BUS Zone Expander
Model: RP128EZB

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The BUS Zone Expander (BZE) enables to expand the number of bus detectors connected to the RISCO system to more than 32 detectors and to improve bus performance.

Each BUS Zone Expander creates a separate bus loop that is used only for the bus detectors connected to it. The separate bus loop increases the total system security in case a certain bus detector is sabotaged.

Each BUS Zone Expander can be defined to support 8, 16, 24 or 32 bus detectors.

The following instructions explain how to connect a bus detector to the system using the BUS Zone Expander.

Notes:

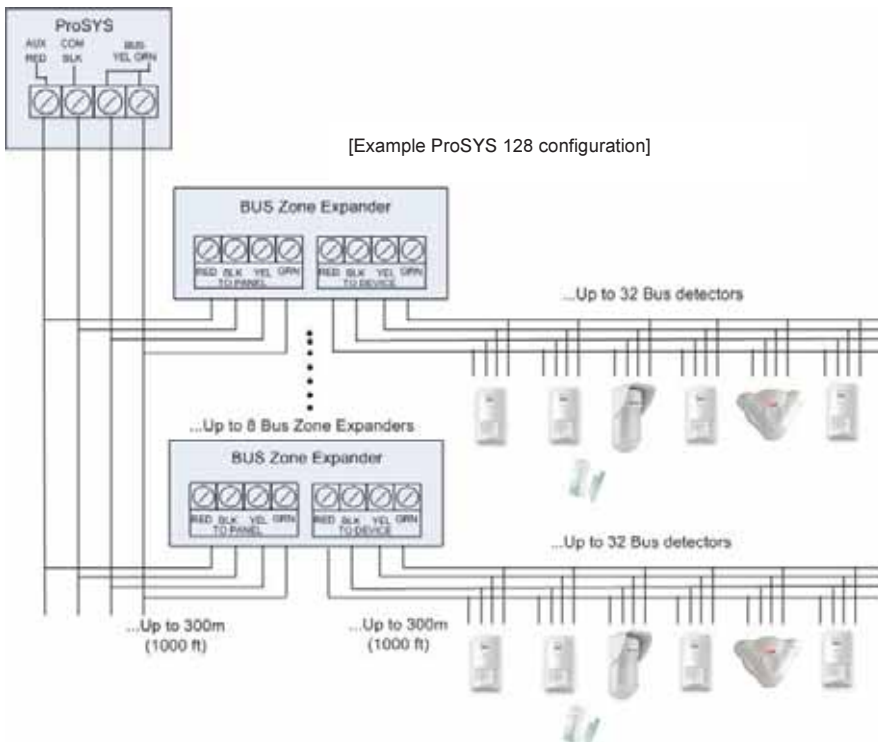Communication with the BUS Zone Expander is supported by ProSYS ver. 7 and later and LightSYS.

The BUS Zone Expander is supported by Upload/Download software ver 3.2.x.x and later and Configuration Software.

Installation

Note:

For maximum operation stability, it is best NOT to exceed a total of:

1. 300 meters (1000 feet) of wiring from the BUS Zone Expander to the panel

2. 300 meters (1000 feet) of wiring from the BUS Zone Expander to the last bus detector

[Example ProSYS 128 configuration]

DIP Switches Settings

SW1: ID		
Switch	**Description**	**Default**
SW1 (1 - 3)	Defines the BUS Zone Expander ID number	ID 1

ID	SW1 - 1	SW1 - 2	SW1 - 3
1	Off	Off	Off
2	On	Off	Off
3	Off	On	Off
4	On	On	Off
5	Off	Off	On
6	On	Off	On
7	Off	On	On
8	On	On	On

SW1 - 4	Not used	

SW2: Config		
Switch	**Description**	**Default**
SW2 (1 - 2) (not relevant for LightSYS which is automatically configured)	Defines the number of bus zones that the expander will support.	8 Bus Zones (Off,Off)

Number of Bus Zones	SW2 - 1	SW2 - 2
8	Off	Off
16	On	Off
24	Off	On
32	On	On

SW2 - 3	Defines which RISCO system **On**: LightSYS (up to 32 bus zones supported) **Off:** ProSYS (Bus zone configuration as per SW2 above)	
SW2 - 4	Controls the configuration of the tamper terminals **On**: Tamper terminals shorted **Off**: Tamper terminals open. Use to connect a tamper switch	Off

Connectors Settings

Jumper	Function	Jumper	Function
J1	Quick Bus Connector to **bus zones bus**	**J2**	Quick Bus Connector to **system main bus**

LEDs

LED	Condition	Description
LD2 Device Trbl	Indicates communication between the BUS Zone Expander and the bus detectors	**On**: Communication OK **Flash**: Communication trouble between the zone expander and any of the bus detectors or no bus zones defined for the BUS Zone Expander
LD3 Power	Indicates communication between the main panel and the BUS Zone Expander	**On**: Power and communication are OK **Flash**: Communication trouble between the BUS Zone Expander and the main panel

Programming (ProSYS (P) and LightSYS (L))

The following instructions describe the procedure of allocating a bus detector using the BUS Zone Expander.

Note:

When using the Auto Setting feature (**P**: [7] [5], **L**: ⑦①❶) , the system will guide you through the procedure mentioned below for a maximum of eight ProSYS BZEs or four LightSYS BZEs.

Step 1: Adding the BUS Zone Expander (not relevant for LightSYS)

1. Access the Installer menu and select:

    P: [7] Accessories > [1] Add/Delete Module > [2] Zone Expander.
    L: ⑦Install ① Bus Device ② Manual ❶❸ Bus Zone Expander

2. Use the (**P**) ⬭ and ⬭ or (**L**) ⬭ and ⬭ keys to position the cursor over the BUS Zone Expander number for which you want to assign (or delete).

    Note:

    Make sure that the zone expander's physical ID dipswitch setting (SW1 1-3) is identical to the ID number you select during programming.

3. **P (only)**: Place the cursor on the TYPE field
    and use the ⬭ key to select:

    BZE08: 8 Bus zones expansion   BZE24: 24 Bus zones expansion

    BZE16: 16 Bus zones expansion   BZE32: 32 Bus zones expansion

    Note:

    Make sure that the zone expander type is set according to the one set by DIP switches SW2 (1-2).

Step 2: Defining the type the bus detectors connected to the BUS Zone Expander

1. The display will show:

P   BUS Zone:
*   (x:yy) TYPE=None*

2. In the x:yy designation, the **x** represents the BUS Zone Expander ID number and the **yy** represents the bus detector ID number that is connected to the zone expander, as set by the detector's DIP switches.

3. Using the ⊙ key, select the detector type.
   - OPR12: WatchOUT PIR
   - ODT15: WatchOUT DT
   - WatIN: WatchIN
   - ILun3: Industrial Lunar Grade 3
   - iDTG3: iWISE/BWareDT Grade 3
   - iQUG3: iWISE/BWareQUAD Grade 3
   - iDTG2: iWISE/BWareDT Grade 3
   - iQUG2: iWISE/BWareQUAD Grade 2
   - BZ1: Single BUS zone expander

Note:

The maximum of **yy** is defined according to the BUS Zone Expander type, example for BZE24 the maximum of **yy** will be 24.

L: (quick keys: ⑦①② ❶❾)
      BUS ZONE: (01)
      (0:01)TYPE=NONE

Note:

The display "(x:yy) Type: None" represent the BUS detector location in the system. In the 0:yy designation, the 0 represents that the bus detector is on the main unit and is not assigned to a Bus Zone Expander. The yy represents the bus detector ID number (up to 32) as set by the detector's DIP switches...

Use the ▢ or ▢ keys to position the cursor over the ID filed and enter the Bus Zone ID number that you are assigning or deleting. Make sure that the detector's physical ID number is identical to the ID number you select during programming.

2. Using the arrow keys move to the Type field. Use the ▢ key to toggle and select the detector's type (as per ProSYS choice at left)

4. Press (#/6) / ▢ to confirm and store your choice and move to the next bus detectors.

Step 3: Assigning a Bus Detector to a Zone

1. From the main Installer menu select

   P: [2] Zones > [1] One by One.
   The following display appears:
   ZONE ONE BY ONE
   ZONE = 001 (X:YY)

2. Select a zone number whose designation (x:yy) is equivalent to the one defined for the bus detector. (The **x** represents the BUS Zone Expander ID number and the **yy** represents the bus detector ID number as set by the detector's ID DIP switches).
   Press (#/6) to access the first category.

3. Define Partitions, Groups, Zone Type and Zone Sound

4. In the Termination category, the display will show:
   Z:zzz Terminate:
   [1] BUS Zone
   Press (#/6) to confirm.

   > **Note:**
   >
   > **zzz** represents the zone number in the system

5. The display will show:
   Z:zzz LINK TO:
   (x:yy) TYPE=****
   This is a *Read Only* screen. Make sure that you have selected the right bus detector.

6. Press (#/6). The loop response category is not applicable to a bus zone.

7. Press (#/6), assign a label and press (#/6).

L: ②①① Zones: Parameters: One By One

The following display appears:

```
ZONE ONE BY ONE
ZONE#=01 (XY:ZZ)
```

> **Note:**
>
> The display next to the selected zone number defines the type of zone and its location in the system in the format *XY:ZZ*
>
> X: Zone physical type (B=Bus zone, I=Input zone or single BUS zone expander)
>
> Y: The expander ID number. "0" represent the main bus, for example:
>
> *B0:15* refers to bus zone 15 on the main bus.
>
> ZZ   : The serial zone number in the system (01-32)

2. Specify a two-digit zone number from which you want to start programming (for example, 01) and press 🔘 to access the category of Zone Label.

3. Enter the zone label. The Labels category enables you to create and/or edit up to 15 characters to describe each of the system's zones

4. Press 🔘 to confirm and proceed to define Partitions, Groups, Zone Type and Zone Sound.

   > **Note:**
   >
   > The iWISE/BWare BUS detectors have additional input on board. When selecting iWISE/BWareBus detector the following question will appear: "*Link Bus Detector to zone xx?* " Selecting Yes will assign the input as the consecutive zone of the selected Bus detector.
   >
   > For example: If Bus detector with ID 0:01 (Zone 1 in the system) is defined as iQUG3 then the input of the zone will be assigned as Zone 2.

Step 4: **Using the extra relay zone input on the iWISE/BWarebus detectors:**

To use the input of the iWISE/BWare detector you need to link it to one of the zones in the system that is not a bus Zone detector.

1. **P (only):** From the main Installer menu select [2] Zones > [1] One by One. The following display appears:
   ZONE ONE BY ONE
   ZONE = 001 (X:YY)

2. **P (only):** Select the zone number that you want to assign to the input.

Note:
Do not select a zone number whose designation (x:yy) has already been assigned to a bus detector.

3. Define Partitions, Groups, Zone Type and Zone Sound

4. In the Termination category, select the relevant bus zone input termination:
   BUS Zone Input N/C
   BUS Zone Input EOL
   BUS Zone Input DEOL
   BUS Zone Input N/O
   BUS Zone Input TEOL

5. Press (#/6)/ . Select the bus zone that the input zone belongs to. The **Type** field will be updated automatically when selecting the zone.
   Press (#/6)/ . Define the loop response time.

6. Press (#/6)/ , assign a label and press (#/6)/ .

Step 5: Setting the Bus Detectors Parameters

1. From the main Installer menu select:
   P: [2] Zones > [0] Miscellaneous > [3] BUS Zone Parameters.
   L: ②Zones ① Parameters ② By Category ⑦ Advanced ❹ Bus Zone Configuration

2. Select the zone that the BUS Zone was assigned to and press (#/6) / .

3. Configure the parameters for the relevant bus detector.

Technical Specifications

Power Supply	13.8V
Current Consumption	20mA
Dimension	10.5 cm x 6.6 cm x 1.8 cm
Main Panel Connection	4-wire bus, up to 300 m from Main Panel

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