Manuals+ — User Manuals Simplified.

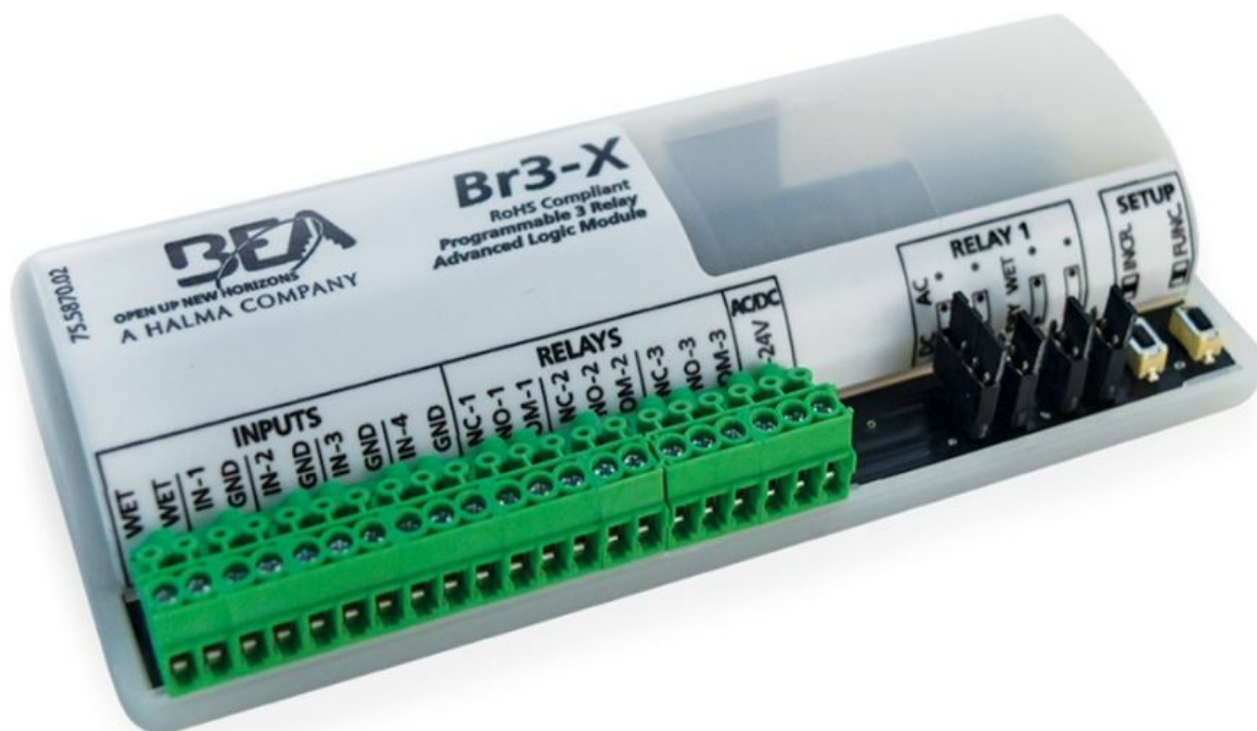# BEA BR3-X Programmable 3 Relay Logic Module User Guide

Contents

BEA BR3-X Programmable 3 Relay Logic Module

BEFORE BEGINNING INSTALLATION

### READ BEFORE BEGINNING INSTALLATION & SET-UP

- Shut off all power going to header before attempting any wiring procedures.
- Maintain a clean and safe environment when working in public areas.
- Constantly be aware of pedestrian traffic around the door area.
- Always stop pedestrian traffic through the doorway when performing tests that may result in unexpected reactions by the door.
- ESD (electrostatic discharge): Circuit boards are vulnerable to damage by electrostatic discharge. Before handling any board ensure you dissipate your body's ESD charge.
- Always check placement of all wiring before powering up to ensure that moving door parts will not catch any wires and cause damage to equipment.
- Ensure compliance with all applicable safety standards (i.e. ANSI A156.10) upon completion of installation.
- DO NOT attempt any internal repair of the components. All repairs and/or component replacements must be performed by BEA, Inc. Unauthorized disassembly or repair:
    1. May jeopardize personal safety and may expose one to the risk of electrical shock.
    2. May adversely affect the safe and reliable performance of the product resulting in a voided warranty.

SET-UP / WIRING

Set jumpers

| RELAY 1 OUTPUT	DRY/WET JUMPER2	AC OUTPUT VOLTAGE1	DC OUTPUT VOLTAGE2
DRY	both jumpers set to DRY	N/A	N/A
WET1	both jumpers set to WET	both jumpers set to AC	both jumpers set to DC

Wiring according to desired function (reference full User's Guide for complete set of wiring diagrams).
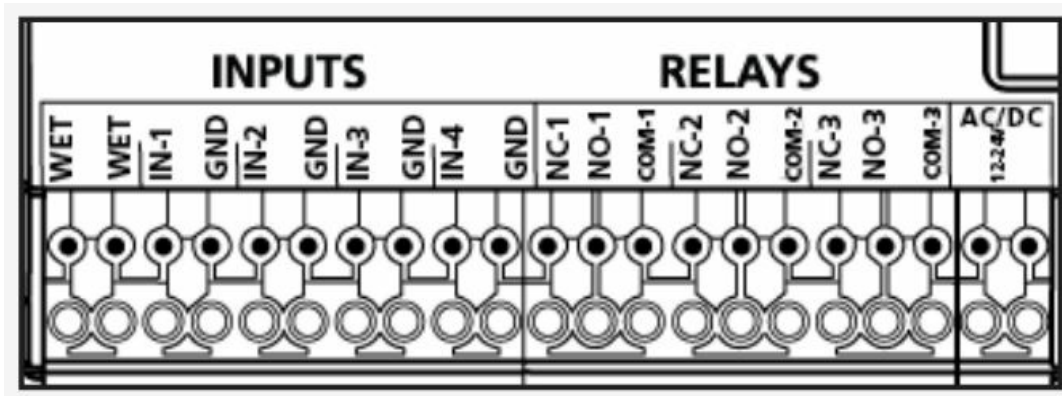
NOTES

1. If voltage Input at the Br3-X is AC, then output selection can be AC or DC.
2. When DC 'WET' output is selected, COM terminal is positive (+) and the ground (-) is switched between NO and NC.

PROGRAMMING
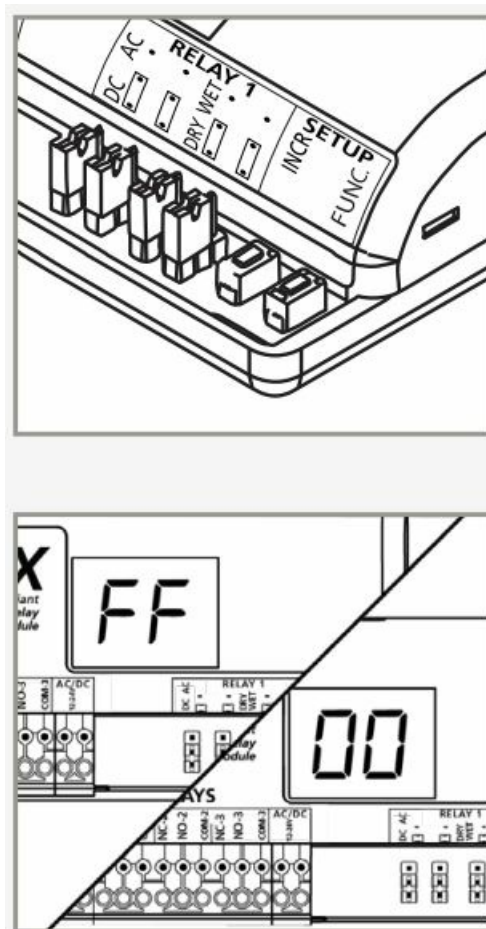
1. Press and hold INCR + FUNC for 3 seconds.
2. Display will toggle between FF / 00 for 5 seconds.[1,2]
3. While FF / 00 is displayed, press INCR to cycle through functions.
4. Once desired function is selected, press FUNC to cycle through parameters.

5. Display will toggle between parameter and its current value for 5 seconds.

6. Press 3 INCR to cycle through parameter's values.

7. Repeat steps 4-7 until all function parameters are set.

8. Wait 5 seconds for Br3-X to save and display function.

9. Test the device to ensure that all function parameters are working correctly and as intended for the specific application.

NOTES

1. Function 00 disables the BR3-X.

2. "nP" = no parameters are applicable for the selected function.

3. Relay hold time(s) and delay time(s) MUST be set for any relay that is to be utilized. Ex: For function 36, if using only relay 1, h1 must be set… if using relay 1 and relay 2, h1, h2, and d1 must be set.

4. Pressing and holding INCR will rapid cycle.

FUNCTIONS REFERENCE

FUNCTION	DESCRIPTION	LOGIC
10	timer	• activation of relay 1 via trigger of input 1 • reverse logic available
11	ratchet / latching	• ratchet/latching of relay 1 via trigger of input 1
22	2-relay sequencer + inhibitor	• sequence of relay 1 and relay 2 with inhibiting of input 1 until input 2, input 3, or WET input is triggered • activation of input 4 reinhibits input 1
28	2-relay sequencer + door position	• sequence of relay 1 and relay 2 via trigger of input 1 or WET input • input 2 allows delay to run when open but not when closed
29	deactivation timer	• sequence of relay 1 and relay 2 via trigger of input 1 or WET input • input 2, once opened after sequence, allows relay 1 to deactivate • input 2 allows delay to run when open but not when closed • input 3 disables sequence, reverse logic available
36	3-relay sequencer + '1-shot'	• sequence of relay 1 and relay 2 and relay 3 via trigger of input 1 or WET input • relay 1, relay 2, and relay 3 can be maintained or '1-shot'

37	3-relay sequence with 'independent relay'	• sequence of relay 1 and relay 2 and relay 3 via trigger of input 1 or WET input • relay 1, relay 2, and relay 3 can be 'independent' or sequenced
50	interlock timer	• interlock of relay 1 and relay 2 via trigger of input 1 and input 2, respectively
55	interlock ratchet / latching	• interlock ratchet of relay 1 and relay 2 via trigger of input 1 and input 2, respec- tively
65	2-way 2-relay sequence	• sequence of relay 1 and relay 2 via trigger of input 1 • sequence of relay 2 and relay 1 via trigger of input 2 • input 3 triggers relay 1 individually, input 4 triggers relay 2 individually
NL	normally locked restroom	• sequence of relay 1 (lock), relay 2 (door), and relay 3 (occupied indicators) for normally locked, single occupancy restrooms
NU	normally unlocked restroom	• sequence of relay 1 (lock), relay 2 (door), and relay 3 (occupied indicators) for normally unlocked, single occupancy restrooms
DN	3-relay sequencer + 'day / night mode'	• sequence of relay 1 and relay 2 and relay 3 via trigger of input 1 or WET input • input 2 operation dependent upon input 4 ('day / night mode')
00	disable	• Br3-X disabled • 00 is the default setting and has no assigned function

PARAMETERS REFERENCE

PARAMETER	DESCRIPTION	LOGIC	
h1*	relay 1 hold time	00 – 60 seconds countdown begins AFTER release of input 1 or WET input	
h2*	relay 2 hold time	00 – 60 seconds countdown begins AFTER d1 (delay between relay 1 & relay 2) expires	
h3*	relay 3 hold time	00 – 60 seconds countdown begins AFTER d2 (delay between relay 1 & relay 3) expires	
d1	delay between relay 1 & relay 2	00 – 60, _1 (1/4), _2 (1/2), _3 (3/4) seconds delay begins AT activation of input 1 or WET input	
d2	delay between relay 1 & relay 3	00 – 60, _1 (1/4), _2 (1/2), _3 (3/4) seconds delay begins AT activation of input 1 or WET input	
rL	reverse logic	00 = normal logic input 1 trigger must be NO and close its contact to trigger	01 = reverse logic input 1 trigger must be NC and open its contact to trigger
nP	no parameters	no parameters available for selected function	

TECHNICAL SPECIFICATIONS

Supply Voltage	12 – 24 VAC/VDC ±10%
Current Consumption	30 – 130 mA (DRY output)
Input Input 1, 2, 3, 4 WET input	DRY contact 5-24 VAC/VDC ±10%
Contact Rating Relay 1 (DRY) Relay 1 (WET) Relay 2 Relay 3	3 A @ 24 VAC or 30 VDC 1 A 3 A @ 24 VAC or 30 VDC 1 A @ 24 VAC or 30 VDC

Specifications are subject to change without prior notice.
All values measured in specific conditions.

COMPLIANCE EXPECTATIONS

BEA, INC. INSTALLATION/SERVICE COMPLIANCE EXPECTATIONS

BEA, Inc., the sensor manufacturer, cannot be held responsible for incorrect installations or incorrect adjustments of the sensor/device; therefore, BEA, Inc. does not guarantee any use of the sensor/device outside of its intended purpose. BEA, Inc. strongly recommends that installation and service technicians be AAADM-certifi ed for pedestrian doors, IDA-certifi ed for doors/ gates, and factory-trained for the type of door/gate system. Installers and service personnel are responsible for executing a risk assessment following each installation/service performed, ensuring that the sensor/device system performance is compliant with local, national, and international regulations, codes, and standards. Once installation or service work is complete, a safety inspection of the door/gate shall be performed per the door/gate manufacturer's recommendations and/or per AAADM/ANSI/DASMA guidelines (where applicable) for best industry practices.

Safety inspections must be performed during each service call – examples of these safety inspections can be found on an AAADM safety information label (e.g. ANSI/DASMA 102, ANSI/DASMA 107, UL294, UL325, and International Building Code). Verify that all appropriate industry signage, warning labels, and placards are in place.
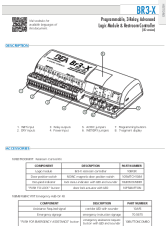
Contact

- **Tech Support & Customer Service:** 1-800-523-2462
- **General Tech Questions:** techservices-us@BEAsensors.com
- **Tech Docs:** www.BEAsensors.com

Visit website for full User's Guide and language options

Documents / Resources

BEA BR3-X Programmable 3 Relay Logic Module [pdf] User Guide
BR3-X Programmable 3 Relay Logic Module, BR3-X, Programmable 3 Relay Logic Module, 3 Relay Logic Module, Logic Module, Module

BEA BR3-X Programmable 3-Relay Logic Module [pdf] Owner's Manual
BR3-X Programmable 3-Relay Logic Module, BR3-X, Programmable 3-Relay Logic Module, 3-Relay Logic Module, Logic Module

References

- **Homepage | BEA Sensors**