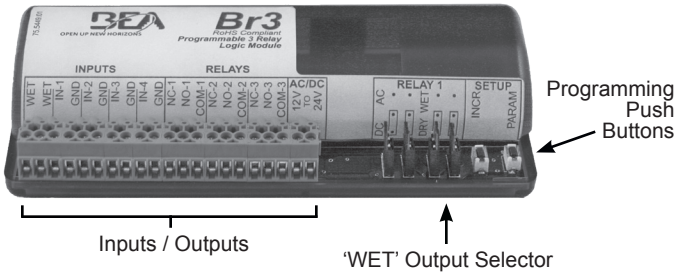
1 Description

The Br3 is a programmable 3 relay logic module that may be used for multiple applications, including simple timing, door mounted sensor inhibiting and advanced relay sequencing. The Br3 contains 12 different programmable functions which allow the technician to carry one and only one module.

In addition to the ability to provide up to 3 Amps through the first two relays and 1 Amp through the third relay used in "DRY" mode, the Br3 provides the ability to select a 'WET' voltage output of up to 1 Amp on Relay 1 to power electric strikes and magnetic locks without the need for an external power supply. This feature can greatly simplify the installation (as long as the power supply powering the Br3 is rated for 1 Amp).



The 'WET' output can also be set using jumpers to output DC if the Br3 is supplied with AC, otherwise it will just pass the AC voltage that is supplied. Similarly if powered by DC, the 'WET' output will only output DC.

The module provides removable screw terminal connectors which help to reduce extra wiring.

Another feature of the Br3 is that it also provides an easy 2-button digital programming with a user-friendly display, hold times being adjustable from 0 to 60 seconds, and delay times being adjustable from 0 to 60 seconds with ¼, ½ and ¾ also available to the applicable functions.

Br3 APPLICATIONS GUIDE
(Refer to the corresponding page number for a more detailed description and programming of each function.)

FUNCTION	SUBJECT	DESCRIPTION	PAGE
10 (MC10)	Simple Timer	Provides an activation of Relay 1 triggered by Input 1. The function also provides an option for reverse-logic on the activation of Input 1.	4
11 (MC11)	Ratchet/Latching	Provides a ratcheting/latching of Relay 1 triggered by Input 1. Each trigger of Input 1 will change the state of Relay 1.	4
21 (LE21)	Inhibitor w/Door Position Input	Provides an activation of Relay 1 with an inhibitor of activation of Input 1 until Input 2, Input 3 or 'WET' Input is triggered, which all activate Relay 1. Additionally Input 4 provides a door position switch input for which closing it will re-inhibit Input 1.	5
22 (LE22)	2 Relay Sequence Inhibitor w/Door Position Input	Provides a sequence for Relay 1 and/or Relay 2 with an inhibitor of activation of Input 1 until Input 2, Input 3 or 'WET' Input is triggered, which all activate the sequence. Additionally Input 4 provides a door position switch input for which closing it will re-inhibit Input 1. Simply put this function is a combination between a LE21 and MC25.	6
25 (MC25)	2 Relay Sequence	Provides a sequence for Relay 1 and/or Relay 2 triggered by Input 1 or 'WET' Input.	7
28 (MC28)	2 Relay Sequence w/Door Position Input	Provides a sequence for Relay 1 and/or Relay 2 triggered by Input 1 or 'WET' Input. Additionally Input 2 provides a door position switch input which allows the delay to run when Input 2 is opened, but not run when closed. Simply put, this function is an MC25 with a normally opened door position switch input to determine if the delay should run.	8
29 (MC29)	Relay 1 Deactivation Timer	Provides a sequence for Relay 1 and/or Relay 2 triggered by Input 1 or 'WET' Input. Additionally Input 2 provides a door position switch input which allows Relay 1 to deactivate once Input 2 is opened after the sequence has run. Input 2 also allows the delay to run when Input 2 is opened, but not run when closed, as in the MC28. Input 3 provides an input to disable the sequence whose input logic is also selectable. Simply put Relay 1 will be active the entire time until the normally opened door position switch signifies that the door has come closed again.	9
35 (MC35)	3 Relay Sequence	Provides a sequence for Relay 1 and/or Relay 2 and/or Relay 3 triggered by Input 1 or 'WET' Input. Simply put this function is a MC25 with three relays instead of two.	10
50 (MC50)	Interlock Timer w/Door Position Inputs	Provides an interlock of Relay 1 and Relay 2 triggered by Inputs 1 and 2, with door position switch inputs on Input 3 for Input 1and Input 4 for Input 2. Only one relay will be allowed to operate at a time thus making the two relays interlocked or mutually exclusive. In order to activate a relay, its corresponding position switch input must be closed.	11
55 (MC55)	Interlock Ratchet w/Door Position Inputs	Provides an interlock ratchet of Relay 1 and Relay 2 triggered by Inputs 1 and 2, with door position switch inputs on Input 3 for Input 1 and Input 4 for Input 2. Only one Relay will be allowed to operate at a time thus making the two relays interlocked or mutually exclusive. In order to activate a relay, its corresponding position switch input must be closed. Each trigger of an input will change the state of its respective relay.	12
65 (MC65)	2-Way, 2 Relay Sequence	Provides a two-way sequencer to sequence Relay 1 and/or Relay 2 triggered by Input 1. Similarly, it also provides a sequence in the opposite direction to sequence Relay 2 and/or Relay 1 triggered by Input 2. Inputs 3 and 4 also trigger Relays 1 and 2 individually.	13
75 (MC75)	2 Relay Sequence	Provides a sequence for Relay 1 and/or Relay 2 triggered by Input 1 or 'WET' Input.	14

2 Specifications

DESCRIPTION	SPECIFICATION
Supply Voltage	12 to 24 VAC/VDC: +/- 10%
Current Consumption	30 to 130 mA ('DRY' Output)
Temperature Range	-15°F (-26°C) to +150°F (65°C)*
Input Specification	Inputs 1 to 4: 'DRY' Contact 'WET' Input: 5 VAC/VDC to 24 VAC/VDC: +/- 10%

DESCRIPTION	SPECIFICATION
Contact Rating 'DRY' - Relay 1 - Relay 2 - Relay 3 Contact Rating 'WET' - Relay 1	3 A at 24 VAC; 3 A at 30 VDC 3 A at 24 VAC; 3 A at 30 VDC 1 A at 24 VAC; 1 A at 30 VDC 1 A
Dimensions	5.2" (133mm) W x 2.2" (55mm) D x 1" (25mm) H
Housing Material	ABS – Grey Translucent

*NOTE: If the Br3 is powered with AC voltage and is using the 'WET" output to convert to DC, and the current draw of the device is greater than .9 amps the upper temperature range is +130°F (54°C).

3 Precautions



- ❑ Shut off all power before attempting any wiring procedures.
- ❑ Maintain a clean & 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: Circuit boards are vulnerable to damage by electrostatic discharge. Before handling ensure you dissipate your body's charge.
- ❑ Always check placement of components before powering up so that moving parts will not catch any wires or cause damage to equipment.
- ❑ Ensure compliance with all applicable safety standards (i.e. ANSI A156.10 / 19) upon completion of installation.
- ❑ When preparing to wire multiple devices together for a 'system' configuration, it is best to ensure the correct operation of each device independently before starting to help reduce troubleshooting time later, in the event of a discrepancy.
- ❑ When applying equipment on a new installation, utilizing new electrical supply circuits, always ensure that correct line voltage exists and is stable. Remember to shut the power back off once this is checked, before performing any wiring to the system.
- ❑ DO NOT attempt any internal repair of the sensor. 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.

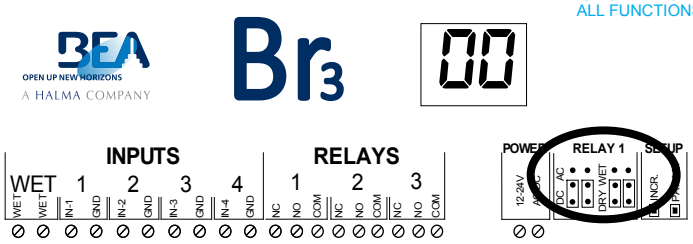
4 Jumper Settings

1. The Br3 contains two (2) sets of jumpers. Both sets deal with configuring Relay 1 options:

   Jumper set 1 configures whether or not to output AC or DC voltage if the 'WET' output is selected. Jumper set 2 configures whether or not the Relay 1 output is 'WET' or 'DRY'. The 'WET' voltage output means that the module will supply a voltage output of up to 1 Amp on Relay 1 to power electric strikes and magnetic locks without the need for an external power supply. This feature can greatly simplify the installation (as long as the power supply powering the Br3 is rated for 1 Amp).

   The 'WET' output can also be set using jumpers to output DC if the Br3 is supplied with AC, otherwise it will just pass the AC voltage that is supplied. Similarly if powered by DC, the 'WET' output will only output DC.

CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.



NOTE: Default jumper settings make Relay 1 output 'DRY' only. All four jumpers set to lower pins.

- To set Relay 1 to output DC (if 'WET') move **both** shunts (2) on Jumper Set 1, to the two (2) lower pins.
- To set Relay 1 to output AC (if 'WET' and powered with AC) move **both** shunts (2) on Jumper Set 1, to the two (2) upper pins.
- To set Relay 1 to output 'DRY' (Jumper Set 1 becomes unused), move **both** shunts (2) on Jumper Set 2, to the two (2) lower pins.
- To set Relay 1 to output 'WET', move **both** shunts (2) on Jumper Set 2, to the two (2) upper pins.

4 Jumper Settings (Continued)

PRECAUTIONS TO OBSERVE WHEN USING A 'WET' OUTPUT

- ❑ Never change the switch settings when the module has power connected to it or when a load is applied.
- ❑ Never allow 2 different voltage sources to be connected to the load (electric strike for example) at the same time. This can result in serious damage to equipment.
- ❑ Always move **both** shunts when changing a jumper set.
- ❑ If an EL device is being powered by a separate power source, DO NOT select the 'WET' output option on the Br3. If 'WET' is selected, the next activation of the module will send a voltage to the load and if there is already a voltage being applied from another source, the Br3 and possibly the load will be permanently damaged.
- ❑ When using the 'WET' output option on the Br3, set all desired switch positions ('WET' – 'DRY' and AC – DC) before the module is powered and before any loads are applied.
- ❑ When DC 'WET' output is selected, COM terminal is positive(+) and the ground(-) is switched between NO and NC.
- ❑ Ensure there is no other voltage connected to the load. Whatever the Input voltage is at the Br3, the output will correspond. The following can also be observed:

  1. If voltage Input at the Br3 is AC, then output selection can be AC or DC.
  2. If voltage Input at the Br3 is DC, then output selection can only be DC.
  3. The maximum load applied to Relay 1 should never exceed 1A. If more than one device is to be connected, add the consumption values together for a total value. If current is excessive, damage to equipment can result.
  4. On the Br3, the 'WET' output is only available at Relay 1.

- ❑ When supplying Br3 with AC input voltage, and selecting 'WET' output on relay **with** DC conversion, you actually get rectified AC voltage, which is identical to applying a bridge rectifier to any AC voltage.

CAUTION: Relay 1 'WET' OPTION IS ACTIVE FOR ALL FUNCTIONS!

5 Selecting the Function

The following steps are to program the Br3 to select and configure the desired function.

1. When there is no function set, as is the case on an initial power on, or if you desire to change the function, the user must first press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display. At this point the display will toggle between FF and 00 every one (1) second for five (5) seconds after the last button has been pressed.
2. By pressing on the INCR button, the user can toggle through each function to select the function. A display of 10 corresponds to function MC10, 11 corresponds to function MC11, etc. Once you reach the last function, 75, the list will rollover to the beginning.

   NOTE: Selecting 00 disables the module.
3. After selecting the function, the user can then press the PARAM button to cycle through and set the parameters defined for that particular function, if applicable. If there are any function parameters, the display will toggle between the parameter and its current value every one (1) second for five (5) seconds after the last button has been pressed. If there are no parameters, NP and -- will be displayed as a parameter and its value for five (5) seconds.

   NOTE: Once the PARAM button has been pressed as to set the function's respective parameters and values, the user will not be able to go back and select a different function until the display goes inactive and the user repeats the above process starting with Step 1. This prevents the user from inadvertently changing functions or selecting variables from different functions.
4. After selecting the function's parameter to change, the user can press the INCR button to increment the parameter's value. A single press of the INCR button will increment the value by one, but holding the increment button will allow for a rapid increment of the value.
5. Once all parameters for the function are set, wait the five (5) seconds for the display to go inactive and the Br3 to save the updated parameters. The Br3 is now programmed. As long as no relays are active, the display will show the function selected, otherwise it will show those relays. Once the values are changed, they are only saved after the display goes inactive again (5 seconds).

   NOTE: Remember that the INCR push button always increments the value of the parameter that you are looking at, and the PARAM push button toggles through the available parameters.

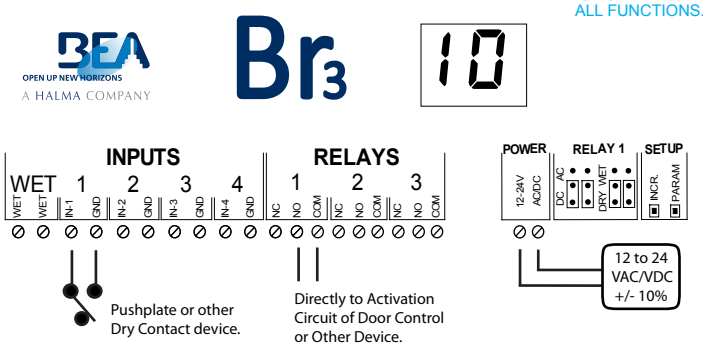
   NOTE: To change only the value of a parameter under the function, start the process with Step 3.

6A Function 10 - Timer Module (MC10)

CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.

The MC10 provides an activation of Relay 1 triggered by Input 1. The function also provides an option for reverse-logic for the activation of Input 1. Adjustable parameters include H1 for activation hold time of Relay 1 and RL for reverse logic for Input 1. A re-activation of Input 1 will re-start the hold timer and keep the relay active. A maintained Input 1 will freeze the hold timer thus keeping its relay active until the Input is released, which will allow the hold timer to expire and deactivate the relay normally. A reverse logic version of the timer function is also offered in which the logic on Input 1 is reversed, thus to activate the timer, the input must be opened.

A typical application is to have a push-plate to activate a door controller. For this scenario the push-plate would be wired to Input 1 and the door controller would be wired to Relay 1. An example wiring diagram for this scenario is shown.



MC10 SETUP

1. Wire the Br3 accordingly.
2. Select the MC10 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 10.
3. Set the MC10 parameters according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.
   Parameters for the MC10 function are shown in the chart. Set the parameters as needed for the application, and wait for the display to become inactive to save the configuration.

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60'. Relay 1 hold time will not begin counting down until the release of Input 1.
RL	Activation Logic Input	'00' = Normal Logic: The activation device at Input 1 must be normally opened and close its contacts to trigger the timer.
		'01' = Reverse Logic: The activation device at Input 1 must be normally closed and open its contacts to trigger the timer.

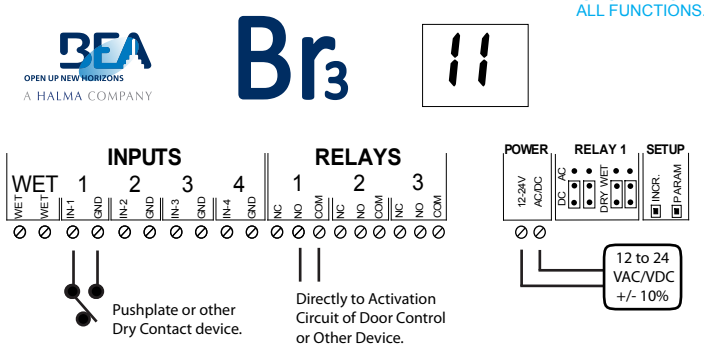
4. Once programming is complete, test the Br3. Trigger the timer via Input 1. Ensure that Relay 1 activates and its hold time is as programmed. The display will show R 1 when Relay 1 is energized and 1 0 when de-energized.
5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended, and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

6B Function 11 - Ratchet (MC11)

CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.

The MC11 function provides a ratcheting of Relay 1 triggered by Input 1. Each trigger by Input 1 will change the state of Relay 1. MC11 has NO adjustable parameters. If Input 1 is maintained, Relay 1 will only change state once. Input 1 must then be opened and re-closed for a relay change of state.

A typical application is to have a set of push-to-open and push-to-close push-plates connected to a door in the instance that a single hold time will not suit all users of the door. For this scenario the push-to-open push-plate would be wired in parallel with the push-to-close push-plate to Input 1 and the door controller would be wired to Relay 1. An example wiring diagram for this scenario is shown.



MC11 SETUP

1. Wire the Br3 accordingly.
2. Select the MC11 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 11.
3. There are NO parameters to set for the MC11 as the state of Relay 1 is not based on time, so just wait for the display to become inactive to save the configuration.
4. Once programming is complete, test the Br3. Trigger the ratchet via Input 1. Ensure that Relay 1 changes state and that it is maintained. The display will show R1 when Relay 1 is energized. Trigger the ratchet again via Input 1 and ensure Relay 1 changes state again. The display will show 11 when Relay 1 is de-energized.
5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended, and that the system is in compliance with all applicable standards (ie. ANSI A 156.10, A156.19).

6C Function 21 - Inhibitor (LE21)

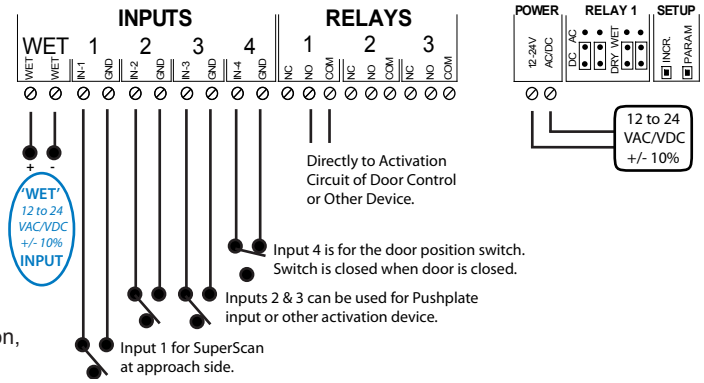
CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.

The LE21 function provides activation of Relay 1 with an inhibitor of activation for Input 1 until Input 2, Input 3 or 'WET' Input is triggered, which all activate Relay 1. Additionally Input 4 provides a door position switch input for which closing it will re-inhibit Input 1. Adjustable parameters include H1 for activation hold time of Relay 1.



NOTE: The door position switch must have a closed contact when the door is closed and an opened contact when it is not.

A typical application is a 'Low-Energy' situation in which you have only 'Knowing-Act' activation devices such as push-plates, a re-activation device, such as a SuperScan, on the door for safety and a door position switch. For this scenario the push-plates would be wired to Inputs 2 and/or 3, the SuperScan would be wired to Input 1, a door position switch on Input 4 and the door controller on Relay 1. When the door position switch on Input 4 is closed, the SuperScan Input is ignored (inhibited) and only becomes a re-activation device (uninhibited) after an activation on Input 2 or Input 3. The SuperScan on Input 1 will remain uninhibited until the door is closed again, closing Input 4. An example wiring diagram for this scenario is shown.



NOTE: While the 'WET' Input is not involved in our typical application, it will still function as Input 2 and Input 3.

LE21 SETUP

1. Wire the Br3 accordingly.
2. Select the LE21 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 2 1.
3. Set the lone LE21 parameter according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.
   The single parameter for the LE21 function is shown in the chart. Set it as needed for the application, and wait for the display to become inactive to save the configuration

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60'. Relay 1 hold time will not begin counting down until the release of an activation input.

4. Once programming is complete, test the Br3. Attempt to trigger the timer via the re-activation device tied to Input 1. Ensure that Relay 1 does NOT energize as it should be inhibited. The display should still show 21 since Relay 1 is de-energized. Now trigger the timer via Input 2, Input 3 or 'WET' Input. Ensure that Relay 1 activates and its hold time and is as programmed. The display will show R1 when Relay 1 is energized. Before the door closes attempt to re-activate the timer via the device tied to Input 1. The door should re-open and the timer should restart. Once again observe the relay hold time and ensure that it is as programmed. Let the door close to close Input 4 via the door position switch. Once again attempt to trigger the timer via the re-activation device tied to Input 1. Ensure that Relay 1 does NOT energize as it should be re-inhibited.
5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended, and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).).

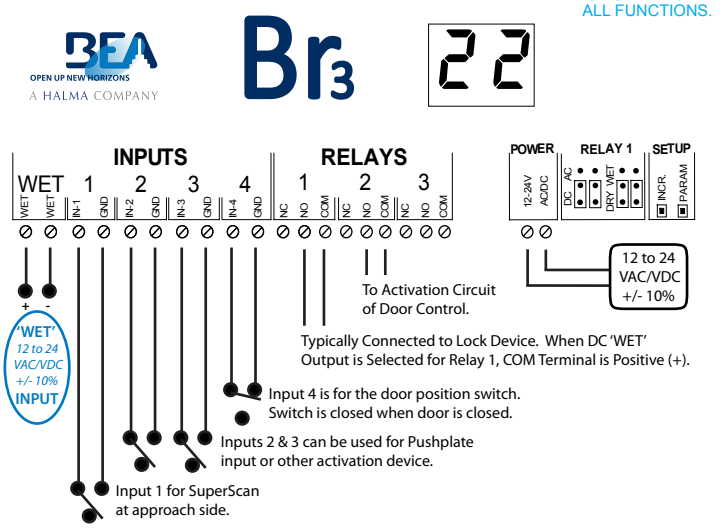
6D Function 22 - 2 Relay Sequence w/Inhibitor (LE22)

The LE22 function provides a sequence for Relay 1 and/or Relay 2 with an inhibitor of activation for Input 1 until Input 2, Input 3 or 'WET' Input is triggered, which all activate the sequence. Additionally Input 4 provides a door position switch input for which closing it will re-inhibit Input 1. Simply put this function is a combination between a LE21 and MC25. Adjustable parameters include H1 for activation hold time of Relay 1, H2 for activation hold time of Relay 2 and D1 for delay between activation of Relay 1 to Relay 2. A re-activation of the sequence before it expires will re-start both hold timers and keep the relays active. A maintained input will freeze both hold timers, thus keeping their relays active until the input is released, which will allow the hold timers to expire and deactivate the relays normally.

NOTE: The delay timer will only fire one time during initial activation or maintained input.

NOTE: The door position switch must have a closed contact when the door is closed and an opened contact when it is not.

CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.



A typical application is a 'Low-Energy' situation, which needs security, in which you have only 'Knowing-Act' activation devices such as push-plates and a re-activation device, such as a SuperScan, on the door for safety and a door position swtich. For this scenario the push-plates would be wired to Inputs 2 and/or 3, the SuperScan would be wired to Input 1, a door position switch on Input 4, a security device such as a Maglock or electric strike on Relay 1 and the door controller on Relay 2. When the door position switch on Input 4 is closed, the SuperScan input is ignored (inhibited) and only becomes a re-activation device (uninhibited) after an activation on Input 2 or Input 3. The SuperScan on Input 1 will remain uninhibited until the door is closed again closing Input 4. An example wiring diagram for this scenario is shown.

NOTE: While the 'WET' Input is not involved in our typical application, it will still function as Input 2 and Input 3 do if used.

LE22 SETUP

1. Wire the Br3 accordingly.

2. Select the LE22 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 22.

3. Set the LE22 parameters according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.
     Parameters for the LE22 function are shown in the chart. Set the parameters as needed for the application and wait for the display to become inactive to save the configuration.

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60'. Relay 1 hold time will not begin counting down until the release of Input 1.
H2	Relay 2 hold time	'00' through '60'. Relay 2 hold time will not begin counting down until the delay between Relay 1 and Relay 2 expires.
D1	Delay between Relay 1 and Relay 2	'00', '_1' (1/4), '_2' (1/2), '_3' (3/4), '01' through '60' seconds. The delay time will begin counting down with activation of sequence.

4. Once programming is complete, test the Br3. Attempt to trigger the sequence via the re-activation device tied to Input 1. Ensure that the sequence does NOT start as it should be inhibited. The display should still show 22 since Relay 1 is de-energized. Now trigger the sequence via Input 2, Input 3 or 'WET' Input. Ensure that the sequence runs and the Relays activate and the timers are as programmed. The display will show R1 when Relay 1 is energized, R2 when Relay 2 is energized or R= when both Relay 1 and Relay 2 are energized at the same time. Before the door closes attempt to re-activate the sequence via the device tied to Input 1. The door should re-open immediately and the relay hold timers should restart. Once again observe the relay hold times and ensure that it is as programmed. Let the door close and trigger Input 4 via the door position switch. Once again attempt to trigger the sequence via the re-activation device tied to Input 1. Ensure that sequence does NOT start as it should be re-inhibited.

5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended, and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

6E Function 25 - 2 Relay Sequence (MC25)

The MC25 function provides a sequence for Relay 1 and/ or Relay 2 triggered by Input 1 or 'WET' Input. Adjustable parameters include H 1 for activation hold time of Relay 1, H 2 for activation hold time of Relay 2 and D 1 for delay between activation of Relay 1 to Relay 2. A re-activation of Input 1 or 'WET' Input before the sequence expires will re-start both hold timers and keep the relays active. A maintained input will freeze both hold timers, thus keeping their relays active until the input is released, which will allow the hold timers to expire and deactivate the relays normally.

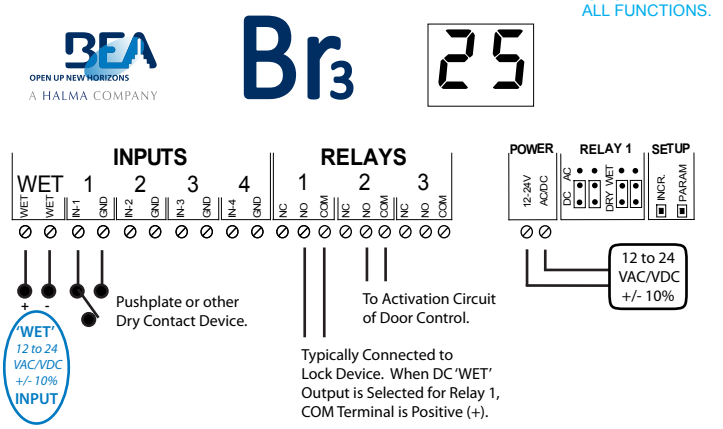
NOTE: The delay timer will only fire one time during initial activation or maintained input.

NOTE: The functionality for MC25 has changed slightly in this version as it will also check the 'WET' Input.

A typical application is a security door in which you have a push-plate to start the sequence to unlock the security device, such as a Maglock or electric strike and then activate the door controller. For this scenario the push-plate would be wired to Input 1, the security device would be wired to Relay 1 and the door controller would be wired to Relay 2. An example wiring diagram for this scenario is shown.

NOTE: While the 'WET' Input is not involved in our typical application, it will still function as Input 1 does if used

CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.



MC25 SETUP

1. Wire the Br3 accordingly.
2. Select the MC25 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 25.
3. Set the MC25 parameters according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.

   Parameters for the MC25 function are shown in the chart. Set the parameters as needed for the application, and wait for the display to become inactive to save the configuration.

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60' - Relay 1 hold time will not begin counting down until the release of Input 1 or 'WET' Input.
H2	Relay 2 hold time	'00' through '60' - Relay 2 hold time will not begin counting down until the delay between Relay 1 and Relay 2 expires.
D1	Delay between Relay 1 and Relay 2	'00', '_1' (1/4), '_2' (1/2), '_3' (3/4), '01' through '60' seconds. The delay time will begin counting down with the activation of the sequence.

4. Once programming is complete, test the Br3. Trigger the sequence via Input 1 or 'WET' Input. Ensure that the sequence runs and the relays activate and the timers are as programmed. The display will show R1 when Relay 1 is energized, R2 when Relay 2 is energized and R= when both Relay 1 and Relay 2 are energized at the same time.
5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended, and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

6F Function 28 - 2 Relay Sequence w/Position Input (MC28)

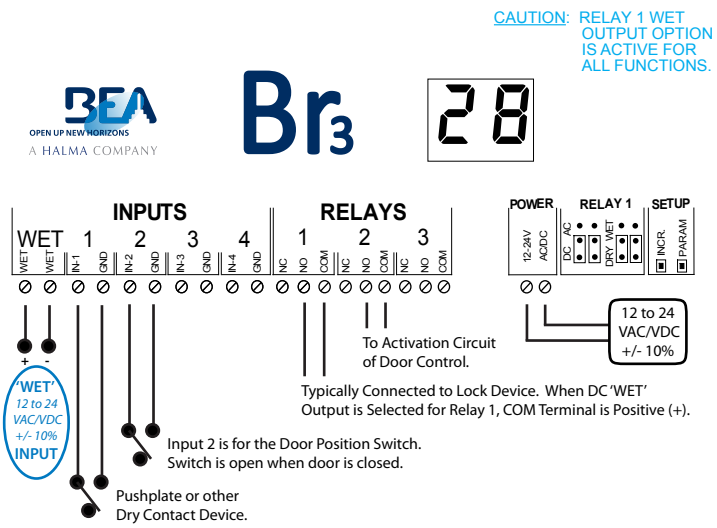
The MC28 function provides a sequence for Relay 1 and/ or Relay 2 triggered by Input 1 or 'WET' Input. Additionally Input 2 provides a door position switch input which allows the delay to run when Input 2 is opened, but not run when closed. Simply put, this function is an MC25 with a normally opened door position switch input to determine if the delay should run. Adjustable parameters include H1 for activation hold time of Relay 1, H2 for activation hold time of Relay 2 and D1 for delay between activation of Relay 1 to Relay 2. A maintained input will freeze both hold timers, thus keeping their relays active until the input is released, which will allow the hold timers to expire and deactivate the relays normally.

NOTE: The delay timer will only fire when Input 2 is opened.

NOTE: The door position switch must have an opened contact when the door is closed, and a closed contact when it is not. (Position switch logic is different than 21, 22, 50 and 55.)

A typical application is a security door in which you have a push-plate to start the sequence to unlock the security device, such as a Maglock or electric strike and then activate the door controller and an additional door position switch. For this scenario the push-plate would be wired to Input 1, the position switch would be wired to Input 2, the security device would be wired to Relay 1 and the door controller would be wired to Relay 2. An example wiring diagram for this scenario is shown.

NOTE: While the 'WET' Input is not involved in our typical application, it will still function as Input 1 does if used.



MC28 SETUP

1. Wire the Br3 accordingly.

2. Select the MC28 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 28.

3. Set the MC28 parameters according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.
   Parameters for the MC28 function are shown in the chart. Set the parameters as needed for the application, and wait for the display to become inactive to save the configuration.

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60' - Relay 1 hold time will not begin counting down until the release of Input 1 or 'WET' Input.
H2	Relay 2 hold time	'00' through '60' - Relay 2 hold time will not begin counting down until the delay between Relay 1 and Relay 2 expires.
D1	Delay between Relay 1 and Relay 2	'00', '_1' (1/4), '_2' (1/2), '_3' (3/4), '01' through '60' seconds. The delay time will begin counting down with the activation of the sequence.

4. Once programming is complete, test the Br3. Trigger the sequence via Input 1 or 'WET' Input. Ensure that the sequence runs and the relays activate and the timers are as programmed. The display will show R1 when Relay 1 is energized, R2 when Relay 2 is energized and R= when both Relay 1 and Relay 2 are energized at the same time. Ensure that the delay between Relay 1 and Relay 2 runs when the sequence starts from the door closed position. Now, re-run the sequence; however this time before the door reaches the closed position, reactivate the door and ensure that the door reactivates immediately as the delay between timer, D1 does NOT run.

5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

6G Function 29 - Relay 1 Deactivation Timer (MC29)

The MC29 function provides a sequence for Relay 1 and/or Relay 2 triggered by Input 1 or 'WET' Input. Additionally Input 2 provides a door position switch input which allows the Relay 1 to deactivate once Input 2 is opened after the sequence has run. Input 2 also allows the delay to run when Input 2 is opened, but not run when closed, as in the MC28. Input 3 provides an input to disable the sequence whose logic is also selectable. Simply put Relay 1 will be active the entire time until the normally opened door position switch signifies that the door has come closed again. Adjustable parameters include H1 for activation hold time of Relay 1 after the door position switch has closed, H2 for activation hold time of Relay 2, D1 for delay between activation of Relay 1 to Relay 2 and RL for reverse logic for Input 3.

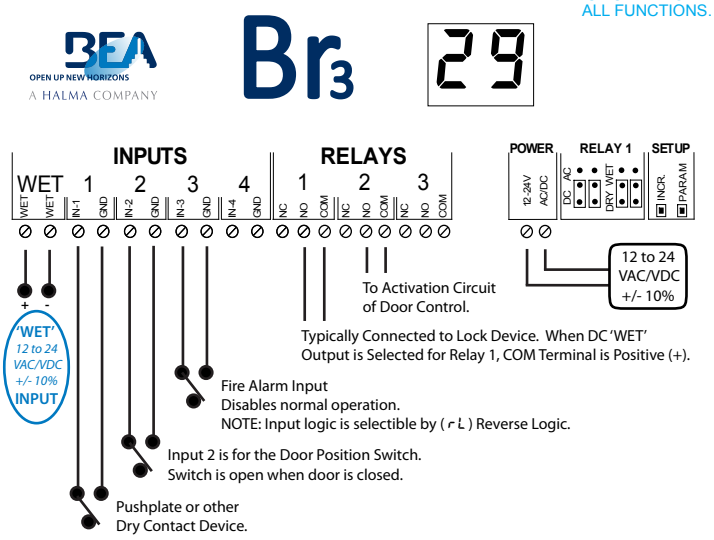
NOTE: The delay timer will only fire one time during initial activation or maintained input.

NOTE: The door position switch must have an opened contact when the door is closed, and a closed contact when it is not. (Position switch logic is different than 21, 22, 50 and 55.)

A typical application is a security door in which you have a push-plate to start the sequence to unlock the Maglock, which you would want unlocked for the entire sequence until the door becomes closed again, then activate the door controller and an additional door position switch. For this scenario the push-plate would be wired to Input 1, the position switch would be wired to Input 2, the Maglock would be wired to Relay 1 and the door controller would be wired to Relay 2. An example wiring diagram for this scenario is shown.

NOTE: While the 'WET' Input is not involved in our typical application, it will still function as Input 1 does if used.

CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.



MC29 SETUP

1. Wire the Br3 accordingly.
2. Select the MC29 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 29.
3. Set the MC29 parameters according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.
   Parameters for the MC29 function are shown in the chart. Set the parameters as needed for the application, and wait for the display to become inactive to save the configuration.

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60' - Relay 1 hold time will not begin counting down until the release of Input 2.
H2	Relay 2 hold time	'00' through '60' - Relay 2 hold time will not begin counting down until the delay between Relay 1 and Relay 2 expires.
D1	Delay between Relay 1 and Relay 2	'00', '_1' (1/4), '_2' (1/2), '_3' (3/4), '01' through '60' seconds. The delay time will begin counting down with the activation of the sequence.
RL	Input 3 Logic	'00' = Normal Logic: The activation device at Input 3 must be normally opened and close it's contacts to disable the sequence.
		'01' = Reverse Logic: The activation device at Input 3 must be normally closed and open it's contacts to disable the sequence.

4. Once programming is complete, test the Br3. Trigger the sequence via Input 1 or 'WET' Input. Ensure that the sequence runs and the relays activate and the timers are as programmed. The display will show R1 when Relay 1 is energized, R2 when Relay 2 is energized and R= when both Relay 1 and Relay 2 are energized at the same time. Ensure that the delay between Relay 1 and Relay 2 runs when the sequence starts from the door closed position. Ensure that Relay 1 stays active the entire time until the door returns to the closed position. Now, re-run the sequence; however this time before the door reaches the closed position, reactivate the door and ensure that the door reactivates immediately as the delay between timer, D1 does NOT run. Finally check the sequence disabling feature by triggering Input 3, while at the same time attempting to run the sequence by triggering Input 1 or 'WET' Input. The sequence should NOT run again until Input 3 is released.
5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

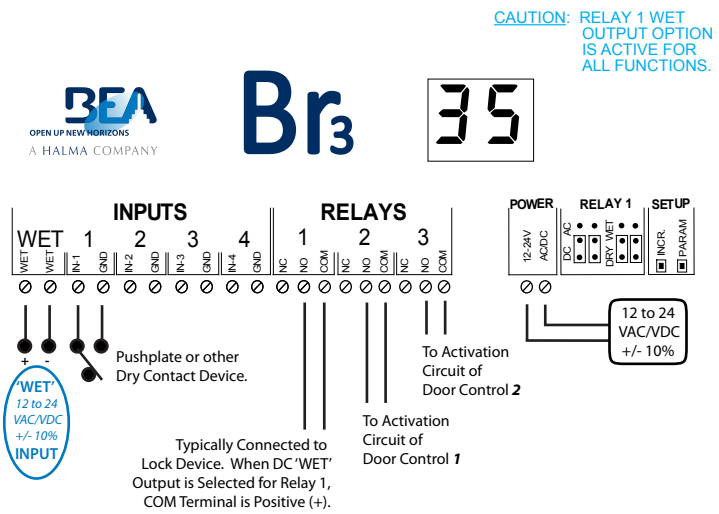
6H Function 35 - 3 Relay Sequence (MC35)

The MC35 function provides a sequence for Relay 1 and/or Relay 2 and/or Relay 3 triggered by Input 1 or 'WET' Input. Simply put this function is a MC25 with three relays instead of two. Adjustable parameters include H1 for activation hold time of Relay 1, H2 for activation hold time of Relay 2, H3 for activation hold time of Relay 3, D1 for delay between activation of Relay 1 to Relay 2 and D2 for delay between activation of Relay 1 to Relay 3. A re-activation of Input 1 or 'WET' Input before the sequence expires will re-start all hold timers and keep the relays active. A maintained input will freeze all hold timers thus keeping their relays active until the input is released, which will allow the hold timers to expire and deactivate the relays normally.

NOTE: The delay timer will only fire one time during initial activation or maintained input.

A typical application is a secure pair of doors with flush bolts in which you have a push-plate to start the sequence to unlock the security device, such as a Maglock or electric strike, then activate the first door controller and then activate the second door controller. For this scenario the push-plate would be wired to Input 1, the security device would be wired to Relay 1, the first door controller would be wired to Relay 2 and the second door controller would be wired to Relay 3.

NOTE: While the 'WET' Input is not involved in our typical application, it will still function as Input 1 does if used.



MC35 SETUP

1. Wire the Br3 accordingly.

2. Select the MC35 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 35.

3. Set the MC35 parameters according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.
   Parameters for the MC35 function are shown in the chart. Set the parameters as needed for the application, and wait for the display to become inactive to save the configuration.

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60' - Relay 1 hold time will not begin counting down until the release of Input 1 or 'WET' Input.
H2	Relay 2 hold time	'00' through '60' - Relay 2 hold time will not begin counting down until the delay between Relay 1 and Relay 2 expires.
H3	Relay 3 hold time	'00' through '60' - Relay 3 hold time will not begin counting down until the delay between Relay 1 and Relay 3 expires.
D1	Delay between Relay 1 and Relay 2	'00', '_1' (1/4), '_2' (1/2), '_3' (3/4), '01' through '60' seconds. The delay time will begin counting down with the activation of the sequence.
D2	Delay between Relay 1 and Relay 3	'00', '_1' (1/4), '_2' (1/2), '_3' (3/4), '01' through '60' seconds. The delay time will begin counting down with the activation of the sequence.

4. Once programming is complete, test the Br3. Trigger the sequence via Input 1 or 'WET' Input. Ensure that the sequence runs and the relays activate and the timers are as programmed. The display will show R1 when Relay 1 is energized, R2 when Relay 2 is energized, R3 when Relay 3 is energized, R= when Relay 1 and Relay 2 are energized at the same time, R≡ when all three relays are energized or R= when Relay 1 and Relay 3 are energized at the same time.

5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

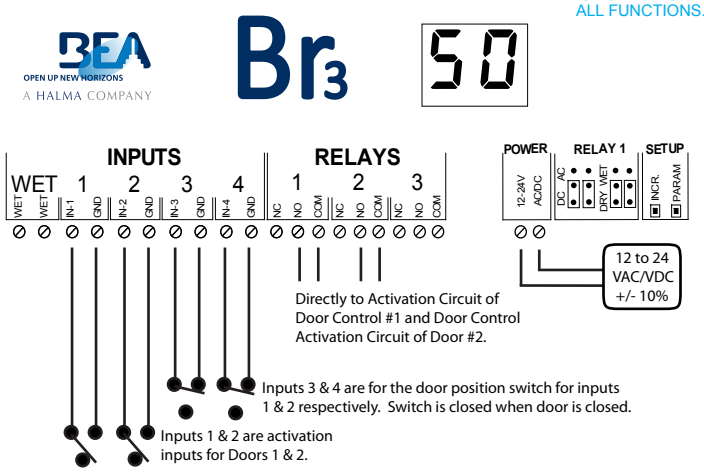
6I Function 50 - Interlock Timer (MC50)

CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.

The MC50 function provides an interlock of Relay 1 and Relay 2 triggered by Inputs 1 and 2, with door position switch inputs on Input 3 for Input 1 and Input 4 for Input 2. Only one relay will be allowed to operate at a time thus making the two relays interlocked or mutually exclusive. In order to activate a relay, its corresponding position switch input must be closed. Adjustable parameters include H1 for activation hold time of Relay 1 and H2 for activation hold time of Relay 2. A re-activation or maintaining of an input while its respective relay is activated will restart the hold timer and keep the relay active.

NOTE: The door position switch must have a closed contact when the door is closed and an opened contact when it is not.

A typical application is to have a pair of doors on a clean room in which only one door can be opened at a time. Each door would have a push-plate and a door position switch. For this scenario each door's push-plate would be wired to Input 1 and Input 2, with the door position switches wired to Input 3 and Input 4 respectively, door controller 1 would be wired to Relay 1 and door controller 2 would be wired to Relay 2. An example wiring diagram for this scenario is shown.



MC50 SETUP

1. Wire the Br3 accordingly.

2. Select the MC50 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 50.

3. Set the MC50 parameters according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.
     Parameters for the MC50 function are shown in the chart. Set the parameters as needed for the application, and wait for the display to become inactive to save the configuration.

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60'. Relay 1 hold time will not begin counting down until the release of Input 1.
H2	Relay 2 hold time	'00' through '60'. Relay 2 hold time will not begin counting down until the release of Input 2.

4. Once programming is complete, test the Br3. Wait until both doors are closed then trigger Relay 1 via Input 1. Ensure that Relay 1 changes state and its hold time and is as programmed. The display will show R1 when Relay 1 is energized. Test the interlock by attempting to trigger Relay 2 via Input 2 while door 1 is still open. Relay 2 should NOT activate due to the first position switch being opened. Let Relay 1 timeout and the door to close. The display will show 50 when Relay 1 is de-energized. Once the first position switch is closed trigger Relay 2 via Input 2. Ensure that Relay 2 changes state and its hold time and is as programmed. The display will show R2 when Relay 2 is energized. Test the interlock by attempting to trigger Relay 1 via Input 1 while door 2 is still open. Relay 1 should NOT activate due to the second position switch being opened. The display will show 50 when Relay 2 is de-energized.

5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended, and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

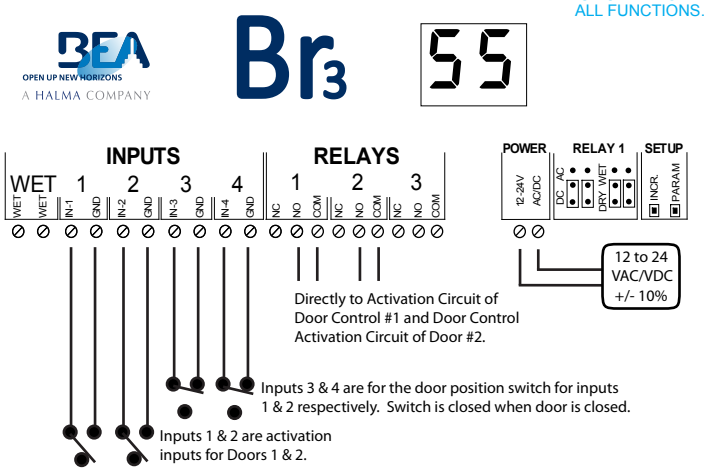
6J Function 55 - Interlock Ratchet (MC55)

The MC55 function provides an interlock ratchet of Relay 1 and Relay 2 triggered by Inputs 1 and 2, with door position switch inputs on Input 3 for Input 1 and Input 4 for Input 2. Only one relay will be allowed to operate at a time thus making the two relays interlocked or mutually exclusive. In order to activate a relay, its corresponding position switch input must be closed. Each trigger of an input will change the state of its respective relay. MC55 has NO adjustable parameters. If the input is maintained, its relay will only change state once. The input must then be opened and re-closed for a change of state.

NOTE: The door position switch must have a closed contact when the door is closed and an opened contact when it is not.

A typical application is to have a pair of doors on a clean room in which only one door can be opened at a time. Each door would have a set of push-plates connected to it in the instance that a single hold time will not suit all users of the door. Each door would also have a door position switch. For this scenario door number 1 and 2 push plates shall be wired in parallel to inputs 1 and 2 respectively, with the door position switches wired to Input 3 and Input 4 respectively, door controller 1 would be wired to Relay 1 and door controller 2 would be wired to Relay 2. An example wiring diagram for this scenario is shown below.

CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.



MC55 SETUP

1. Wire the Br3 accordingly.
2. Select the MC55 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 55□.
3. There are NO parameters to set for the MC55 as the state of Relay 1 and Relay 2 are not based on time, so just wait for the display to become inactive to save the configuration.
4. Once programming is complete, test the Br3. Wait until both doors are closed then trigger Relay 1 via Input 1. Ensure that Relay 1 changes state and that is maintained. The display will show R1 when Relay 1 is energized. Test the interlock by attempting to trigger Relay 2 via Input 2. Relay 2 should NOT activate due to the first position switch being opened. Now trigger Relay 1 again via Input 1 and ensure Relay 1 changes state again. The display will show 55 when Relay 1 is de-energized. Once the first position switch is closed trigger Relay 2 via Input 2. Ensure that Relay 2 changes state and that is maintained. The display will show R2 when Relay 2 is energized. Test the interlock by attempting to trigger Relay 1 via Input 1. Relay 1 should NOT activate due to the second position switch being opened. Now trigger Relay 2 again via Input 2 and ensure Relay 2 changes state again. The display will show 55 when Relay 2 is de-energized.
5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended, and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

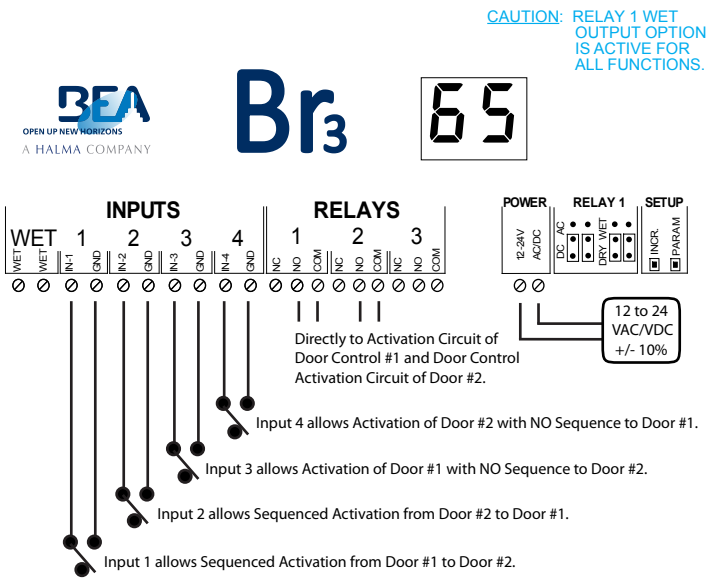
6K Function 65 - 2 Way, 2 Relay Sequence (MC65)

The MC65 function provides a two-way sequencer to sequence Relay 1 and/or Relay 2 triggered by Input 1. Similarly, it also provides a sequence in the opposite direction to sequence Relay 2 and/or Relay 1 triggered by Input 2. Inputs 3 and 4 also trigger Relays 1 and 2 individually (non-sequenced). Adjustable parameters include H1 for activation hold time of Relay 1, H2 for activation hold time of Relay 2, D1 for delay between activation of Relay 1 to Relay 2 and D2 for delay between activation of Relay 2 to Relay 1. A re-activation of Input 1 or Input 2 before the sequence expires will re-start both hold timers and keep the relays active. A maintained input will freeze both hold timers, thus keeping their relays active until the input is released, which will allow the hold timers to expire and deactivate the relays normally.

NOTE: The delay timer will only fire one time during initial activation or maintained input.

NOTE: The functionality for MC65 has changed slightly in this version as you no longer have to wait for a sequence to complete before running another sequence.

A typical application is an unsecured two door sequence vestibule that allows two-way traffic in which you have a push-plate on the entrance of each door to start the sequence and two push-plates between the doors to activate the doors individually in case of entrapment. For this scenario the push-plate for in-bound traffic would be wired to Input 1, the push-plate for out-bound traffic would be wired to Input 2, a push-plate for entrapment release of door 1 would be wired to Input 3, a push-plate for entrapment release of door 2 would be wired to Input 4, Relay 1 would be wired to door controller 1 and Relay 2 would be wired to door controller 2. An example wiring diagram for this scenario is shown.



MC65 SETUP

1. Wire the Br3 accordingly.

2. Select the MC65 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 65.

3. Set the MC65 parameters according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.
   Parameters for the MC65 function are shown in the chart. Set the parameters as needed for the application, and wait for the display to become inactive to save the configuration.

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60' - Relay 1 hold time will not begin counting down until the release of Input 1 for inbound or until the delay between Relay 2 and Relay 1 expires for outbound or until the release of Input 3.
H2	Relay 2 hold time	'00' through '60' - Relay 2 hold time will not begin counting down until the release of Input 2 for outbound or until the delay between Relay 1 and Relay 2 expires for inbound or until the release of Input 4.
D1	Delay between Relay 1 and Relay 2	'00', '_1' (1/4), '_2' (1/2), '_3' (3/4), '01' through '60' seconds. The delay time will begin counting down with the activation of the sequence.
D2	Delay between Relay 2 and Relay 1	'00', '_1' (1/4), '_2' (1/2), '_3' (3/4), '01' through '60' seconds. The delay time will begin counting down with the activation of the sequence.

4. Once programming is complete, test the Br3. Trigger the sequence via Input 1. Ensure that the in-bound sequence runs and the relays activate and the timers are as programmed. The display will show R1 when Relay 1 is energized, R2 when Relay 2 is energized and R= when both Relay 1 and Relay 2 are energized at the same time. Trigger the sequence via Input 2. Ensure that the out-bound sequence runs and the relays activate and the timers are as programmed. Trigger only door 1 via Input 3. Trigger only door 2 via Input 4.

5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

6L Function 75 - 2 Relay Sequence (MC75)

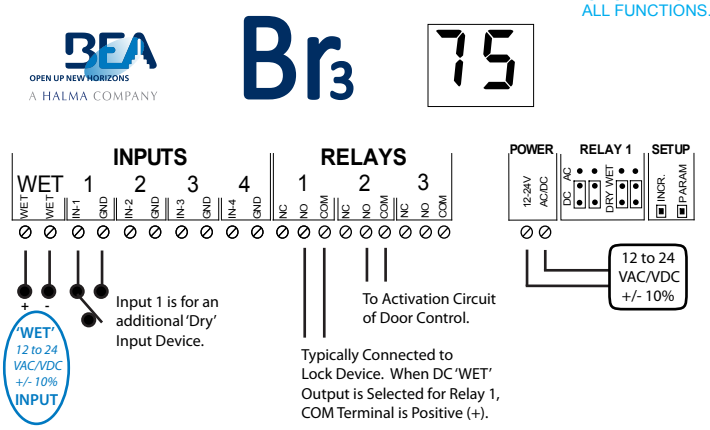
The MC75 function provides a sequence for Relay 1 and/ or Relay 2 triggered by Input 1 or 'WET' Input. Adjustable parameters include H1 for activation hold time of Relay 1, H2 for activation hold time of Relay 2 and D1 for delay between activation of Relay 1 to Relay 2. A re-activation of Input 1 or 'WET' Input before the sequence expires will re-start both hold timers and keep the relays active. A maintained input will freeze both hold timers, thus keeping their relays active until the input is released, which will allow the hold timers to expire and deactivate the relays normally.

NOTE: The delay timer will only fire one time during initial activation or maintained input.

A typical application is a security door in which you have a card-reader that supplies an output voltage to start the sequence to unlock the security device, such as a Maglock or electric strike and then activate the door controller. For this scenario the card-reader would be wired to 'WET' Input, the security device would be wired to Relay 1 and the door controller would be wired to Relay 2. An example wiring diagram for this scenario is shown below. An example wiring diagram for this scenario is shown below.

NOTE: While the Input 1 is not involved in our typical application, it will still function as 'WET' Input does if used.

CAUTION: RELAY 1 WET OUTPUT OPTION IS ACTIVE FOR ALL FUNCTIONS.



MC75 SETUP

1. Wire the Br3 accordingly.

2. Select the MC75 as the function according to the steps outlined in Section 5 – Selecting the Function.
   - Press and hold both push buttons (INCR & PARAM) for three (3) seconds to activate the display.
   - Press the INCR button to toggle through each function and select 75.

3. Set the MC75 parameters according to the steps outlined in Section 5 – Selecting the Function.
   - Press PARAM button to cycle through and set the parameters.
   - Press the INCR button to increment the parameter's value.
   Parameters for the MC75 function are shown in the chart. Set the parameters as needed for the application, and wait for the display to become inactive to save the configuration.

PARAMETER (PARAM Button)	DESCRIPTION	POSSIBLE VALUES (INCR Button)
H1	Relay 1 hold time	'00' through '60' - Relay 1 hold time will not begin counting down until the release of Input 1 or 'WET' Input.
H2	Relay 2 hold time	'00' through '60' - Relay 2 hold time will not begin counting down until the delay between Relay 1 and Relay 2 expires.
D1	Delay between Relay 1 and Relay 2	'00', '_1' (1/4), '_2' (1/2), '_3' (3/4), '01' through '60' seconds. The delay time will begin counting down with the activation of the sequence.

4. Once programming is complete, test the Br3. Trigger the sequence via Input 1 or 'WET' Input. Ensure that the sequence runs and the relays activate and the timers are as programmed. The display will show R1 when Relay 1 is energized, R2 when Relay 2 is energized and R= when both Relay 1 and Relay 2 are energized at the same time.

5. Upon completion of the above steps, walk test the door to ensure all functions, timers, sensors, etc. are working as intended and that the system is in compliance with all applicable standards (i.e. ANSI A156.10, A156.19).

7 Documentation

1. Document all work. For future reference, be sure to record the Br3 Serial Number on your Work Order.
2. Educate the Owner / Manager as to the proper operation of the door and sensor system, and what to do to ensure safe use of the door in the event of discovering a malfunction. Show the Owner / Manager how to perform a daily safety check of the system. You may also wish to provide the owner/Manager a copy of an owners manual provided by AAADM for the type of door selected.
3. Be sure to obtain signatures on your work order for all work accomplished.

8 Troubleshooting

PROBLEM	PROBABLE CAUSE	CORRECTIVE ACTION
Module will NOT react to any input.	1. Incorrect Br3 power 2. Module not programmed 3. Incorrect wiring 4. Faulty module	1. Check the Br3's power. It should be 12 to 24 volts AC or DC +/- 10%. Ensure that input power is applied at the correct terminals. 2. Ensure a function has been programmed. If '00' is showing in the display, the Br3 will need to be programmed. All "h" values must be set to at least '01'. 3. Jumper an active Input and ensure that the fault is not within the wiring. If module works when jumped, trace wiring from Inputs / relays. 4. Replace module.
Module reacts to input but has no output.	1. Wrong outputs are connected 2. Incorrect wiring 3. Incorrect jumper settings 4. Faulty module	1. Check to ensure that the proper outputs are connected per the function selected. 2. Trace all wiring to ensure correct termination points. 3. Check that the jumpers are configured correctly for the application. 4. Replace module

9 Company Contact

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A HALMA COMPANY

CAUTION

Do not leave problems unresolved. If a satisfactory solution cannot be achieved after troubleshooting a problem, please call BEA, Inc. If you must wait for the following workday to call BEA, leave the door inoperable until satisfactory repairs can be made. Never sacrifice the safe operation of the automatic door or gate for an incomplete solution.

The following numbers can be called 24 hours a day, 7 days a week. For more information, visit www.beasensors.com.

East: **1-866-249-7937**
Canada and Texas: **1-866-836-1863**
Central: **1-800-407-4545**
West: **1-888-419-2564**