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Section 1 _____
General Description

The PC-6 is a dual purpose relay designed to be used with safety sensors, and swing-door operators.

1. The PC-6 functions as a lock-out relay (LOR) for full-speed doors with header (lintel) mount safety sensors. In this application, the sensor is "lockedout" during the closing cycle by the relay. (The safety sensor is engaged at all other times). In order to meet the ANSI code, provision is made for railmounted photo-eyes (sold separately).

2. The second application is as a Secondary Activation Module (SAM) for low energy doors, which are activated by a push-switch (called Knowing Act doors). In this case the safety sensor is mounted on the approach side of the door leaf.

The principle is that when the door is opened manually the safety sensor is not in the circuit, and the door operator essentially functions as a manual door closer.

However, when a user pushes the activating switch, the PC-6 immediately sends a signal to the operator, opening the door, and putting the door mounted sensor into the circuit. This allows an object or person in the path of the door to be detected. The door will not close until the object or person leaves the door swing path. The sensor remains in the circuit until the door is closed, allowing for maximum safety. A door position switch (magnetic contact switch) is required.

FEATURES / BENEFITS:

- One relay does two different applications.
- No jumpers or switches to select, or traces to cut – mode selection is automatic.
- Operates on any voltage from 12 – 24V AC/DC.
- Works with any operator – AC or DC motors, Electro-mechanical, or Electro-hydraulic.

CX-PC-6

(replaces PC3 and PA5)

Installation Instructions

Section 2 _____
Installation

Mounting

The PC-6 should be mounted in a clean dry location out of direct contact with the elements. Once the unit has been wired and adjusted, it may be tucked up in the header or affixed using the supplied Velcro.

Wiring

CAUTION: Do not apply power to the unit until all secondary wiring is complete.

Wiring of this unit is dependant on the mode desired. Select your intended application, then proceed to the section indicated.

WIRING & SET-UP INSTRUCTIONS:

Lock-out Relay (replaces PC-3)	Proceed to section 3A below
Secondary Activation Module (replaces PA-5)	Proceed to section 3B on Page 2

Section 3A _____
Wiring & Set Up Instructions

Lock-out Relay Mode

The two Orange wires are used to power the PC-6, and can be connected to 12 or 24 volts, AC/DC. (Non polarity sensitive). The yellow LED glows faintly to indicate power.

The Red and Black wires connect directly to the door motor leads (between the control box and motor).

If the motor is AC, then polarity is not an issue. The lock-out relay is triggered by the AC voltage going high to low.

If the motor is DC, then the wires are polarity sensitive. If the LOR doesn't energize when the door is closing, then just reverse the Red and Black LOR wires. NOTE: The Red LED is illuminated whenever the relay is activated.

The Gray and Violet wires are to be used with door beams. These wires are to be connected to the normally open (N.O.) relay contacts of the door beam. The beams are typically mounted at the end of guide rails and designed to reset the L.O.R. in the event anyone should walk into the swing path when the door is in its closing cycle.

The Yellow and Green wires are connected in series with the Safety Sensor's normally open (N.O.) relay contacts, and the safety circuit of the operator.

The remaining White, Brown & Blue wires are not used in this mode, and should be individually taped off.

Adjustments

As you make the following adjustments, refer to diagram #1 for locations of the LED's, and potentiometer.

Turn on power, and activate the door. The door should open fully, time out, and close. During this closing cycle the Red LED should illuminate. Adjust the potentiometer clockwise to add time, counterclockwise to decrease time. Proper adjustment is obtained when the Red LED is lit during the entire closing cycle of the door. (The Yellow LED is not used in this mode).

Activate the door again. It should open, then begin closing. Before it completely closes re-activate the door. It should re-cycle (re-open).

NOTE: If the door beam is interrupted during the door's closing cycle, the Red LED will turn off, and the safety sensor will immediately re-connect to the safety circuit of the door control. Reactivation of the door from the approach sensor will NOT re-open the door until the swing zone clears.

Perform the test again, but before the second reactivation, step into the door beam pattern (activate the photo-eye). In this case the door should not reopen.

Section 3B _____ Wiring & Set Up Instructions

Secondary Activation Mode

The two Orange wires are used to power the PC-6, and can be connected to 12 or 24 volts, AC/DC. (Non polarity sensitive). The yellow LED glows faintly to indicate power.

Connect a momentary dry contact, such as a wall switch, to the Grey and White wires. Connect the door position switch (i.e. - magnetic switch) to the Grey and Brown wires. (Note: Switch contact is closed when the door is closed).

The door mounted safety sensor is connected to the Grey and Violet wires. Use the normally open contacts of the sensor (relay contact closes when person/object is detected).

Connect the Blue & Yellow wires to the automatic door operator Activate Input.

The remaining Red, Black & Green wires are not used in this mode, and should be individually taped off.

NOTE: If a lintel mounted safety sensor is desired, it is mounted and connected to the safety circuit of the door operator in the usual way. (It is not connected to this PC-6 circuit).

Adjustments

As you make the following adjustments, refer to diagram #2 for locations of the LED's, and potentiometer.

Turn on power, and activate a wall switch. Observe YELLOW & RED LED's, (Sensor and Relay LED's) both which should light immediately. The length of time for the RED Relay LED is determined by adjusting the pot marked RELAY TIME, (clockwise for more time, counterclockwise for less time). It may be desirable to keep the PC-6 time at a minimum and add hold time using the operator timer instead.

The, YELLOW Sensor LED will stay on until the door has closed (as indicated by the door position switch). This LED indicates that the sensor circuit is active, and any detection of a person or object by the safety sensor will keep the door held open.

Note that when the door mounted sensor detects a person or object, the YELLOW LED does not light. It only lights when a wall switch has been pressed first.

An added feature of the PC-6 is the automatic reset feature. If a switch has been pushed but the door has not opened within approximately 1 minute, the unit will reset. This will save wear and tear on the lock and the door operator.

Section 4 _____

System Inspection Instructions

After the Installation and operational check of the system:

1. Place warning label on the door (as per ANSI A156.10 or A156.19 guidelines). This will advise the person entering the swing side zone that the door will move.
2. Instruct the owner on door system operation and how to test it. This should be checked on a daily basis.
3. Instruct the owner on what to do if the door or any of its components become damaged.
4. Strongly recommend to the owner that the complete entry be inspected twice a year as part of the service agreement.

Section 5 _____

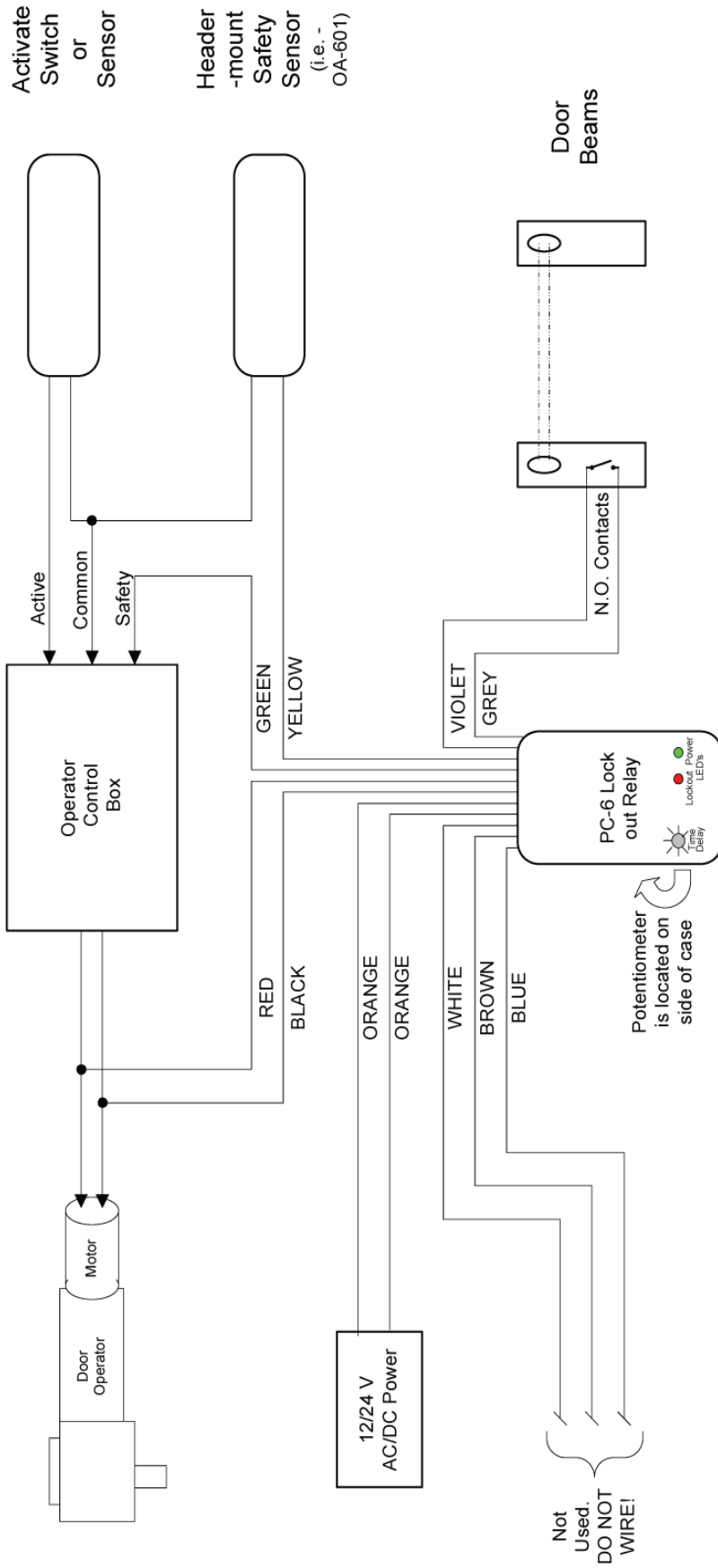
Technical Data

Model	PC-6
Size	3 1/4" x 2 1/4" x 3/4"
Mounting	Velcro patch
Enclosure	Black ABS Plastic
Operating Voltage	12 / 24 Volts AC/DC
Current Draw	18 mA standby, 40 mA max.
Response Time	0.3 seconds
Inputs:	
LOR Mode:	Motor: 3 - 120V AC/DC Door Beam: N/O momentary
SAM Mode:	Activation: N/O switch Sensor: N/O output Contact Switch: N/C when door is closed.
Relay Output	1 x Form C (SPDT)
Contact Rating	4 amps @ 120V AC/ 30VDC
Electrical Life	100,000 @ rated capacity
Time Delay	DOR - 0.5 - 30 seconds

Section 6 _____

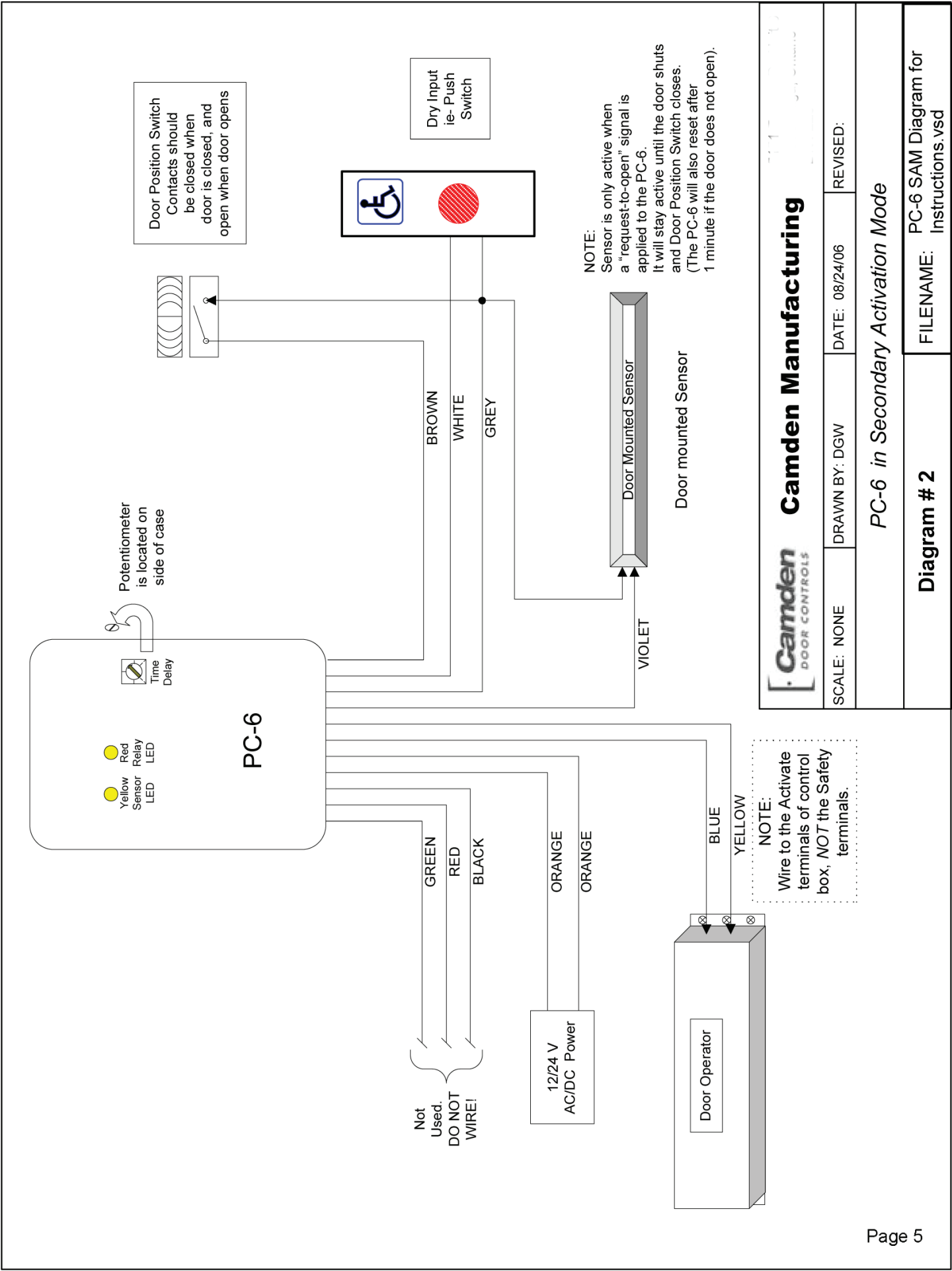
Warranty

Camden Door Controls guarantees the PC-6 to be free from manufacturing defects for 3 years from date of sale. If during the first 3 years, the PC-6 fails to perform correctly, it may be returned to our factory where it will be repaired or replaced (at our discretion) without charge. Except as stated herein, Camden extends no warranties expressed or implied regarding function, performance or service.



NOTE:
 For simplicity, the 12/24V needed to power the sensors and Door Beams have been omitted on this diagram

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SCALE: NONE	DRAWN BY: DGW	DATE: 08/23/06	REVISED:
<i>PC-6 in Lock-out Relay Mode</i>			
Diagram #1		FILENAME: PC-6 LOR Diagram for Instruction manual.vsd	



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PC-6 in Secondary Activation Mode

Diagram # 2	PC-6 SAM Diagram for Instructions.vsd
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