Technical data sheet
Smart camera
Part no.: 50108990
LSIS 412i M45-W1

Figure can vary

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- Operation and display
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Technical data

Basic data

Series	LSIS 412i
Chip	CMOS

Functions

Software functions	BLOB analysis (completeness monitoring)
	BLOB analysis (presence control)
	Dimension monitoring
	Focus adjustment
	Position determination

Optical data

Working range	75 ... 10,000 mm
Light source	LED, White
Camera resolution, horizontal	752 px
Camera resolution, vertical	480 px
Focal length	16 mm
Chip size	1/3 in
Frame rate (images per second), max.	50 pieces per second
Electronic shutter speed	0.054 ... 20 ms
Camera type	Monochrome

Electrical data

Performance data

Supply voltage U_B	18 ... 30 V, DC
Power consumption, max.	10 W

Inputs/outputs selectable

Number of inputs/outputs selectable	8 Piece(s)
Voltage type, outputs	DC
Switching voltage, outputs	Typ. U_B / 0 V
Voltage type, inputs	DC
Switching voltage, inputs	Typ. U_B / 0 V

Interface

Type	RS 232, Ethernet

RS 232

Function	Process

Ethernet

Function	Process
	Service

Connection

Connection 1

Function	Configuration interface
	Data interface
	Service interface
Type of connection	Connector
Designation on device	SERVICE
Thread size	M12

Connection 2

Function	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Designation on device	PWR
Thread size	M12

Connection 3

Function	Data interface
	Signal IN
	Signal OUT
Type of connection	Connector
Designation on device	BUS OUT
Thread size	M12

Mechanical data

Dimension (W x H x L)	75 mm x 55 mm x 113 mm
Housing material	Metal
Lens cover material	Glass
Net weight	500 g

Operation and display

Type of configuration	Via web browser

Environmental data

Ambient temperature, operation	0 ... +45 °C
Ambient temperature, storage	-20 ... +70 °C

Certifications

Degree of protection	IP 65
	IP 67
Certifications	c UL US
US patents	US 8,288,706 B

Classification

Customs tariff number	90318020
eCl@ss 5.1.4	27310101
eCl@ss 8.0	27310101
eCl@ss 9.0	27310201
eCl@ss 10.0	27310101
eCl@ss 11.0	27310101
ETIM 5.0	EC002550
ETIM 6.0	EC002550
ETIM 7.0	EC002550

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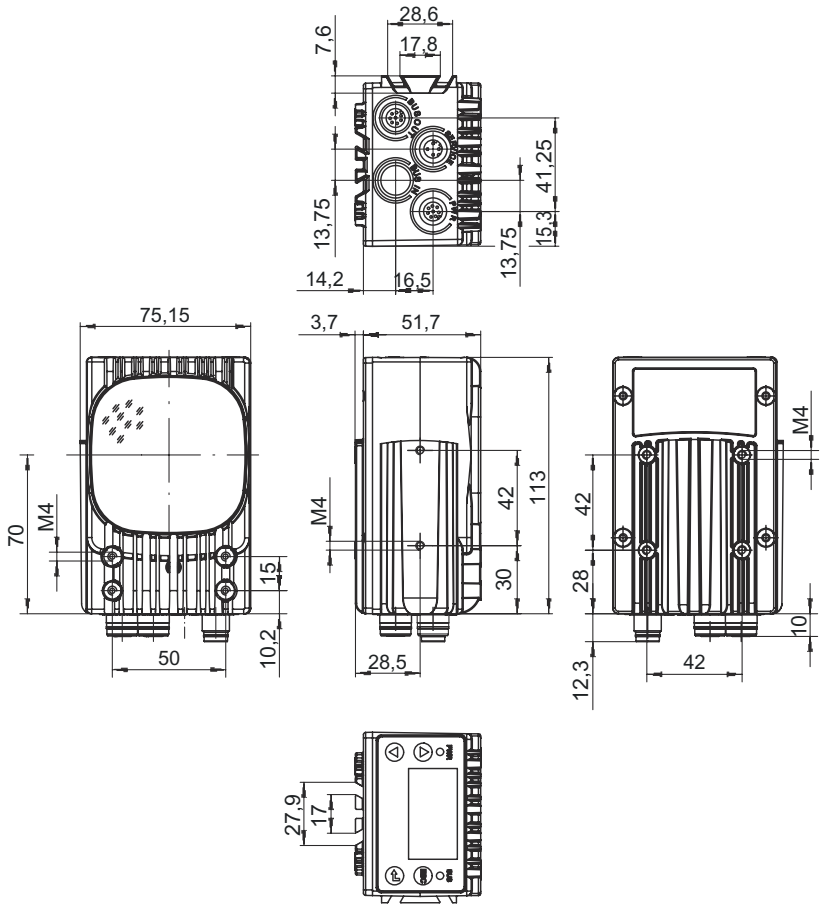
Dimensioned drawings

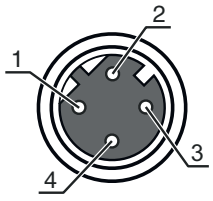
All dimensions in millimeters



Electrical connection

Connection 1	SERVICE
Function	Configuration interface
	Data interface
	Service interface
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

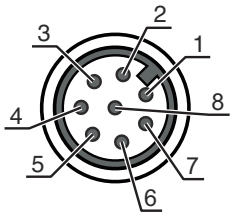
Pin	Pin assignment
1	TD+
2	RD+
3	TD-
4	RD-



Electrical connection

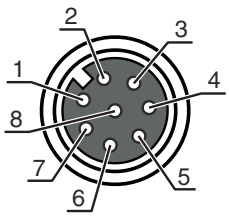
Connection 2	PWR
Function	Signal IN
	Signal OUT
	Voltage supply
Type of connection	Connector
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

Pin	Pin assignment
1	VIN
2	IO1
3	GND
4	IO2
5	IO3
6	IO4
7	n.c.
8	FE



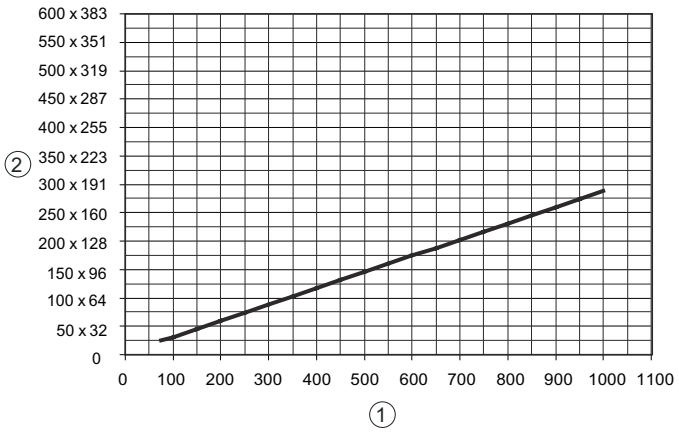
Connection 3	BUS OUT
Function	Data interface
	Signal IN
	Signal OUT
Type of connection	Connector
Thread size	M12
Type	Female
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

Pin	Pin assignment
1	IO5
2	IO6
3	GND
4	IO7
5	IO8
6	RS 232-RX
7	RS 232-TX
8	FE



Diagrams

Relationship between working distance and field of view size



1 Distance [mm]
2 Field of view: width x height [mm]

Operation and display

LED		Display	Meaning
1	**PWR**	Off	No supply voltage
		Green, flashing	Device ok, initialization phase
		Green, continuous light	Device OK
		Orange, continuous light	Service operation
		Red, flashing	Device OK, warning set
		Red, continuous light	Device error
2	**BUS**	Off	No supply voltage
		Green, flashing	BUS initialization
		Green, continuous light	BUS OK
		Red, flashing	Bus error

Part number code

Part designation: **LSIS AABB CCD-EF-GG**

LSIS	**Operating principle** Smart camera
AA	**Functions** 41: BLOB analysis 42: Code reading 46: BLOB analysis, code reading, measuring tool 47: Compartment fine positioning
BB	**Interface** 2: RS 232 / Ethernet + digital I/Os
CC	**Camera chip / resolution range** M4: Monochrome / 752 x 480px
D	**Lens** 3: 8 mm 5: 16 mm 9: depending on the used interchangeable lens
E	**Illumination** I: infrared light M: RGBW W: white X: external illumination

Part number code

F	**Illumination type** 1: diffuse front illumination 9: none
GG	**Version** 01: plastic n/a: glass H: with heating

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.

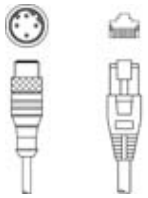
Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135128	KD S-M12-8A-P1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50135074	KS ET-M12-4A-P7-050	Connection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
	50135139	KS S-M12-8A-P1-050	Connection cable	Connection 1: Connector, M12, Axial, Male, A-coded, 8 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

Accessories

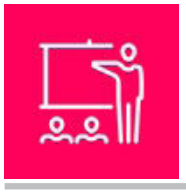
Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50135081	KSS ET-M12-4A-RJ45-A-P7-050	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50027375	BT 56	Mounting device	Functions: Static applications Design of mounting device: Mounting system Fastening, at system: For 16 mm rod, For 18 mm rod, For 20 mm rod Mounting bracket, at device: Clampable Material: Metal Tightening torque of the clamping jaws: 8 N·m

Services

	Part no.	Designation	Article	Description
	S981014	CS30-S-110	Start-up support	Details: Performed at location of customer's choosing, duration: max. 10 hours. Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses. Restrictions: No mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment.
	S981019	CS30-T-110	Product training	Details: Location and content to be agreed upon, duration: max. 10 hours. Conditions: Price not including travel costs and, if applicable, accommodation expenses. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.

Note

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