

# EXP-MS-N4X-AT-LV

## Explosion Proof Motion Sensor Instruction Manual

Thank you for your purchase of the EXP-MS-N4X-AT-LV Motion Sensor, the following instructions are intended for this part number only.



### Installation

This unit is easily wall mounted via integral mounting bracket, which can be adjusted -90° to +30° vertically after installation. The explosion proof housing provides two 1/2" or 3/4" hub openings located on either side of the housing for running electrical conductors in a feed through configuration. A bushing seal at each conductor opening prevents damage to wiring insulation.

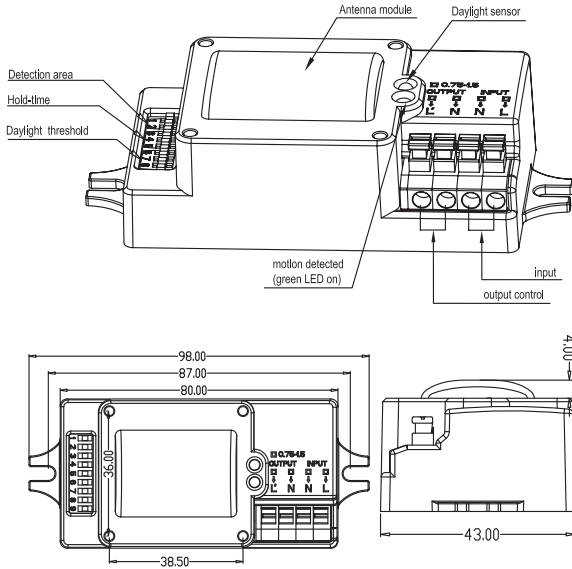
This unit is designed to operate on low voltage 12-24V AC or DC electrical circuits. This motion sensor is suitable for use in environments where combustible dusts and particulates may be present. 1/2" or 3/4" NPT tapped conduit openings are provided on either of the unit in feed through versions while dead end versions have a single conduit hub, providing easy and secure connection to main power line supplies.

The EXP-MS-N4X-AT-LV operates like a standard on/off light switch. The circuit is normally open when no motion is present. Once motion is detected, the internal switch changes to a closed circuit, allowing voltage to pass through the sensor and power the device(s) at the other end.

The sensor is an active motion detector; it emits high-frequency electro-magnetic waves (5.8GHz) and receives their echo. The sensor detects the change in echo from even the slightest movement in its detection zone. A microprocessor then triggers the "switch light ON" command. Detection is possible through doors, panes of glass or thin walls.

**IMPORTANT: persons or objects moving towards the sensor are detected best.**

**NOTE: the high frequency of the output of this sensor is <10Mw – that is just one 100<sup>th</sup> of the transmission power of a mobile phone or the output of a microwave oven.**



MOTION SENSOR	
Operating voltage	12 or 24V AC/DC
HF system	5.8GHz±75MHz, ISM wave band
Transmitting power	<0.5mW
Power consumption	≤0.5W(standby)
Detection zone	Max.(D x H): 16m x 15m
Detection sensitivity	25% / 50% / 75% / 100%
Hold time	5s / 30s / 90s / 3min / 20min / 30min
Daylight sensor	5Lux/15Lux/30Lux/50Lux/100Lux/Disable
Mounting height	15m Max.
Motion detection	0.5~3m/s
Detection angle	150°(wall installation) 360°(ceiling installation)
Operating temperature	-20℃ ~60℃
IP rating	IP20

## Setting

By selecting the combination on the DIP switch, sensor data can be precisely set for each specific application.

	1	2	
ON	I	ON ON	100%
	II	- ON	75%
	III	ON -	50%
	IV	- -	25%

### Detection area

Detection area can be reduced by selecting the combination on the DIP switches to fit precisely each application.

	3	4	5	
ON	I	ON ON ON		5s
	II	- ON ON		30s
	III	ON - ON		90s
	IV	- - ON		3min
	V	ON ON -		20min
	VI	- - -		30min

### Hold time

Refers to the time period the lamp remains at 100% illumination after no motion detected.

	6	7	8	
ON	I	ON ON ON		5lux
	II	- ON ON		15lux
	III	ON - ON		30lux
	IV	- - ON		50lux
	V	ON ON -		100lux
	VI	- - -		Disable

### Daylight sensor

The sensor can be set to only allow the lamp to illuminate below a defined ambient brightness threshold.

When set to Disable mode, the daylight sensor will switch on the lamp when motion is detected regardless of ambient light level.  
30lux, 50lux, 100lux; twilight operation, 5lux, 15lux: darkness operation only.

	9	
ON	I	ON Disable
	II	- Sensor

### Mode

When set to Disable, the microwave sensor function is inactive, lights turns on or off by switch.

When set to Sensor, the microwave sensor function is active.

**Certifications - Compliance**

- Class I, Divisions 1 & 2, Groups B, C, D
- Class I, Zones 1 & 2, Groups IIB+H2, IIA
- Class II, Divisions 1&2, Groups E,F,G
- Class III, Divisions 1&2
- Ex db IIC Gb
- Ex tb IIC Gb Db IP66
- NEMA 3,4,4X,7 (B,C,D), 9 (E,F,G)

<b>Malfunction</b>	<b>Cause</b>	<b>Remedy</b>
The load will not work	<ul style="list-style-type: none"> <li>- wrong light control setting selected</li> <li>- load faulty</li> <li>- mains switch OFF</li> </ul>	<ul style="list-style-type: none"> <li>- adjust setting</li> <li>- change load</li> <li>- switch ON</li> </ul>
The load is always working	<ul style="list-style-type: none"> <li>- continuous movement in the detection zone</li> </ul>	<ul style="list-style-type: none"> <li>- check zone setting</li> </ul>
Load works without and identifiable movement	<ul style="list-style-type: none"> <li>- sensor is not mounted for detecting movement reliably</li> <li>- movement occurred, but not identified by the sensor (movement behind a wall, movement of small object in immediate vicinity etc.)</li> </ul>	<ul style="list-style-type: none"> <li>- securely mount enclosure</li> <li>- check zone setting</li> </ul>
The load will not work despite movement	<ul style="list-style-type: none"> <li>-rapid movements are being suppressed to minimize malfunctioning or the detection zone you have set is too small</li> </ul>	<ul style="list-style-type: none"> <li>-check zone setting</li> </ul>

THESE INSTRUCTIONS MAY NOT COVER ALL DETAILS OR VARIATIONS OF THIS PRODUCT FOR YOUR EQUIPMENT OR INSTALLATION REQUIREMENTS. SHOULD FURTHER INFORMATION NOT COVERED BY THESE INSTRUCTIONS BE REQUIRED, PLEASE CONTACT LARSON ELECTRONICS BY EMAIL AT [SALES@LARSONELECTRONICS.COM](mailto:SALES@LARSONELECTRONICS.COM) OR BY PHONE AT 1-800-369-6671 FOR FURTHER ASSISTANCE.

PLEASE VISIT [LARSONELECTRONICS.COM](http://LARSONELECTRONICS.COM) FOR **WARRANTY** AND **RETURN** INFORMATION.