NOTES:

A. ELECTRICAL SPECIFICATIONS:
   1. SUPPLY VOLTAGE: 12V±10%
   2. IDLE CURRENT: 25 MILLIAMPS MAX. (NO ATTACHED DEVICES)
   3. OPERATING CURRENT: 65 MILLIAMPS MAX.(NO ATTACHED DEVICES)
   4. OPERATING TEMPERATURE: 0° TO 50° CELSIUS
   ⚠ CAUTION!: PRODUCT CAN BE DAMAGED IF WIRED INCORRECTLY. FOLLOW WIRING INSTRUCTION IN J-EA-K1-02-M.

B. MATERIALS
   1. FRONT COVER - PC PLASTIC
   2. CONTROLLER HOUSING - PC PLASTIC
   3. BUTTONS - ABS PLASTIC
   4. BUTTON FRAME - ABS PLASTIC
   5. GASKET - SILICONE RUBBER

C. CONNECTIONS:
   1. JA = DOOR #1 ACCESS CONNECTOR
   2. JB = DOOR #2 ACCESS CONNECTOR
   3. JC = TAMPER SWITCH OUT PUT CONNECTOR
   4. REFER TO USER INSTRUCTIONS (J-EA-K1-02-M) FOR MORE DETAIL

D. 2 MOUNTING SCREWS PROVIDED
   MOUNT WITH M3.5 SCREWS. HEAD DIAMETER NOT TO EXCEED 6.0 MILLIMETER.
   MAXIMUM TORQUE FORCE = 1.1 N m
   MINIMUM TORQUE FORCE = 0.7 N m

E. ONE SUPPRESSOR DIODE PROVIDED. CAN BE USED WHEN CONNECTING AN EXTERNAL RELAY (NOT PROVIDED) OR MULTIPLE CONTROLLERS TO A SINGLE LATCH.

F. SEE ORDERING INFORMATION FOR COLOR AND LOGO OPTIONS.

G. FOR INDOOR USE ONLY

EA KEYPAD ASSEMBLY

DATE	DRAWN	CHKD	SCALE	DRAWING NUMBER
24JUN2010	ACH		.5:1	J-EA-K1-02

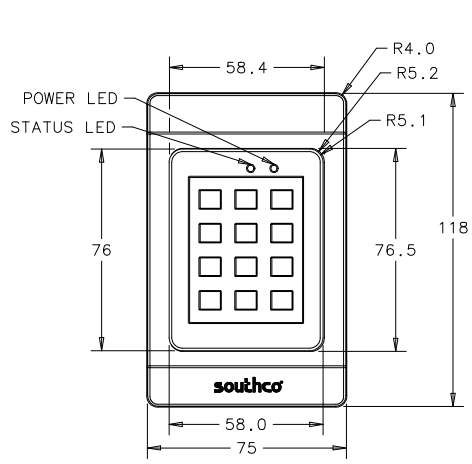
MILLIMETERS

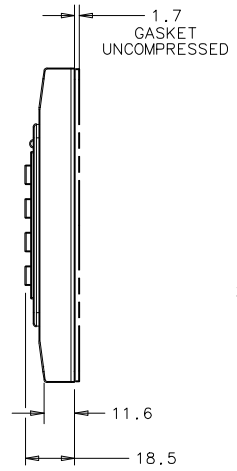
ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.

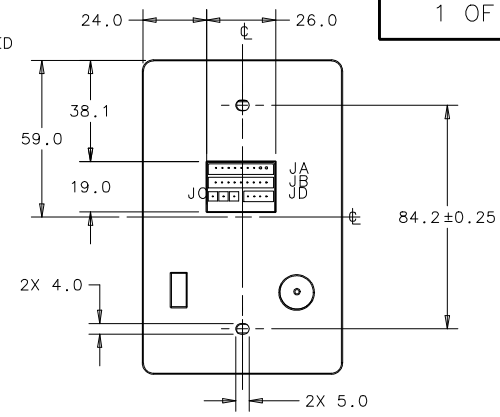
THIRD ANGLE PROJECTION | A3 PAPER SIZE

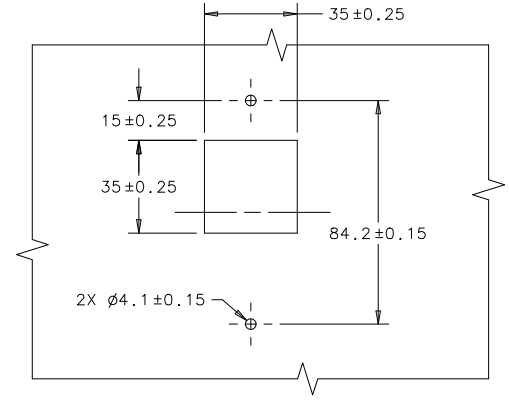
REV	DATE	DRAWN/CHKD	DESCRIPTION
A	24JUN2010	ACH/BB	PRN: P2010-0645

ITEM	PART NUMBER
ASSEMBLY	SEE LEGEND
USER INSTRUCTIONS	EA-K1-02-M

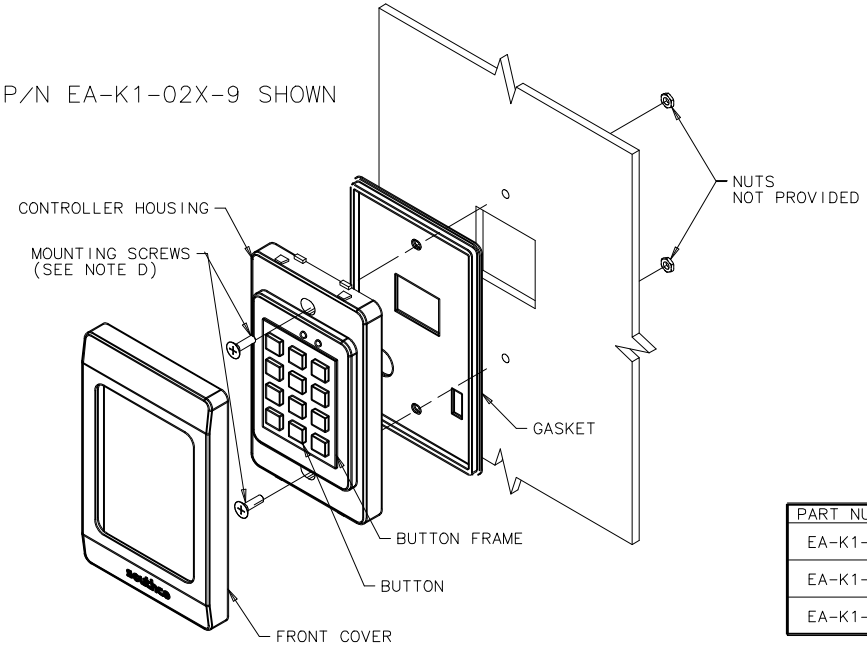








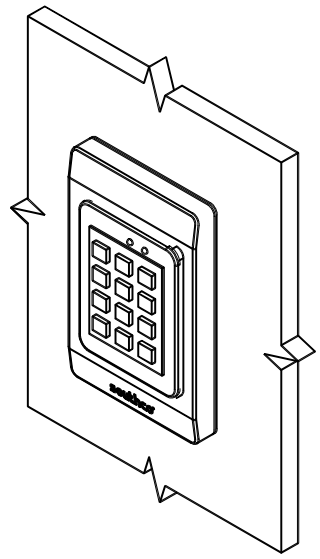
P/N EA-K1-02X-9 SHOWN



ORDERING INFORMATION

PART NUMBER*	FRONT COVER	CONTROLLER HOUSING	BUTTON	BUTTON FRAME
EA-K1-020	BLACK	BLACK	BLACK WITH WHITE MARKINGS	BLACK
EA-K1-021	WHITE	WHITE	WHITE WITH BLACK MARKINGS	BLACK
EA-K1-022	COOL GRAY 2 C	COOL GRAY 2 C	WHITE WITH BLACK MARKINGS	BLACK

* ADD -9 TO PART NUMBER FOR SOUTHCO LOGO (FOR EXAMPLE, EA-K1-020-9)



SURFACE MOUNTING

EA KEYPAD ASSEMBLY

DATE	DRAWN	CHKD	SCALE	DRAWING NUMBER
24JUN2010	ACH		.5:1	J-EA-K1-02

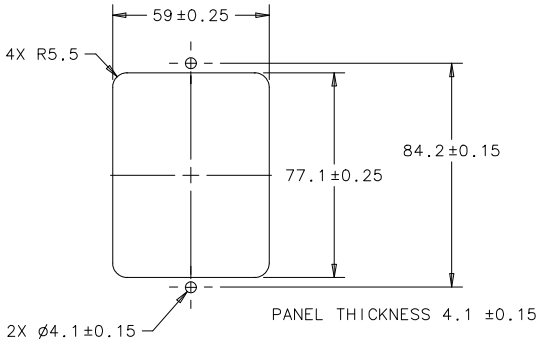
MILLIMETERS

ALL DIMENSIONS WITHOUT TOLERANCES ARE FOR REFERENCE ONLY.

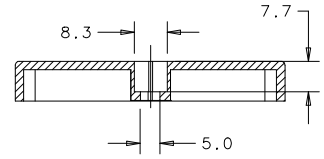
THIRD ANGLE PROJECTION | A3 PAPER SIZE

REV	DATE	DRAWN/CHKD	DESCRIPTION
A	24JUN2010	ACH/BB	PRN: P2010-0645

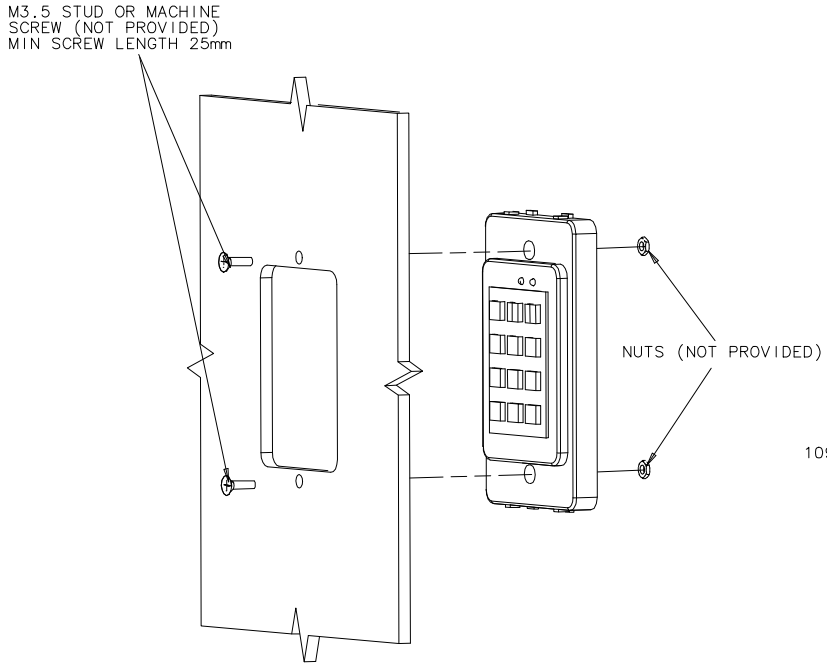
ITEM	PART NUMBER
ASSEMBLY	SEE LEGEND
USER INSTRUCTIONS	EA-K1-02-M



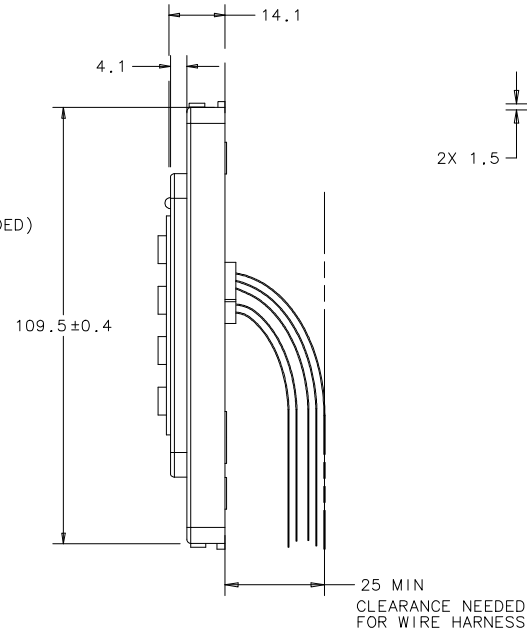
PANEL PREPARATION



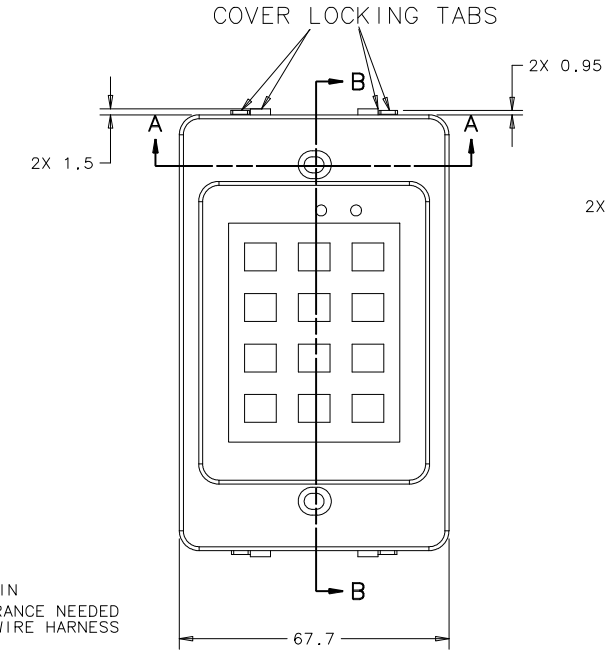
SECTION A-A

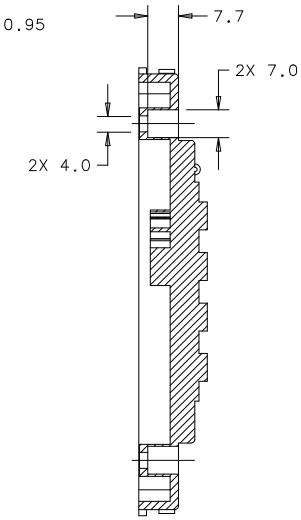


REAR MOUNTING



COVER AND GASKET REMOVED





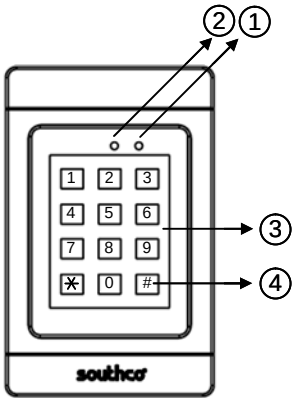
SECTION B-B

EA-K1-02x Keypad
Operating Instructions

Package Contents

- Standalone keypad
- Wire harness for JA connector (9-wires with blue connector)
- Wire harness for JB connector (8-wires with white connector)
- Wire harness for JC connector (3-wires with blue connector)
- 1 diode
- 2 mounting screws
- Operating instructions

EA-K1 Standalone Keypad Access Controller



1. Power LED
2. Status LED
   a. Solid Green: waiting for key code
   b. Flashing Green: release door
   c. Flashing Green and Red: programming
3. Keypad
4. Command exit

Features

- Supports 2-latch access with 150 user access codes
- Programmable door release time (1 to 99 seconds)
- Programmable user and instruction code length (5 to 8 digits)
- LED indicators: Power and Status
- Non-volatile memory will retain data when power is removed
- Tamper switch
- For indoor use only

Specifications

Access Code Length:	Programmable 5 to 8 digits
Monitoring Inputs:	Auxiliary (x2)
	Tamper Switch
Supply Voltage:	12 ± 10% VDC
Standby Current:	25mA (max, no attached devices)
Operating Current:	65mA (max, no attached devices)
Operating Temperature:	0-50 °C
Operating Humidity:	20-90% RH, No condensation
Dimensions:	118 mm x 75 mm x 19 mm

Controller Mounting and Installation

Please refer to Southco trade drawing J-EA-K1-02 for mounting and installation details.

Modes of Operation

There are two modes of operation for this access controller:

1. User Mode – In this mode, access will be granted when a valid access code is entered or the auxiliary input asserted. An access code ending in an odd number will open the latch connected to the JA connector. An access code ending in an even number will open the latch connected to the JB connector.
2. Programming Mode – In this mode, the controller's settings can be set by the supervisor.

Types of Codes

There are three types of codes for this access controller:

1. Access Code – The controller allows for 150 user access codes. When a programmed access code is entered, the controller will grant access. Access codes cannot begin with a "9".
2. Supervisor Code – There is one supervisor code. This code is used to program the controller and cannot be used as an access code. The supervisor code cannot begin with a "9".
3. Instruction Code – These are used to program the various settings of the controller. The instruction codes are listed in the table below.

Instruction Codes	
Programming the Supervisor Code	99998
Enrolling or Changing Access Codes	99001 - 99150
Programming Access Code Length	99505 – 99508
Programming Door Release Time	99801 – 99899
Resetting the Controller	99990

Default Settings

Default Settings	
Access code length	5 digits
Door release time	5 seconds
Supervisor code	12345678

Programming the Supervisor Code

The controller is shipped with the default supervisor code (12345678) pre-programmed. To change the supervisor code:

1. Enter instruction code “99998”. The Status LED will flash green, blink red, and then become solid green.
2. Enter the current eight digit supervisor code. The Status LED will blink once.
3. Enter the new eight digit supervisor code. The supervisor code **cannot** begin with nine (nine is reserved for instruction codes). The Status LED will flash red then turn off.

WARNING: If the supervisor code is lost, forgotten or incorrectly entered while programming, the keypad cannot be restored to default settings, no new programming codes may be entered, and the lost supervisor code cannot be recovered. Without the supervisor code, the keypad will continue to function. However, no programming changes can be made.

Enrolling or Changing Access Codes

The controller supports up to 150 user access codes. Access codes that end in an odd number will allow access to the latch connected to the JA connector. Access codes that end in an even number will allow access to the latch connected to the JB connector.

The access codes can be any combination of digits, except the access codes **cannot** begin with nine (nine is reserved for instruction codes). To enroll or change an access code:

1. Enter one of the 150 instruction codes for enrolling access codes (i.e. 99001 through 99150). The Status LED will flash green, flash red, and then remain green.
2. Enter the supervisor code. The Status LED will blink once.
3. Enter the access code. The Status LED will flash red twice, and then turn off.

To change a user access code, use the programming code that it is paired with. For example, if 99001 had been used to assign the user access code 12345, you may change this user access code to 54321 by using the instruction code 99001. It is recommended that the supervisor keep careful records of each access code and its corresponding instruction code.

Programming Door Release Time

The length of time the door is released can be programmed from 1 to 99 seconds.

To change from the default of five seconds:

1. Enter “998tt”, where “tt” is the door release code in seconds. The Status LED will flash green, flash red, and then become solid green.
2. Enter the supervisor code. The Status LED will flash red, then green before turning off.

Programming Code Length

The number of digits in the access and instruction codes can be changed from the default of five. The number of digits set here is the number of digits the keypad accepts for both access and instruction codes. If the number of digits is increased, then the function code must be padded with zeroes. For example if the number of digits has been changed from five to eight, the code to reset the controller (99990) must be entered as “99990000”.

NOTE: The supervisor code cannot be adjusted; it is always an eight digit code.

To change from the default of five digits:

1. Enter “9950x”, where “x” is the number of digits in the user access code (ranging from 5 to 8). The Status LED will flash green, flash red, and then become solid green.
2. Enter the eight digit supervisor code. The Status LED will flash red, then green before turning off.

NOTE: Changing the code length will not delete programmed access codes. However, changing the code length to be longer than access codes already stored in memory will result in the access codes being unusable. For example, if a five digit access code is stored in memory, and the code length is then changed to eight, the access code cannot be used.

If the code length is changed to be shorter than access codes already enrolled, then the last digit of the shortened access code will determine which latch is opened. For example, if an access code is 87654321, the controller will open the latch connected to the JA connector since the access code ends in an odd digit. If the code length is changed to seven digits, then this access code will be shortened to 8765432 and open the latch connected to the JB connector since the access code now ends in an even digit

Resetting the Controller

The controller can be set to its factory default settings. To restore the default settings:

1. Enter the programming code 99990.
2. Enter the supervisor access code.

The Status LED will flash red twice and then turn off indicating the programming is complete.

NOTE: This will erase all programmed user access codes.

Other Features

Auxiliary Inputs

The EA-K1-02x controller has two auxiliary inputs.

One input can be driven by an external device to grant access to the latch connected to the JA connector. Pin 4 from the JA connector (green wire) is the auxiliary input. When the auxiliary input is 12VDC, the controller will grant access for the programmed access time.

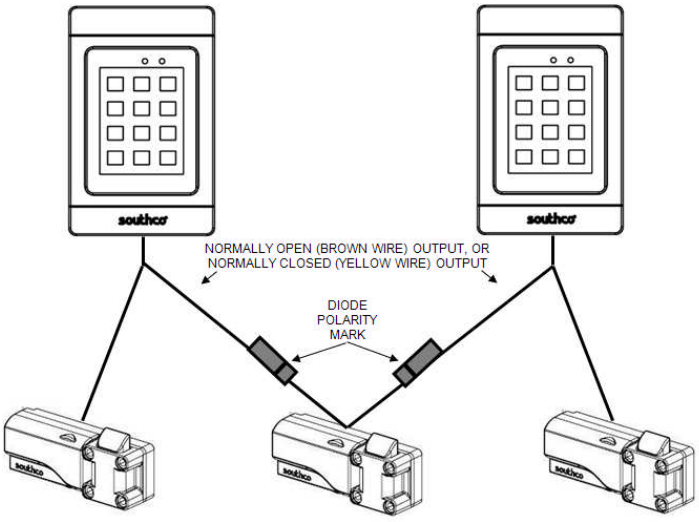
The other input can be driven by an external device to grant access to the latch connected to the JB connector. Pin 2 from the JA connector (purple wire) is the auxiliary input for the JB connector. When the security monitor input is LOW (0V), the controller will grant access for the programmed access time.

Tamper Switch

The JC connector can be used to monitor the status of the tamper switch. When the tamper switch is closed, the NO signal will be driven to the same voltage level as the COM signal. When the tamper switch is open, the NC signal will be driven to the same voltage level as the COM signal.

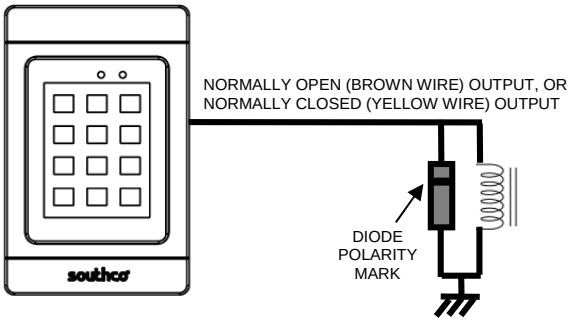
Wiring Multiple Controllers

A diode is provided with the EA-K1-02x controller. The diode allows for a keypad to be isolated when multiple controllers are connected to the same latch. Refer to the figure below for wiring details when using the diode when using multiple controllers.

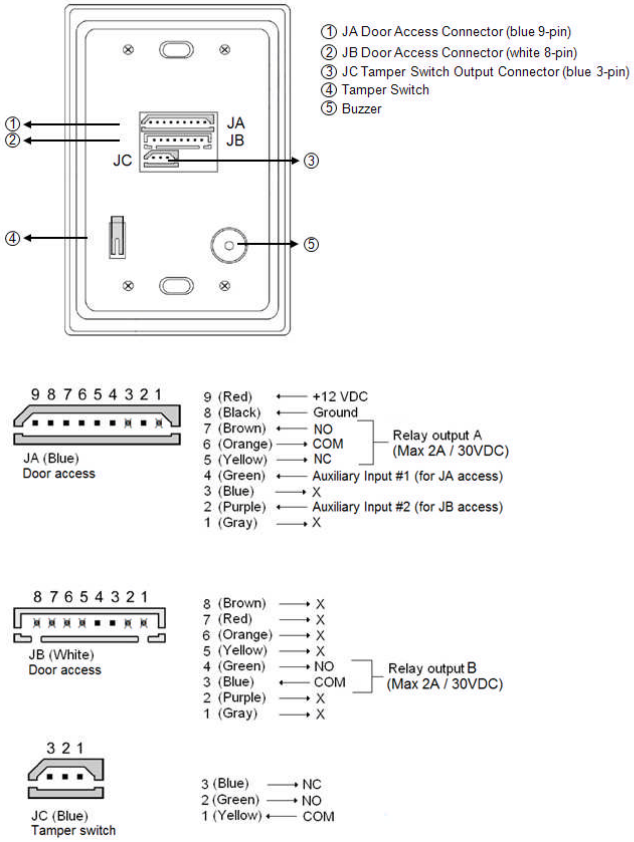


Connecting to an Inductive Load

A diode is provided with the EA-K1-02x controller. This diode should be used when connecting to a device with an inductive load (for example, a relay or door strike) to protect the controller from a reverse voltage spike. The diode should be placed in parallel with the coil, as shown in the figure below.



Wiring Diagram



All leads marked with an "X" are not functional.

CAUTION: A keypad that has been programmed is non-returnable. Please use caution in programming functions so as not to render the keypad unusable.

For technical support of this product contact: info@southco.com
or visit: www.southco.com