SMART
SENSOR
BUSINESS

Leuze electronic

the sensor people

Figure can vary

Part no.: 50138405
LPS 36.10
Line profile sensor

Contents

Technical data

Basic data	
Series	36
Contains	LxSsoft configuration software
Application	Object measurement Contour measurement
Special design	
Special design	Plastic screen
Optical data	
Light source	Laser, Red
Laser class	2M
Measurement data	
X-axis measurement range	150 ... 600 mm
Measurement range z-axis	200 ... 800 mm
Resolution	X-axis: 1 … 1,5 mm, relative to measurement distance Y-axis: 1 … 3 mm, relative to measurement distance
Repeatability of Z-axis, relative to measurement distance	≤ 0.5 %
Repeatability of Z-axis, relative to measurement distance, note	Reflectivity 90 %, identical object, identical environment conditions, measurement object ≤ 50x50 mm²
Measurement time	10ms
Linearity of Z-axis, relative to measurement distance	± 1,0%
Black/white behavior	1 %, 6 … 90% diffuse reflectance
Electrical data	
Performance data	
Supply voltage U_B	18 ... 30 V, DC
Inputs	
Number of activation inputs	1 Piece(s)
Outputs	
Number of digital switching outputs	2 Piece(s)
Switching outputs	
Switching output 1	
Switching element	Transistor, Push-pull
Function	Operational readiness
Switching output 2	
Switching element	Transistor, Push-pull
Function	Cascading
Interface	
Type	Ethernet
Connection	
Number of connections	3 Piece(s)

Part no.: 50138405 – LPS 36.10 – Line profile sensor

Connection 1	
Type of connection	Connector
Function	Signal IN Voltage supply Signal OUT
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded
Connection 2	
Type of connection	Connector
Function	Data interface Configuration interface
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded
Connection 3	
Type of connection	Connector
Function	Encoder
Thread size	M12
Type	Female
Material	Metal
No. of pins	8 -pin
Encoding	A-coded
Connection 4	
Type of connection	Connector
Function	Not used (dummy plug)
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Mechanical data	
Dimension (W x H x L)	56 mm x 160 mm x 74 mm
Housing material	Metal Plastic, Aluminum
Lens cover material	Plastic
Net weight	620 g

Environmental data	
Ambient temperature, operation	-30 ... 50 °C
Ambient temperature, storage	-30 ... 70 °C

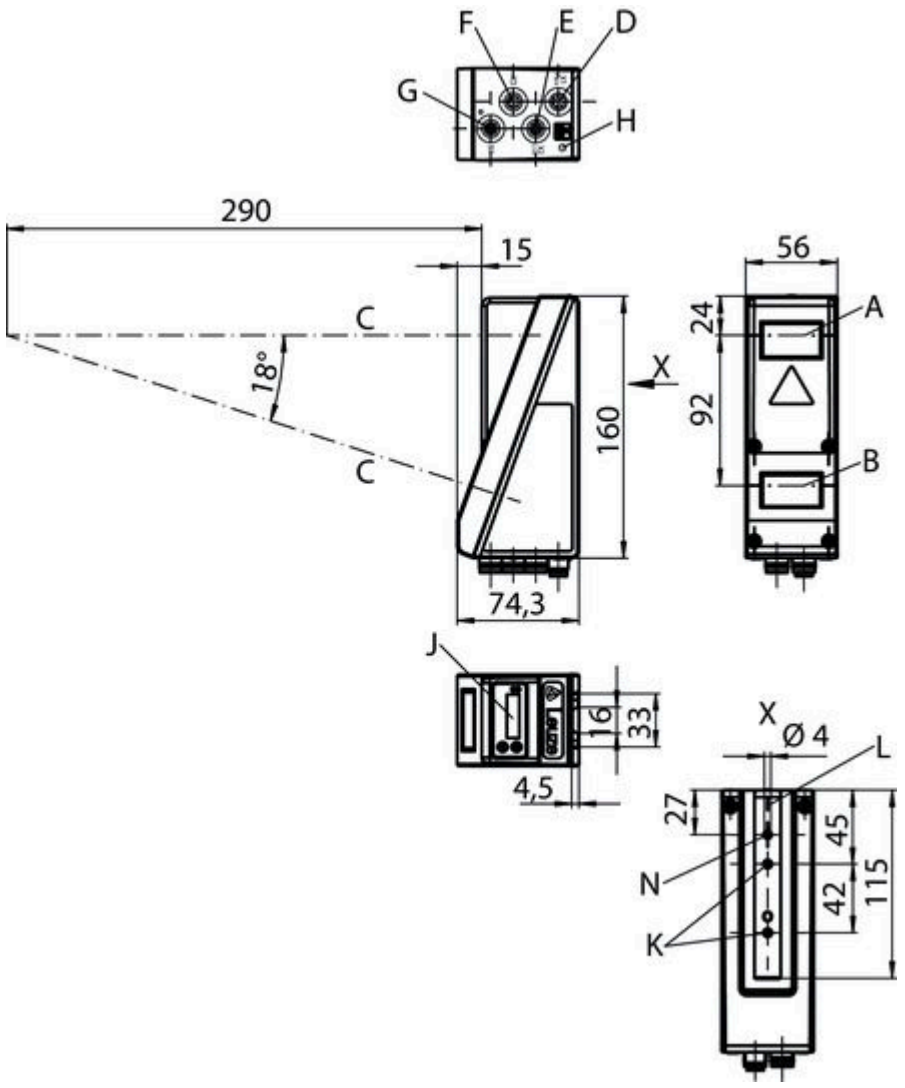
Certifications	
Degree of protection	IP 67
Protection class	III, VDE
Certifications	c UL US

Standards applied	IEC 60947-5-2

Classification	
eCl@ss 8.0	27280190
eCl@ss 9.0	27280190
ETIM 5.0	EC001825
ETIM 6.0	EC001825

Dimensioned drawings

All dimensions in millimeters

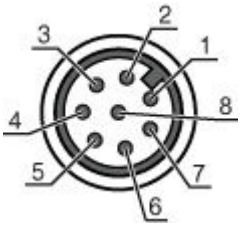


A	Transmitter
B	Receiver
C	Optical axis
D, E, F, G	X1-X4 connections
H	FE screw
J	OLED display and membrane keyboard
K	M4 thread (4.5 deep)
L	Support for mounting system

Electrical connection

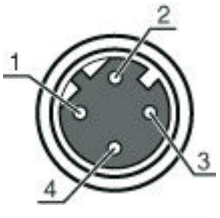
Connection 1	X1 PWR
Type of connection	Connector
Function	Signal IN Voltage supply Signal OUT
Thread size	M12
Type	Male
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

Pin	Pin assignment	Conductor color
1	V+	White
2	IN ACTIVATE	Brown
3	GND	Green
4	OUT 1 / Operational readiness	Yellow
5	Trigger IN	Gray
6	OUT 2	Pink
7	n.c.	Blue
8	n.c.	Red



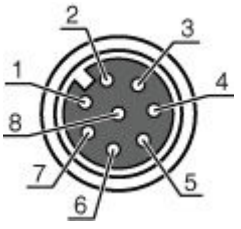
Connection 2	X2 ETH
Type of connection	Connector
Function	Data interface Configuration interface
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Pin	Pin assignment	Conductor color
1	Tx+	Yellow
2	Rx+	White
3	Tx-	Orange
4	Rx-	Blue



Connection 3	X3 encoder
Type of connection	Connector
Function	Encoder
Thread size	M12
Type	Female
Material	Metal
No. of pins	8 -pin
Encoding	A-coded

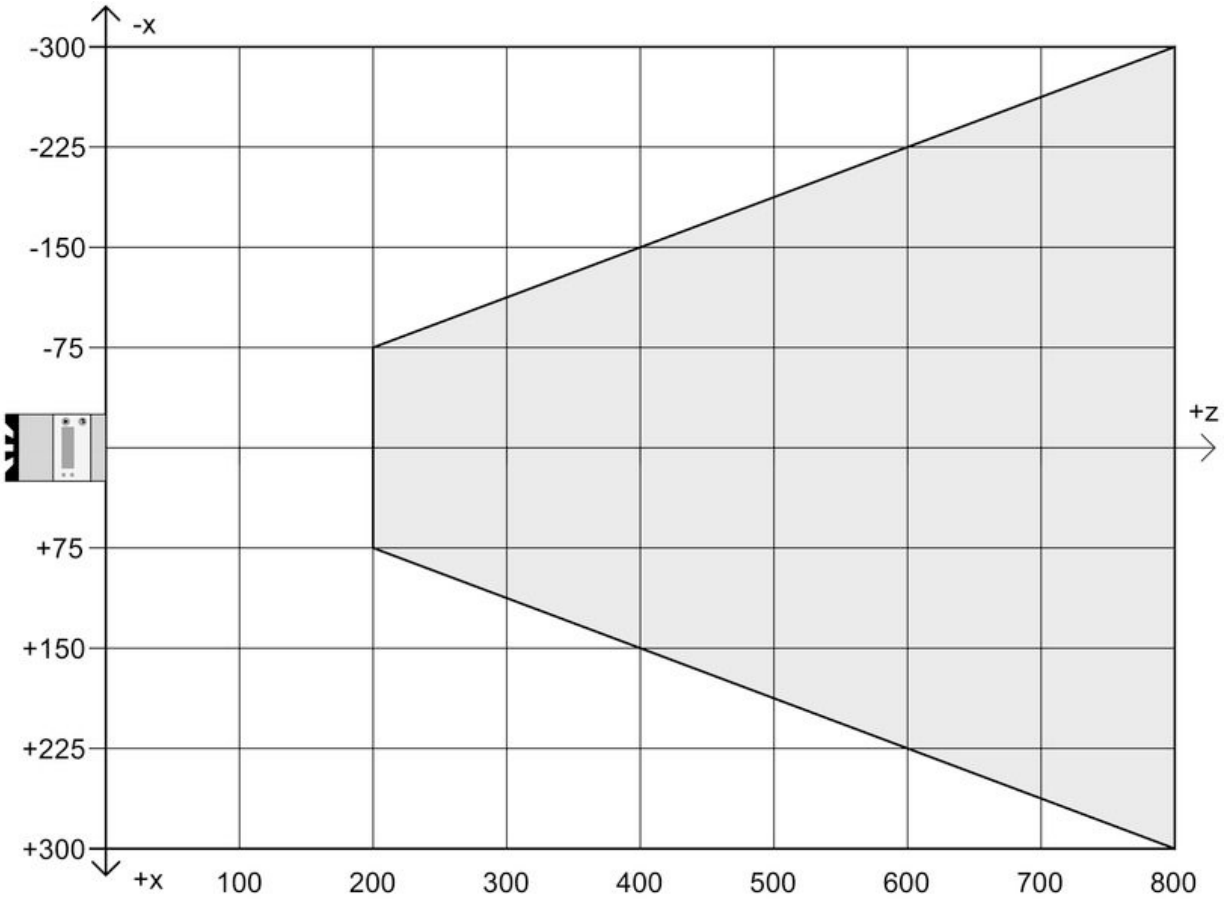
Pin	Pin assignment	Conductor color
1	V+	White
2	GND	Brown
3	GND	Green
4	Enc. A+	Yellow
5	Enc. A-	Gray
6	Enc. B+	Pink
7	Enc. B-	Blue
8	+5 V DC	Red



Connection 4	
Type of connection	Connector
Function	Not used (dummy plug)
Thread size	M12
Type	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Diagrams

Measurement range



x Line length in mm
z Object distance

Operation and display

LEDs

LED	Display	Meaning
1	Green, continuous light	Operational readiness
	Off	No supply voltage
2	Yellow, continuous light	Ethernet connection is established
	Yellow, flashing	Data transmission active
	Off	No data transmission

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.

NOTE

Never look directly into the beam or point the beam in the direction of telescope users!
The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of **laser class 2M** as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to "Laser Notice No. 50" from June 24, 2007.

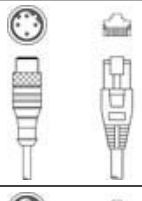
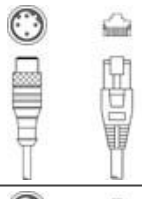
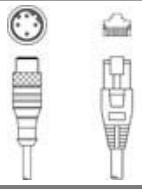
- For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
- Do not point the laser beam of the device at persons!
- Interrupt the laser beam using a non-transparent, non-reflective object if the laser beam is accidentally directed towards a person.
- When mounting and aligning the device, avoid reflections of the laser beam off reflective surfaces!
- CAUTION! The use of operating and adjusting devices other than those specified here or the carrying out of differing procedures may lead to dangerous exposure to radiation! The use of optical instruments or devices (e.g., magnifying glasses, binoculars) in combination with the device increases the danger of eye damage.
- Observe the applicable statutory and local laser protection regulations.
- The device must not be tampered with and must not be changed in any way.
  There are no user-serviceable parts inside the device.
  Repairs must only be performed by Leuze electronic GmbH + Co. KG.

Accessories

Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50135127	KD S-M12-8A-P1-020	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Open end Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR
	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
	50135129	KD S-M12-8A-P1-100	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Open end Shielded: Yes Cable length: 10,000 mm Sheathing material: PUR

Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50125541	K-DS M12A-8P-0,75m-LxS36-CP	Configuration cable	Parameter memory: Yes Connection 1: Connector, M12, Axial, Female, A-coded, 8 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 8 -pin Shielded: Yes Cable length: 750 mm Sheathing material: PUR
	50135080	KSS ET-M12-4A-RJ45-A-P7-020	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 2,000 mm Sheathing material: PUR
	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
	50135082	KSS ET-M12-4A-RJ45-A-P7-100	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 10,000 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
	50121435	BT 56 - 1	Mounting device	Functions: Static applications Design of mounting device: Mounting system Fastening, at system: For 12 mm rod, For 14 mm rod, For 16 mm rod Mounting bracket, at device: Clampable Material: Metal Tightening torque of the clamping jaws: 8 N·m
	50126007	BT 56 - V	Mounting device	Functions: Dynamic applications Design of mounting device: Mounting system Fastening, at system: For 16 mm rod, For 14 mm rod, For 12 mm rod Mounting bracket, at device: Clampable Material: Metal Tightening torque of the clamping jaws: 12 N·m

Mounting technology - Other

	Part no.	Designation	Article	Description
	50111224	BT 59	Mounting bracket	Fastening, at system: Groove mounting Mounting bracket, at device: Clampable Material: Metal
	50124941	BTU 0300M-W	Mounting device	Fastening, at system: Through-hole mounting Mounting bracket, at device: Clampable, Groove mounting Material: Metal

Services

	Part no.	Designation	Article	Description
	S981001	CS10-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.
	S981005	CS10-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.