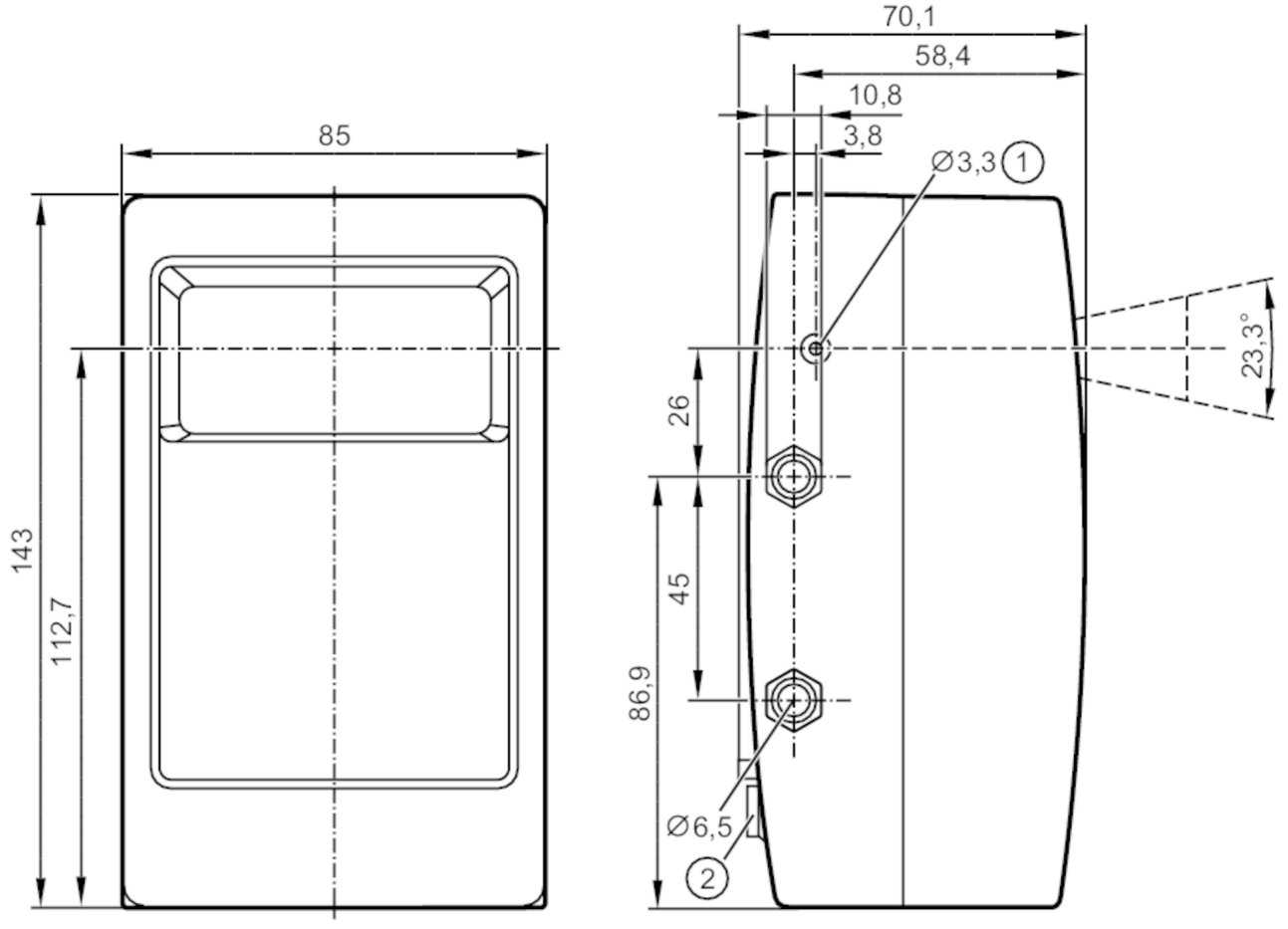
O3M151

3D sensor for mobile applications

O3MXOOKG/CAN/E3/GM/70



1 Reference socket
2 Connections

Product characteristics		
Type of light		Infrared light
Image resolution 3D	[px]	64 x 16
Angle of aperture 3D	[°]	70 x 23
Image repetition frequency 3D	[Hz]	25 / 33 / 50
Application		
Application		output of 3D image data
Electrical data		
Operating voltage	[V]	9...32 DC
Current consumption	[mA]	< 400
Power consumption	[W]	3.6
Protection class		III
Type of light		Infrared light
Image sensor		PMD 3D ToF-Chip

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Monitoring range			
Image resolution 3D	[px]	64 x 16	
Angle of aperture 3D	[°]	70 x 23	
Image repetition frequency 3D	[Hz]	25 / 33 / 50	
Software / programming			
Parameter setting options		via PC with ifm Vision Assistant	
Interfaces			
Communication interface		CAN; Ethernet	
Number of CAN interfaces		1	
Number of Ethernet interfaces		1	
Note on interfaces		Output of preprocessed data via CAN interface	
CAN			
Transmission rate		250 (125...1000) kBaud	
Protocol		CANopen; UDS	
Factory settings		J1939 interface: default	
		device address (ECU): 239	
		UDS interface: 500 (125...1000) kBaud	
Usage type		Parameter setting; Data transmission	
Ethernet			
Protocol		UDP/IP	
Factory settings		IP address: 192.168.1.1	
		subnet mask: 255.255.255.0	
		target IP address: 255.255.255.255	
		target port: 42000	
Usage type		Data transmission	
Operating conditions			
Ambient temperature	[°C]	-40...85	
Note on ambient temperature		with high image repetition frequency of 25Hz	
Storage temperature	[°C]	-40...105	
Protection		IP 67; IP 69K; (with mounted connectors or protective caps)	
Max. immunity to extraneous light	[klx]	120	
Tests / approvals			
EMC		DIN EN 61000-6-4	industrial environments
		DIN EN 61000-6-2	industrial environments
Shock resistance		DIN EN 60068-2-27	30 g / 6 ms bump
Vibration resistance		DIN EN 60068-2-6	10 g / 10...500 Hz swept sine
		DIN EN 60068-2-64	10...2000 Hz noise
Electrical safety		DIN EN 61010-2-201	electric shock / electrical supply only via PELV circuits
MTTF	[years]	78	
Mechanical data			
Weight	[g]	1087	
Dimensions	[mm]	143 x 85 x 70.1	

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Material	housing: diecast aluminium; disc: gorilla glass

Accessories

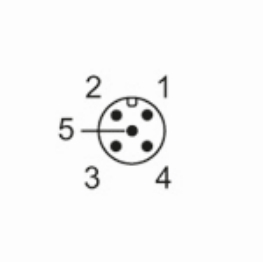
Items supplied	Protective covers

Remarks

Remarks	The illumination unit is required for the operation of the sensor.
	Only use original ifm cables to connect sensor and illumination unit.
	The function-specific performance values can be found in the applicable documentation.
Pack quantity	1 pcs.

Electrical connection - CAN

Connector: 1 x M12; coding: A



1	screen
2	9...32 V
3	GND
4	CAN-H
5	CAN-L

Electrical connection - Ethernet

Connector: 1 x M12; coding: D

1	TD +
2	RD +
3	TD -
4	RD -

Other data

Field of view size with lens distortion correction

Measuring range / distance [m]	Length [m]	Width [m]
5	7	2
10	14	4.1
15	21	6.5
30	42	12.2

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measuring range for object recognition

object type / object size	application condition	Measuring range [m]
vehicle	sunny (~120 klx)	0.25...30
	cloudy (~20 klx)	0.25...40
	darkness	0.25...50
person	sunny (~120 klx)	0.25...12
	cloudy (~20 klx)	0.25...16
	darkness	0.25...20
retroreflector	sunny (~120 klx)	1...40
	cloudy (~20 klx)	1...60
	darkness	1...80
software variant:	OD object recognition	

measuring range for ROI

application condition	Measuring range [m]
	typical value
sunny (~120 klx)	0.25...12
cloudy (~20 klx)	0.25...15
darkness	0.25...30
software variant :	DI / BF distance image basic functions

measuring accuracy

application condition	measuring accuracy [cm]
	typical value
sunny (~120 klx)	± 15
cloudy (~20 klx)	± 10
darkness	± 5
software variant :	DI / BF distance image basic functions