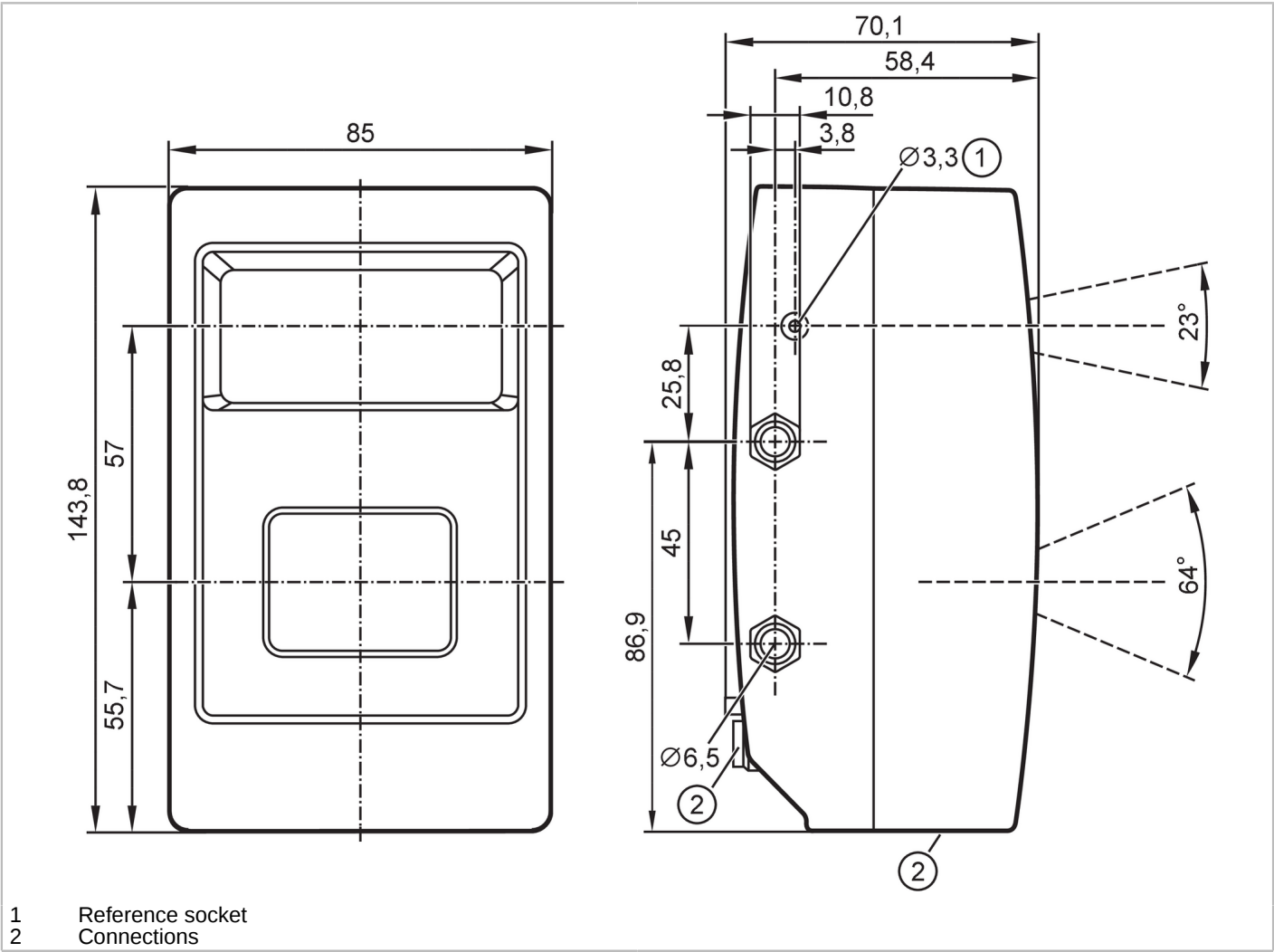


O3M251



3D sensor for mobile applications

O3MXOOKG/CAN/E3/GM/A1/70



- 1 Reference socket
2 Connections



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
-------------	--

Electrical data

Operating voltage	[V]	9...32 DC
Current consumption	[mA]	< 600
Power consumption	[W]	4.6
Protection class		III



3D sensor for mobile applications

O3MXOOKG/CAN/E3/GM/A1/70

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)
Max. immunity to extraneous light [klx]	120



3D sensor for mobile applications

O3MXOOKG/CAN/E3/GM/A1/70

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

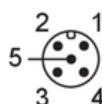
Mechanical data		
Weight [g]		1155
Dimensions [mm]		143.8 x 85 x 70.1
Material		housing: diecast aluminium; disc: gorilla glass

Accessories	
Items supplied	Protective covers

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 -

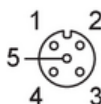


3D sensor for mobile applications

O3MXOOKG/CAN/E3/GM/A1/70

Electrical connection - Video

Connector: 1 x M12; coding: A; Contacts: 3



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

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

O3M251



3D sensor for mobile applications

O3MXOOKG/CAN/E3/GM/A1/70

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