ZX16D: 16 Zone Expansion Module

PARADOX IMPERIAL
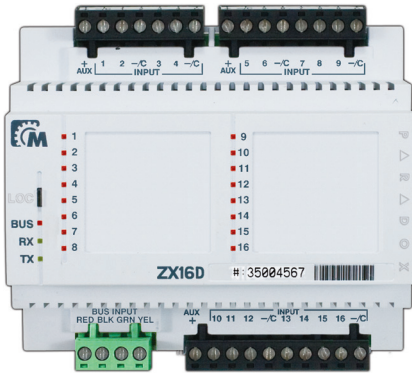
| Installation/Wiring:	??
Programming 1:	??
Programming 2:	??
Testing:	??
Total Time:	??

DRAFT

Description

Driven by the V32 main controller's 4-wire communication bus (Multibus), the ZX16D is a DIN module with 16 inputs for home automation or security with a status display for each input. The module offers a test mode with 5 different tests for input connectivity and operation, and full remote firmware upgradeability.

With its DIN rail design, the module saves space, and makes installation and wiring significantly faster and easier.

Features

- 16 zones or inputs
- Diagnostic Mode: Zone LEDs turn on/off to identify assigned zone inputs, verify correct wiring (no EOL, EOL without tamper, EOL with tamper) and perform a walk test
- Remote firmware upgradeability via Multibus
- DIN rail design with on-board status display, and removable terminals
- Programming via BabyWare software
- Bi-directional LOCATE feature from module to software and vice versa

Overview
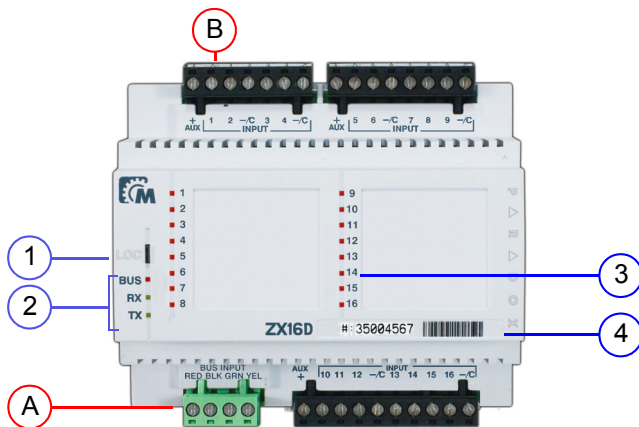
1) Module Locate feature activation (see "Bi-directional Locate Feature" on page 3)
2) Multibus input status LEDs ("LED Feedback" on page 2)
3) Input status LEDs ("LED Feedback" on page 2)
4) Product serial number

A) 4-wire Multibus connection
B) Device inputs

Related Topics

Installation / Wiring
- DIN Rail Enclosures
- System Diagrams and Wiring Tips
- Wire Gauge Selection

Features
- Bi-directional Locate Feature (see page 3)
- Remote Firmware Upgrade (see page 3)

BabyWare
- BabyWare

Specifications

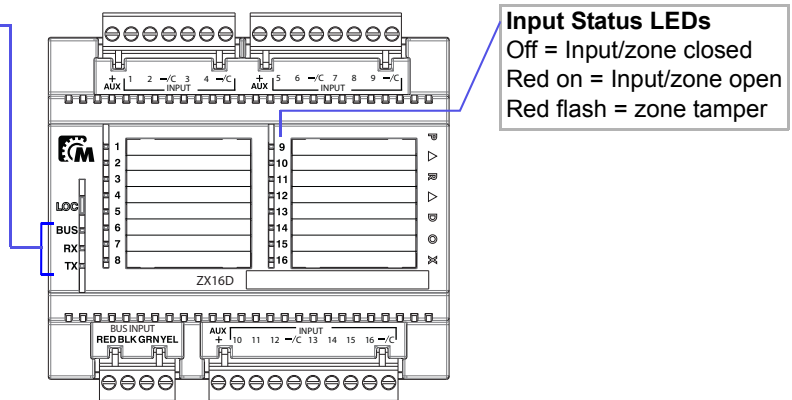| Input voltage	Typically 12Vdc (from Multibus)
Multibus	4 wires at up to 900m (3,000ft)
Current consumption	68mA
Number of device inputs	16 standard device inputs
Dimensions	Standard DIN6: 11cm X 10cm X 6cm (4.2" X 4" X 2.5")
Operating Temperature	-10ºC to 50ºC (14ºF to 122ºF)

Wiring

1	**INPUT DEVICES** For input device wiring options, see ??
2	**EXTERNAL MODULE TAMPER SWITCH** Input 16 (N.C.) only.
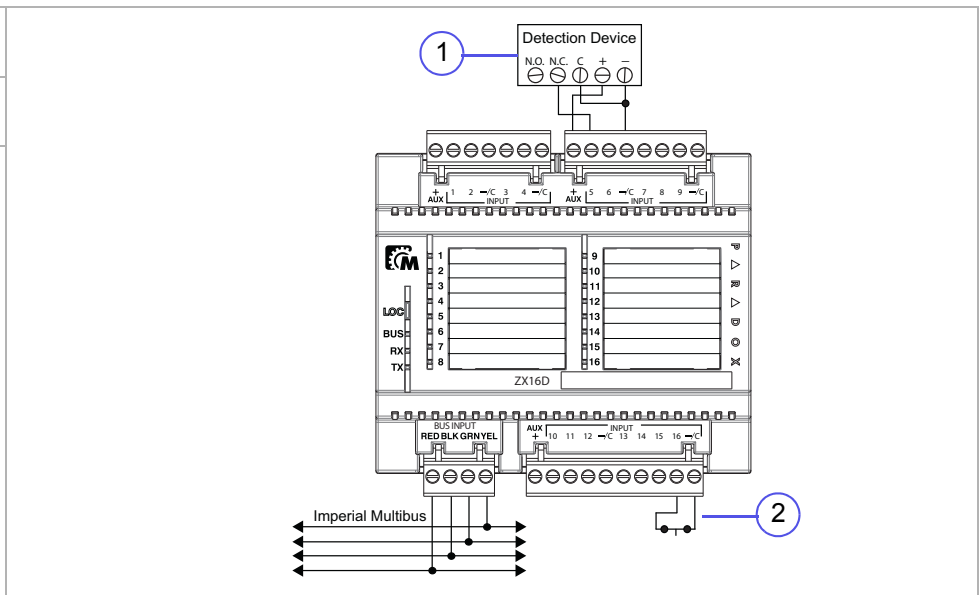
LED Feedback

BUS	RX	TX	STATUS
Green	Green flash	Green flash	OK (communication in progress)
Red on	-	-	Short on GRN or YEL
	-	Green on	Communication failure/ too many modules
	Green on	Green on	Bus lines reversed (GRN / YEL)
Red flash	-	-	Bus power too low
	Green flash	Green flash	Module locate mode
Blue flash	-	-	Firmware upgrade in progress

Input Status LEDs
Off = Input/zone closed
Red on = Input/zone open
Red flash = zone tamper

Test Mode

To facilitate installation and verify correct wiring, the ZX16D features five Test Modes. In order to use this feature, the ZX16D module must be powered (Test Mode 1 requires a full bus connection).

To enter Test Mode, press the LOC button. The ZX16D enters Test Mode 1. Press the LOC button again to enter Test Mode 2, and so on. On the sixth press, the ZX16D will exit Test Mode.

Mode	Feature	LED Feedback	Instructions
Mode 1*	Input assignment	RX flashes x 1	Entering Mode 1 illuminates all zones that have already been assigned in the control panel.*This feature will be available on future versions.
Mode 2	EOL disabled Tamper disabled	RX flashes x 2	Entering Mode 2 sets the ZX16D for: **No EOL / No tamper**. To verify correct EOL / tamper wiring, open and close the zone and verify that the zone's LED reacts accordingly.
Mode 3	EOL enabled Tamper disabled	RX flashes x 3	Entering Mode 3 sets the ZX16D for: **With EOL / No tamper**. To verify correct EOL / tamper wiring, open and close the zone and verify that the zone's LED reacts accordingly.
Mode 4	EOL enabled Tamper enabled	RX flashes x 4	Entering Mode 4 sets the ZX16D for: **With EOL / With tamper**. To verify correct EOL / tamper wiring, open and close the zone and verify that the zone's LED reacts accordingly.
Mode 5	Zone test	RX flashes x 5	Entering Mode 5 illuminates all connected zones. When a zone is triggered, the corresponding zone LED will turn off, indicating correct wiring.

Bi-directional Locate Feature

Pressing and holding the LOC button for 3 seconds will initiate the Module Locate feature. When a Module Locate is initiated, the module's representation in the BabyWare software will flash and the module's BUS, RX and TX LEDs will flash at 1Hz to indicate that it is in locate mode. A module locate can also be initiated from the BabyWare software. From BabyWare right-click the module's representation and select Locate Physical. The module's BUS, RX and TX LEDs will flash. We highly recommend that after pressing locate and identifying the module, open the programming page and assign the proper physical location label and the doors' labels and locations. After complete connection, use the space provided on the module to indicate the doors' description.
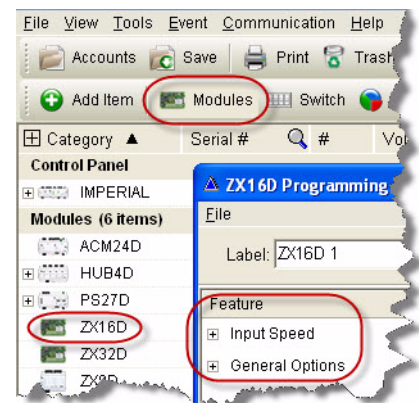
Remote Firmware Upgrade

Work in progress...
The ZX16D is firmware upgradeable remotely via the V32 controller's Multibus at 57.6Kbps. Using BabyWare connect to the V32 account using any of the connection methods (direct connect, IP static, or IP DNS). Right-click the desired module and select Upgrade (???). When communicating through the Internet, BabyWare will indicate whether the panel or any of the bus modules have a newer firmware version available. A firmware upgrade for a single module or group of modules will take usually less than 10 minutes, which keeps system downtime to a minimum.

Programming a ZX16D Module

Figure 1: ZX16D Programming

1) When BabyWare is communicating with the V32 controller and a ZX16D module is connected to the Multibus, it automatically appears in the Modules display area. To view the Modules display area, click the **Modules** toggle button. Alternatively, you may wish to add a module to BabyWare before the module is physically connected to the system. Click the **Add Item** button.
2) To program a module that already appeared in the system, double-click the module's icon. The ZX16D Programming window opens.
3) From the ZX16D Programming window, configure input speeds and general options. Click OK.

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