

# OPERATING INSTRUCTIONS

# PC-3™

## THRU BEAM PHOTOEYE

### UL325 NON-COMPLIANT



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## Cautions and Warnings



### **WARNING ... Not to be used for Personnel Protection**

Never use product as sensing devices for personnel protection. Doing so could cause serious injury or death.

These sensors do NOT include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can cause either an energized or de-energized sensor output condition. UL 325 Non-compliant

## Product Overview

The PC-3 photoeye system does not have a focusing lens and the generous 24° sensing angle makes it one of the easiest to align. Do not use outdoors or where there is chance of getting wet.

## Specifications

Specifications	
Power Supply	12-24 VDC 24 VAC
Power Supply Tolerance	+/- 20%
Current Draw	Tx: 43mA Rx:23mA Standby, 17mA Detect
Housing Material	PVC Black
Relay Type	Form C DPST contact rating 1A@24VDC/120VAC
Temperature Range	-40F° - 170F°
Connections	Tx: 18in 2 Conductor RX: 18 in 5 Conductor
Detect Indicator	Red LED
Power Protection	Thermal Fuse
Environmental	IP50 Not water tight
Range	30 Feet
Response Time	10mS (max.)
Size	4in. x 2in. x 1.5 in.
Detection Angle	24°

## Connections

	Transmitter	Receiver
Red Wire	Power Positive (+)	Power Positive (+)
Black Wire	Power Negative (-)	Power Negative (-)
White Wire		Internal Relay Common Output
Brown Wire		Internal Relay Normally Closed Output
Green Wire		Internal Relay Normally Open Output
Power is not polarity sensitive		



Figure 1

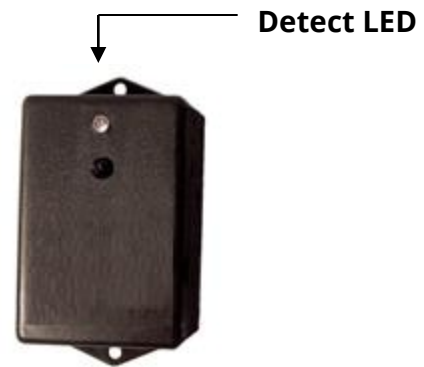


Figure 2

### PC-3 Transmitter connections (figure 1)

1. Connect power Red (+) positive
  2. Connect power Black (-) negative
- Not polarity sensitive

### PC-3 Receiver connections (figure 2)

1. Connect power to Red (+) positive
2. Connect power to Black (-) negative
3. Connect White internal relay common to operator input Common or Gnd as specified by operator manual
4. Connect Green internal relay normally open to operator input open, safety reverse or other as specified by operator manual
5. The Brown internal relay normally closed is not normally used and may be just cut off or left alone
6. The detect Led will glow red when an obstruction occurs.

## Troubleshooting

Symptom	Possible cause	Solution
Holds gate open	No power on Tx or Rx	Check power source, Check detect LED
Does not activate gate	Bad connection or broken wires	Check wires and connections
	Relay Contacts burned or stuck	Replace receiver
	Not connected to correct input terminals	Check operator manual for terminals
	Sunlight "blinding" the receiver eye	Change position of receiver to shield the sensor from the direct sunlight
Chattering	Interference or stray bounced signal	See if any reflective surfaces could be sending signal into the receiver sensor

## Ordering Information

**PC-3**      **PC-3 Transmitter and Receiver**

## Accessories

**IRB-BR**      **Set of 2 L Mounting Brackets**



## Warranty

EMX Industries Incorporated warrants all products to be free of defects in materials and workmanship for a period of two years under normal use and service from the date of sale to our customer. This warranty does not cover normal wear and tear, abuse, misuse, overloading, altered products, damage caused by incorrect connections, lightning damage, or use other than intended design.

There is no warranty of merchantability. There are no warranties expressed or implied or any affirmation of fact or representation except as set forth herein.

EMX Industries Inc. sole responsibility and liability, and the purchaser's exclusive remedy shall be limited to the repair or replacement at EMX Industries option of a part or parts found not conforming to the warranty. In no event shall EMX Industries Inc. be liable for damages, including but not limited to damages resulting from non-conformity, defect in material or workmanship.

Effective date: January 1<sup>st</sup>, 2002

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