



SEE THE DIFFERENCE!

Numerical display of 50 grayscale levels

DATA SHEET

CNTX™ See The Difference!

Advanced Contrast Sensor

Increase process throughput with high-speed, accurate and reliable contrast differentiation. The CNTX™ combines small spot size and fast response to achieve high-speed contrast differentiation of both neutral and color targets. The sensor provides numerical display of 50 grayscale levels. The broad-spectrum light source allows accurate detection of a wide range of colors against any background. The flexibility of the CNTX™ makes it easy to set-up in a wide variety of printing, packaging and converting applications.

The CNTX™ is the perfect fit for many applications that require the ability to differentiate between two conditions that vary in contrast. Whether you need to detect registration marks for alignment or positioning purposes, or sort products based on color, the CNTX™ provides the accuracy and precision for reliable process control.

The CNTX™ uses a modulated white light source optimized to detect all colors. The sensor measures the light reflected by two different targets and provides an output signal when the threshold setting is exceeded. The small spot size provides the resolution necessary to achieve accurate timing and positioning measurements. The discrete output provides the high-speed interface to external controls. An analog output allows external monitoring of signal levels.

Two seven-segment displays provide a visual representation of the relative intensity from 00 to 50. The two gain settings and three LED intensity settings provide for flexible operation over a wide range of conditions. The two keys are provided for making adjustments and changing sensor settings for optimum operation.

The CNTX is easy to use with its well defined light spot and digital display.

- High color contrast sensitivity and resolution.
- High detection speed, 25-microsecond discrete output response.
- Broad-spectrum white LED light source allows detection of all colors.
- Two gain settings and three light source intensity settings allow a wide range of adjustment capability.
- Easy-to-use operator adjustable threshold.
- Fast and convenient integration. In one sensor you get both analog and discrete output, auto-detect for PNP/NPN configuration.
- Unique numerical display indicates measured levels making process setup easy.
- Circular spot allows for any orientation of sensor to marks.

FOR CONTRAST APPLICATIONS

Applications

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

CNTX™ Features

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

EMX

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**For quotes and questions,
contact Applications
Support:
1-800-426-9912
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CNTX™

Advanced Contrast Sensor

Functions

OPERATING MODE	The CNTX™ is in operating mode in detect or undetect state.
REFLECTED LEVEL	Displays the relative reflection intensity.
THRESHOLD	Displays the preset detection level.
MANUAL PROGRAM MODE	Switches the CNTX™ to PROGRAM MODE.
SET THRESHOLD	Sets the detect level.
SET LED INTENSITY	Sets the LED intensity to LO, MED, HI.
SET HYSTERESIS LEVEL	Sets the un-detect level 1–9 steps above the detect level.
SET OUTPUT NO/NC	Sets the discrete output to NO or NC.
SET DETECTION EXTEND TIME	Extends the detect output by selected time.
SET LOCK / UNLOCK	Locks and un-locks the CNTX™ pushbutton controls.
TEACH MODE	Switches the CNTX™ to TEACH MODE.
TEACH DETECT	Sets the level of reflection at which the CNTX™ will detect the target.
TEACH UNDETECT	Sets the level of reflection so CNTX™ will not detect the target.
PNP / NPN	The micro controller detects and selects the required output configuration.

Specifications

White light source

Broad spectrum LED
min. 100,000 hours

Sensing distance

28mm

Spot size

3.0mm dia.

Depth of field

+/- 3mm

Response time

25 µs

Switching frequency

40Khz

LED intensity

3 levels

Relative intensity display range

00 to 50

Sensitivity

1X, 10X

Signal level

Two 7 segment digits

Detection threshold

Two 7 segment digits

Digital output

Autodetect NPN / PNP

Output function

NO/NC selectable

Security

LOCK / UN-LOCK
keypad

Power indicator

Green LED

Detect indicator

Red LED

Programming indicator

Yellow LED

Data retention

EEPROM non-volatile memory

Dimensions

2.0"(51mm)x2.4"(61mm)x1.0"(25mm)

Weight

0.21lbs. (95g)

Supply voltage

10 - 24 VDC

Operating current

60 mA

Short circuit protection

Discrete output

Overload / reverse

Polarity protection

Supply voltage

Operating Temperature

-20 to 55°C

Storage Temperature

-20 to 70 C

Housing

Metal alloy

Mechanical Protection

IP67 NOT FOR PRESSURE WASH DOWN

Values Stored in Non Volatile Memory

THRESHOLD, NO/NC, LED INTENSITY,
Local LOCK/UNLOCK, DETECTION
EXTEND TIME, HYSTERESIS LEVEL,
TEACH DETECT, TEACH UNDETECT.

Indicators

7 Segment Display LED

Green LED	Power
Red LED	Detect
Yellow LED	Program

Connector M12

Pin 1	Power 10 to 24 V DC
Pin 2	Discrete output PNP/NPN NO/NC
Pin 3	Ground
Pin 4	Analog output 0 to 5 V DC
Pin 5	Remote LOCK/UNLOCK input

Ordering Information



CNTX-30-0
Contrast Sensor

Accessories



UVX-300B
Bracket



UVX-300C
5-meter cable with
M12 5 pin connector

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

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