BAA10-001/002-S-BAC02(L)-KIT
BAA10-001/002-B-BAC02(L)-KIT

Document: BAC02-KIT-D002

Installation Manual

Touchless Actuator Kits (For doors with an electrical Lock)

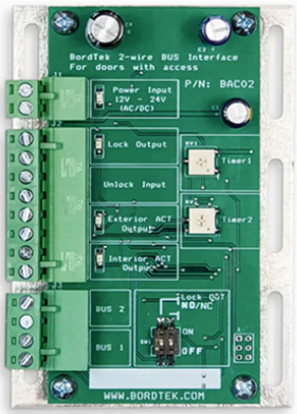


Table of Contents

What is included in the BAC02 kit.. 3

What is NOT included in the BAC02 kit... 4

BAC02 REV02 - Control 5

Features 5

Dimensions 5

Electrical characteristics: 5

BAC02 REV02 - Terminal blocks, potentiometers and DIP switches 6

1- Power Input 6

2- Lock Output 7

3- Unlock Input (Wet Signal) 7

4- Exterior Activation Output 7

5- Interior Activation Output 7

6- Exterior Actuator BUS 8

7- Interior Actuator BUS 8

8- RV1 Potentiometer/Timer (Activation Delay) 8

9- RV2 Potentiometer/Timer (Activation Length) 8

10- DIP Switch Settings: 8

BAA10 Touchless Actuator 9

Actuator Color on different Modes 9

Features 9

Dimensions 9

Electrical characteristics 10

DIP Switch Settings 10

Mounting plate (included) 11

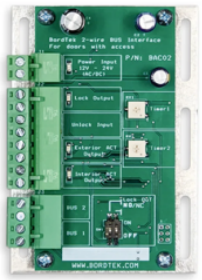
BAC02/BAA10 Wiring diagram for doors with access on one side 12

BAC02/BAA10 Wiring diagram for doors with access on both sides 13

What is included in the BAC02 kit...

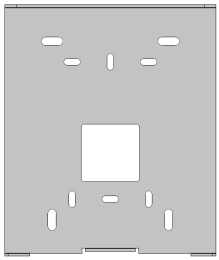
1x BAC02 Control & screws

Part number: BAC02 REV02
(See BAC02 Control section for details)



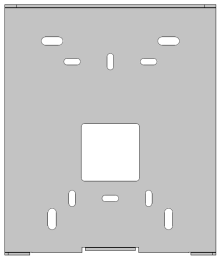
1x BAA10 Touchless Actuators

Part number: BAA10-001-Y
Y=S With front activation only
Y=B With front and bottom activations
(Mounting plate & hardware included)

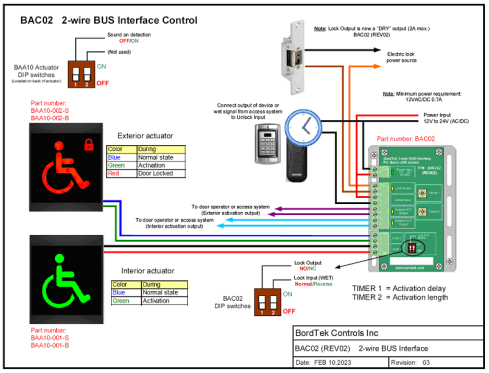


1x BAA10 Touchless Actuators

Part number: BAA10-002-Y
Y=S With front activation only
Y=B With front and bottom activations
(Mounting plate & hardware included)



Wiring diagram(s)



What is NOT included in the BAC02 kit...

- Strike or maglock

- Access device (ex: Day-Timer, access system, card reader, key pad...)

- Low voltage Power Supply to power the BAC02 control

    - Suggested power: 12VDC 1A or 24VDC 1A power supply
      Additional current maybe needed for the electric lock

- Cables/wires to connect all components

    - Suggested cable/wire type to use: 20 AWG, 1 pair of stranded (7x30)
      20 AWG, hook-up / stranded wire (7x30)

BAC02 REV02 - Control

The BordTek BAC02 control module serves as the interface connecting BordTek's touchless actuators and third party access device(s) with the automatic door operator. Specifically designed for doors equipped with an electrical lock, this controller is compatible with both single-side and double-side access configurations. Refer to the wiring diagram for installation guidelines.

The BUS functionality of the BAC02 control module delivers power and facilitates communication between the control unit and the actuators. Only one pair of wires is required for the actuator installation, making it an effortless retrofit solution when upgrading from conventional mechanical accessible buttons to BordTek's touchless actuators.

The BAC02 control module can be used either as a standalone unit or integrated into an access control system for enhanced functionality and convenience.

Features:

- Low tension power supply input (12 - 24 Volt AC/DC)
- Two activation outputs: Interior and exterior
- Electric lock output mode: Normally opened or normally closed
- Unlock wet input: Normal or Reverse
- DIP switches: Select lock output mode and unlock input mode
- Simplified connections: 2-Wire BUS
- Two adjustable timers: Activation delay and Activation length
- Solid state activation output supports AC and DC signals
- LED indicators for power input, activation and lock outputs
- Large plug-in terminal blocks
- Aluminum mounting plate and self-tapping screws included
- Fits in automatic door operator enclosures
- Can be used as stand alone or with an access system

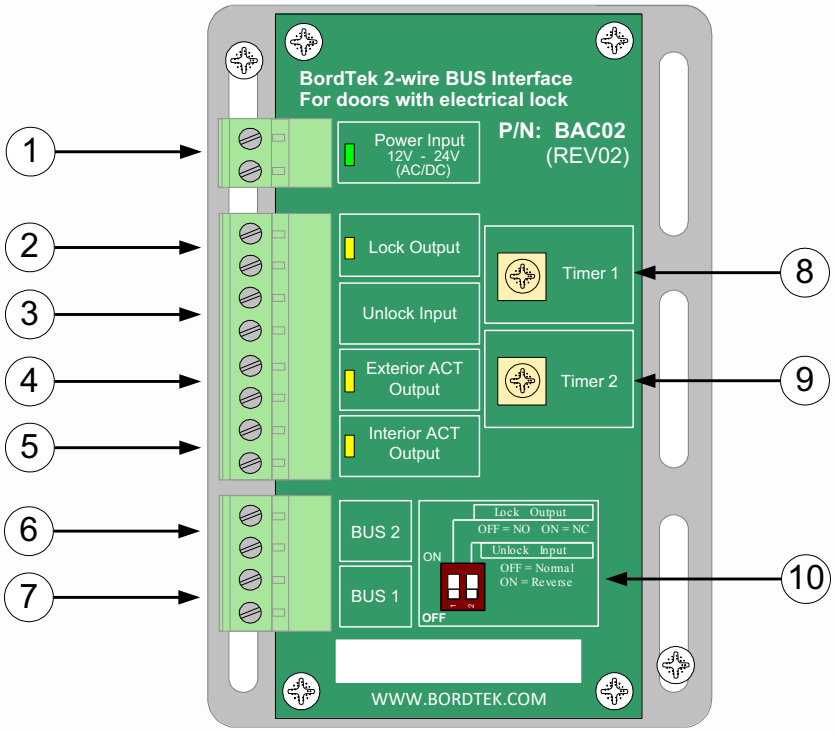
Dimensions: 3 x 4.3 x 1 inches (76 x 110 x 25 mm)

Electrical characteristics:

Parameter	MIN	TYP	MAX	Unit
Power Input	12	-	24	VOLT(AC/DC)
Activation Output Drive (Max.)	-	-	500	mA
Unlock Input	5	-	50	VOLT(AC/DC)
Lock Output Drive (Max.)	-	-	2	A
Timer 1 Adjustment (Activation delay)	0	-	5	SEC
Timer 2 Adjustment (Activation length)	1	-	30	SEC

BAC02 REV02 - Terminal blocks, potentiometers and DIP switches

Note: DO NOT install live. Apply power **ONLY** after all wires have been connected properly. Refer to the wiring diagram(s) as example(s).



Note: All terminal blocks can be unplugged to make the wiring task easier.

1- Power Input

This terminal block is the power supply input to power the BAC02 control. The touchless actuators will be powered by the BAC02 control through the BUS connections.

Power requirement: 12 to 24Volts (DC/AC), 0.7A

2- Lock Output

The Lock Output drives the electrical lock. (ex: Strike, MagLock,...)
This output is a solid state driver (not a mechanical relay), which can be configured as normally opened or normally closed with DIP switch #1.

Maximum drive capability: 2 amps.

3- Unlock Input (Wet Signal)

The Unlock Input releases the electrical lock connected to the "Lock Output" and changes the state of the exterior actuator from "RED" (locked) to "BLUE" (unlocked). A wet signal is required for this input (Not a dry contact).

4- Exterior Activation Output

The Exterior Activation Output is a dry contact, normally closed when active. This output represents the activation signal coming from the exterior actuator and can be connected to an automatic door operator, an access system, etc...

To Note: - Some installation requires two outputs. For example, when connecting an access system to the BAC02. The BAC02 control has two activation outputs; interior and exterior. These outputs can also be connected in parallel to make one activation output.

Maximum drive capability: 0.5 amps.

5- Interior Activation Output

The Interior Activation Output is a dry contact, normally closed when active. This output represent an activation signal coming from the interior actuator and can be connected to an automatic door operator, an access system, etc...

Maximum drive capability: 0.5 amps.

6- Exterior Actuator BUS

This two wire port is to be connected to the touchless exterior actuator. The BUS will supply power and communication between the BAC02 and the exterior actuator.

7- Interior Actuator BUS

This two wire port is to be connected to the touchless interior actuator. The BUS will supply power and communication between the BAC02 and the interior actuator.

8- RV1 Potentiometer/Timer (Activation Delay)

RV1 potentiometer (adjustment) is the activation delay/time required to power the electric lock. This allows the door to physically unlock before sending an activation signal to the automatic door opener to start opening the door .

Range of Timer 1 (RV1): 0 to 5 seconds

9- RV2 Potentiometer/Timer (Activation Length)

RV1 potentiometer (adjustment) is the length of the activation signal.

Range of Timer 2 (RV2): 1 to 30 seconds

10- DIP Switch Settings:

DIP switch #1 Lock Output Mode

Switch #1 OFF: Normally Opened
Switch #1 ON: Normally Closed

DIP switch #2 Unlock Input Mode

Switch #2 OFF: Normal Requires a wet signal to drive the lock output
Switch #2 ON: Reverse Requires a wet signal to not drive the lock output

BAA10 Touchless Actuator

The BAA10 touchless actuator serves as the user interface to open the door operated by an automatic door operator. This touchless actuator is specifically designed for indoor applications, providing a seamless and hygienic means of opening doors.

Actuator Color on different Modes

(Idle mode)

(Activation mode)

(Lock mode)

Features:

- Tempered smoked glass front interface
- Touchless functions
  Front activation: IR Presence (adjustable range up to 12")
  Bottom activation (Optional): PIR, floor level motion detection
  Note: Bottom activation is disabled for the first 30 seconds after power up
- Simplified connections: 2-Wire BUS
- **Easy retrofit, NO additional wires required**
- Large plug-in terminal block
- Mounting bracket and hardware included
- Selectable beeper on activation

Dimensions: 6.2 x 5.25 x 1 inches (157.5 x 133 x 25 mm)

BAA10 Touchless Actuator (Cont.)

***Electrical characteristics*:**

Parameter		MIN	TYP	MAX	Unit
Power consumption		-	2.8	4	W
Sound output power		-	85	85	db
Sound rated frequency		2000	2300	2600	KHz
Touchless detection distance - Front of glass (Infrared)		2 (50)	-	12(306)	In (mm)
PIR bottom detection distance - Optional (Infrared)		(Automatic range to floor)			In (mm)
Red LEDs	Luminous intensity	-	25100	-	mcd
	Wavelength	-	623	-	nm
Green LEDs	Luminous intensity	-	62800	-	mcd
	Wavelength	-	525	-	nm
Blue LEDs	Luminous intensity	-	10700	-	mcd
	Wavelength	-	268	-	nm
Operating temperature		-40 (-40)	-	185 (85)	F(C)

***DIP Switch Settings*:**

DIP switch #1 Audible Sound On Detection (Beep)

Switch #1 OFF: No sound (No beep)
Switch #1 ON: Sound on detection

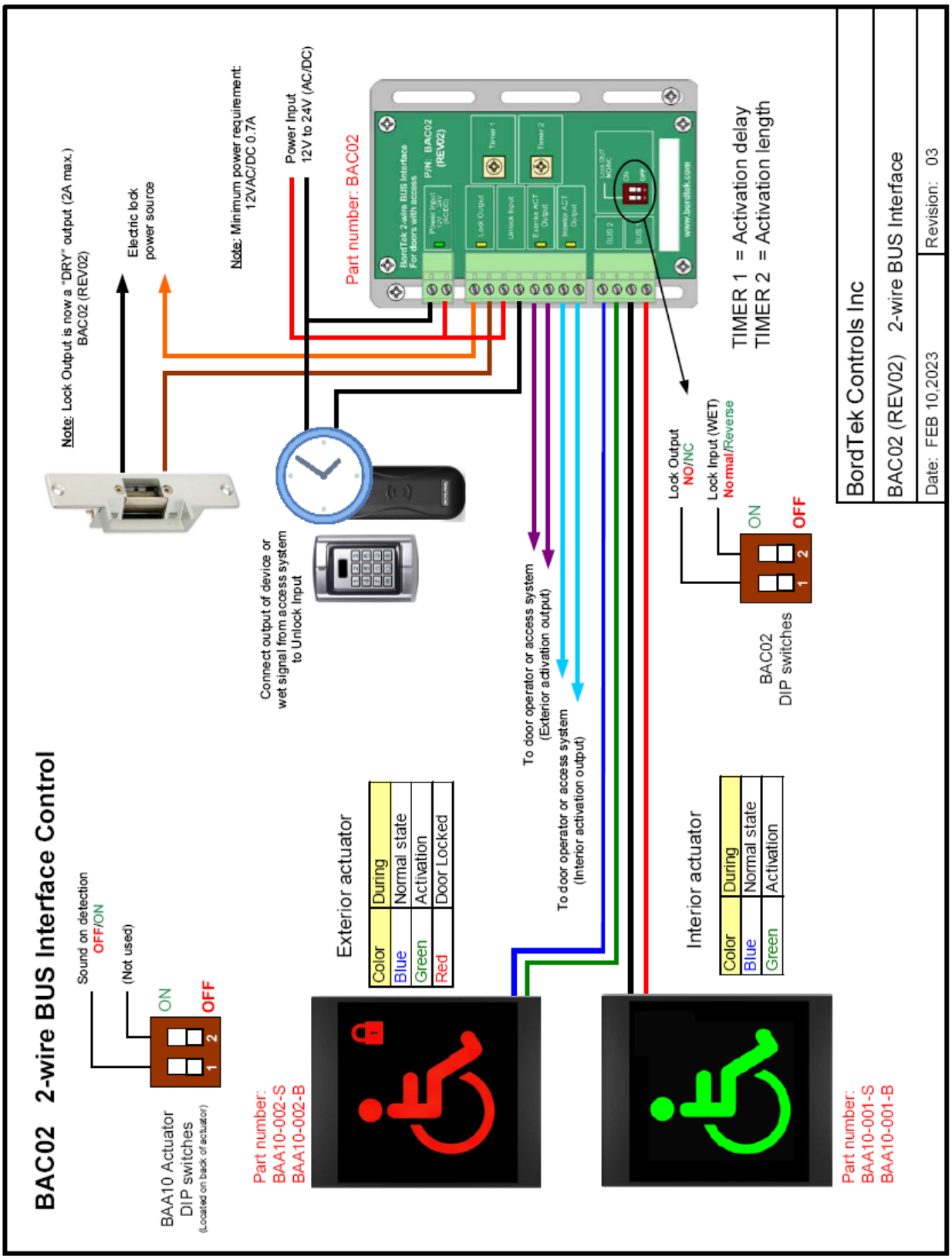
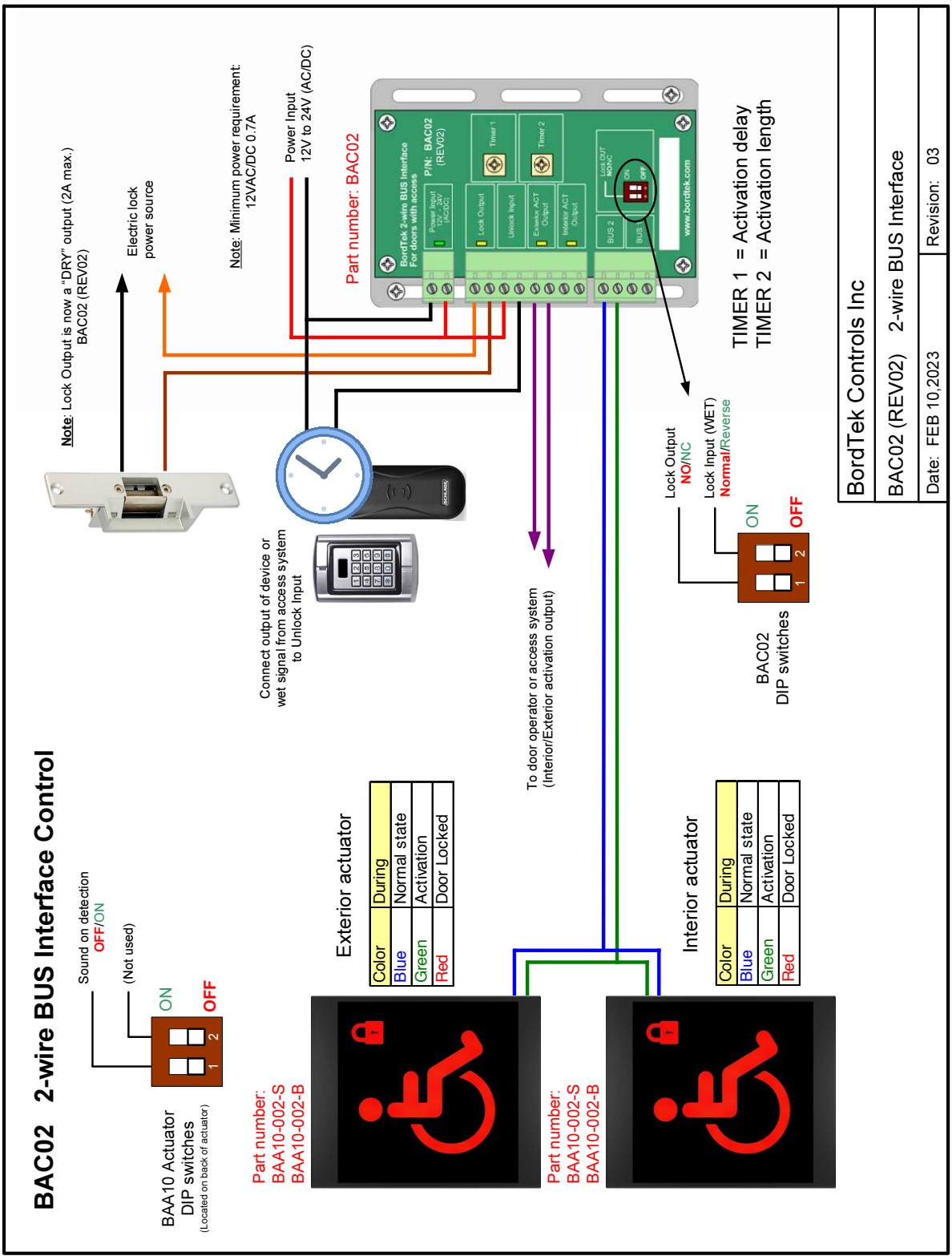
DIP switch #2 (Not currently used)

Switch #2 OFF:
Switch #2 ON:

***Mounting plate (included)*:**

The mounting plate material is 6061 Aluminum with metal locking pin.
The plate is designed to fit on most electrical box sizes.

BAC02/BAA10 Wiring diagram for doors with access on one side



BAC02/BAA10 Wiring diagram for doors with access on both sides