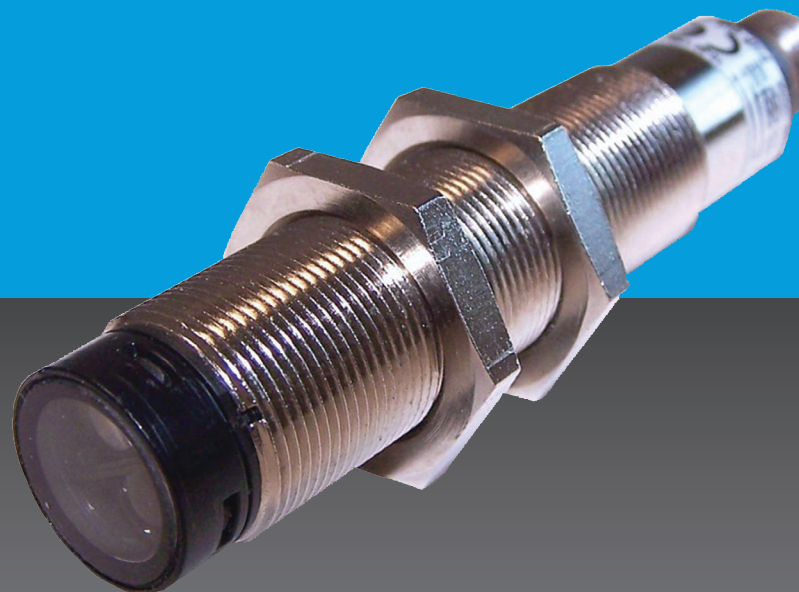


# LMX-300

L A S E R   S E N S O R

The LMX-300 is a diffuse reflection laser sensor housed in an M18 cylindrical package. A single button teach-in is provided. The LMX is aimed at the lightest object (either background or target) and press the teach button. The sensor threshold is set to 50% of the light object.

# LMX



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## Applications

- Position Sensing
- Contrast
- Presence

## Design & Features

- 300mm (11.81in) range
- Complementary N.O./N.C.
- PNP output
- M12 connector
- Nickel-plated brass housing

## Ordering Information



LMX-300  
Laser Sensor

### CAUTION

Class 1 Laser Product  
Complies with 21 CFR 1040.10 and 1040.11  
except for deviations pursuant to Laser Notice  
Number 50, dated July 26, 2001.

**Note:** This sensor is equipped with a visible red light laser diode and is classified as a CLASS LASER DEVICE. According to the CEIEN60825-1 norms, class 1 laser devices are safe in operating conditions that can be reasonably foreseen. This sensor emits visible laser light impulses with a maximum peak power of 0.4 milliwatt. The laser output maximum power level is checked through a circuit that is always working, so it can detect any single failure. The Class 1 laser always emits a beam of intense and very concentrated light. The intentional and prolonged observation of this light can cause eye problems. As a result, it is advisable, where possible, to install the laser sensors so the beam cannot exceed the operating area. Avoid laser beam contact with eyes.

**NOT INTENDED FOR USE IN  
PERSONAL SAFETY APPLICATIONS.**

## Functions

Teach mode

Auto-set detection threshold

## Specifications

|  |   |               |
|--|---|---------------|
| Type                                     | Diffuse reflection  |               |
| Sensing distance                         | up to 300mm   |               |
| Emission                                 | Visible red Class 1 Laser (650nm);<br>see Caution note  |               |
| Minimum detectable object                | 0.1mm   | Indicators    |
| Differential travel                      | <10%  | Yellow LED    |
| Repeat accuracy                          | 5%  | Green LED     |
| Operating voltage                        | 10-30VDC  |               |
| Ripple                                   | < 10%   | Connector M12 |
| No-load supply current                   | < 25mA  | Pin 1         |
| Load current                             | <100mA  | Pin 2         |
| Leakage current                          | <10µA (at VDC max.)   | Pin 3         |
| Voltage drop                             | 2V max at 100mA   | Pin 4         |
| Output type                              | PNP - Complementary NO/NC   |               |
| Switching frequency                      | 800Hz   |               |
| Time delay before availability           | 200ms   |               |
| Input voltage transients protection      | Yes   |               |
| Input power polarity reversal protection | Yes   |               |
| Output power short-circuit protection    | Yes, switch auto resets after load is removed   |               |
| Temperature range                        | -10/+55°C (14° to 131° F)   |               |
| Temperature drift                        | 10% Sr  |               |
| Interference to external light           | 3000 lux (incandescent lamp), 10000 lux (sunlight)  |               |
| Protection degree (DIN 40050)            | IEC IP67  |               |
| LED indicators                           | Yellow ON (output energized, light state)<br>Yellow OFF (output de-energized, dark state)<br>Green (power ON) |               |
| Housing material                         | Housing Material Nickel-plated brass  |               |
| Lens material                            | Glass   |               |
| Tightening torque                        | 40 N-m (29 lb-ft.)  |               |
| Weight                                   | 200g (7.05 oz)  |               |

**WARRANTY** EMX INC. the product described herein for a period of 2 years under normal use and service from the date of manufacture. The product will be free from defects in material and workmanship. This warranty does not cover ordinary wear and tear, abuse, misuse, overloading, altered products, or damage caused by the purchaser from incorrect connections, or lightning damage. There is no warranty of merchantability. There are no warranties expressed, implied or any affirmation of fact or representation which extend beyond the description set forth herein. EMX Inc. sole responsibility and liability, and purchaser's exclusive remedy shall be limited to the repair or replacement at EMX's option of a part or parts not so conforming to the warranty. In no event shall EMX Inc. be liable for damages of any nature, including incidental or consequential damages, including but, not limited to any damages resulting from non-conformity defect in material or workmanship.