



# OC-903C



## Swing Door Lockout Relay



5912352 2005.9

### MANUFACTURER'S STATEMENT

Read this document and this Operation Manual carefully before use, to ensure proper operation of this Optex sensor. Failure to read this Operation Manual may cause improper sensor operation and may result in serious injury or death. This product is a non-contact activating switch intended for mounting on the header of an automatic door. Do not use it for any other applications; otherwise proper operation and safety cannot be guaranteed.

**Cautions :**

1. Follow the instructions (especially **Note**) in this Operation Manual when installing and adjusting the sensor.
2. When setting the sensor's area pattern, make sure there is no traffic around the installation site.
3. Before turning the power on, check the wiring to prevent damage or malfunction of equipment that is connected to the sensor.
4. Do not disassemble, rebuild or repair the sensor yourself; otherwise it may cause electric shock or breakdown of the sensor.
5. Only use the sensor as specified in the supplied instructions.
6. Be sure to install the sensor in accordance with the local laws and standards of your country.
7. Before leaving the jobsite, be sure this equipment is operating properly and instruct the building owner/operator on proper operation of the door and this sensor.

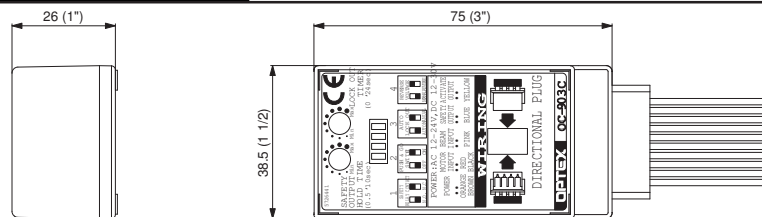
### SPECIFICATIONS

Power Supply	12 - 24V AC, 12 - 30V DC	Operation Indicator	Green: Standby
Current Draw	250mA max.*		Red: Door Opening
Output			Orange: Lockout
Activate Output : Form A Relay	50V, 0.1A(Resistance Load)	Operating Temperature	-20 - +55degrees (-4F - +131Fdegrees)
Safety Output : Form C Relay	50V, 0.1A (Resistance Load)	Weight	50g (1.8oz.)
Relay Hold Time(Safety Output only)	0.5 to 10s	Accessories	1 Two sided tape
Response Time	< 0.3s		2 Wiring shell
Lockout Timer	0 - 24sec		

\*When a unit of the OA-603 and OC-903C used.

The specifications herein are subject to change without prior notice due to improvements.

### OUTER DIMENSIONS



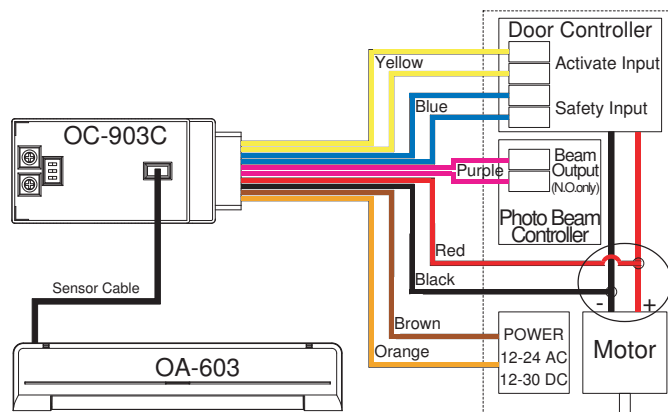
[mm (inch)]

### INSTALLATION

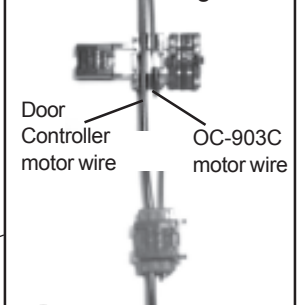
#### WIRING

**Note**  
Please install a photo beam with the OC-903 system for sensor reactivation when beam triggered on closing cycle.

**Note**  
Photo beam input is **Normally Open** and **DRY CONTACT** only.



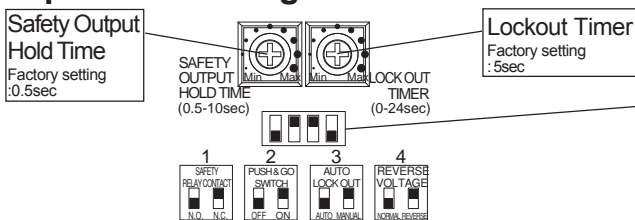
#### How to use Wiring shells



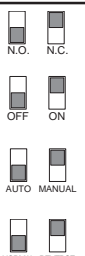
**Note** Close shell  
Please use the Wiring shells unless there are wiring terminals for the motor.

### ADJUSTMENT

#### Dipswitch Settings



- 1 **SAFETY RELAY CONTACT** (factory setting:NO)  
Choose the Relay Contact.
- 2 **PUSH & GO SWITCH** (factory setting:ON)  
When using double swing with knowing act, turn on this Dipswitch.
- 3 **AUTO LOCK OUT** (factory setting:MANUAL)  
If Auto Lock out function doesn't work, select the MANUAL with LOCK OUT TIMER.
- 4 **REVERSE VOLTAGE**(factory setting:NORMAL)  
For Besam MP controller set to REVERSE.  
For all controller except Besam MP set to NORMAL.



# CHECKING

**Note** Please enforce the door open to complete the teaching.

Status	Turn on the Power	Door opening	Door opened Completely	Start closing	Door closing	Door closed	
(Image)							
Sensor Status	1st Teaching	1st Complete Teaching	Lockout	2nd Teaching	Complete Teaching	Lockout	Standby
Operation Indicator	OA-603 Blinking Yellow	Yellow	Orange	Orange	Green	Orange	Green
OC-903C	Slow Blinking Green	Green	Red	Red	Red	Orange	Green
Relay Contact	Activate						
	Safety						

**Note** Check the OC-903C operation according to the following flow chart.

Status	Turn on the Power (Door closed)	Door opening	Door opened Completely	Door closing	Door closed
(Image)					
Sensor Status	Header Sensor Photo Beam Standby	Detection Active	Lockout	Standby	Lockout
Operation Indicator	Green	Red	Green	Orange	Green
Relay Contact PUSH&GO ON	Activate				
	Safety				
Relay Contact PUSH&GO OFF	Activate				
	Safety				
Relay Contact EVERY REBOOT	Activate				
	Safety				

**Note** Safety Output is selectable by the dipswitch for either NO or NC. (Above picture is showing NO.) Relay contact reverses on opening cycle when PUSH & GO is on.

## Inform the following items to the building owner/operator

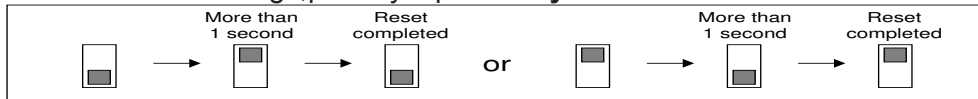
1. When turning the power on, always walk-test the sensor pattern to ensure proper operation.
2. Always keep the detection window clean. If dirty, wipe the window with a damp cloth ( Do not use any cleaner or solvent ).
3. Do not wash the sensor with water.
4. Do not disassemble, rebuild or repair the sensor yourself; otherwise electric shock may occur.
5. Contact your installer or the sales engineer if you want to change the settings.
6. Do not place an object that moves or emits light in the detection area.(ex. Plant, illumination etc..)
7. Do not paint the Detection Window.

# TROUBLESHOOTING

Door status	Trouble	Possible cause	Solution	Reference	Door status	Trouble	Possible cause	Solution	Reference
close	Door does not open	OC-903C NO and NC are inverted.	Change the OC-903C Dipswitch	OC-903C ADJUSTMENT	open	The sensor keeps detection and the door remains open.	There is an object that moves.	Remove the object	OA-603 ADJUSTMENT
		OC-903C Wrong Wiring	Check the OC-903C wiring	OC-903C INSTALLATION			The detection area overlapping with the detection area.	Carry out the teaching again	OA-603 ADJUSTMENT
		OC-903C SAFETY OUTPUT HOLD TIME is set long.	Shorten the OC-903C setting time	OC-903C ADJUSTMENT			Water drops on the sensor.	Keep the sensor free from waterdrops.	OA-603 ADJUSTMENT
close	The door does not open while the sensor keeps detection.	Moving object in the detection area	Remove the object	OA-603 ADJUSTMENT	closing	Does not lock out.	Header Vibration	Secure the header	
		There was an abrupt change in the detection area.	Reset the teaching again	OA-603 ADJUSTMENT			The detection area overlapping with it of another sensor	Change the Frequency dipswitch.	OA-603 ADJUSTMENT
		Waterdrops on the sensor.	Keep the sensor free from waterdrops.	OA-603 ADJUSTMENT			Wrong wiring of motor power voltage	Check the OC-903C wiring	OC-903C ADJUSTMENT
opening	The door starts opening while the sensor detects.	Vibration of the header	Secure the header		closing	The door starts closing while the sensor detects.	OC-903C NO and NC are inverted.	Change the OC-903C Dipswitch	OC-903C INSTALLATION
		The detection area overlapping with it of another sensor	Change the Frequency dipswitch.	OA-603 ADJUSTMENT			OC-903C Wrong Wiring	Check the OC-903C wiring	OC-903C ADJUSTMENT
		Unadequate detection area setting	Reset the detection area	OA-603 ADJUSTMENT			The lock out timer is set long with OC-903C Manual setting.	Change the OC-903C Lockout Timer	OC-903C ADJUSTMENT
opening	The door starts opening without the detection.	OC-903C NO and NC are inverted.	Change the OC-903C Dipswitch	OC-903C INSTALLATION	No detection	No detection	Wrong door controller setting	Change the door controller setting.	
		OC-903C Wrong Wiring	Check the OC-903C wiring	OC-903C ADJUSTMENT			The power supply is not ON.	Make sure that the sensor cable between OA-603 and OC-903C is connected.	OA-603 INSTALLATION
		The lock out timer is set long with OC-903C Manual setting.	Change the OC-903C Lockout Timer	OC-903C ADJUSTMENT				Check the OC-903C wiring	OC-903C ADJUSTMENT
open	Door remains open	Unadequate detection area setting	Reset the detection area	OA-603 ADJUSTMENT	No detection	No detection	Dirty detection window.	Wipe the OA-603 detection window lightly with a damp cloth.	OA-603 ADJUSTMENT
		Wrong Wiring	Check the OC-903C wiring	OC-903C INSTALLATION			Unadequate detection area setting	Reset the detection area	OA-603 ADJUSTMENT
		OC-903C NO and NC are inverted.	Change the OC-903C Dipswitch	OC-903C ADJUSTMENT			Communication error.	Make sure that the sensor cable is not cut off.	OA-603 INSTALLATION
open	Door remains open	OC-903C Wrong Wiring	Check the OC-903C wiring	OC-903C INSTALLATION	No detection	No detection	No sufficient sensitivity	Adjust the sensitivity.	OA-603 ADJUSTMENT
		OC-903C SAFETY OUTPUT HOLD TIME is set long.	Shorten the OC-903C SAFETY OUTPUT HOLD TIME.	OC-903C ADJUSTMENT			The mounting height is too high.	Adjust the mounting height to the stated height.	OA-603 ADJUSTMENT
		Wrong wiring of motor power voltage	Check the OC-903C wiring	OC-903C ADJUSTMENT					

## How to reset the sensor

**Note** When wish to reset the settings, put any dipSW only on OA-603 to ON/OFF for more than 1 second.



## Warning Indication

Mode	Life cycle Notification	Communication Error
Operation Indicator	Twice Green Blinking 	Twice Orange Blinking 
Representation	The relay is reaching the end of its life cycle.	The sensor cable is connected, but unstable communication. Refer to "ADJUSTMENT".

## Contact your installer or the sales engineer if:

- you need to change the settings or replace the sensor.
- the trouble still persists after checking and remedying as described above.

"Take Care of Environment". This manual uses recycled paper.



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