Technical data sheet
Vision sensor
Part no.: 50154858
IVS 1148i AD0804-102-M4-S-TALL

For Illustration purposes only

Contents

- Technical data
- Dimensioned drawings
- Electrical connection
- Part number code
- Notes
- Further information
- Accessories

Technical data

Basic data

Series	IVS 1100i
Imager	Sony global shutter

Functions

Software functions	Count codes
	Counting: surfaces, edges, forms
	Detect codes
	DPM (directly marked codes)
	Locate codes
	Locate: surface, edge, form
	Measuring: angle, circle, distance, point-to-point, point-to-line
	Parts detection: brightness, contrast, surface pixels, edge pixels

Read data

Code types, readable	2/5 Hong Kong
	2/5 IATA
	2/5 Interleaved
	2/5 Matrix
	2/5 NEC
	2/5 Straight
	Aztec
	Codabar
	Code 128
	Code 39
	Data Matrix Code
	DotCode
	EAN 8/13
	GS1 Databar Expanded
	GS1 Databar Expanded Stacked
	GS1 Databar Limited
	GS1 Databar RSS 14
	GS1 Databar RSS 14 Stacked
	Micro QR
	PDF417
	PDF417 Micro
	Pharma Code
	QR 2005
	QR Model 1
	UPC-A
	UPC-E

Optical data

Reading distance	50 ... 2,000 mm
Light source	LED, red / white, internally switchable
Transmitted-signal shape	Pulsed
Camera resolution, horizontal	1,440 px
Camera resolution, vertical	1,080 px
Focal length	8 mm
Electronic shutter speed	0.025 ... 2 ms
Camera type	Monochrome

Electrical data

Protective circuit	Polarity reversal protection
	Short circuit protected

Performance data

Supply voltage U_B	18 ... 30 V, DC
Power consumption, max.	24 W, at 24 V DC

Inputs

Number of digital switching inputs	3 Piece(s)

Switching inputs

Voltage type	DC

Outputs

Number of digital switching outputs	5 Piece(s)

Switching outputs

Voltage type	DC
Switching current, max.	100 mA
Switching voltage	high: ≥(U_B-2V)
	low: ≤ 2 V

Switching output 1

Switching element	MOSFET semiconductor
Switching principle	Push-pull

Switching output 2

Switching element	MOSFET semiconductor
Switching principle	Push-pull

Switching output 3

Switching element	MOSFET semiconductor
Switching principle	Push-pull

Switching output 4

Switching element	MOSFET semiconductor
Switching principle	Push-pull

Interface

Type	Ethernet, PROFINET

Ethernet

Architecture	Client
	Server
Address assignment	DHCP
	Manual address assignment
Transmission speed	10 / 100 Mbit/s
Function	Process
Switch functionality	None
Transmission protocol	TCP/IP, UDP, Telnet, FTP/SFTP, PROFINET

PROFINET

Function	Process
Conformance class	B
Protocol	PROFINET RT
Transmission speed	100 Mbit/s

Connection

Number of connections	2 Piece(s)

Technical data

Connection 1

Function	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	12 -pin
Encoding	A-coded

Connection 2

Function	Data interface
	Ethernet, input
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	8 -pin
Encoding	X-coded

Mechanical data

Design	Cubic
Dimension (W x H x L)	45 mm x 85 mm x 35 mm
Housing material	Metal
Metal housing	Aluminium, anodized
Lens cover material	Plastic / PMMA
Net weight	165 g
Housing color	Silver
Type of fastening	Mounting thread
	Via optional mounting device

Operation and display

Number of LEDs	3 Piece(s)
Type of configuration	Vision Studio software

Environmental data

Ambient temperature, operation	0 ... 50 °C
Ambient temperature, storage	-20 ... 70 °C
Relative humidity (non-condensing)	90 %

Certifications

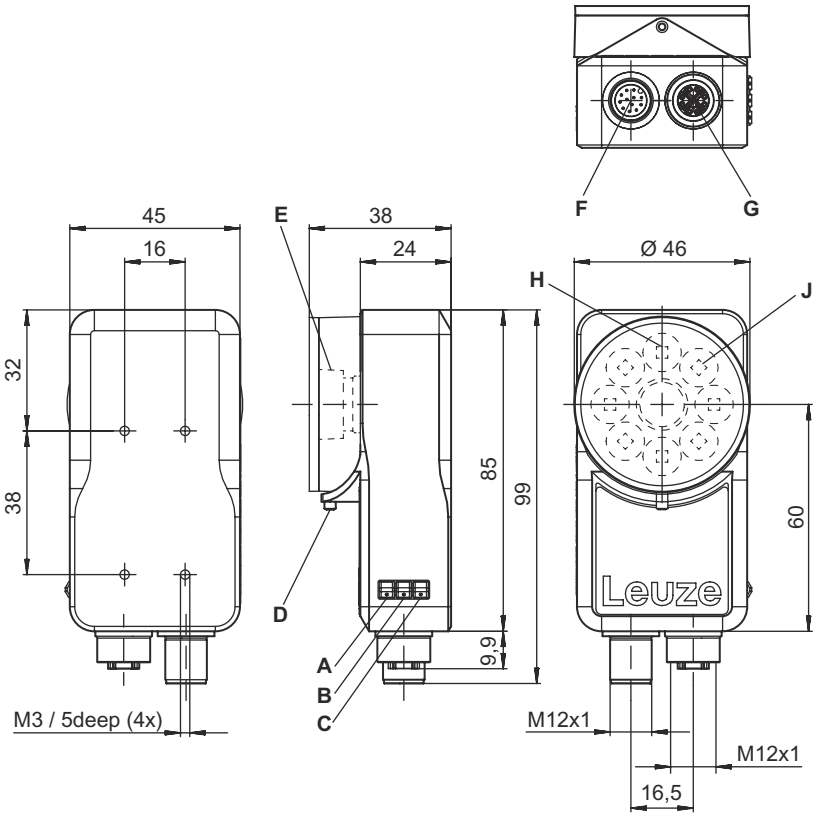
Degree of protection	IP 67, EN 60529 with various connectors or screwed-on caps
Protection class	III
Approvals	c UL US
Test procedure for EMC in accordance with standard	EN 61000-6-2
	EN 61000-6-3
Test procedure for continuous shock in accordance with standard	IEC 60068-2-27, test Ea
Test procedure for vibration in accordance with standard	IEC 60068-2-6, test Fc

Classification

Customs tariff number	90318020
ECLASS 5.1.4	27310101
ECLASS 8.0	27310101
ECLASS 9.0	27310201
ECLASS 10.0	27310101
ECLASS 11.0	27310101
ECLASS 12.0	27310101
ECLASS 13.0	27310101
ECLASS 14.0	27310101
ECLASS 15.0	27310101
ECLASS 16.0	27310101
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550
ETIM 8.0	EC002550
ETIM 9.0	EC002550
ETIM 10.0	EC002550
UNSPSC 26.08	43211718

Dimensioned drawings

All dimensions in millimeters



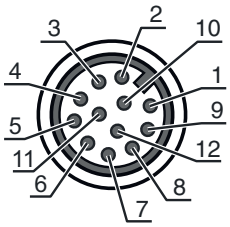
A Green LED, operation
B Yellow LED, LAN (Ethernet)
C Yellow LED, trigger
D Lens cover lock M3 SW 1.5 (max. torque 0.1 Nm)
E Lens
F Connection for operating voltage and I/O, M12, A-coded, 12-pin, male
G M12 Ethernet connection, X-coded, female
H Integrated high power LED illumination, red
J Integrated high power LED illumination, white

Electrical connection

Connection 1

Function	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	12 -pin
Encoding	A-coded

Pin	Pin assignment	Conductor color
1	IN 0	Brown
2	IN 1	Blue
3	OUT 2	White
4	OUT 3	Green
5	READY	Pink
6	COMMON INTERFACE	Yellow
7	VIN	Black
8	GND	Gray
9	n.c.	Red
10	Trigger IN	Violet
11	OUT 0	gray / pink
12	OUT 1	red / blue

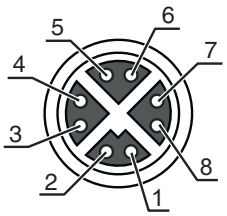


Electrical connection

Connection 2

Function	Data interface
	Ethernet, input
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	8 -pin
Encoding	X-coded

Pin	Pin assignment
1	LAN A+
2	LAN A-
3	LAN B+
4	LAN B-
5	LAN D+
6	LAN D-
7	LAN C-
8	LAN C+



Part number code

Part designation: **IVS XXXXX YYAAAA BBB CD E FGGG**

IVS	**Operating principle** IVS: Vision Sensor for inspection tasks
XXXXX	**Series/interface (integrated fieldbus technology)** 1148i: PROFINET, Ethernet TCP/IP + FTP, SFTP
YY	**Focus position** AD: adjustable (manually)
AAAA	**Optics model** 08: focal length 8 mm 04: diaphragm f/4.0
BBB	**Beam exit** 102: front
C	**Illumination** M: multicolor
D	**Resolution range** 4: 1440 x 1080 pixels
E	**lens cover**
F	T: toolset
GGG	**Version** PRD: presence detection MEC: presence detection, measuring, counting ALL: presence detection, measuring, counting, 1D/2D-code reading + DPM

Note

A list with all available device types can be found on the Leuze website at www.leuze.com.

Notes

	Observe intended use!
	↳ This product is not a safety sensor and is not intended as personnel protection. ↳ The product may only be put into operation by competent persons. ↳ Only use the product in accordance with its intended use.

Further information

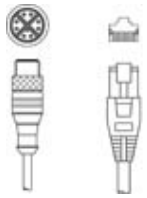
- The specified core colors apply when using connection cables from Leuze.

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50130282	KD S-M12-CA-P1-050	Connection cable	Application: Oil and lubricant resistant Connection 1: Connector, M12, Axial, Female, A-coded, 12 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50134943	KD S-M12-CW-P1-050	Connection cable	Application: Oil and lubricant resistant Connection 1: Connector, M12, Angled, Female, A-coded, 12 -pin Connector, LED: No Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

Connection technology - Interconnection cables

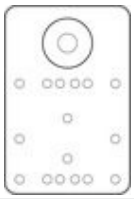
	Part no.	Designation	Article	Description
	50137380	KSS GB-M12-8A-RJ45-A-P7-050	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, X-coded, 8 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50136188	KSS GB-M12-8W-RJ45-A-P7-050	Interconnection cable	Application: Oil and lubricant resistant Suitable for interface: Ethernet Connection 1: Connector, M12, Angled, Male, X-coded, 8 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

Accessories

Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50121433	BT 300 W	Mounting device	Contains: 4x M4 x 10 screw, 2x M6 x 10 screws, 4x M3 x 8 screw Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Adjustable Material: Metal

Mounting technology - Swivel mounts

	Part no.	Designation	Article	Description
	50149698	BTK IVS 1048	Mounting device	Fastening, at system: Screw type Mounting bracket, at device: Spherical head Material: Aluminum

Lenses

	Part no.	Designation	Article	Description
	50148541	Lens S-M12-4F4	Lens	Suitable for: IVS 1000i & DCR 1000i Focal length: 3.6 mm

Illuminations

	Part no.	Designation	Article	Description
	50148123	IL BA 012/130 RD 301 L D	Illumination	Type of article: LED bar lighting with switchable constant light Suitable for: IVS 1000i & DCR 1000i Special version: Protective cover, lenticular Functions: Continuous operation Light source: LED, Red Opening angle, max.: 18 ° Housing material: Metal Type of fastening: Via optional mounting device, Mounting thread
	50148131	IL SP 021/014 300	Illumination	Type of article: LED spotlight Suitable for: IVS 1000i & DCR 1000i Functions: Triggered operation, Integrated power control Light source: LED, Red Opening angle, max.: 14 ° Housing material: Metal Type of fastening: Mounting thread, Via optional mounting device

Note

↳ A list with all available accessories can be found on the Leuze website in the Download tab of the article detailed page.