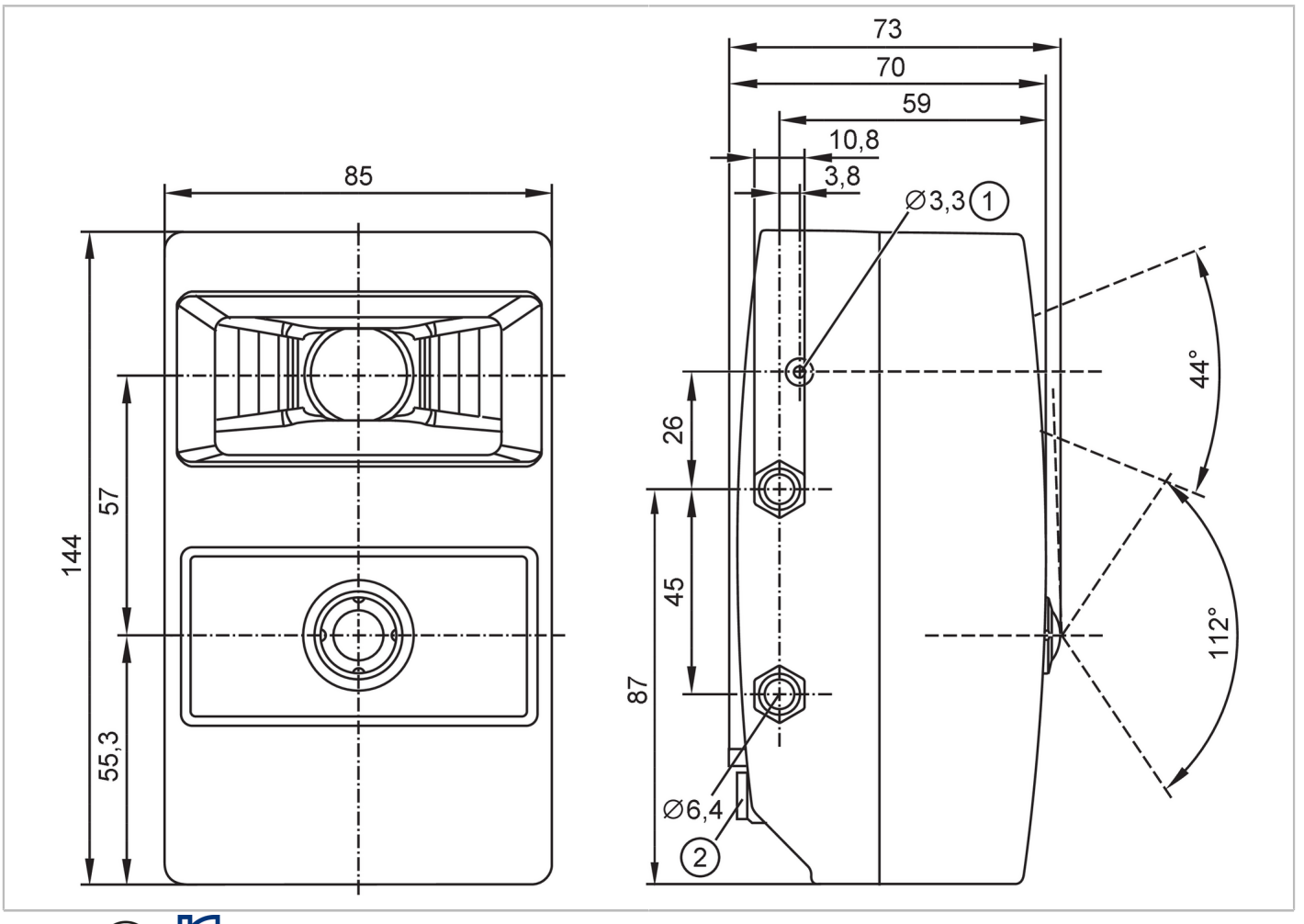
O3M372

3D sensor for mobile applications

O3MXOOKG/CAN/E1/E3/AI/GM/97



Product characteristics		
Type of light		infrared light
Image resolution	[px]	1280 x 960
Image resolution 3D	[px]	64 x 16
Angle of aperture	[°]	143 x 112
Angle of aperture 3D	[°]	97 x 44
Image repetition frequency	[Hz]	30
Image repetition frequency 3D	[Hz]	30
Application		
Application		AI person detection; output of 3D image data; output of 2D image data; output of object recognition and collision prediction data
Electrical data		
Operating voltage	[V]	9...32 DC
Current consumption	[mA]	< 950
Power consumption	[W]	9.5
Protection class		III
Type of light		infrared light

O3M372

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Image sensor		PMD 3D ToF chip / 2D CMOS chip (HDR)
Outputs		
Video output		Ethernet, RTP, RTSP, H.264, H.265, MJPEG (max. 1280 x 960)
Detection zone		
Image resolution	[px]	1280 x 960
Image resolution 3D	[px]	64 x 16
Angle of aperture	[°]	143 x 112
Angle of aperture 3D	[°]	97 x 44
Image repetition frequency	[Hz]	30
Image repetition frequency 3D	[Hz]	30
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
CAN		
Transmission rate		250 (125...1000) kBaud
Protocol		SAE J1939; UDS
Factory settings		SAE J1939 interface: Default
		device address (ECU): 239
Usage type		parameter setting; data transmission
Note on interfaces		Output of preprocessed data via CAN interface
Ethernet		
Protocol		UDP/IP; TCP/IP
Factory settings		3D IP address: 192.168.1.1
		2D IP address: 192.168.1.3
		subnet mask: 255.255.255.0
		3D target IP address: 255.255.255.255
		target port 42000
Usage type		data transmission; RTP/RTSP video stream (H.264, H.265, MJPEG)
Note on interfaces		preprocessed data output and video output via Ethernet
Operating conditions		
Ambient temperature	[°C]	-40...75
Storage temperature	[°C]	-40...90
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)
Max. immunity to extraneous light	[klx]	120
Tests / approvals		
EMC	DIN EN 61000-6-4	industrial environments
	DIN EN 61000-6-2	industrial environments

O3M372

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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]	47	

Mechanical data

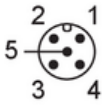
Weight	[g]	1481.965
Dimensions	[mm]	143.4 x 85 x 73.1
Materials		housing: diecast aluminium; disc: gorilla glass

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; Contacts: 5



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

Electrical connection - Ethernet

Connector: 1 x M12; coding: D; Contacts: 4



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	11.3	4.0
10	22.6	8.1
15	33.9	12.1
30	67.8	24.2

O3M372

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measuring range for object recognition

object type / object size	application condition	Measuring range [m]
vehicle	sunny (~120 klx)	0.25...17
	cloudy (~20 klx)	0.25...25
	darkness	0.25...29
person	sunny (~120 klx)	0.25...7
	cloudy (~20 klx)	0.25...10
	darkness	0.25...12
retroreflector	sunny (~120 klx)	1...24
	cloudy (~20 klx)	1...35
	darkness	1...46
AI person detection		25
software variant:	OD object recognition	

measuring accuracy

application condition	measuring accuracy [cm]
	typical value
sunny (~120 klx)	± 15
cloudy (~20 klx)	± 10
darkness	± 5
software variant:	OD object recognition