

Inner Range. UniBus 8-Relay Expander

P/N: 996515PCB&K INSTALLATION MANUAL

Introduction

The UniBus 8 Relay Expander Board provides eight independent, high current relay outputs, offering a general purpose interface in applications such as warning devices (strobe, sounders, etc.) automation and access control.

The board is connected directly to the Host Controller or LAN Module or another UniBus Board via the UniBus cable supplied. NOTE: Ensure that the current required by UniBus Boards does not cause the Host Module's ancillary current limit to be exceeded. Refer to the current Inner Range product catalogue for details of compatible host Modules and number of UniBus boards supported on each.

Specifications

Power Supply Input: +13.75V DC via the UniBus connection from the host Module.
 Operating Voltage Range: 11 to 14V DC.
 Current Consumption: 45mA PLUS 16mA per relay. i.e. Approximately 175mA when all Relays are On.
 Relay Contact Ratings.
 - Max DC Voltage/Current: 24V DC. / 1.0 Amp
 - Max AC Voltage/Current: 30V AC(RMS) / 0.5 Amp

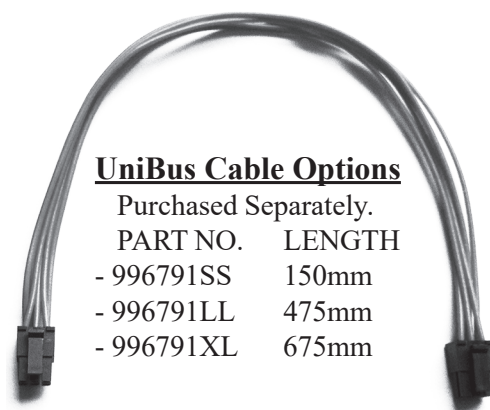
Physical dimensions: Length: 105mm. 94mm with snap-off strip removed.
 Width: 94mm Depth: 28mm with UniBus cable connected.
 Installation environment: 0° to 49° Celsius (32° to 120° F). 15% to 85% Relative humidity (non-condensing)

Additional installation and device wiring details can be found in the following manuals:

- Integrati Security Controller Installation Manual. Document P/N: 6366001 / 636001NA
- Integrati Intelligent LAN Access Module Installation Manual. Document P/N: 636018
- Integrati 8 Zone LAN Expander Module Installation Manual. Document P/N: 636005
- Inception Controller Installation Manual. Document P/N: 636300

Parts List

- UniBus 8-Relay Expander PCB sub-assembly.
- Installation Guide. (This document)
- 4 x Metal M3 Mounting Clips.
- 4 x M3 screws.
- 4 x 6 way plug-on screw terminals.
- 1 x UniBus Cable. 270mm. (Other lengths available)



UniBus Cable Options

Purchased Separately.
 PART NO. LENGTH
 - 996791SS 150mm
 - 996791LL 475mm
 - 996791XL 675mm

Disclaimer

The manufacturer &/or it's agents take no responsibility for any damage, financial loss or injury caused to any equipment, property or persons resulting from the correct or incorrect use of the system or it's peripherals. The purchaser assumes all responsibility in the use of the system and it's peripherals.

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.

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Regulatory Information

UL294 Requirements (North America)

- Wiring methods shall be in accordance with the National Electrical Code (ANSI/NFPA70), local codes, and the authorities having jurisdiction.
- The UniBus 8 Relay Expander is acceptable for indoor use only and must be installed within the protected premises.
- All cabling must be UL Listed and/or Recognized wire
- All interconnecting devices must be UL Listed.
- 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 hrs standby power.

FCC Statement

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)

Fire Protection

This product must be installed into a suitable non-flammable equipment enclosure ensuring that the enclosure has been installed onto a non-flammable surface and away from all flammable materials. Any Conduit entry points that have the knockout removed but are not used, must also be resealed using Conduit Plugs.

Installation

- 1) UniBus Boards are installed in an Integriti enclosure using the PCB Mounting Clips and M3 screws provided in the kit. The enclosure must be an approved cabinet with Tamper switch protection provided by an Integriti Module installed in the same enclosure.
- 2) Remove the power and disconnect the battery from the Host Module.
- 3) Choose a mounting location that will allow a 6-way UniBus cable to be connected between the 8-Relay Expander and the Host Module or an existing UniBus Board, without strain, then install the PCB Mounting Clips.

NOTE: The 8-Relay Expander Board may be installed by one of the following methods:

 - a) Mounted on the chassis using the 4 PCB mounting clips & M3 screws provided. (Preferred method)
 - b) Mounted above an existing Integriti Size B Board using 35mm Hex Brass standoffs purchased separately (Part Number 999009). For this method, the Snap-off strip on the PCB must be retained.
- 4) Secure the Board to the Mounting Clips or Standoffs using the M3 screws provided.
- 4) Using a 6-way UniBus cable, connect P1 to the UniBus connector on the Host Module or the spare UniBus connector on an existing UniBus Board. **NOTE THE FOLLOWING:**
 - 1) Only use Inner Range UniBus cables. A 270mm UniBus cable is provided. *Other lengths are listed on p1.*
 - 2) A maximum of 6 UniBus Boards can be connected to a single Host Module.
 - 3) All UniBus Boards must be in the same enclosure as the Host Module.
 - 4) Total combined length of UniBus cables must not exceed 1620mm.
- 5) Determine the Auxiliary numbers that will be assigned to this 8-Relay Expander board and adjust the settings of Switches 1 and 2 on DIPswitch SW1 accordingly. *See below.*
- 6) Install device wiring, then proceed to ‘Commissioning, Testing & Troubleshooting’ on p4.

UniBus 8 Relay Expander Board Layout

NOTE: Links LK1 (Term) & LK2 and Headers P3 & P4 are NOT used in the field.

T1 to T4. Relay contact connections.
See diagram on Page 4.

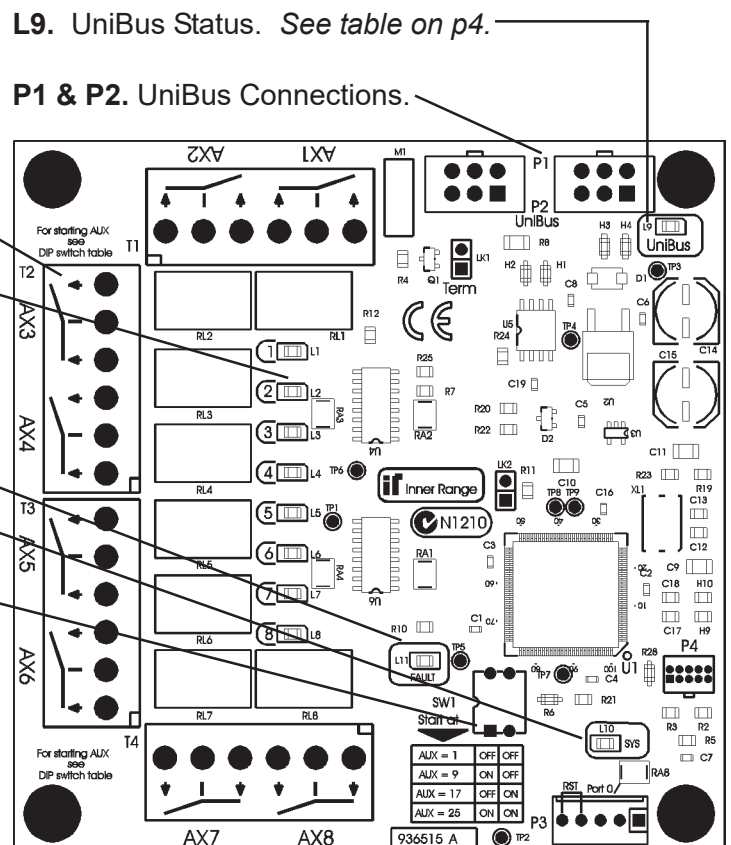
L1 to L8. Relay ON Indicator LEDs.

L11. Fault LED.
See table on p4.

L10. System Status LED.
See table on p4.

SW1. Address DIPswitch.
S1 & S2: UniBus Address.
See table below.

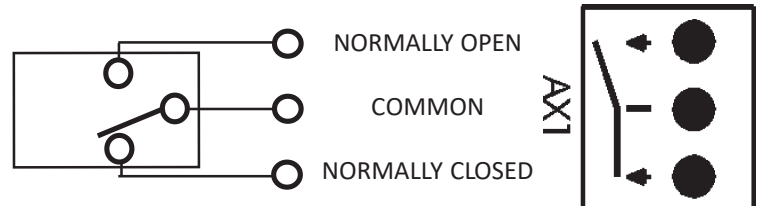
Assign Auxiliaries		DIPswitch	
		1	2
1	to 8	OFF	OFF
9	to 16	ON	OFF
17	to 24	OFF	ON
25	to 32	ON	ON



COMMISSIONING, TESTING & TROUBLESHOOTING

Relay Contacts Schematic diagram.

Refer to the Host Module Installation Manual for Relay & Device wiring examples.



Pre Power Up Testing

The following checks are performed with all AC power and Batteries disconnected from the Host Module. Physically inspect cabling for any signs of cable damage or short circuits.

Power Up Testing

When wiring is complete and checked to be OK, re-apply AC power and reconnect the Battery on the Host Module. Wait approximately 45 seconds, then check the Status LEDs; L9, L10 and L11.

L9	“UNIBUS”	OFF:	OK
		Flashing:	Getting Address
		ON:	Address Clash or Too High. Choose another address.
L10	“SYS”	Flashing:	OK
L11	“Fault”	OFF:	OK
		ON:	On during normal operation = A fault has been detected. On during bootup or firmware download = OK.

Auxiliary Relay Testing.

INTEGRITI: The Auxiliaries can be tested via the Integrati System Designer Software by selecting “Auxiliaries” then scrolling to the Module that you wish to test or entering the Module ID at the top of the ‘ID’ column. Right Click on an Auxiliary to open the Popup where the Auxiliary can be controlled by selecting the ON or OFF action. The result of the action can be viewed:

- Via the Software. Check the current Auxiliary state display in the “Status” column which updates in real-time.
- Via the LEDs, L1 to L8 on the UniBus 8 Relay Expander Board.

Auxiliaries can also be tested by the Installer from an LCD Terminal via the “Test Auxiliaries” option. <MENU>, 4, 2. Use the DOWN ARROW to scroll to the desired Auxiliary, or use the ON key to enter the Auxiliary ID, then press OK to view the current state.

The RIGHT ARROW key can be used to set an ON and/or OFF Time if required.

INCEPTION: The status of any Zone or System Input can be viewed via the Inception Browser ‘State/Control’ menu.

- To Test:
- Determine the Auxiliary ID Numbers of the Auxiliaries on the Relay board under test.
 - Turn each Auxiliary On and Off in turn while monitoring the relevant LED on the Relay board to check that the Relay is functioning.

Programming Notes

Program the new Auxiliary Outputs and assign them to the required functions.

System Commissioning and Routine Maintenance

Procedures for a range of Commissioning and Routine Maintenance Tests are provided in the document:

“Inner Range. Integrati/Inception Security and Access Controllers. Manufacturers recommended routine maintenance.” Routine Maintenance Testing should be performed at intervals of not less than one year, or more frequently as required by relevant regulations, and/or as agreed with the customer.