



# OMNI8C RLU Remote Logic Annunciator

Model C1180B and C1181B 8 Point Remote Annunciator Logic Modules.

## DATASHEET

## Features

- Provides reliable alarm functions for critical alarms
- Small , compact, surface mounted and easy to use
- 8 Potential Free Contact Inputs
- 27 Standard Alarm Sequences
- Fully “DIP” Switch Configurable
- 24Vdc Powered
- Normally Open/Closed Selectable via DIP switch
- Four versatile Group Alarm output contacts
- Optional High Power Lamp Driver outputs
- Optional Serial Port - Modbus/PLC compatible
- IEC61508 SIL1 Rated



Model C1180, C1181

The Omni8c RLU is a full function alarm annunciator logic module for 8 alarm points. Interconnect up to 16 modules together to produce an alarm annunciator up to 128 points. Connect to remote alarm displays such as the Omniflex Model [C1670](#) or [C1496](#) series for a complete window alarm annunciator system, or wire to individual mimic lights to provide full critical alarm functionality to your mimic display.

### Inputs

The 8 inputs accept potential free inputs and are individually “DIP” switch configured for N.O. or N.C. operation.

### Alarm Sequences

The alarm sequence for the 8 inputs can be configured by DIP switch with a choice of 27 standard sequences. More individualised or advanced settings are done through the programming port accessible on the unit using the free Omniset Configuration Utility.

### Control Pushbuttons

Test, Silence, Acknowledge and Reset Pushbutton input terminals are provided for a wide variety of control options.

### Group Alarm Functions

The four common output relays can be configured as group alarm, horn output and watchdog. Functions such as Relay follows input or alarm, Multiple Re-flash, or Ring-back horn are easily settable on these relays.

An Inhibit input function is provided which disables all the inputs on the annunciator, for example during plant startup or shutdown periods.

### Optional Communications Serial Port

An optional RS232/485 serial port can be fitted to allow all alarm functions to be accessed from your PLC or SCADA using the popular Modbus protocol.

### High Power Lamp Driver Outputs – C1181B

A version of this product is available equipped with high power lamp drivers. These drivers can source 24Vdc up to 250 mA, with short circuit protection, to drive higher power mimic lights, or large alarm displays.



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## SPECIFICATIONS

### Power Supply

Voltage	24Vdc (STD)
Isolation PSU to inputs	None
Max dc Ripple	10% pk. to pk.
Consumption (excluding display)	0.4A max

### Alarm Inputs - Potential Free Contact

Input Board Option	<b>C1xxx-0</b>	<b>C1xxx-1</b>
Input Type	Common +ve **	Common -ve
	** 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 Option	<b>C1xxx-2</b>	<b>C1xxx-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	8 dc or ac inputs (powered externally)	
Compliance to standards		
Safety	IEC950	
EMC	EN50081-2; EN50082-2	

### Inputs General

Input Scan Rate	4 milliseconds
Terminations	3.81mm pitch plug-in terminals
Wire size	1.5mm <sup>2</sup> (17SWG/15.5SWG) max.
Connections	Via plug-in Terminals

### Pushbuttons

Quantity	Four buttons inputs
Functions	Silence; Acknowledge; Reset; Test
Configuration	N.O to GND

### 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
Functions	RL1: Watch Dog+Group Alarm 1 RL2: Horn RL3: Group Alarm 2 RL4: Group Alarm 3 (Other functions software programmable)

### Lamp Driver Outputs (Model C1181)

Connection Type	Two Part Detachable Screw Terminals
Type	Transistor switch to +24Vdc
On State volt drop	2 Volts max at 250mA
Off State leakage current	280µA max
Voltage Max.	+28Vdc (External)
Load Current Max.	250mA per channel

Protection	Output short circuit protected for up to 5s <b>Continuous short circuit will damage outputs</b>
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### Ribbon Header Outputs (Model C1180)

Connection Type	20 way Ribbon Header
Type	Transistor switch to 0Vdc
On State volt drop	1.1 Volts max at 100mA
Off State leakage current	100µA max
Voltage Max.	+28Vdc (External)
Load Current Max.	100mA per channel
Protection	No short circuit protection. <b>Short circuit will damage outputs</b>

### Relay Contact Outputs (Model C1180)

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)
Storage Temperature	-10°C – 70 °C (+14°F – 158°F)

### Weight

Unpacked	0.7kg approx.
Packed	0.9kg approx.

### Compliance to Standards

Immunity – ESD	IEC 61000-4-2:2001, level 3
Immunity – RF Fields	IEC 61000-4-3:2001, 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, 24 V dc +15% -10%
Vibration	IEC60068-2-6: 1995 10-150Hz. 1g
Functional Safety	IEC61508 SIL1

Compliance to CEGB EES 1988 IIES1989 and Eskom NWS1819 specifications

### 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
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



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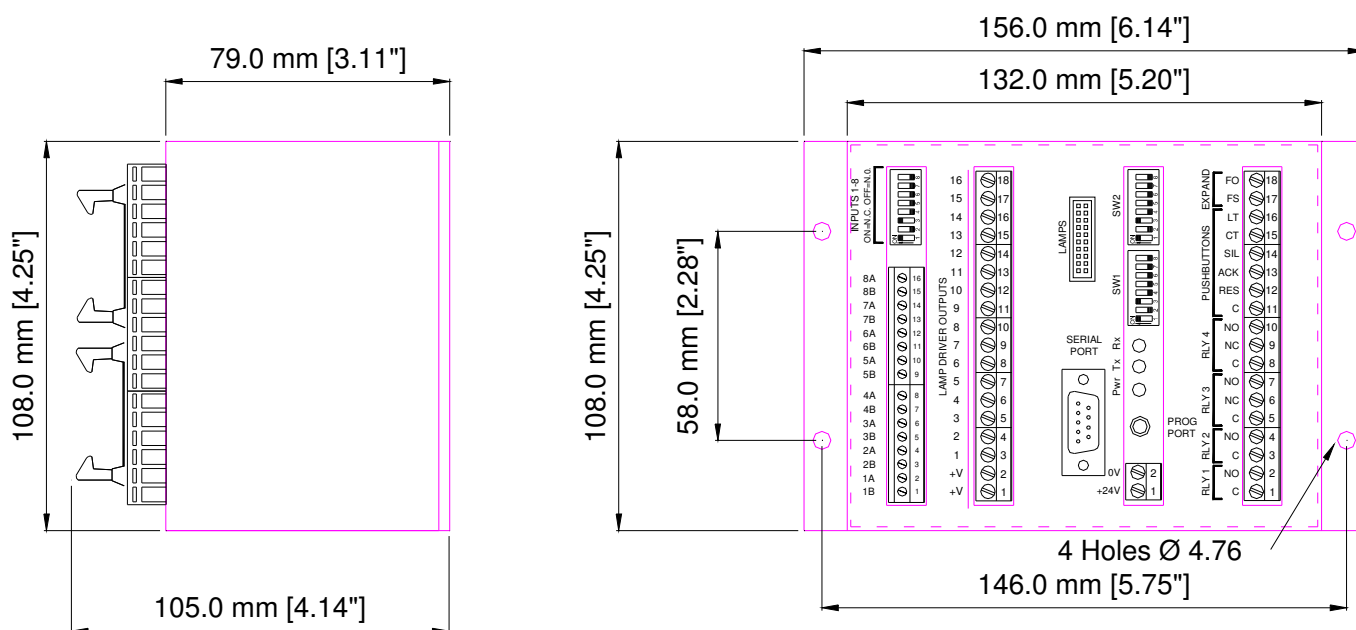
Model C1180B and C1181B 8 Point Remote Annunciator Logic Modules.

## ORDERING INFORMATION

ORDER CODE	DESCRIPTION
C1180-x <sup>1</sup>	Remote Logic Unit ; 8 potential free contact input annunciator, no display. Display connected via ribbon cable.
C1181-x <sup>1</sup>	Remote Logic Unit, 8 potential free contact input annunciator , no display. Display connected via lamp driver outputs.
<b><sup>1</sup>Input Option:</b>	
x=	0 (default)    1    2    3
	+ve Com    -ve Com    30-60Vdc iso    90-150Vac/dc iso
<b>Accessories</b>	<i>To be ordered separately Will be fitted before delivery.</i>
<b>Serial Communications Option (Modbus)</b>	
C1423	Isolated RS232/485 Serial Port
<b>Repeat Outputs</b>	
C1425	8 way Input Repeat Relay Board

C1169	16 Way Repeat Lamp Driver Terminals
<b>Pushbutton Stations</b>	
C1415	Remote Pushbutton Station with Audible
<b>Alarm Displays</b>	
C1496	Compatible with Omni8C 8 point alarm displays. (see separate <a href="#">data sheet</a> )
C1670	Compatible with large display systems (see separate <a href="#">data sheet</a> )
<b>Interface Accessories</b>	
C1168	OmniSet Programming cable for Prog Port
C1416	Ribbon Header to terminals converter
C6308	Ribbon to 16 Relays Form C 5A

## MECHANICAL CONFIGURATION



C1180B , C1181B Housing Mechanical Detail



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## C1180 and C1181 ELECTRICAL CONNECTION DIAGRAM

