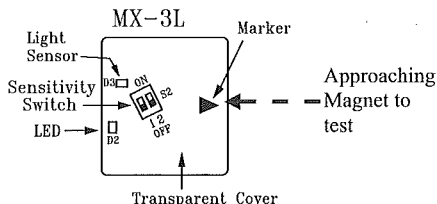
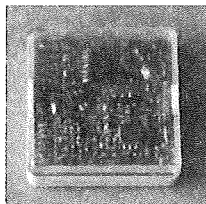


MX-3L MINI LIGHT DETECTOR

INTRODUCTION

MX-3L is a mini type light detector to detect the ambient light intensity. It can be used as a control device to control a window shutter when sun goes up or turn on a light when sun goes down. It also can be an alarm device to issue alarm when someone turns on a light in a dark room (24-Hour Zone).



INSTALLATION

A. Enrolling Code

1. Open the case by using a blade type screw driver from the marker side and insert a 3V CR-2032 Lithium battery. (Panasonic is recommended).
2. Select "Installer Mode" on the Base Unit, and enter Installer Password to gain access authority. Then select \Set Device\Enroll Device\Special Sensor\Enter Zone No. to enroll the ID of the MX-3L by using a magnet to approach the marker side of the MX-3L. You may change its various attributes under \Set Device\Change Device Setting\Special Sensor Change, to fulfill different requirements.
3. User also can enroll or change device settings by running the HyperSecureLink software on a PC. (Refer to HyperSecureLink User Guide)

B. Location (Important Notice: This sensor can't be put on metal surface.)

The detector's transparent cover should face the light coming direction.

Note: The RF transmission range will be extremely shrunk due to radio signal attenuation if the transmitter is put on metal surface.

C. Testing

1. Using a magnet to approach the marker side, the transmission LED flashes once if the light intensity is below the threshold level, flashes twice if the light intensity is above the threshold level.
2. If the MX-3L has been enrolled in the LS-30 Base Unit, the Base Unit shows the signal received with RF strength dB value on the LCD display.

Note: For stable operation, the signal strength should be above 40dB (standard version Base Unit). If the signal strength is too low, the detector or Base Unit should be relocated to make the receiving signal as high as possible.

D. Sensitivity Selector (S2)

SW1	SW2	Threshold Level (TL)	light intensity reference
On	On	100 Lux (highest sensitivity)	Home Reading environment 250-400 Lux (default)
On	Off	500 Lux	Sun rise/ Sun set (outside) 500-1,000 Lux
Off	On	2000 Lux	Rainy day (outside) 2,500-3,500 Lux
Off	Off	4000 Lux (lowest sensitivity)	Sunny day (outside) 5,000-20,000 Lux

OPERATION

MX-3L can be used as a control or alarm device by the settings in the Base Unit and it operates according to the following table: (TL means Threshold Level)

Type	Operation	Action on trigger
Control	High	Corresponding switch(s) On when light intensity above the TL. Corresponding switch(s) Off when light intensity below the TL.
	Low	Corresponding switch(s) On when light intensity below the TL. Corresponding switch(s) Off when light intensity above the TL.
Alarm	High	Alarm when light intensity above the TL Restore when light intensity below the TL
	Low	Alarm when light intensity below the TL Restore when light intensity above the TL

SPECIFICATIONS

Power: one 3V CR-2032 lithium battery

RF signals: Above TL/Below TL, Battery Low, Heartbeat (@60 min.), Power on Reset (@power on)

Sensor: NaPiCa (Cadmium Free) type

Light Intensity Threshold Level: 100Lux, 500Lux, 2000Lux, 4000Lux. (+/-40%), selectable

Current Drain: 10uA @ standby, 20mA @ RF operation

Estimated Battery Life: 1 year (@ actuated 10 times/day)

Operating Temperature: -10~ 40°C

Size: 35 x 38 x 10 mm

Weight: about 12g (with battery)

WARRANTY

The Manufacturer warrants its products (hereinafter referred to as the Product) to be in conformance with its own plans and specifications and to be free of defects in materials and workmanship under normal use and service for a period of twelve months from the date of shipment by the Manufacturer. The Manufacturer's obligations shall be limited within the warranty period. At its option, to repair or replace the Product or and part thereof. To exercise the warranty the Product must be returned to the Manufacturer freight prepaid and insured.

This warranty does not apply in the following cases: improper installation, misuse, failure to follow installation and operating instructions, alteration, abuse, accident or tampering, and repair by anyone other than the manufacturer.

This warranty is exclusive and expressly in lieu of all other warranties, obligations or liabilities, whether written, oral, express or implied, including any warranty of merchantability or fitness for a particular purpose, or otherwise. In no case shall the Manufacturer be liable to anyone for any consequential or incidental damages for breach of this warranty or any other warranties whatsoever, as aforesaid.

This warranty shall apply to the Product only. All Products, accessories or attachments of others used in conjunction with the Products, including batteries, shall be covered solely by their own warranty, if any. The Manufacturer shall not be liable for any damage or loss whatsoever, whether directly, indirectly, incidentally, consequentially or otherwise, caused by the malfunction of the Product due to Products, accessories, or attachments of others, including batteries, used in conjunction with the Products.

The Manufacturer shall have no liability for any death, personal and/or bodily injury and/or damage to property or other loss whether direct, indirect, incidental, consequential or otherwise, based on a claim that the Product failed to function.

NOTE: The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

To comply with the FCC RF exposure compliance requirements, this device and its antenna must not be co-located or operating to conjunction with any other antenna or transmitter.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

