Omni8C 8 Point Alarm Annunciator

8 contact input Annunciator with Backlit LED display

Model Number
C1490B

DATASHEET

- 24Vdc Panel Mount 8 Point Alarm Annunciator
- Expandable up to 128 points
- Multiple Alarm Sequences easily set by “DIP” switches
- IP42 Front Panel Protection:
- All Round Compliance:
  - IE61508 SIL1 Compliant
  - RoHS Compliant

Features

- Backlit LED Display
- 24Vdc Powered
- Small, compact, panel mounted and easy to use
- 8 Potential Free Contacts
- 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 **Omni8C** alarm annunciator is a compact version of the popular Omni16C offering similar features to its bigger brother. It is an off-the-shelf product using Backlit LED windows. The Omni8C is panel mounted with optional integral Test, Silence, Acknowledge, and Reset Pushbuttons (sacrificing one alarm window) or using an externally wired pushbutton station.

The 8 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. The alarm sequence for the 8 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.

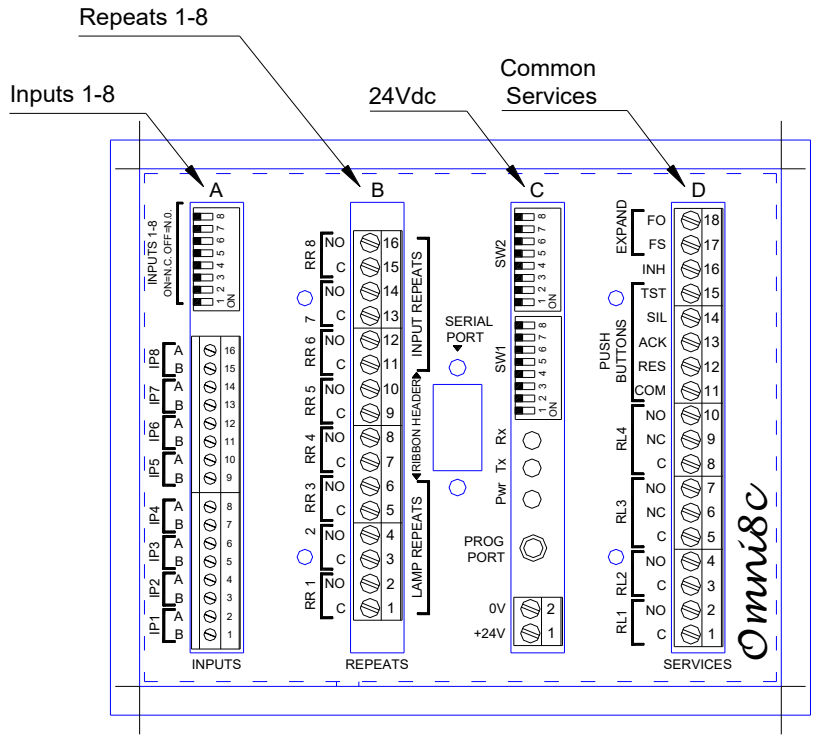
The Omni8C can be combined into alarm systems up to 256 points.

Input repeats and Lamp repeats are available using an optional ribbon header terminal board C1426. The Omni8C compliments PLCs in applications where alarm annunciation is required using serial communications via Modbus.

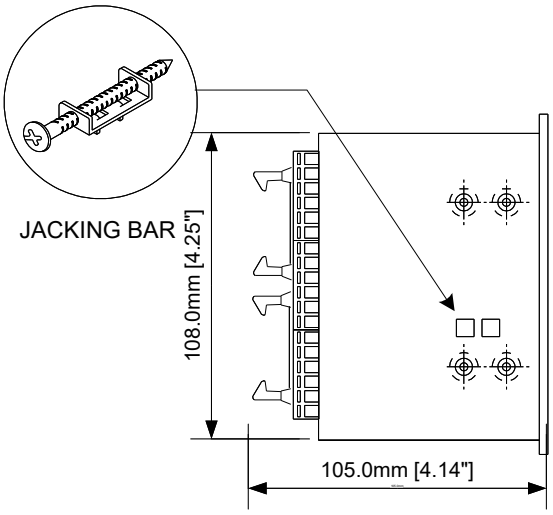
Input 8 may be designated via DIP switch as an Inhibit input which disables all the inputs on the annunciator during maintenance activities.

The Omni8C has been assessed as suitable for use in SIL1 applications as specified in IEC61508.

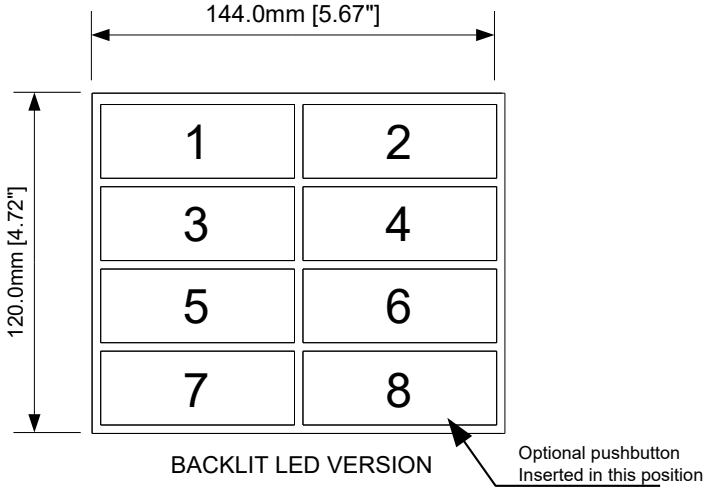
Electrical Connection



Mechanical Configuration (including Window Layout)

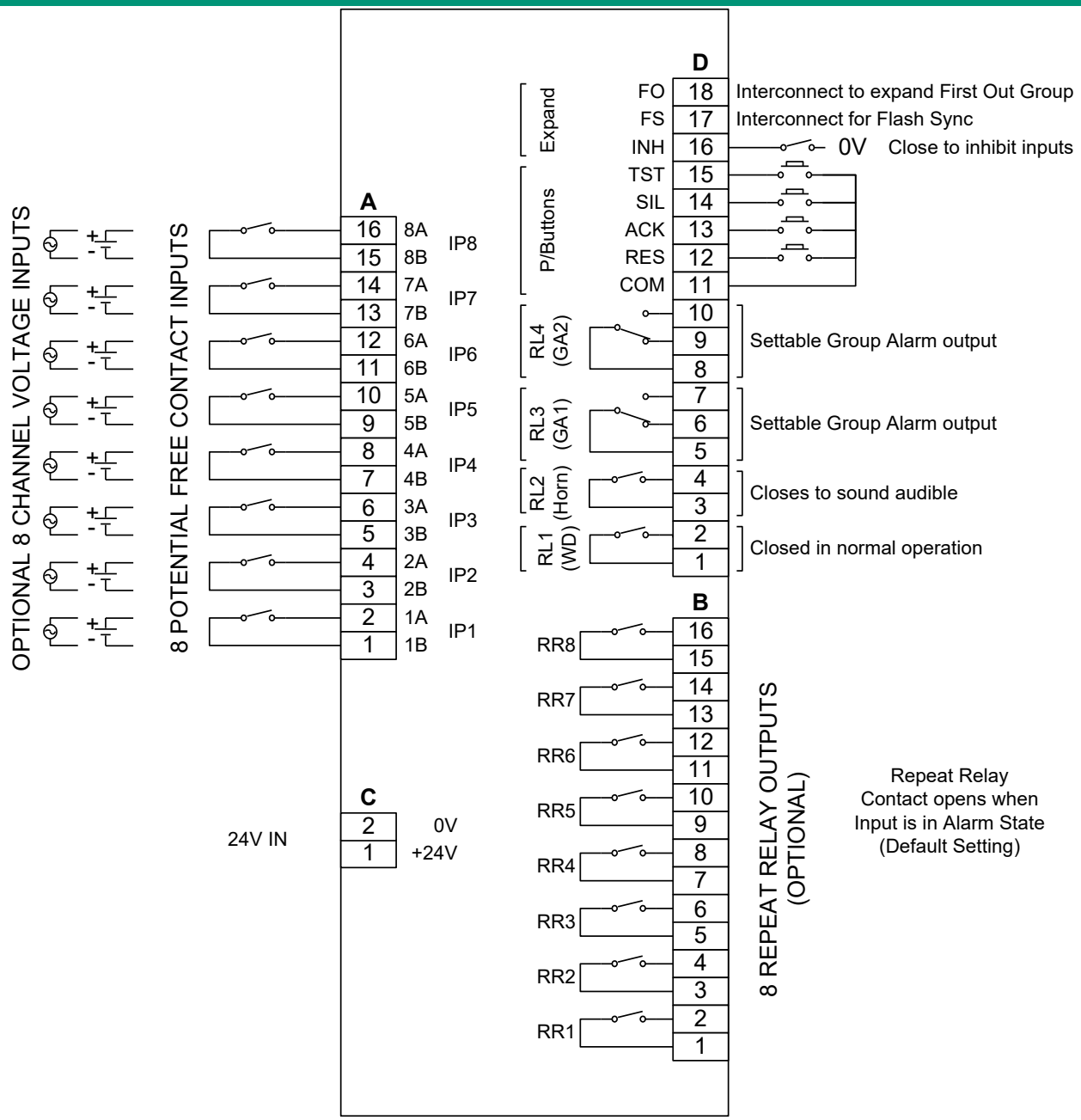


Allowed Panel Thickness
1.6mm [0.0625"] to 9mm [0.334"]

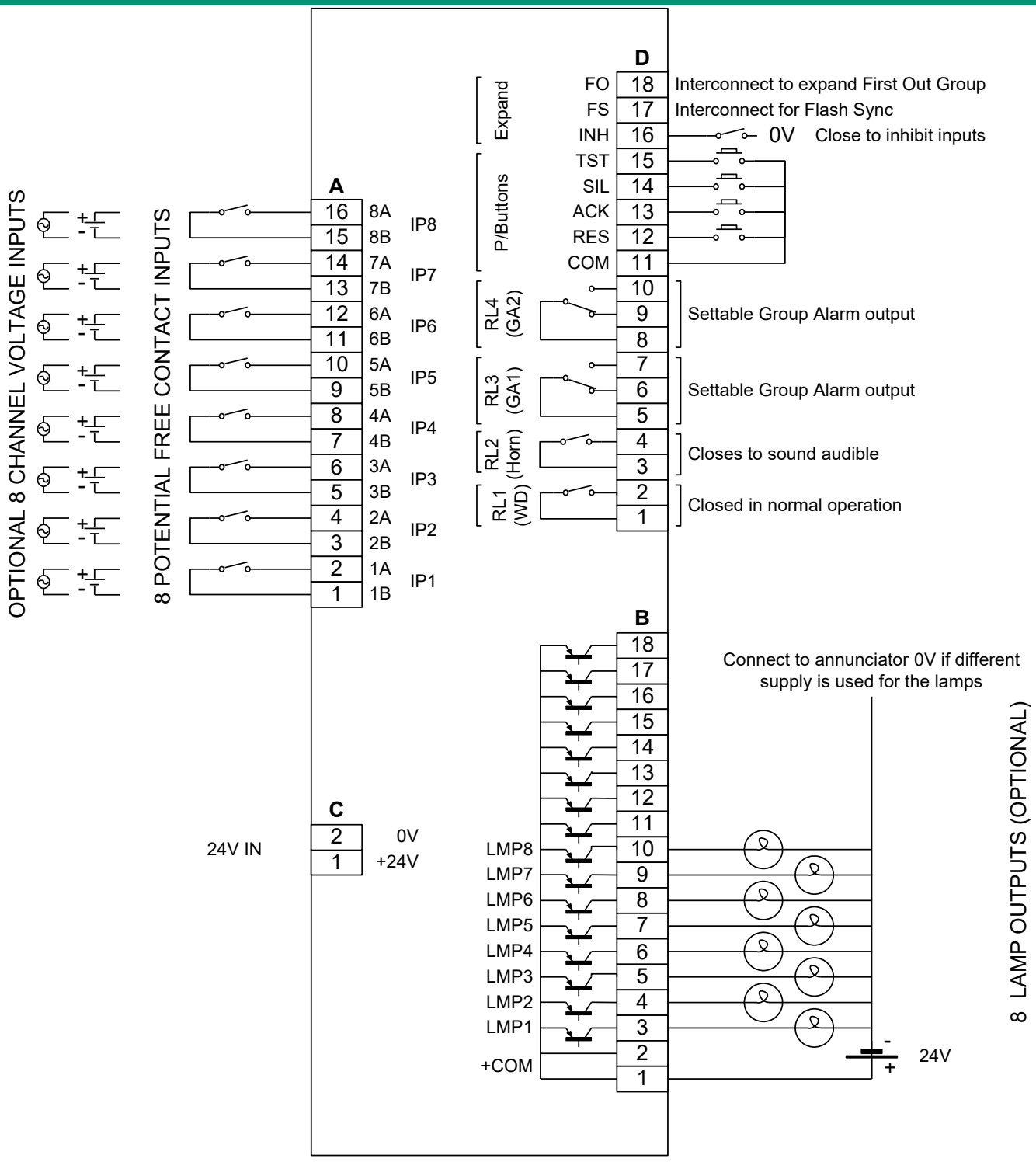


Cut-out Dimensions
136mm [5.35"] wide x 112mm [4.41"] high

Electrical Connection Diagram



Electrical Connection Diagram (Lamp Driver)



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8 contact input Annunciator with Backlit LED display

Model Number
C1490B

Specifications

Power Supply

Voltage Option	24Vdc (STD)
Isolation PSU to inputs	None
Max dc Ripple	10% pk. to pk.
Consumption	0.5 Amp max.

Alarm Inputs - Potential Free Contact

Input Board Option	C1490B-0	C1490B–1
Input Type	Common 24V **	Common 0V
	** Standard Option	Order
Quantity and Type	8 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	C1490B-2	C1490B–3
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	8 dc or ac inputs	
Compliance to standards		
Safety	IEC950	
EMC	EN50081-2; EN50082-2	
Compliance to CEGB EES 1988 and Eskom NWS1819 specifications		

Inputs General

Input Scan Rate	4 milliseconds
Wire size	1.5mm2 (17SWG/15.5SWG) max.
Connections	Via plug-in Terminals

Integral Pushbuttons

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

Alarm Window Display

Quantity	8 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 Humidity	0°C – 60 °C (+32°F – 140°F) Up to 90% RH, non condensing is recommended
Storage Temperature Humidity	-10°C – 70 °C (+14°F – 158°F Less than 40% RH is recommended

Weight

Unpacked/Packed	1.6kg approx. / 1.8kg approximately

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.
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.

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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
C1490B-x	LED Backlit Alarm Annunciator; 24Vd

Input Options

x	Description	x	Description
Omit x	24V Common	-2	19-60Vdc iso
-1	0V Common	-3	90-150Vac/dc iso

Note: The Model C1491B Sidebar LED Annunciator has been discontinued. The C1490B is a drop in replacement with an improved display"

Accessories
To be ordered separately. (Will be fitted prior to shipment.)

Serial Communications Option (Modbus)	
C1423A	Isolated RS232/485 Serial Port
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 8)
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

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