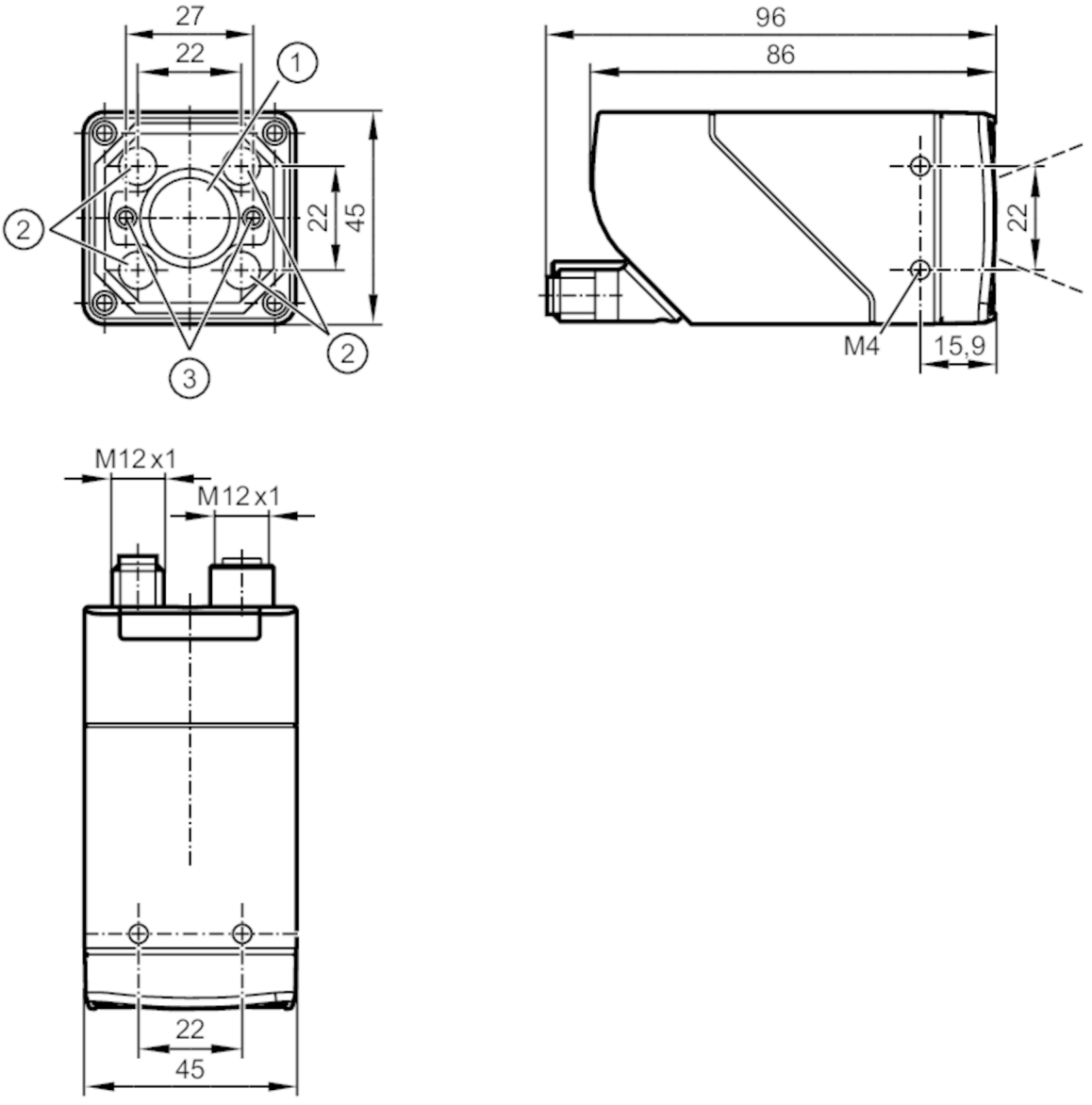
O2I505

1D / 2D code readers

O2IIRDKG/E1/E2/EF/VF/TB/T



1 lens
2 Illumination unit
3 laser spots

Product characteristics		
Type of light		Infrared light
Image resolution	[px]	1280 x 960
Max. reading rate	[Hz]	40
Electrical data		
Operating voltage	[V]	18...30 DC
Current consumption	[mA]	< 300; (24V DC typical)
Max. current consumption	[mA]	650; (18V DC, with switched outputs, memory stick active)
Protection class		III
Reverse polarity protection		yes

O2I505

1D / 2D code readers

O2IIRDKG/E1/E2/EF/VF/TB/T

Overvoltage category		II
Type of light		Infrared light
Wave length	[nm]	850
Image sensor		CMOS image sensor black/white
Inputs / outputs		
Number of inputs and outputs		Number of digital outputs: 2
Inputs		
Trigger		external; 24 V PNP/NPN (IEC 61131-2 Typ 3); TCP/IP; EtherNet/IP; internal
Outputs		
Total number of outputs		2
Electrical design		PNP/NPN; (configurable)
Number of digital outputs		2; (configurable)
Output function		configurable
Max. voltage drop switching output DC	[V]	1
Max. current load per output	[mA]	100
Short-circuit protection		yes
Type of short-circuit protection		yes (non-latching)
Overload protection		yes
Monitoring range		
Field of view size	[mm]	Operating distance: Field of view 200: 38 x 29 300: 58 x 43 500: 96 x 72 1000: 192 x 144
Operating distance	[mm]	> 200
Image resolution	[px]	1280 x 960
Lens type		Telephoto lens
Readable codes		Interleaved 2-of-5; Industrial 2-of-5; Code 39; Code 93; Code 128; Pharmacode; Codabar; EAN8; EAN8 Add-On 2; EAN8 Add-On 5; EAN13; EAN13 Add-On 2; EAN13 Add-On 5; UPC-A; UPC-A Add-On 2; UPC-A Add-On 5; UPC-E; UPC-E Add-On 2; UPC-E Add-On 5; GS1 DataBar Omnidirectional; GS1 DataBar Truncated; GS1 DataBar Stacked; GS1 DataBar Stacked Omnidirectional; GS1 DataBar Limited; GS1 DataBar Expanded; GS1 DataBar Expanded Stacked; GS1 - 128; MSI Barcode; ECC200; PDF-417; QR; Micro-QR; Aztec Code; GS1 ECC200; GS1 QR Code; GS1 Aztec Code
Code quality based on		ISO / IEC 15415 ISO / IEC 15416 AIM DPM ISO/IEC TR 29158 SEMI T10
Legible fonts		Industrial; Document; OCR-A; OCR-B; Pharma; Semi; Universal; Dot Print
Text recognition		yes
Bewegungsgeschwindigkeit	[m/s]	7
Omnidirectional reading		yes
Max. inclination to the image plane	[°]	45

O2I505

1D / 2D code readers

O2IIRDKG/E1/E2/EF/VF/TB/T

Max. reading rate	[Hz]	40	
Software / programming			
Parameter setting options		teach button; via PC with ifm Vision Assistant	
Interfaces			
Communication interface		Ethernet	
Ethernet			
Number of Ethernet interfaces		1	
Transmission standard		10Base-T; 100Base-TX	
Transmission rate		10 MBit/s; 100 MBit/s	
Protocol		TCP/IP; EtherNet/IP	
Factory settings		IP address: 192.168.0.69	
		subnet mask: 255.255.255.0 (Class C)	
		gateway IP address: 192.168.0.201	
		MAC address: see type label	
Usage type		Parameter setting; Data transmission	
Operating conditions			
Ambient temperature	[°C]	-10...50	
Storage temperature	[°C]	-40...70	
Max. relative air humidity	[%]	90; (non condensing)	
Max. height above sea level	[m]	4000	
Protection		IP 65	
Degree of soiling		3	
Tests / approvals			
EMC		EN IEC 61000-6-4 radiation of interference	industrial environments
		EN IEC 61000-6-2 noise immunity	industrial environments
Shock resistance		EN 60068-2-27	50 g 11 ms / not repetitive
		EN 60068-2-27	40 g 6 ms / repetitive
Vibration resistance		EN 60068-2-6	2 g (10 ... 150 Hz)
Laser protection class		1	
Notes on laser protection		Caution:	Laser light
		laser class:	1
			EN / IEC60825-1:2007
			EN / IEC60825-1:2014
			Complies with 21 CFR 1040.10 except for compliance with IEC 60825-1 Ed. 3, as described in Laser Notice No. 56 dated 8 May 2019.
Photobiological safety		exempt group; (EN 62471)	
Electrical safety		EN IEC 61010-2-201	electrical supply only via PELV circuits
MTTF	[years]	53	
UL approval		Ta	-10...50 °C
		Enclosure type	1
		voltage supply	Limited Energy
		File number UL	E364788
Mechanical data			
Weight	[g]	604.5	

O2I505

1D / 2D code readers

O2IIRDKG/E1/E2/EF/VF/TB/T

Type of mounting		screw mounting; (bore hole M4 x 7 mm)
Dimensions	[mm]	45 x 45 x 96
Material		housing: diecast zinc powder-coated; front lens: gorilla glass; LED window: PC; pushbuttons: POM
Sealing material		FKM
Tightening torque	[Nm]	2.1

Displays / operating elements

Display	Function	2 x LED, green
	Function	2 x LED, yellow
	Teach-Funktion	1 x LED, green
	Teach-Funktion	1 x LED, yellow
Operating elements	1 x	Teach-Taste

Accessories

Accessories (optional)	Operating software
	Mounting accessories
	Adapter cable
	protective and filter windows

Remarks

Pack quantity	1 pcs.

Electrical connection

Electrical connection - Ethernet

Connector: 1 x M12; coding: D; Moulded body: stainless steel; sealing: FKM

1	TxD+
2	RxD+
3	TxD-
4	RxD-

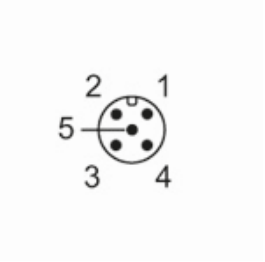
O2I505

1D / 2D code readers

O2IIRDKG/E1/E2/EF/VF/TB/T

Electrical connection - supply

Connector: 1 x M12; coding: A; Moulded body: stainless steel



1	U+
2	trigger input
3	0 V
4	Switching output 1 configurable
5	Switching output 2 configurable / trigger output with external illumination