

# Inner Range

## UniBus 16-Floor Lift Interface

P/N: 996540PCB&K

### INSTALLATION MANUAL

#### Introduction

UniBus 16-Floor Lift Interface Boards provide a low level interface incorporating button feedback, between an Integrity or Inception system and a Lift Control system. It incorporates input conditioning and switching to provide the isolation required between the two systems. Using a 6-way UniBus cable, the board connects directly to the Host Module or via another UniBus Board and is compatible with the following types of Inner Range Host Modules:

- Integrity Security Controller (ISC)
- Intelligent LAN Access Module (ILAM)
- Integrity Access Controller (IAC)
- 8-32 Zone Expander.

#### Important Notes:

**1) The host Module must be powered by an Inner Range Smart Power Supply. Choice of power supply & battery will depend on total load current, battery backup time and battery re-charge time requirements. The following are a guide only.**

- |  |   |
|--|---|
| <b>Module + 1 UniBus Board:</b>          | <b>3A Smart Power Supply minimum.</b>                           |
| <b>Module + 2 or more UniBus boards:</b> | <b>3A, 8A or 10A Smart Power Supply. 8A or 10A recommended.</b> |

**2) Ensure that the current required by UniBus Boards & their peripherals does not exceed the Host Module's ancillary current limit.**

**3) Firmware / Software Compatibility.**

- Integrity Software/Controller Firmware V2.5.1 or later is required.
- Inception Firmware V1.0.0 or later.

**4) A host module is required per lift car. Adding more UniBus Lift Interfaces to a host module only expands the number of floors for a single lift car.**

#### Parts List

- UniBus Lift Interface PCB sub-assy.
- 6 x Metal M3 PCB Mounting Clips.
- 17 x 3 way plug-on screw terminals.
- 6 x M3x10mm screws.
- Installation Guide. (This document)
- 1 x UniBus Cable. 270mm. (Other lengths available. See page 3 for details)

#### Specifications

- |                       |  |  |
|-----------------------|--|--|
| Power Supply Input:   | 11V to 14V DC from Host Module   |  |
| Current Consumption:  | 55mA PLUS 16mA per relay. i.e. Approximately 310mA when all Relays are On. |  |
| Button Input Voltage: | 16 - 110V dc full wave rectified non regulated.                            |  |
| Contact Rating.       | Max switched current:  | 500mA @ 16 - 48V DC/AC RMS                 |
|                       |  | 200mA @ 60 - 110V DC/AC RMS (30W / 62.5VA) |

- |                      |         |                                   |
|----------------------|---------|-----------------------------------|
| Physical dimensions: | Length: | 200mm.                            |
|                      | Width:  | 94mm                              |
|                      | Depth:  | 28mm with UniBus cable connected. |

- Installation environment: 0° to 49° Celsius (32° to 120° F)  
15% to 85% Relative humidity (non-condensing)

## REGULATORY INFORMATION

### UL294 Requirements (North America)

**File No: BP20873**

Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), local codes, and the authorities having jurisdiction.

The system Controller, remote Modules and UniBus in-cabinet expansion boards are acceptable for indoor use only and must be installed within the protected premises.

The AC power cord must not be plugged into an outlet controlled by a switch.

If a separate power supply is utilized for ancillary power (e.g. For electric locks), the power supply must be a UL Listed Access Control or Burglar Alarm, Low-Voltage Class 2, Power-Limited, power source capable of a minimum of 4 hours standby power.

All cabling must be UL Listed and/or Recognized wire

All interconnecting devices must be UL Listed.

This access control system must be used with UL listed Card Readers.

The following Listed Card Readers are compatible with the system:

- |                            |                 |                 |
|----------------------------|-----------------|-----------------|
| - Inner Range SIFER Reader | - HID Proximity | - HID iClass SE |
| - Inner Range SIFER-Keypad | - HID iClass    |                 |

Fuses. CAUTION - FOR CONTINUED PROTECTION AGAINST THE RISK OF FIRE, REPLACE WITH ONLY THE SAME TYPE AND RATING OF FUSE.

### FCC Statement (North America)

Information to the user (FCC Part 15.105)

Class B Product:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Warning: Any changes or modifications not expressly approved by Inner Range Pty Ltd could void the user's authority to operate the equipment.

### ISED (Canada)

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

1. L'appareil ne doit pas produire de brouillage;
2. L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

CAN ICES-3 (B) / NMB-3(B)
---------------------------

## Installing the UniBus Lift Interface

- 1) Remove the power, LAN and Battery connections from the Host Module.
- 2) Choose a mounting location that will allow a 6-way UniBus cable to be connected between the Lift Interface and the Host Module or an existing UniBus Board, without strain, then install using the 6 PCB mounting clips provided.
- 3) Secure the Board to the standoffs using the M3 screws provided.
- 4) Using the 6-way UniBus cable, connect Lift Interface P1 to the UniBus connector on the Host Module or the spare UniBus connector on an existing UniBus Board.

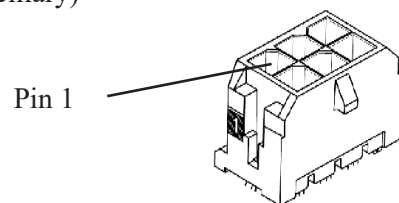
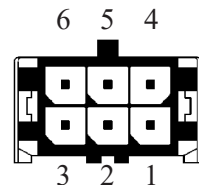
### NOTES:

- a) Only use Inner Range UniBus cables. Any damage caused by the use of custom UniBus cables will not be covered under warranty.  
A 270mm UniBus cable is provided. Other lengths are listed below.
  - b) A maximum of 6 UniBus Lift Interface boards can be connected.
  - c) A maximum of 6 UniBus Boards in total can be connected to a Host Module.
  - d) Combined length of all UniBus cables on a Host Module must not exceed 1620mm.
  - e) DO NOT run UniBus cables outside or between enclosures under any circumstances.  
All UniBus Boards must be in the same enclosure as the Host Module.
- 5) Determine the Floors that will be assigned to this Lift Interface board and adjust the settings on DIPswitch SW1 accordingly. *See the table on page 5.*
  - 6) Re-apply power and re-connect the LAN and Battery to the host Module.
  - 7) Wait for 45 seconds, then check the Status LEDs; L33, L34 and L35.



### UniBus connector.

- 1 Comms
- 2 +13.75V (System)
- 3 0V
- 4 0V
- 5 +13.75V (Ancillary)
- 6 Comms





**Interface Board Layout.**

**T1 to T16** Wiring terminals for connection to Floor request buttons/lamps and Lift Control equipment.  
SENSE: Floor button sense.  
NC: Normally Closed Relay contacts.  
*See details on page 6.*

**P1 / P2 / L33. UniBus.**  
Connectors & Status LED for UniBus.  
*See pages 3 & 8 for details.*

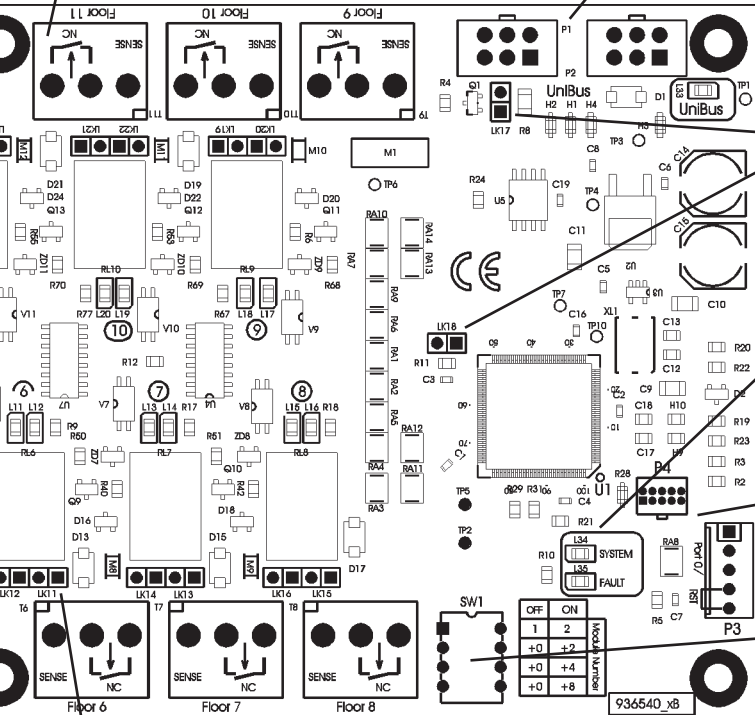
**LK17 & LK18.**  
Factory Only. NOT USED in the field.

**L34 SYSTEM.  
L35 FAULT.**  
*See table on page 8.*

**P3 & P4.**  
Factory Only. NOT USED in the field.

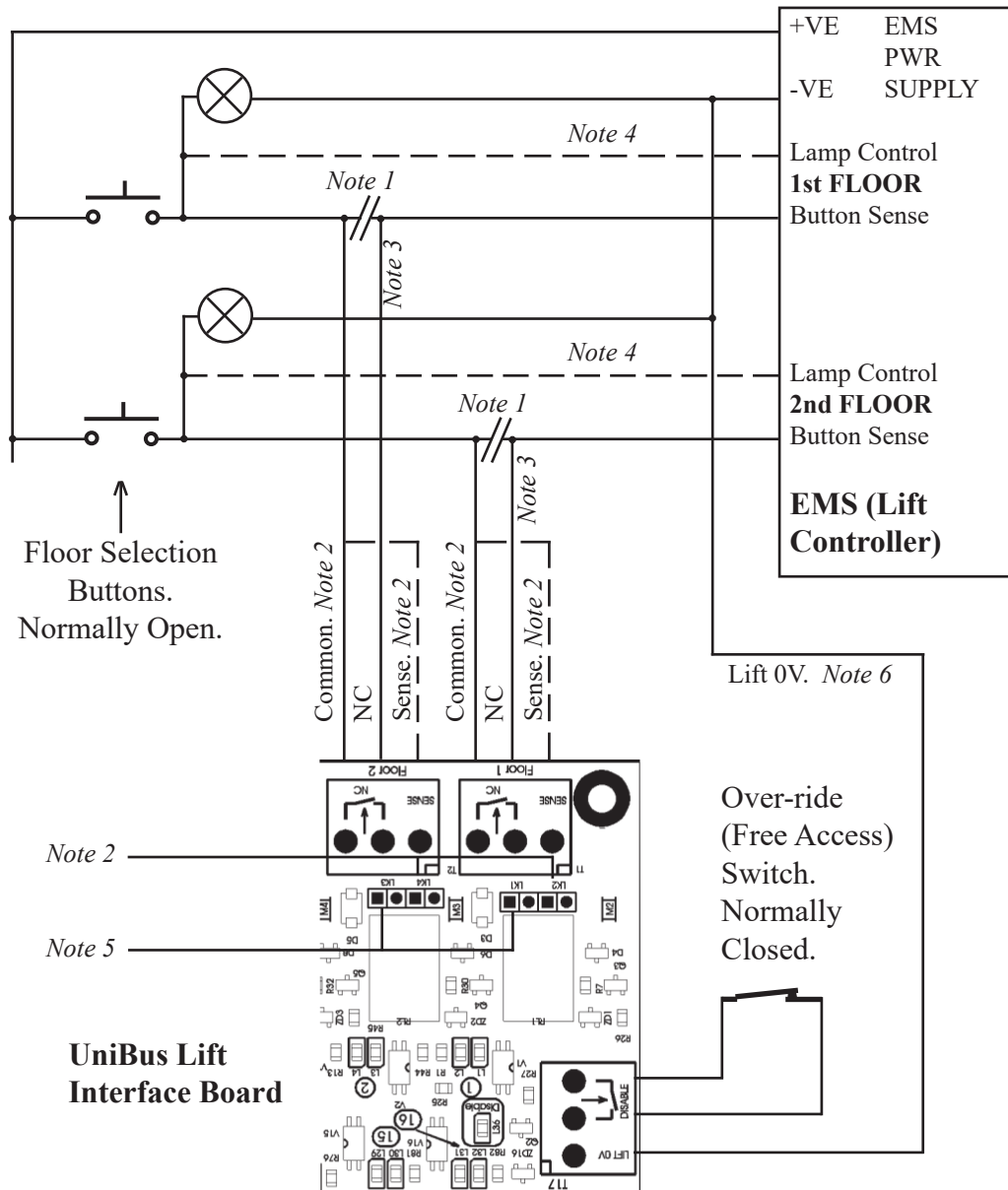
**DIPswitch SW1: Switch 1-4.**  
UniBus Address number.

**Odd Numbered Links from LK1 to LK15 & LK19 to LK33.**  
Fitted when button Lamp feedback voltage is sourced via Lift Controller button sense feed. *See pages 6 & 7 for details.*  
(Inserts on on-board diode between “NC” and “Common”)



<u>Assign Floors</u>			<u>DIPswitch</u>			
			<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1	to	16	OFF	OFF	OFF	OFF
17	to	32	ON	OFF	OFF	OFF
33	to	48	OFF	ON	OFF	OFF
49	to	64	ON	ON	OFF	OFF
65	to	80	OFF	OFF	ON	OFF
81	to	96	ON	OFF	ON	OFF

### Typical Installation Wiring.



1. The existing Elevator Management System (EMS) connection between the Floor button and the Button sense input on the Lift Control equipment is disconnected.
2. If the Button was wired directly to the Button sense input, connect the Floor button feed into the "Common" terminal and fit the even numbered Links (LK2, 4, 6, 8, etc. but not LK18) on the Lift Interface board.  
OR  
If the Button was not wired directly to the Button sense input, connect the Floor button feed into the "Sense" terminal and remove the even numbered Links (LK2, 4, 6, 8, etc. but not LK18) on the Lift Interface board.

The Sense input on the Lift interface board may be used for the following reasons:

- a) If additional circuitry (such as a relay) was connected between the Floor Selection Button and the "Sense" input on the EMS. When this is the case, the wire from the button is connected to the Sense input instead of the Common input, and the relevant Links are removed.

The Common input is then connected to a voltage source (or 0V) suitable for the EMS "Sense" input.

- b) If an alternative wiring scheme is required to accommodate Floor selection buttons that switch to negative. *See note 7 regarding other wiring schemes below.*
3. Connect the Lift Control equipment Button sense wire into the “N.C.” terminal.
  4. The EMS may provide a separate output circuit for lamp control.
  5. If the Floor Button and Lamp are on a common circuit ensure that the odd numbered links (LK1, 3, 5, 7, etc. but not LK17) are fitted on the Lift Interface board.  
OR  
If the Floor Button and Lamp are on separate circuits ensure that these links are removed.
  6. “Lift 0V” MUST be connected to negative of the Lift Controller DC Power Supply.
  7. Other wiring schemes can be accommodated and may require additional external components. Send a detailed schematic diagram of the existing EMS wiring to Inner Range Technical support for advice.

### Commissioning & Testing

1. When wiring is complete and checked to be OK, connect power to the Host Module.
2. With the “DISABLE” switch terminals open circuit, the DISABLE LED should be lit and all floors connected to that interface board should be freely accessible.

To perform Floor Relay testing, the “DISABLE” switch terminals must be closed (shorted).

3. Program the options for Lift control in the system. As a minimum, the relevant hardware Module/s, Floors, Lift Types (Integrity only), Lift Cars and User Permissions must be programmed.

#### INTEGRITY

Refer to the Integrity Programming Reference Manual for system programming details.

#### INCEPTION

Refer to the Inception Commissioning Checklist and Browser Help (blue info buttons) for programming details.

4. Once programmed ensure that all floors connected, switch between the secure and free state. Review should also be monitored at this point to ensure that no excessive amounts of noise on the button inputs cause false triggering of these inputs.

Monitor the relevant LED on the Lift Interface board to check that the Relay is functioning.

#### INTEGRITY

The Floor Relays can be tested via the Integrity System Designer Software by selecting a Floor and using the “Free” and “Secure” buttons at the top right-hand corner of the “Lift Floor” dialog box.

Floor Relays can also be tested by the Installer from an LCD Terminal via the “Lifts” option in the Control Menu.

i.e. <MENU>, 9, 4.

Select the required Lift control action, then follow the prompts to select the entity to test.

#### INCEPTION

The Floor Relays can be tested via the Inception Browser from the ‘State/Control’ Menu “Control Lift Floors” option by selecting a Floor and using the “Quick Control” buttons in the left-hand column.

5. Individually check each floor for correct operation as per the system programming.

**Status and Fault LEDs**

<b>L1-31</b>	ON	(Odd numbered LEDs only) Indicates the presence of +ve feed voltage on the “N.C.” terminals for each floor. Also follows the Floor button lamp when button lamp feedback voltage is sourced via Lift Controller button sense feed.
<b>L2-32</b>	ON	(Even numbered LEDs only) Indicate when the Floor Access Relays are active. Note: Relays are normally active and de-activate to select the floor. Will remain Off when in Disabled mode.
<b>L33</b>	OFF	OK
<b>UNIBUS</b>	Flashing	Getting Address
	ON	Address Clash or Too High. Choose another address.
<b>L34 SYS</b>	Flashing	OK. Module is powered and firmware running OK.
<b>L35</b>	OFF	OK
<b>“Fault”</b>	ON	If On during normal operation, a fault has been detected. OK if On during bootup or firmware download.
<b>L34/L35</b>	Alt Flash	Firmware Update in progress. (Fast alternate flashing)
<b>L36</b>	Disable	On when security is disabled and Floors are in free access. i.e. “Disable” input is open circuit.

**Disclaimer.**

While every effort has been made to ensure the accuracy of this manual, the manufacturer assumes no responsibility or liability for any errors or omissions.

Due to ongoing development, this manual is subject to change without notice.

**Designed & manufactured in Australia**