

OBJECT RECOGNITION TECHNOLOGY
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Innovations O2D Image Sensor



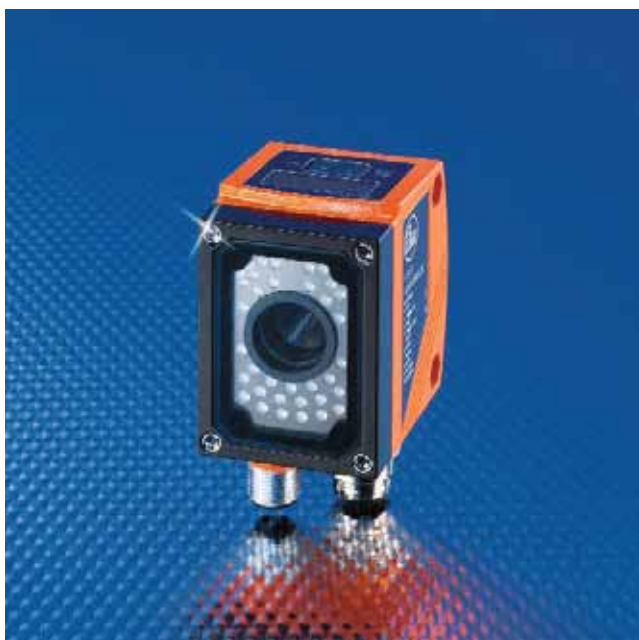
fluid sensors
and diagnostic
systems

position
sensors
and object
recognition

bus,
identification
and control systems

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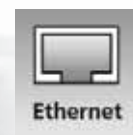
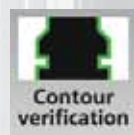
Image sensor – the electronic eye.



efector[®]
dualis

Object recognition for assembly and manufacturing tasks and for quality control.

- Stand-alone unit with integrated lighting.
- Compact and robust design.
- Easy parameter setting.
- Integrated Ethernet process interface with position indication.
- 128 MB RAM: teaching of 32 applications with up to 24 models each possible.



Stand-alone unit:

With integrated lighting and evaluation in a robust, industrially compatible IP 67 housing for use in the temperature range of -10...60 °C.

Image processing algorithms for industrial applications:

With orientation-independent contour verification. It solves tasks like presence and position monitoring, quality control as well as sorting and counting tasks.

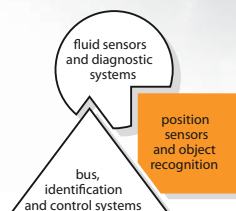
Handling concept:

The menu-guided PC parameter setting via Ethernet interface allows quick adjustment to your application. The Ethernet interface moreover allows remote maintenance with error image and evaluation data memory, an update option for the sensors as well as the process image for the connection to programmable logic controllers.

Furthermore, a limited number of parameters can be set on the unit via two pushbuttons and the 4-digit 10-segment display.



The efector dualis image sensor reliably detects the fixing hole on the joint flange by means of a backlight.



Applications:

Monitoring presence, completeness, position, quality control as well as sorting tasks.

Operating distance [mm]							Order no.
50	75	100	200	400	1000	2000	
Field of view size [mm] · Resolution from 0.1 mm							
20 x 14	28 x 20	36 x 26	68 x 50	130 x 100	320 x 240	640 x 480	O2D220
46 x 32	61 x 44	77 x 56	140 x 100	270 x 200	640 x 480	1280 x 960	O2D222
–	15 x 11	20 x 14	40 x 30	80 x 60	200 x 150	400 x 300	O2D224

Accessories

Type	Description	Order no.
	Stainless steel mounting set for rod mounting Ø 12 mm	E2D110
	Stainless steel mounting set for rod mounting Ø 14 mm	E2D112
	Operating software for image sensor	E2D200
	Clamp linking ring, high-grade stainless steel	E21076
	Clamp, high-grade stainless steel, Ø 12 mm	E21110
	Mounting rod, 100 mm, Ø 12 mm, M10 thread, stainless steel	E20938
	Mounting rod, 100 mm, Ø 14 mm, M12 thread, stainless steel	E20939
	Mounting rod, 150 mm, Ø 12 mm	E21111
	Mounting rod, 200 mm, Ø 12 mm	E21112
	Mounting rod, 300 mm, Ø 12 mm	E21113
	Diffuser for O2D	E21165
	Protective plastic cover for O2D	E21166
	Protective glass cover for O2D	E21168
	Ethernet cable, 2 m, M12 D-coded	E21138
	Ethernet cable, 5 m, M12 D-coded	E21139
	Ethernet cable, 10 m, M12 D-coded	E21137
	Ethernet adapter, M12 / RJ45, angled	E21140
	Patch cable, 2 m, RJ45, cross-link	EC2080
	Patch cable, 5 m, RJ45, cross-link	E30112
	Patch cable, 2 m, RJ45	E21135
	Patch cable, 5 m, RJ45	E21136

Common technical data

Type of sensor	CMOS image sensor black/white, 640 x 480	
Detection rate	[Hz]	max. 20
Motion speed	[m/s]	typ. 1
Function display	LED	7
Operating voltage	[V]	24 DC ± 10 %
Current consumption	[mA]	< 300
Current rating	[mA]	100 (per switching output)
Type of light	infrared, direct illumination	
Operating temperature	[°C]	-10...60
Protection	IP 67, III	
Material	housing front lens LED window	diecast zinc glass polycarbonate
Switching inputs (configurable)	max. 2, 24 V PNP	
Switching outputs (configurable)	max. 5, 24 V PNP	
Connection external lighting	24 V PNP	
Parameter setting interface	Ethernet 10Base-T / 100Base-TX	
Dimensions	[mm]	60 x 42 x 53 (59)

Connectors and splitter boxes

Type	Description	Order no.
	M12 socket, 2 m, PUR cable, 8-pole	E11231
	M12 socket, 5 m, PUR cable, 8-pole	E11232
	M12 socket, 2 m, PUR cable, 8-pole	E11950
	M12 socket, 5 m, PUR cable, 8-pole	E11807
	M12 socket, 10 m, PUR cable, 8-pole	E11311
	Parameter setting cable, 2 m, M12 D-coded / RJ45, cross-link	E11898

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