



APPLICATION

Photoelectric fork sensor checks presence of plastic cap and eliminates downtime

During continuous production of fast-moving consumer goods, line stoppages are both costly and time consuming. After filling, sealing and capping, bottles of table sauces proceed for labelling and packaging; at this stage, the undetected absence of a plastic cap from an individual bottle requires manual intervention and potentially the rejection of an entire batch of production. A highly versatile photoelectric fork sensor, positioned directly over the conveyor, senses the presence of a cap on each bottle prior to labelling and triggers an alarm if a cap is missing. Contrinex fork light-barrier sensors with industry-standard IO-Link communication are ideal for this application, offering designers four discrete operating modes and switching frequencies up to 14,000 Hz. With a standard resolution of 0.3 mm (down to 0.1 mm in high-resolution mode) and fork openings from 10 mm to 120 mm, these robust, metal-cased sensors are well suited to both the task and the environment.

INDUSTRIES

Robotics, packaging, materials handling, logistics, food and beverage



Robotics



Beverage filling machines



Conveyor systems



Packaging systems


FORK SENSORS

PHOTOELECTRIC SENSORS

ROBUST SPACE-SAVING DESIGN OFFERS VERSATILITY AND SIMPLICITY


Contrinex fork light-barrier sensors offer a powerful combination of simplicity, multi-mode operation and compactness, with high-resolution and high-speed sensing as standard. Ideal for general position- and presence-sensing in industrial environments, these versatile, metal-cased devices allow four modes of operation – standard, high-resolution, power and high-speed – and the convenience of a push-pull output. Equipped with the industry-standard IO-Link protocol, they provide a choice of manual or remote set-up and adjustment, simplifying installation while saving time and money.

KEY ADVANTAGES

- ✓ High resolution: Ø 0.1–0.2 mm
- ✓ High frequency up to 14 kHz
- ✓ 4 sensor modes: Standard, High Resolution, Power, Speed
- ✓  IO-Link v1.1
- ✓ Sensitivity adjustment allowing detection of transparent objects
- ✓ Compact design accommodates photoelectric emitter and receiver in a single housing
- ✓ Push-pull output keeps inventory costs down while allowing exceptional flexibility
- ✓ Robust space-saving housing ensures precise alignment requiring no on-site adjustment

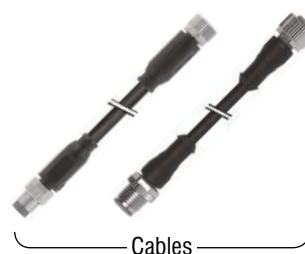


PRODUCT OVERVIEW

 IO-Link								
SERIES	U 10	U 20	U 30	U 40	U 50	U 80	U 100	U 120
Housing size mm	□ 25×45×10	□ 40×50×10	□ 50×60×10	□ 60×70×10	□ 70×80×10	□ 100×80×10	□ 120×80×10	□ 144×90×12
Through-beam (s _n mm)	10	20	30	40	50	80	100	120

ACCESSORIES

Go to page 298 to see all the accessories



COMMON FEATURES

Supply Voltage range	10 ... 30 VDC
Output	Light-ON/Dark-ON/IO-Link
Ambient temperature	-25 ... +60°C

OUTPUT

LG[x]-U[xx]MA-[xxx]-[xxx] — see p. 196
 Housing size [##] Fork opening in mm
 Emission type [I] Infrared [R] Red — see p. 196
 Reference key on page 196

OPERATING PRINCIPLE

 Through-beam









ACCESSORIES

- A** Group A: M8 3-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- B** Group B: M8 4-pin
- C** Group C: M12 4-pin
Sub-group: Field attachable connectors
Sub-group: Distribution boxes
- D** Group D: M12 AC/DC 3-pin
- E** Group E: Universal mounting brackets
Sub-group: Mechanical stops
- F** Group F: Photoelectric mounting brackets
- G** Group G: Photoelectric reflectors
- H** Group H: Sensor tester

Go to page 298 for details

CABLES
 Cable lengths available:
 2 m, 5 m, 10 m
 other customised lengths possible


U-SHAPE FORK SENSORS LG SERIES

FAMILY	OPERATING PRINCIPLE	SENSING RANGE (mm)	FORK OPENING (mm)	LIGHT SOURCE
U-SHAPE FORK SENSORS – LG SERIES		10	10	LED, infrared 880 nm
		20	20	LED, red 660 nm
		30	30	LED, red 660 nm
		40	40	LED, red 660 nm
		50	50	LED, red 660 nm
		80	80	LED, red 660 nm
		100	100	LED, red 660 nm
		120	120	LED, red 660 nm

U-SHAPE FORK SENSORS – LG SERIES



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	HOUSING MATERIAL	CABLE	CONNECTOR	 IO-Link	SWITCHING FREQUENCY	RESOLUTION (mm)	DEGREE OF PROTECTION	PART REFERENCE	ACCESSORIES (SEE PAGE 194)
	Die-cast zinc		 M8	 IO-Link	10,000	0.2	IP67	LGI-U10MA-PMS-407	
	Die-cast zinc		 M8	 IO-Link	5,000	0.3	IP67	LGR-U20MA-PMS-407	
	Die-cast zinc		 M8	 IO-Link	5,000	0.3	IP67	LGR-U30MA-PMS-407	
	Die-cast zinc		 M8	 IO-Link	5,000	0.3	IP67	LGR-U40MA-PMS-407	
	Die-cast zinc		 M8	 IO-Link	5,000	0.3	IP67	LGR-U50MA-PMS-407	
	Die-cast zinc		 M8	 IO-Link	5,000	0.3	IP67	LGR-U80MA-PMS-407	
	Die-cast zinc		 M8	 IO-Link	5,000	0.3	IP67	LGR-U11MA-PMS-407	
	Die-cast zinc		 M8	 IO-Link	5,000	0.5	IP67	LGR-U12MA-PMS-407	