

# matrix BUS

Expansion module

## Installation guide



KSI2300006.300

### INTRODUCTION

**matrix BUS** is a wired expansion card that can operate as UNIVERSAL, in this case it adds 1 zone (input) of NC/NO, balanced and inertial type to the lares 4.0, or as OPTEX, and in this case it can add up to three zones, depending on the type of Optex sensor connected.

For connecting Optex sensors, **matrix BUS** provides a serial port compatible with the Optex sensors of the following series:

- BXS (PIR or PIR+AM/ curtain coverage right and left sides);
- VXS (PIR+AM/ PIR+AM+MW/ 90° coverage);
- WXI\* (PIR/ PIR+AM/ 180° coverage right and left sides);
- WXS\* (PIR+AM/ PIR+AM+MW/ 180° coverage right and left sides);
- QXI\* (PIR/ PIR+MW/ 120° coverage right and left sides);

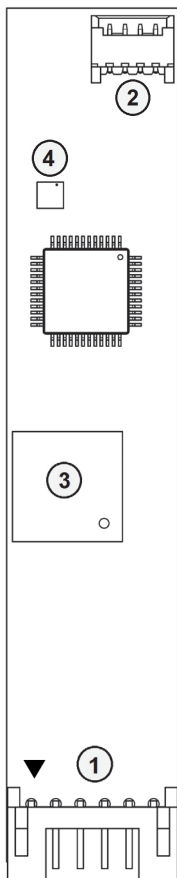
allowing their remote management (configuration data and detailed alarm signalling) through Ksenia SecureWeb and from Ksenia PRO App.

**matrix BUS** is supplied with one cable for connecting Optex motion detectors and with one 6-wires cable of 30cm (of which 4 wires for connecting the BUS of lares 4.0 control panel, 1 wire for the programmable generic input and 1 wire for the positive power supply). Finally, it is provided with a double-side adhesive support for positioning **matrix BUS** inside the sensors.

## TECHNICAL DATA

- Power supply: 13.8 Vdc
- Current consumption: 20mA (excluding terminal +P and UART port)
- KS-BUS interface
- Inputs: n.1 programmable input (with programmable balancing)
- Power terminal: 0.5A (protected by a self-restorable thermal fuse)
- Sound buzzer controlled by the Installer App in real time
- Serial interface compatible with Optex sensors
- Operative temperature range: -10 a +55°C
- Umidity: 95%
- Dimensions: 14×71.5×8 mm

## PCBA DESCRIPTION



LEGEND		
1.	Connector cable with the following contacts (colors of 6 wires in brackets) for connecting lares 4.0 control panel:	
	i1 (brown)	Programmable input (▼) (with programmable balancing) (programmable only if matrix BUS = UNIVERSAL)
	+P (blue)	Positive power supply 0.5A (turn on/off from Installer App in real time, programmable only if matrix BUS = UNIVERSAL)
	+ (red)	Connecting terminals to the BUS of lares 4.0 control panel
	A (yellow)	
	B (green)	
	- (black)	
2.	UART	Optex* sensors compatible port for exchanging communication and configuration data via RS-232
3.	BUZZER	For identifying the position of a sensor, start/stop from Installer App in real time
4.	Sensore	MEMS

\*Only use the serial cable supplied.

## INSTALLATION

**matrix BUS** can be installed in the special housing inside the sensor in use, OPTEX sensors for example, and fixing it with the double-sided adhesive support provided.

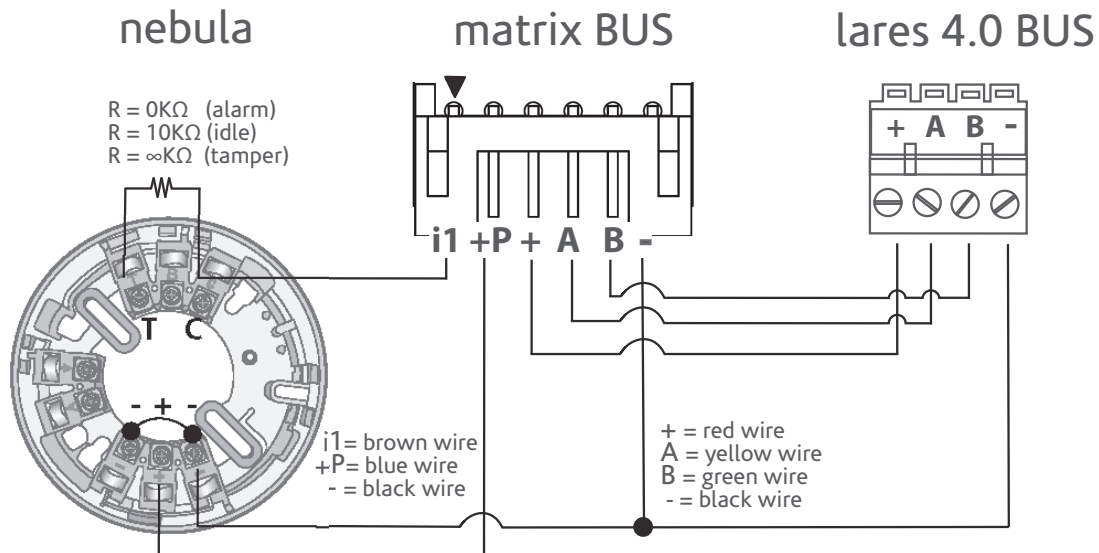
Connecting OPTEX sensors:

- connect one side of the cable supplied, to the serial port (indicated with no.1 at paragraph "DESCRIPTION OF PCBA" page 2) and the other side to the OPTEX serial port (for further information, please consult the manual of the sensor itself).  
Thanks to this serial link, installers avoid the terminal block wiring and the configuration of OPTEX sensors can be performed via Ksenia SecureWeb or APP Ksenia PRO; the OPTEX switch manual settings are completely avoided.

**IMPORTANT: Drill a hole, if not present, on the base of the Optex and pass the cables through it toward the external side.**

Connecting matrix BUS to lares 4.0 and to a sensor:

- a 6 wired cable (30cm) is provided: connect the side with the connector (indicated with n.1 at paragraph "DESCRIPTION OF PCBA" page 2, matching the brown wire with PIN 1, highlighted in the image with a black triangle. Connect the wires on the other side of the cable to lares 4.0 and to the sensor.  
The image below shows an example of wiring with **matrix BUS**, **lares 4.0** control panel and an optical smoke sensor **nebula** (C=Alarm terminal programmed NO and T=tamper terminal programmed NC).



## CONFIGURATION

Open Installer configuration program, BUS Peripherals -> Sensors menu, and choose **matrix BUS** and the type of sensor to be connected (UNIVERSAL or OPTEx).


It is always possible to start/stop the BUZZER sound from the Installer App from real time, for identifying the position of a sensor inside the system, the duration of the BUZZER sound can be programmed when the command will be sent.

When matrix BUS is programmed as UNIVERSAL, it is possible to turn ON/OFF the power supply terminal +P. The same power supply terminal can be turned off for a programmable time of X seconds when the command is sent, useful, for instance, to reset the smoke sensors.

The configuration of the duration of sound and turn off commands is performed by clicking on the icons that



appear in the real time frame, as next image shows: . To stop the timer, set the duration = 1(sec.).

The real time of the device also displays: the voltage value of the BUS, the fuse status (green icon OK , red icon KO) and the power supply terminal +P and the BUZZER status (ON = red icon / OFF = blue icon).

For further details refer to the lares 4.0 Configuration Manual.

## QUANTITY DATA

lares 4.0 models	wls 96	16	40	40 wls	140 wls	644 wls
Maximum number of single expansion (matrix BUS)	4	8	40	40	40	64

## COMPLIANCE

Europe, CE, Rohs   

Technical specifications, appearance, functionality and other product characteristics may change without notice.