MARK SENSORS

Photoelectric Sensors Fiber-optic Sensors Standard Fibers Fiber Sensors Communication Units Mark Sensors Laser Sensors

Safety Sensors Pressure & Flow Sensors Inductive Proximity Sensors

Measurement Sensors

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LX-100

Introducing the 3-LED mark sensor

Functions

lonizers/ Electrostatic Sensors

Equipped with 3 LEDs: red, green and blue To detect any marking, this sen-

sor is equipped with red, green and blue LED light emitting elements all in one. In addition, it uses a coaxial reflective optics system and realizes high precision sensing when used with a 1/4000 resolution 12-bit A/D converter.



2 selectable sensing modes for any application

Mark mode: This sensing mode automatically selects a single color from the 3 R-G-B LEDs to realize an ultra quick 45µs response time. The automatic optimal LED selection function automatically selects the LED that



is most suitable for the sensing. This function is perfect for ultra quick sensing.

Color mode: All 3 R-G-B LEDs light up and high precision mark color discrimination occurs using the R-G-B reflective light ratio. This function enables effective detection of films with patterns around the areas of the mark.



Even beginners can quickly master MODE NAVI operation

The sensor's basic operations are represented by 6 indicator lamps (MODE NAVI). The user can check what mode the sensor is presently in with a quick glance rendering operation simple.

Sensing status digitally controllable

The sensing status, displayed numerically, can be verified at a glance. Also, the sensor settings for each type of packing film can be digitally indicated.

Direct codes enable settings verification at a glance

The settings for the LX-100 series sensors are displayed using a 4-digit direct code. Direct codes enable easy settings verification and maintenance by phone.

Super simple teaching

Teaching (setting the threshold value) is simple, even in "Mark Mode" or "Color Mode". In addition, because teaching via an operation panel or other external input device is also possible, models can be easily interchanged.

Compact design for significant space savings

Cable and plug-in connector types are available depending on the equipment used. These sensors can be easily integrated into already existing systems.

LX-100

Typical applications

Tube positioning



Mark detection Mark detection of packaging film.



Technical specifications

Туре		Cable	M12 plug-in connector type
Model no.	NPN output	LX-101	LX-101-Z (note 1)
	PNP output	LX-101-P	LX-101-P-Z
Sensing range		10±3mm	
Power supply		12 to 24VDC ±10%	
Output		2 x NPN or 2 x PNP open-collector transistor; max. 50mA	1 x NPN or 1 x PNP open-collector transistor; max. 100mA
Output operation		Mark mode: Light-ON/Dark-ON (auto-setting on teaching) Color mode: Consistent-ON/Inconsistent-ON (setting on teaching)	
Response time		Mark mode: max. 45µs; color mode: max. 150µs	
Sensitivity setting		Mark mode: 2-level teaching/Limit teaching; Color mode: 1-level teaching	
Protection		IP67 (IEC)	
Ambient temperature		-10 to +55°C	
Emitting element		Combined red/green/blue LED (Peak emission wave length: 640nm/525nm/470nm)	
Connection method		Cable 2m	M12 connector (note 2)
Dimensions (HxWxD)		35×24×57mm	35×24×71.5mm
Accessories		M4 screws with washers, 2 pcs.	

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Notes: 1.) Suffix -Z=M12 connector type 2.) Cable is not included in delivery. Please select under accessories (page 121)

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