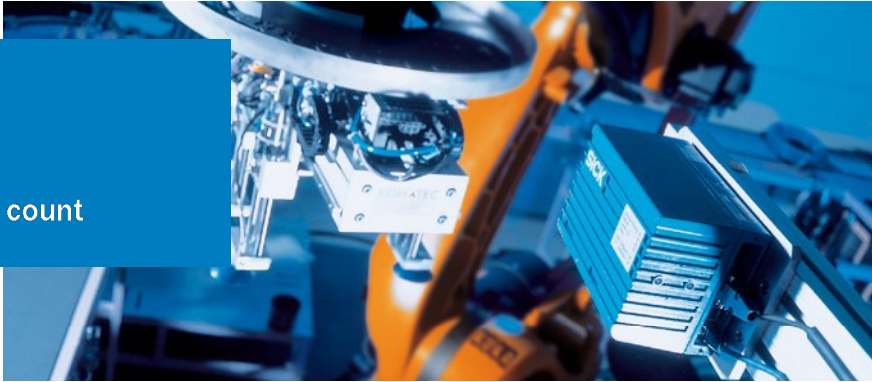


A

When accuracy and resolution count



B



C



D

E

F



Additional information

Detailed technical data..... E-19
 Ordering information..... E-20
 Operating range diagram E-21
 Recommended accessories..... E-21
 Dimensional drawing G-4

Product description

The LMS400 laser measurement system is ideal for material handling and logistics applications where goods must be transported and processed in ever shorter times. The LMS400 offers users a measurement solution that provides high throughput, comprehensive process reliability and improved resolution at close working ranges. The

integrated “Level Control” feature sets new standards for flexibility and application areas in logistics and conveyor systems. Whether in containers, cartons or pallets, the fill level is reliably detected and signaled via integrated switching outputs. The analog output expands the area of use for the direct control of processes in packaging or handling.

At a glance

- Level Control, which is integrated into the sensor, features a gap-free scanning surface that can detect objects in containers, without any impairment from a shadow. Smaller objects, regardless of color, are detected at any place in the container.
- Large dynamic measurement range of 0.7 m to 3 m
- High ambient light immunity
- Rugged design
- High angular resolution
- Ideal for vision applications on pallets

Your benefits

- The integrated Level Control feature replaces a number of sensors and drastically reduces the effort required for wiring and programming
- Reliable detection at high conveyor speeds
- Neither shading nor artificial lighting is necessary
- Simple, flexible installation at positions beyond the robot collision area
- High accuracy detection and positioning measurements in real-time provide rapid data capture

→ www.mysick.com/en/LMS4xx

Detailed technical data

Features

Field of application	Indoor
Type	Short Range
Reading field	Front
Light source	Visible red light (650 nm)
Laser class	2
Field of view	70°
Scanning frequency	180 Hz ... 500 Hz (depending on type)
Angular resolution	0.1° ... 1.0°
Operating range	0.7 m ... 3 m
Max. range with 10 % reflectivity	3 m

Performance

Response time	≥ 2 ms
Detectable object shape	Almost any
Systematic error	± 4 mm
Statistical error	± 3 mm (dependent on remission and distance) ± 10 mm (dependent on remission and distance)
Integrated application	Level Control

Interfaces

Serial (RS-232, RS-422)	Function	✓ Host, AUX
Ethernet	Function	✓ Host
	Data transmission rate	10 Mbit, half-duplex
	Protocol	TCP/IP
Switching inputs		4
Switching outputs		5 (4 x PNP / analog 1 x 4 ... 20 mA)
Optical indicators		6 LEDs

Mechanics/electronics

Operating voltage	≤ 24 V DC, ± 15 %
Power consumption	25 W
Housing	Die-cast aluminum
Housing color	Light blue (RAL 5012)
Enclosure rating	IP 20 (DIN 40 050) ¹⁾
Weight	2.3 kg
Dimensions	179 mm x 107 mm x 130 mm

¹⁾ With plug cover IP 65.

Ambient data

Object remission	4.5 % ... 200 % (depending on type)
Electromagnetic compatibility (EMC)	EN 61000G6G2:2001 / EN 61000G6G4:2001
Vibration resistance	EN 60068G2G6, G27, G29, G64
Shock resistance	EN 60068G2G6, G27, G29, G64
Ambient operating temperature	0 °C ... +40 °C
Storage temperature	-20 °C ... +70 °C

General notes

Selectable region of interest (ROI)	From 50 mm x 3,000 mm to 1,000 mm x 1,750 mm
Number of columns	Up to 50 equidistant or 30 freely positionable
Minimum column width	50 mm
Minimum detectable object	30 mm x 30 mm
Smallest height threshold above the container floor	20 mm
Switching threshold output	Telegram, switching outputs or analog output
Output of height values in the columns	Telegram, analog output

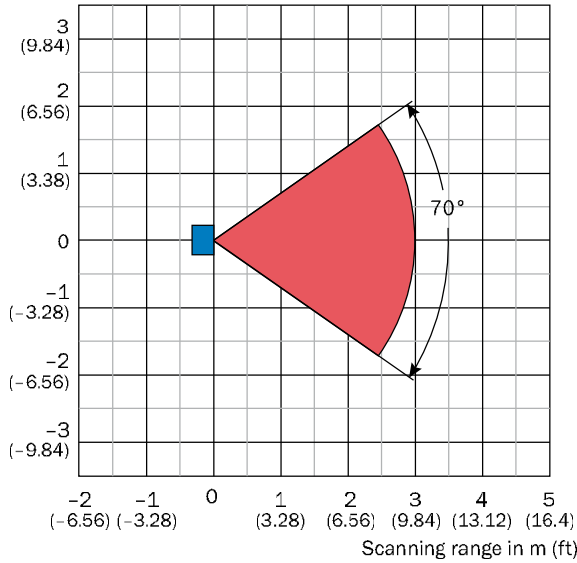
Ordering information

- Sub product family: LMS400
- Type: Short Range
- Field of application: Indoor
- Switching outputs: 5 (4 x PNP / analog 1 x 4 ... 20 mA)
- Housing color: light blue (RAL 5012)

Object remission	Model name	Part no.
6.5 % ... 200 %	LMS400-1000	1027897
4.5 % ... 100 %	LMS400-2000	1041725

Operating range diagram


Scanning range in m (ft)







■ Scanning range max. 3 m (9.84 ft)
 Scanning range for objects up to
 10 % remission 3 m (9.84 ft)

Recommended accessories

Modules

	Brief description	Model name	Part no.
	Modular connection module for one sensor	CDM490-0001	1025363

Plug connectors and cables

	Brief description	Part no.
	Connection cable (3 m), Ø 8 mm, shielded, with 15-pin D-sub HD receptacle and 15-pin D-sub HD plug	2020302
	Ethernet cable, for plug hood, Crossover, RJ-45/RJ-45, 10 m	2032821
	Communication cable for connection to the terminal interface of the connector hood set 2031364, 3 m	2031372
	Connection hood, with connection cable 15-pin D-sub, 3 m	2030535

For additional accessories, please see page F-14