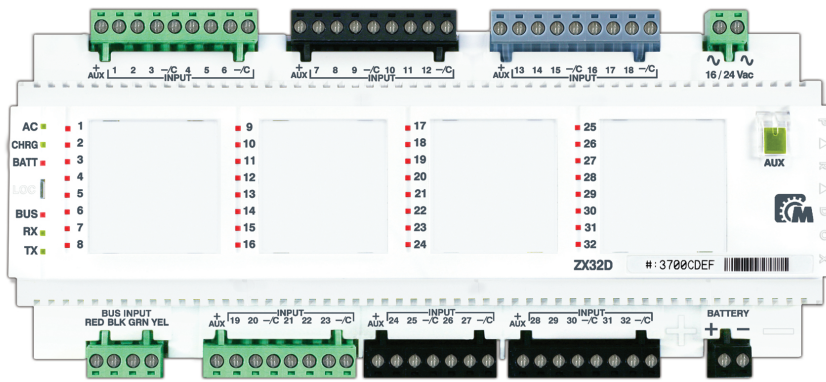


# ZX32D: 32 Zone Expansion Module



Installation/Wiring:	??
Programming 1:	??
Programming 2:	??
Testing:	??
Total Time:	??

**DRAFT**

## Description

Driven by the V32 main controller's 4-wire communication bus (Multibus), the ZX32D is a DIN module with 32 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.

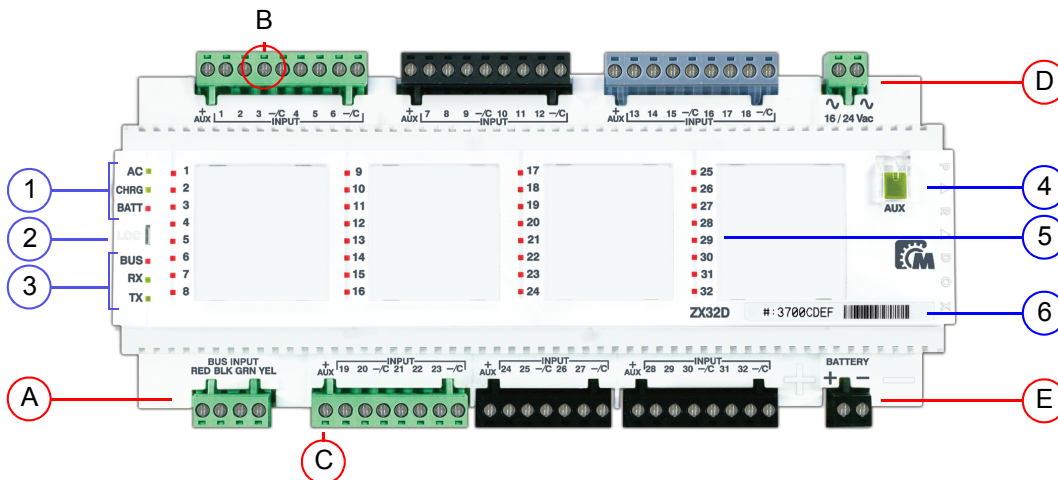
With its DIN rail design, the module saves space, and makes installation and wiring significantly faster and easier.

## Features

- 32 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
- Built-in switching power supply with battery charging
- Auxiliary outputs providing up to 1A
- Remote firmware upgradeability via Multibus
- DIN rail design with on-board status display, and removable terminals
- Programming via BabyWare software
- 4-wire connection to the Imperial Multibus with up to 900m (3000ft) distance
- Bi-directional LOCATE feature from module to software and vice versa

## Overview

- |   |  |
|---|--|
| 1) Power feedback LEDs  | A) 4-wire Multibus connection                  |
| 2) Module Locate feature activation (see "Bi-directional Locate Feature" on page 3) | B) Device inputs                               |
| 3) Multibus input status LEDs   | C) Aux outputs                                 |
| 4) Local AUX output control   | D) AC/DC input: 16-24Vac or 16-36Vdc           |
| 5) Input status LEDs  | E) Battery connection: 12Vdc, 4Ah/7Ah gel cell |
| 6) Product serial number  |  |



For LED status, refer to "LED Feedback" on page 3.

## 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 4)

### BabyWare

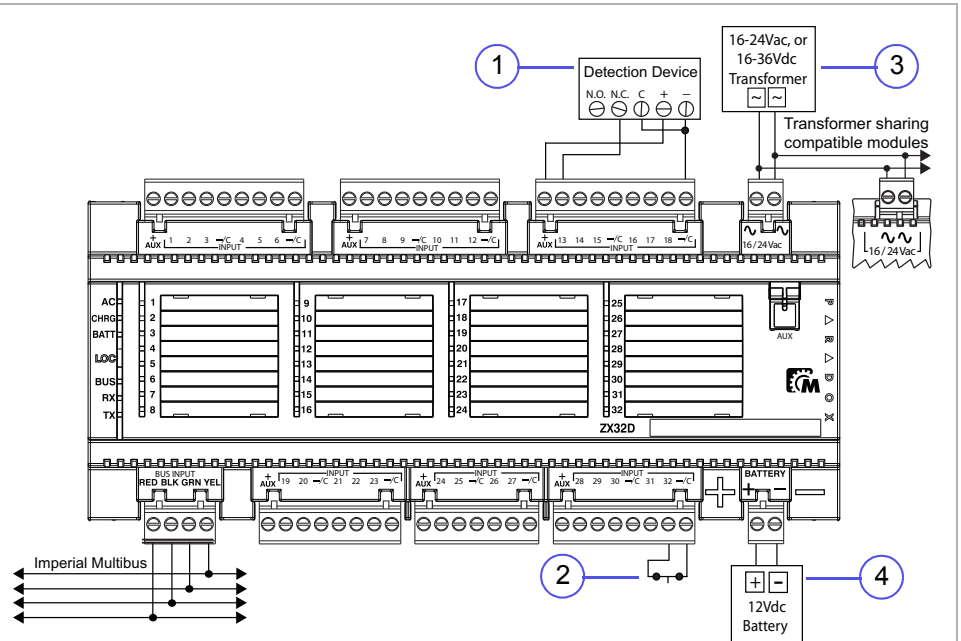
- BabyWare

## Specifications

Power Input Voltage	16-24Vac (50 or 60Hz), or 16-36Vdc 20VA, 20VA or 40VA (see "AC/DC Input with Transformer Sharing" on page 2)
Aux. Output	10.8 to 13.8Vdc, 700mA maximum with fuseless shutdown at 1.1A. With local control button.
Battery	12Vdc, 4/7Ah gel cell (see "Battery Input" on page 2)
Multibus	12Vdc, 4-Wire RS485 at up to 900m (3,000ft)
Current consumption	150mA maximum
Number of device inputs	32 standard device inputs
Dimensions	Standard DIN12: 21cm X 10cm X 6cm (8.4" X 4" X 2.5")
Operating Temperature	-10°C to 50°C (14°F to 122°F)

## Wiring

1	<b>INPUT DEVICES</b> For input device wiring options, see ??
2	<b>EXTERNAL MODULE TAMPER SWITCH</b> Zone 32 (N.C.)
3	<b>AC/DC INPUT WITH TRANSFORMER SHARING</b> Modules with this feature can share a central transformer (16-24Vac, or 16-36Vdc) throughout the system. Ensure that the total power output of the transformer is respected. There is no specific polarity.
4	<b>BATTERY INPUT</b> Connect a 12Vdc (4Ah or 7Ah) rechargeable gel cell battery. Apply AC power before connecting the battery. If battery wires are extended, use an external fuse to protect against a short.



Transformer requirements table

Power Rating	Max. Aux Power	Max. Battery Charging
40VA	1A	300mA
20VA	700mA	300mA

Time to fully charge battery

Battery Type	Batt Charge 300mA
7Ah	24 hours
4Ah	14 hours

## LED Feedback

### AC

Green on = AC or DC power is supplied

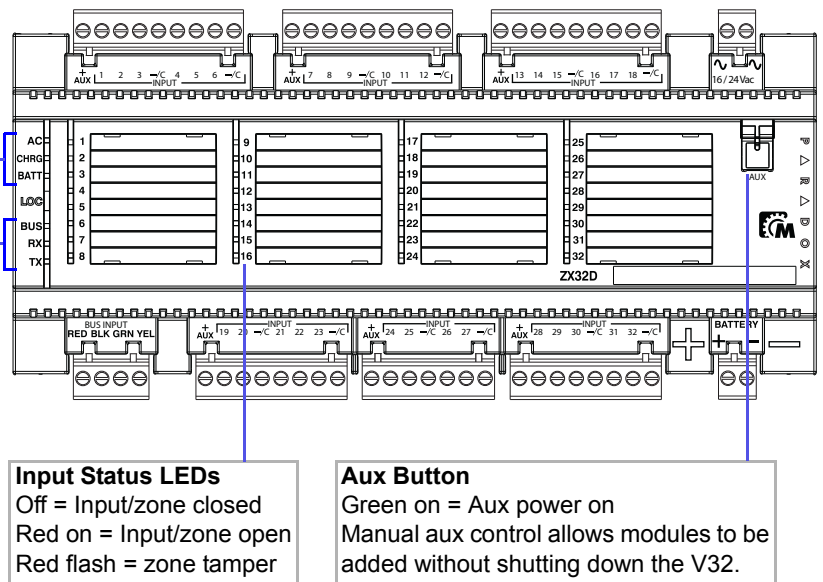
### CHARGE

Green on = Battery charging / test mode  
Green off = No battery / battery fully charged

### BATTERY TBL

Red on = Battery malfunction / Wrong Connection

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
Red flash	Green on	Green on	Bus lines reversed (GRN / YEL)
	-	-	Bus power too low
Blue flash	Green flash	Green flash	Module locate mode
	-	-	Firmware upgrade in progress



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

**Aux Button**  
Green on = Aux power on  
Manual aux control allows modules to be added without shutting down the V32.

## Test Mode

To facilitate installation and verify correct wiring, the ZX32D features five Test Modes. In order to use this feature, the ZX32D module must be powered (Test Mode 1 requires a full bus connection).

To enter Test Mode, press the LOC button. The ZX32D enters Test Mode 1. Press the LOC button again to enter Test Mode 2, and so on. On the sixth press, the ZX32D 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.
Mode 2	EOL disabled Tamper disabled	RX flashes x 2	Entering Mode 2 sets the ZX32D for: <b>No EOL / No tamper</b> . 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 ZX32D for: <b>With EOL / No tamper</b> . 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 ZX32D for: <b>With EOL / With tamper</b> . 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.

\*This feature will be available on future versions.

## 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.

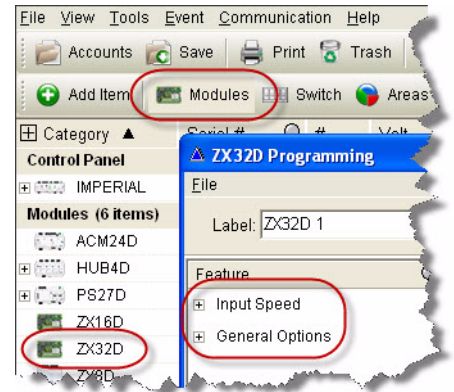
## Remote Firmware Upgrade

The ZX32D 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 ZX32D Module

- 1) When BabyWare is communicating with the V32 controller and a ZX32D 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 ZX32D Programming window opens.
- 3) From the ZX32D Programming window, configure input speeds and general options. Click OK.

Figure 1: ZX32D Programming



**Patents:** One or more of the following US patents may apply: 7046142, 6215399, 6111256, 6104319, 5920259, 5886632, 5721542, 5287111, 5119069, 5077549 and RE39406 and other pending patents may apply. Canadian and international patents may also apply.

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