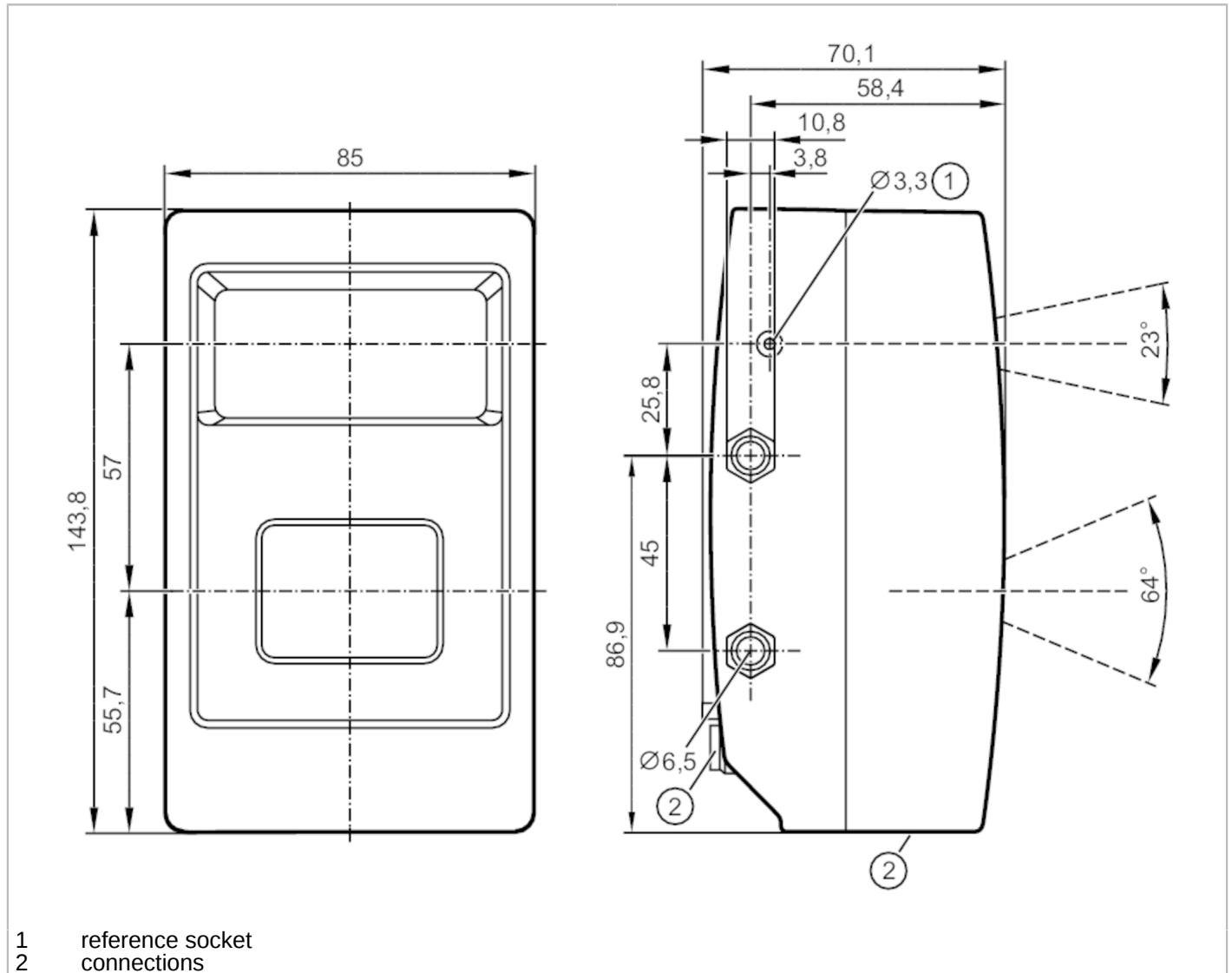


O3M251



3D sensor for mobile applications

O3MXOOKG/CAN/E3/GM/A1/70



Product characteristics

Type of light		infrared light
Image resolution	[px]	640 x 480
Image resolution 3D	[px]	64 x 16
Angle of aperture	[°]	90 x 67
Angle of aperture 3D	[°]	70 x 23
Communication interface		CAN; Ethernet
Dimensions	[mm]	143.8 x 85 x 70.1

Application

Application	output of 3D image data; output of 2D image data
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Electrical data		
Operating voltage	[V]	9...32 DC
Current consumption	[mA]	< 600
Power consumption	[W]	4.6
Protection class		III
Type of light		infrared light
Image sensor		PMD 3D ToF-Chip / 2D Chip
Detection zone		
Image resolution	[px]	640 x 480
Image resolution 3D	[px]	64 x 16
Angle of aperture	[°]	90 x 67
Angle of aperture 3D	[°]	70 x 23
Image repetition frequency	[Hz]	25
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 25 Hz
Storage temperature	[°C]	-40...105
Protection		IP 67; IP 69K; (with mounted connectors or protective caps)
Max. immunity to extraneous light	[klx]	120

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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
Electrical protection	DIN EN 61010-2-201	electric shock / electrical supply only via PELV circuits
MTTF [years]		58

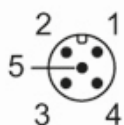
Mechanical data	
Weight [g]	1072
Dimensions [mm]	143.8 x 85 x 70.1
Materials	diecast aluminium

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



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

Electrical connection - Ethernet

Connector: 1 x M12



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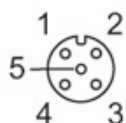
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1	TD +
2	RD +
3	TD -
4	RD -

Electrical connection - video

Connector: 1 x M12



2	not used
3	GND
4	FBAS
5	not used

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

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

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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