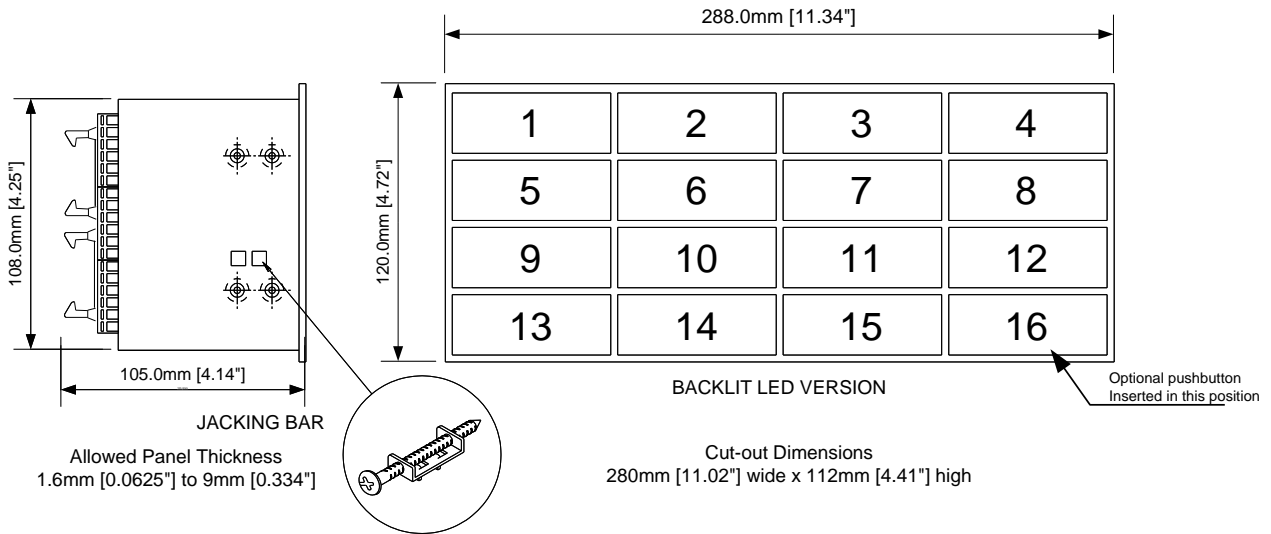
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## Electrical Connection



## Mechanical Configuration (including Window Layout)



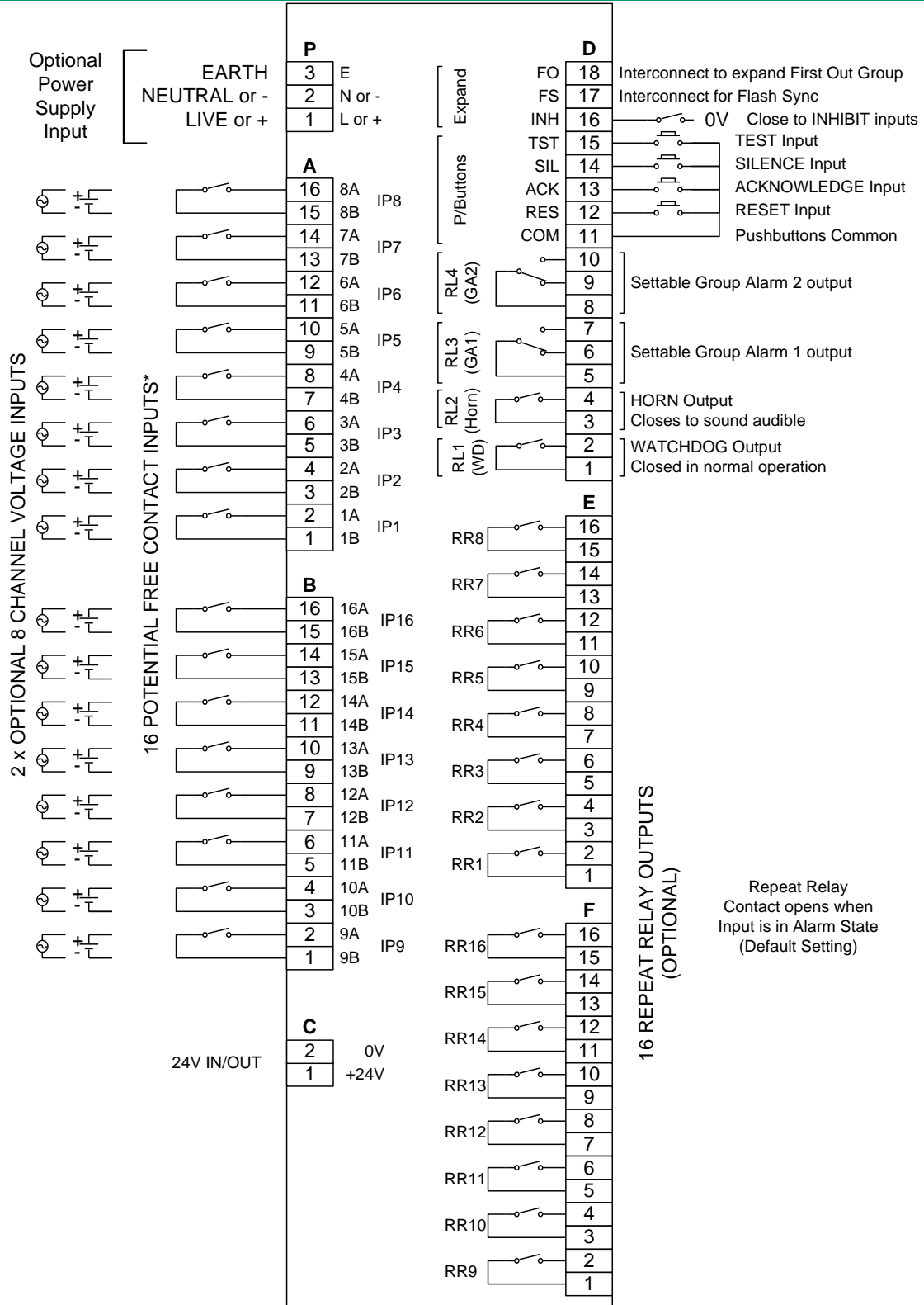


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## Electrical Connection Diagram



\* OPTIONAL RIBBON HEADER INPUTS



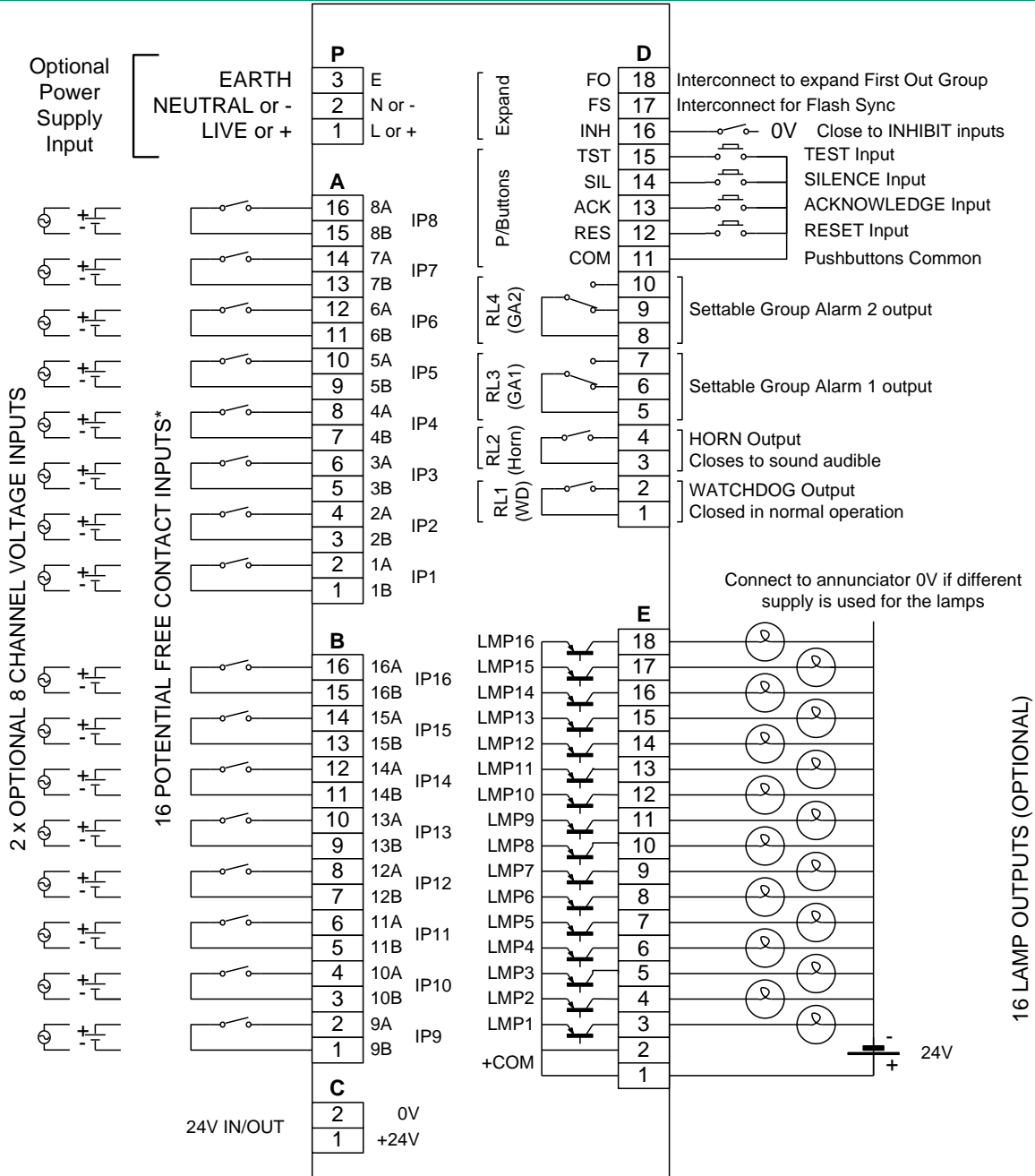


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## Electrical Connection Diagram (Lamp Driver)



\* OPTIONAL RIBBON HEADER INPUTS





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## Specifications

### Power Supply Options

Voltage Option	24Vdc (STD)	20-60Vdc**	85-264Vac**
Isolation PSU to inputs	None	1500Vrms	1500Vrms
** To be ordered as an option see Accessories list; fitted prior to shipment C1480 operating range is 20-60Vdc			
Max dc Ripple	10% pk. to pk.	10% pk. to pk.	N/A
Consumption	1 Amp max.	1.2-0.6 Amps	0.6-0.3A

### Alarm Inputs - Potential Free Contact

Input Board Option	<b>C1480-0</b>	<b>C1480-1</b>
Input Type	Common 24V **	Common 0V
	** Standard Option	Order
Quantity and Type	16 Potential Free Contacts	
Max. Open cct Voltage	28Vdc	
Max. Closed cct Current	5mA per input circuit	
Max. Loop Resistance to detect closed contact	200 ohms	
Min. Loop Resistance to detect open contact	100 kohms	

### Alarm Inputs - Individually Isolated

Input Board Option	<b>C1480-2</b>	<b>C1480-3</b>
Input Voltage range	19 to 60Vdc	90-150Vdc/ac rms
Isolation Input to Logic	1500V ac rms	1500V ac rms
Isolation Input to Input	500V ac rms	500V ac rms
Quantity and Type	16 dc or ac inputs	

### Compliance to standards

Safety	IEC950
EMC	EN50081-2; EN50082-2
Compliance to CEEB EES 1988 and Eskom NWS1819 specifications	

### Alarm Inputs - Ribbon Header Inputs

Input Board Option	<b>C1480-4</b>	<b>C1480-5</b>
Input Type	Common 24V	Common 0V
Quantity and Type	16 Ribbon Header Inputs	
Max. Open cct Voltage	28Vdc	
Max. Closed cct Current	5mA per input circuit	
Max. Loop Resistance to detect closed contact	200 ohms	

### Inputs General

Input Scan Rate	4 milliseconds
Wire size	1.5mm <sup>2</sup> (17SWG/15.5SWG) max.
Connections	Via plug-in Terminals

### Integral Pushbuttons

Quantity	Four buttons mounted on front facia
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Functions Silence; Acknowledge; Reset; Circuit Test

### Alarm Window Display

Quantity	16 Alarm windows
Type	Backlit LED
Window Size	24mmx64mm
Legend Area	21mmx60mm
Legend Type	User printed on film with laser/inkjet using software provided.

### Relay Contact Outputs

Contact Type	2 Potential free changeover (Form C) 2 Potential free normally Open (Form A)
Contact Rating	2A 30Vdc or 0.5A 230Vac
Isolation	1000Vac from contact to other circuits

### Temperature Range

Operating Temperature	0°C – 60 °C (+32°F – 140°F)
Humidity	Up to 90% RH, non condensing is recommended
Storage Temperature	-10°C – 70 °C (+14°F – 158°F)
Humidity	Less than 40% RH is recommended

### Weight

Unpacked/Packed	1.8kg approx. / 2.2kg approximately
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### Compliance to Standards

Ingress Protection (I.P.)	IP42 (front only)
Functional Safety	IE61508 SIL1 Compliant
Human Safety	EN 60950:1995
Emissions	EN55011 & EN50081-2:1994 Grp I Class A
Immunity – ESD	IEC 61000-4-2:1995, level 3
Immunity – RF Fields	IEC 61000-4-3:1995, level 3
Immunity – Fast Transients	IEC 61000-4-4:1995 2 kV – DC power port 1 kV – input/output lines
Supply Variations	IEC 61000-4-7:1991, 24 V dc +15% -10%
Vibration	IEC60068-2-6: 1995 10-150Hz. 1g
RoHS Compliance	2011/65/EU (RoHS2)

### Sequence Options

Seq. No.	Sequence Description
1	Lamp follows input
2	Momentary (fleeting) alarm, manual reset
3	Alarm only (non-latching inputs) auto reset
4	Momentary alarm, manual reset with alarm ringback
5	First out, multiple groups, manual reset
6	First out, manual reset, auto reset on subsequent alarms
7	First out, single group, manual reset, first out continuous flash
8	First out, manual reset, subsequent alarms without horn
9	Momentary alarm, manual reset, auto silence after time delay.





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10	Momentary alarm, manual reset, realarm after time if still abnormal.
11	Momentary alarm, manual reset, constant flash (for motor alarms).
12	Momentary alarm, auto reset, time delay on return to normal.
13	Pulse monitoring alarm; manual reset
14	Momentary alarm, manual reset, with ringback
18	Momentary alarm, auto reset
21	First out, multiple groups, auto reset
23	First out, single group, auto reset, first out continuous flash

24	First out, auto reset, subsequent alarms without horn
25	Momentary alarm, auto reset, auto silence after time delay.
26	Momentary alarm, auto reset, realarm after time if still abnormal.
27	Momentary alarm, auto reset, constant flash (for motor alarms)
28	Pulse monitoring alarm, auto reset
30	Serial port read only mode
31	Serial port read/write mode

## Ordering Information

ORDER CODE	DESCRIPTION
C1480B-x	LED Backlit Alarm Annunciator; 24Vdc

Input Options			
x	Description	x	Description
Omit x	24V Common	-3	90-150Vac/dc iso
-1	0V Common	-4	Ribbon Inputs 24V Common
-2	19-60Vdc iso	-5	Ribbon Inputs 0V Common

**Note:** The Model C1481B Sidebar LED Annunciator has been discontinued. The C1480B is a drop in replacement with an improved display"

### Accessories To be ordered separately

#### Input Board Option

C1174A	Omni16C Ribbon Header Input Board
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#### Power Supply Option – fitted into the Omni16C Housing.

C1421	85-264Vac/dc Isolated Power Supply
C1422	20-60Vdc Isolated Power Supply

#### Serial Communications Option (Modbus)

C1423A	Isolated RS232/485 Serial Port
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#### Repeat Outputs

C1425	8 way Repeat Relay Board
C1426	16 way Ribbon-Header Repeat Output Board (Input and Lamp Repeats)
C1169	16 Way Repeat Lamp Driver Terminals

#### Pushbutton Stations

C1420	Integral Pushbutton Station – (in window 16)
C1415A	Remote Pushbutton Station with Audible

#### Window and Lamp Board Options

##### Backlit LED

C1150	Red Backlit LED Lamp Board
C1151	Yellow Backlit LED Lamp Board
C1152	Green Backlit LED Lamp Board
C1153	Blue Backlit LED Lamp Board
C1154	Orange Backlit LED Lamp Board
C1155	White Backlit LED Lamp Board

#### Incandescent (as Spares only; Lamp version of Annunciator no longer available)

C1160	Lamp and Holder 8 Window Pack
C1161	Incandescent Lamp replacement 10 pack
C1162	Incandescent Lamp replacements 100 pack
C1163	Assorted Colour Filter Kit
C1164A	Plastic Windows and Diffuser Kit (8 pack)

#### Sidebar LEDs (as Spares only; Sidebar LED version of Annunciator no longer available)

C1448-1	Black engravable window
C1448-2	Red engravable window
C1448-3	Amber engravable window
C1448-4	Yellow engravable window
C1448-5	Green engravable window
C1448-6	Blue engravable window
C1448-7	White engravable window
C1446	Engraving for Sidebar LED Windows

#### Mounting Hardware

C1431-01	Mounting Kit 2 High Stack
C1431-02	Mounting Kit 3 High Stack
C1431-03	Mounting Kit 4 High Stack

#### Interface Accessories

C1168B	Omniset Programming cable for Prog. Port
C6320A-2	Ribbon Header to terminals converter
C6308A-2-0	Ribbon to 16 Relays Form C 5A
C1432-1	Omni16 Display Ribbon Cable 1m
C1432-2	Omni16 Display Ribbon Cable 2m
C1432-3	Omni16 Display Ribbon Cable 3m

### Spares To be ordered separately for spares; will NOT be fitted before delivery.

Input Boards	Description
C1171	Omni8/16C Standard 8 Channel Common Positive
C1173	Omni8/16C Standard 8 Channel Common Negative
C1172	Omni 8/16C 8 Channel Isolated 19-60Vdc Inputs
C1170	Omni 8/16C 8 Channel Isolated 90-150Vac/dc Inputs

