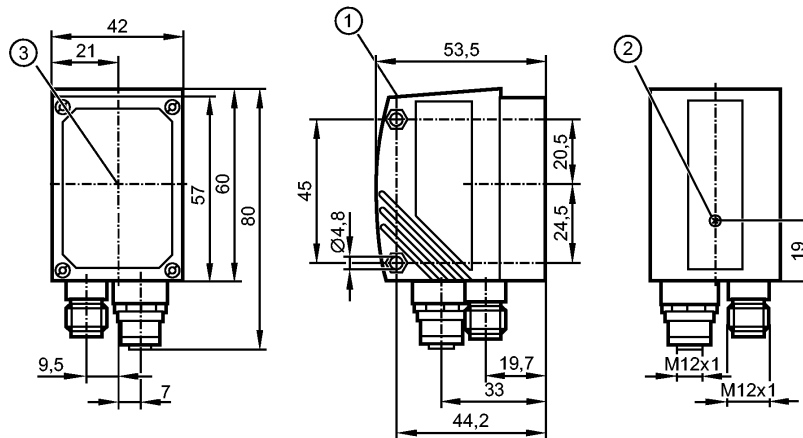# efector250

O2D220
O2DIRPKG/K

Object recognition

> **Please note the wiring of the sensor and the sockets (see data sheet) as for 8-pole sockets the core colours are not standardised.**

1: display
2: Focus adjustment screw
3: Centre of the lens axes

Product characteristics	
Object recognition sensor	
Max. field of view size: 640 x 480 mm	
Infrared lighting 850 nm	

Electrical data		
Operating voltage	[V]	24 DC ± 10 %
Current consumption	[mA]	300
Type of light		Infrared light 850 nm
Protection class		III
Reverse polarity protection		ja *)
Connection external illumination	[V]	24 V DC
Type of sensor		CMOS image sensor B/W, VGA resolution 640 x 480

Inputs	
Circuit	max. 2 (configurable) / 24 V PNP to IEC 61131-2 type 1
Trigger	external; 24 V PNP to IEC 61131-2 type 1 internal

Outputs		
Output		max. 5 (configurable) / 24 V PNP
Max. current load per output	[mA]	100
Voltage drop	[V]	< 2
Short-circuit protection		yes
Overload protection		yes

Range								
Operating distance	[mm]	50	75	100	200	400	1000	2000
Field of view size	[mm]	16 x 12	24 x 18	32 x 24	64 x 48	128 x 96	320 x 240	640 x 480
Smallest detectable object	[mm]	0.1	0.2	0.3	0.4	0.8	2.0	4.0
Resolution	[mm]	0.025	0.05	0.075	0.1	0.2	0.5	1.0
Detection rate	[Hz]	≤ 20						

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O2DIRPKG/K

Motion speed	[m/s]	typ. 1

Software / programming

Parameter setting options	via 2 pushbuttons and 10-segment display or via PC / notebook with operating software

Interfaces

parameter setting interface	Ethernet TCP/IP; 10Base-T / 100Base-TX
Process interface	Ethernet TCP/IP (Port: 50010), EtherNet/IP
IP address	192 .168 .0 .49
subnet mask	255.255.255.0 (Class C)
gateway IP address	192 .168 .000 .201
MAC address	see type label

Environment

Ambient temperature	[°C]	-10...60
Storage temperature	[°C]	-40...85
Protection		IP 67

Tests / approvals

EMC		radiation of interference to EN 61326 noise immunity to EN 61326
MTTF	[Years]	90
Shock resistance		IEC 60028-2-27:
Vibration resistance		IEC 60028-2-6:

Mechanical data

Housing materials	housing: diecast zinc powder-coated; window: glass; LED window: polycarbonate
Weight [kg]	0.4

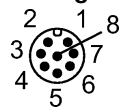### Displays / operating elements

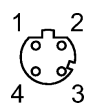| Display	Function display 3 x LED green 4 x LED yellow Display unit / status 4-digit 10-segment display

Electrical connection

Connection	M12 plug, 8 poles M12 socket, 4 poles

Wiring

M12: Process connection
1:    U+
2:    trigger input
3:    0 V
4:    Switching output 5 / trigger output
5:    Switching output 3 / Ready
6:    Switching output 4 / OUT
7:    Switching output 1 / Input 1
8:    Switching output 2 / Input 2

Ethernet TCP/IP: parameter setting/process connection
1:        TD+
2:        RD+
3:        TD-
4:        RD-

Accessories

Accessories (optional)	Operating software; Mounting accessories

efector 250

O2D220
O2DIRPKG/K

Remarks	
Remarks	cULus - Class 2 source required *) The voltage on pins 2, 4, 5, 6, 7 and 8 must not exceed the supply voltage on pin 1 (U+) (see operating instructions).
Pack quantity [piece]	1

Please note the wiring of the sensor and the sockets (see data sheet) as for 8-pole sockets the core colours are not standardised.