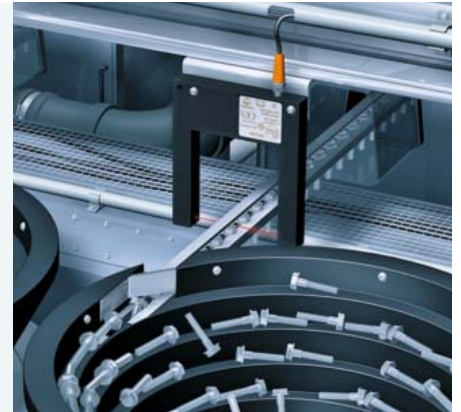# Accurate detection of tiny objects using laser fork sensors

Photoelectric fork and angle sensors

The accurate laser guarantees reliable detection of tiny objects from Ø 30 µm

Quick set-up: no need to align transmitter and receiver

Soiling is signalled by permanent monitoring of the quantity of light

Sensor modes (power, speed, high resolution) can be set in accordance with the specific application

Visible red light

IO-Link

IP 67

Class 1 laser
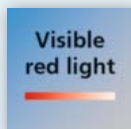
Highest accuracy in the micrometre range

ifm's new units are designed for part monitoring of precision engineering, medical or other tiny components. Thanks to the precise laser, the photo-electric fork sensor even detects objects with a diameter of only 30 µm.

Settings and diagnostics with IO-Link

Thanks to IO-Link, adaptation of the senor settings to suit individual process or environmental requirements is also possible. In the power mode, high light intensity ensures that objects are reliably detected even under difficult conditions. In the speed mode, switching frequencies of up to 10,000 Hz are possible. Moreover, the sensor detects it if its own lens is soiled, so that it can be cleaned in time to guarantee process reliability.

Type	Fork width (w) [mm]	Fork depth (d) [mm]	Smallest detectable object Ø [mm]	Switching frequency [Hz]	Laser protection class	Order no.
Optical fork sensor type OPU · IO-Link 1.1 · M8 connector · 3-pole · red light						**PNP/NPN**
	30	35	0.05 (0.03)*	5,000 (8,000)**	1	**OPU700**
	50	55	0.05 (0.03)*	5,000 (10,000)**	1	**OPU701**
	80	55	0.1 (0.05)*	5,000 (10,000)**	1	**OPU702**

Sensor mode: * high-resolution / ** speed

Dimensions

OPU700

OPU701

OPU702
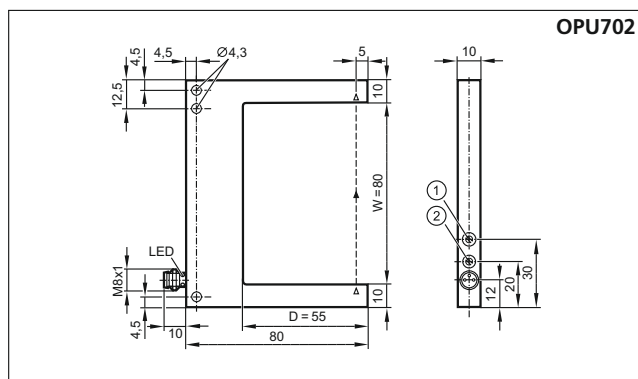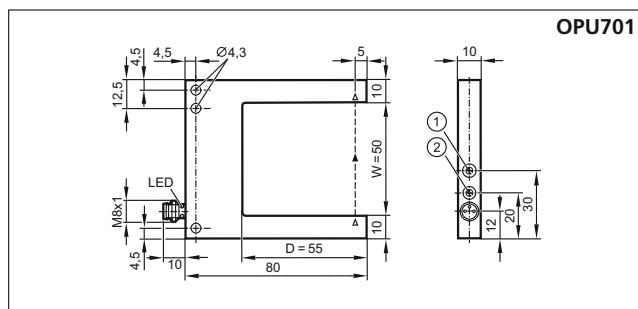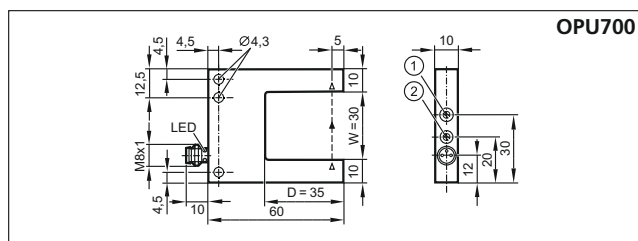
1) Potentiometer sensitivity
2) Output function switch

Common technical data		
Operating voltage	[V DC]	10...30
Exit H = light-on mode / D = dark-on mode		light-on / dark-on selectable
Protection rating, protection class		IP 67, III
Switching status indication	LED	yellow
Current rating	[mA]	100
Short-circuit protection, pulsed		•
Reverse polarity protection / Overload protection		• / •
Ambient temperature	[°C]	-25...60
Housing material		diecast zinc, black, powder coated

IO-Link accessories

Type	Description	Order no.
IO-Link		
	USB IO-Link master for parameter setting and analysis of units Supported communication protocols: IO-Link (4.8, 38.4 and 230 Kbits/s)	**E30390**
	Adapter cable for connection between USB IO-Link master E30390 and sensor with connector M8, 3 poles / M12, 4 poles	**EVC215**
	Memory plug, parameter memory for IO-Link sensors	**E30398**
	IO-Link master with PROFINET interface	**AL1100**
	LR DEVICE (supplied on USB flash drive) Software for online and offline parameter setting of IO-Link sensors and actuators	**QA0011**
Connection technology		
	Socket, M8, 3 poles 2 m black, PUR cable	**EVC141**
	Socket, M8, 3 poles 5 m, black, PUR	**EVC142**

ifm – close to you!

For further technical details, please visit: ifm.com