

# UVX-300P

## PHOSPHORESCENCE SENSOR

Confirm the presence of phosphorescent materials and pigments used in paints, adhesives, security inks and plastics reliably with the UVX-300P. The UVX™ employs our field-proven technology for effective detection in a wide variety of assembly, manufacturing and packaging processes. Since phosphorescent materials continue to emit light after the UV excitation have been removed, it is necessary to control sampling and measurement to assure that this does not interfere with the sensor detection process. High-sensitivity and fast response makes the UVX-300P suitable for high-speed automation processes. The metal alloy case and glass lens provide robust construction expected in an industrial environment.

The UVX features a 2-digit display that provides an indication of signal strength making set-up and integration quick and easy. The versatile sensor provides user set-up parameters including light source intensity adjustment, detection threshold and gain selection making the UVX useful in a wide range of applications.

The UVX includes both a discrete PNP/NPN output and an analog output. The discrete output is automatically set for PNP or NPN operation. The analog output signal may be used to assess the relative quantity of UV materials such as phosphorescent inks, paints and adhesives.

# UVX



**EMX Industries, Inc.**

4564 Johnston Parkway, Cleveland, Ohio 44128

P. 800 426 9912 F. 216 518 9884

**Sales Inquiries:** [salesupport@emxinc.com](mailto:salesupport@emxinc.com) **Technical Support:** [technical@emxinc.com](mailto:technical@emxinc.com)  
[www.emxinc.com](http://www.emxinc.com)

## Applications

- Phosphorescent materials
- Red pigments
- Invisible ink
- Specialty medical adhesive

## Design & Features

- Small spot size
- High sensitivity and high resolution
- Fast response
- Display range 00-99
- Adjustable gain
- Analog output
- PNP/NPN discrete output

## Ordering Information



UVX-300P  
Phosphorescence sensor



UVX-300P-FG  
Phosphorescence sensor  
>500nm spectral response

## Accessories



UVX-300L50  
50 mm focal lens



UVX-300B  
Bracket



UVX-300C  
Cable 5P, 5M, M12, F

NOT INTENDED FOR USE IN  
PERSONAL SAFETY APPLICATIONS.

## Functions

**NORMAL OPERATING MODE**  
**CALIBRATION**  
**THRESHOLD**  
**UV LED INTENSITY**  
**HYSTERESIS LEVEL**  
**DISCRETE OUTPUT**  
**OUTPUT PULSE STRETCH**  
**SECURITY**  
**TEACH MODE**

Displays relative reflection intensity  
User sensitivity adjustment  
Set detection level  
Set LED, LO, MED, HI  
Set undetect level 1-9 steps below threshold  
Set normally open or normally closed  
Set minimum output period 10...90ms  
Lock/unlock pushbutton controls  
Auto-set detection threshold

## Specifications

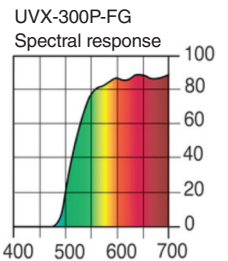
<b>Light source</b>	370nm UV LED, 100,000 hrs.
<b>Light spot size</b>	6...8mm dia. @ 50mm
<b>Light source intensity</b>	3 levels
<b>Sensing distance</b>	up to 350mm
<b>Receiver Spectral Response</b>	350...1000nm
<b>Receiver Spectral Response (FG model)</b>	500...1000nm
<b>Response time</b>	<150uS
<b>Switching Frequency</b>	6kHz
<b>Relative intensity display range</b>	00 to 99
<b>Sensitivity</b>	Adjustable
<b>Signal level</b>	Two 7 segment digits
<b>Detection threshold</b>	Two 7 segment digits
<b>Digital Output</b>	Auto-Detect PNP / NPN
<b>Output Function</b>	NO/NC selectable
<b>Analog Output</b>	0...5V
<b>Power indicator</b>	Green LED
<b>Detect indicator</b>	Red LED
<b>Programming indicator</b>	Yellow LED
<b>Data retention</b>	EEPROM non-volatile memory
<b>Dimensions</b>	51mm x 61mm x 25mm (2.0" x 2.4" x 1.0")
<b>Weight</b>	95 g (0.21 lbs.)
<b>Supply Voltage</b>	10...24 VDC
<b>Operating Current</b>	60 mA
<b>Short Circuit Protection</b>	Discrete output
<b>Overload / Reverse Polarity Protection</b>	Supply voltage
<b>Operating Temperature</b>	-20°C...55°C
<b>Storage Temperature</b>	-20°C...70°C
<b>Housing</b>	Metal alloy
<b>Mechanical Protection</b>	IP65 NOT FOR PRESSURE WASHDOWN

### Indicators

<b>7-Segment display</b>	LED
<b>Green LED</b>	Power
<b>Red LED</b>	Detect
<b>Yellow LED</b>	Program

### Connector M12

<b>Pin 1</b>	Power to 24VDC
<b>Pin 2</b>	Discrete output PNP/NPN NO/NC
<b>Pin 3</b>	Ground
<b>Pin 4</b>	Analog output 0 to 5V DC
<b>Pin 5</b>	Remote LOCK/ UNLOCK input



**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.