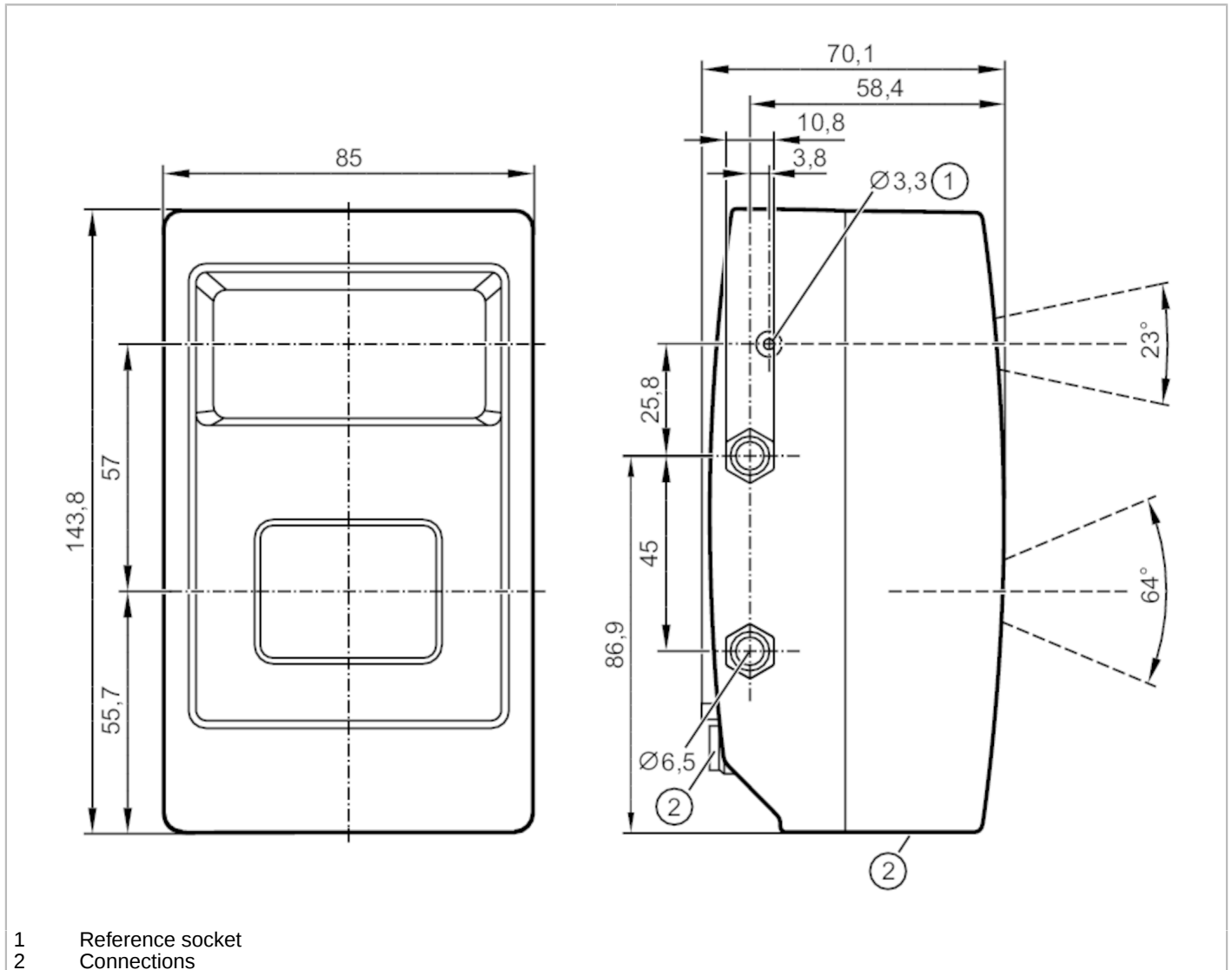


O3M251



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
Image repetition frequency	[Hz]	25
Image repetition frequency 3D	[Hz]	25 / 33 / 50

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

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Protection class	III
Type of light	Infrared light
Image sensor	PMD 3D ToF-Chip / 2D Chip
Outputs	
Video output	PAL (720x576)
Monitoring range	
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
Number of video interfaces (CVBS)	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
Max. relative air humidity [%]	90; (non condensing)
Max. height above sea level [m]	4000
Protection	IP 67; IP 69K; (with mounted connectors or protective caps)

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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
	DIN EN 60068-2-64	10...1000 Hz noise
Electrical safety	DIN EN 61010-2-201	electric shock / electrical supply only via PELV circuits
MTTF	[years]	58

Mechanical data

Weight	[g]	1155
Dimensions	[mm]	143.8 x 85 x 70.1
Material		housing: diecast aluminium; disc: gorilla glass

Accessories

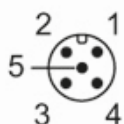
Items supplied	Protective covers
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Remarks

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

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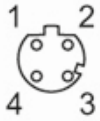


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Electrical connection - Ethernet

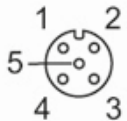
Connector: 1 x M12; coding: D



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

Electrical connection - Video

Connector: 1 x M12; coding: A



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

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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