

# CNTX

## ADVANCED CONTRAST SENSOR

Increase process throughput with high-speed, accurate and reliable contrast differentiation. The CNTX™ combines a broad-spectrum light source, small spot size and fast response to achieve high-speed contrast differentiation of both neutral and color targets. The CNTX employs our field-proven, patented technology, for effective detection of registration marks, glossy surfaces, cap inserts, date codes and sorting of product by color in many industrial applications. The metal alloy case and glass lens provide robust construction expected in an industrial environment.

The CNTX 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 CNTX useful in a wide range of applications.

The CNTX 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 access targets based on their reflectance characteristics.

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## Applications

- Sort products by color
- Detect registration marks
- Confirm presence of date codes
- Detection of glossy surfaces
- Detects cap inserts

## Design & Features

- 0.5mm or 3.0mm spot size
- 25uS response time
- Display range 00-50
- Broad spectrum white LED
- Adjustable LED intensity
- Two gain settings
- Programmable discrete output
- Threshold adjustment
- Analog output

## Ordering Information



CNIX-30-0  
Advanced Contrast Sensor  
3.0mm light spot



CNIX-05-0  
Advanced Contrast Sensor  
0.5mm light spot

## Accessories



UVX-300B  
Bracket



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

## Functions

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

Displays relative reflection intensity  
 X1 and X10  
 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>White light source</b>	Broad spectrum LED, min. 100,000 hours 28mm	<b>Indicators</b>	LED
<b>Sensing distance</b>	0.5mm or 3.0mm dia.	<b>7-Segment display</b>	Power
<b>Spot size</b>	+/- 3mm	<b>Green LED</b>	Detect
<b>Depth of field</b>	25uS	<b>Red LED</b>	Program
<b>Response time</b>	40kHz	<b>Yellow LED</b>	
<b>Switching Frequency</b>	3 levels	<b>Connector M12</b>	
<b>LED intensity</b>	00 to 50	<b>Pin 1</b>	Power to 24VDC
<b>Relative intensity display range</b>	1X, 10X	<b>Pin 2</b>	Discrete output PNP/NPN NO/NC
<b>Sensitivity</b>	Two 7 segment digits	<b>Pin 3</b>	Ground
<b>Signal level</b>	Two 7 segment digits	<b>Pin 4</b>	Analog output 0 to 5V DC
<b>Detection threshold</b>	Auto-Detect NPN / PNP	<b>Pin 5</b>	Remote LOCK/ UNLOCK input
<b>Digital Output</b>	NO/NC selectable		
<b>Output Function</b>	LOCK/UNLOCK keypad		
<b>Security</b>	Green LED		
<b>Power indicator</b>	Red LED		
<b>Detect indicator</b>	Yellow LED		
<b>Programming indicator</b>	EEPROM non-volatile memory		
<b>Data retention</b>	2.0" (51mm) x 2.4" (61mm) x 1.0" (25mm)		
<b>Dimensions</b>	0.21 lbs. (95g)		
<b>Weight</b>	10-24 VDC		
<b>Supply Voltage</b>	60 mA		
<b>Operating Current</b>	Discrete output		
<b>Short Circuit Protection</b>	Supply voltage		
<b>Overload / Reverse Polarity Protection</b>	-20°C...55°C		
<b>Operating temperature</b>	-20°C...70°C		
<b>Storage temperature</b>	Metal alloy		
<b>Housing</b>	IP65 NOT FOR PRESSURE WASH DOWN		
<b>Mechanical Protection</b>			

**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.