VML
DIMENSIONING WITH PERSPECTIVE

Track and trace systems

SICK
Sensor Intelligence.

DIMENSIONING WITH PERSPECTIVE

Product description

The VML track and trace system (a light-grid-based volume measurement system) is your positioning and object measurement solution for challenging applications. Based on light grids, the VML enables accurate determination of the smallest enveloping cuboid of objects, irrespective of their surface properties. This means that it is a particularly reliable solution for measuring transparent objects and objects wrapped in film. The modular structure ensures full compatibility with existing solutions from SICK and enables future enhancements. This guarantees a high degree of flexibility, which enables individual adaptation to specific applications.

At a glance

- Measurement accuracy of up to 5 mm x 5 mm x 2.5 mm (L x W x H) at 1 m/s, and up to 5 mm x 5 mm x 5 mm (L x W x H) at 2 m/s.

- Maximum object size 2,600 mm x 1,200 mm x 1,200 mm (L x W x H)
- Protection class up to IP65
- High degree of integration thanks to the MSC800 controller

Your benefits

- Reliable measurement of objects, regardless of their surface properties – particularly transparent and very dark objects
- Accurate in-line measurement of objects

- Reliable measurement properties thanks to receiver and transmitter modules
- Short MTTR reduces maintenance, lowers operating costs and increases system throughput

CE

Additional information

➜ **www.sick.com/VML**

For more information, simply enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples, and much more.

Detailed technical data

The exact device specifications and performance data of the product may deviate from the information provided here, and depend on the application in which the product is being used and the relevant customer specifications.

General notes

Items supplied	MSC800
	DFV60
	MLG-2 Pro (2 x)
	Cleaning system
	Brackets, conection cables, frame (customized)
Usage	Retail and warehousing
	Courier, express, parcel and postal

Features

Light source	Infrared, LED
MTBF	> 80,000 h
MTTR	< 10 min
Applications	Receiving area
	Outgoing area
	Object dimensioning
Field of application	Indoor
Product category	Volume measurement system

Performance

Maximum object size	2,600 mm x 1,200 mm x 1,200 mm
Minimum object size	100 mm x 100 mm x 10 mm
Accuracy of object coverage	5 mm x 5 mm x 2.5 mm ((L x W x H) up to 1 m/s)
	5 mm x 5 mm x 5 mm ((L x W x H) up to 2 m/s)
	Higher conveyor speeds available upon request

Interfaces

Serial		✔ (2)
	Data transmission rate	300 bit/s … 57,600 bit/s
Ethernet		✔ (2)
	Data transmission rate	10 MBit/s / 100 MBit/s
	Protocol	FTP, TCP/IP, Server/Client
PROFIBUS DP		✔
	Data transmission rate	12 MBaud
	Protocol	PROFIBUS DP
Digital input, opto isolated, reverese polarity protected		✔ (13)
Digital output, PNP +24 V, 30 mA		✔
Floating output		✔ (2)
Output data		XML
		ASCII
		Customer protocol
Configuration interface		Ethernet: SOPAS Engineering Tool

Mechanics/electronics

Dimensions, system (L x W x H)	Customized
Enclosure rating	MLG-2 Pro: IP 65 (EN 60529) DFV60: IP 65 (EN 60529) Control cabinet: IP 54 (EN 60529)
Supply voltage	230 V AC 100 V AC ... 264 V AC
Mains frequency	50 Hz ... 60 Hz
Power consumption	100 W, in normal mode
Window material	Plastic
Housing material	Stainless steel Aluminum Plastic

Ambient data

Ambient temperature operation	0 °C ... +40 °C [1]
Ambient storage temperature	−20 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light immunity	DC light, direct and indirect, 150,000 lx

[1] Extended temperature range upon request.

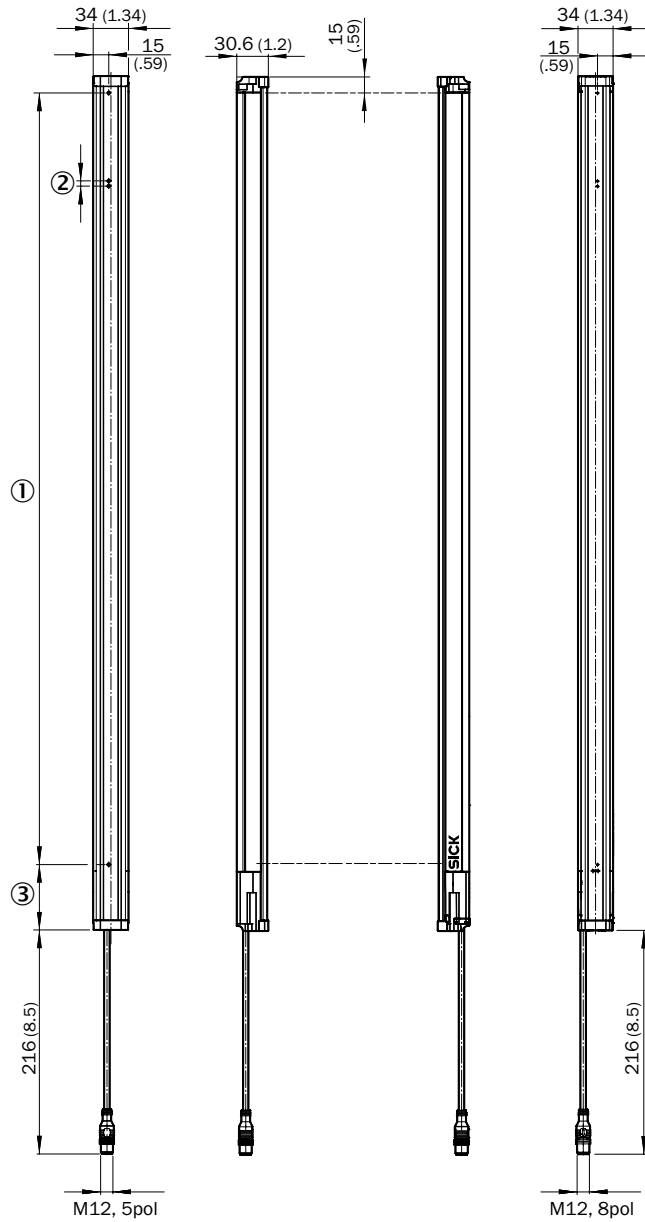## Ordering information

Type	Part no.
VML	On request

## Dimensional drawings (Dimensions in mm (inch))
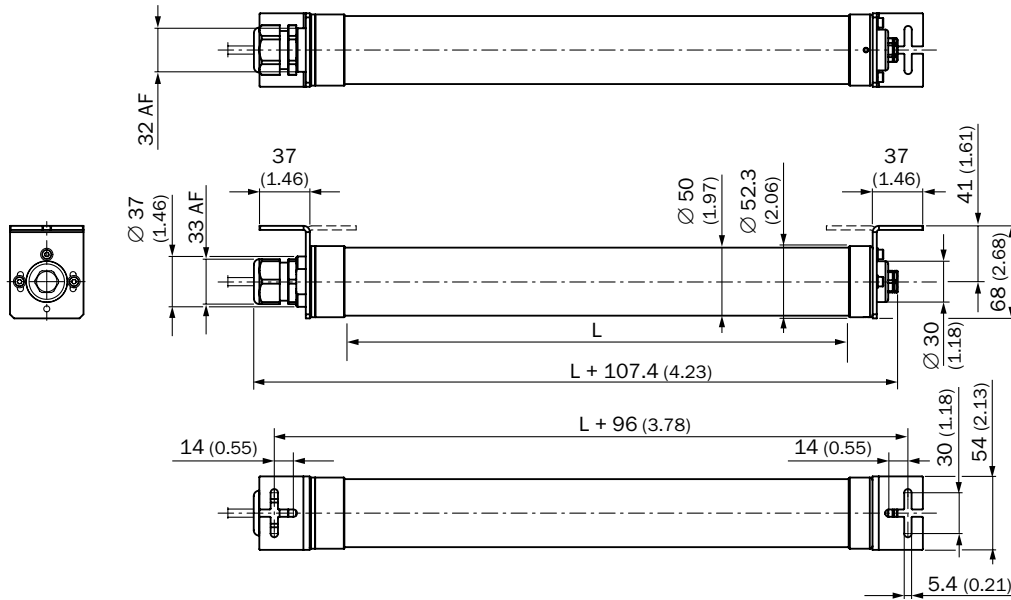
Monitoring height (L) mm	Protection pipe (L) mm	Monitoring height (L) mm	Protection pipe (L) mm	Monitoring height (L) mm	Protection pipe (L) mm
100 … 145	220	**1,000 … 1,045**	1,120	**1,900 … 1,945**	2,020
250 … 295	370	**1,150 … 1,195**	1,270	**2,050 … 2,095**	2,170
400 … 445	520	**1,300 … 1,345**	1,420	**2,200 … 2,245**	2,320
550 … 595	670	**1,450 … 1,495**	1,570	**2,350 … 2,395**	2,470
700 … 745	820	**1,600 … 1,645**	1,720		
850 … 895	970	**1,750 … 1,795**	1,870		

Automation light grids MLG-2 Pro without housing

34 (1.34)
15 (.59)
30.6 (1.2)
15 (.59)
34 (1.34)
15 (.59)

② ①

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③

216 (8.5)

216 (8.5)

M12, 5pol

M12, 8pol

MSC800 controller

500 (19.69)
100 (3.94) 130 (5.12) 130 (5.12) 100 (3.94)
Ø 8.5 (.33) (5x)
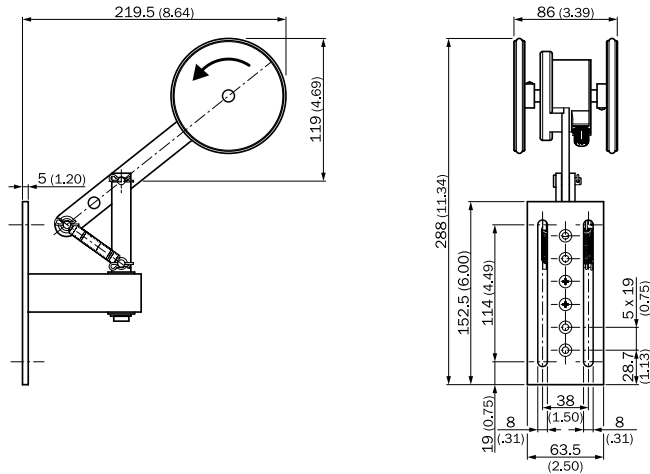464 (18.27)
440 (17.32)
400 (15.75)

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15 (.59) 155 (6.1) 6 (.24)

32 (1.26)

① Detection height
② Beam separation
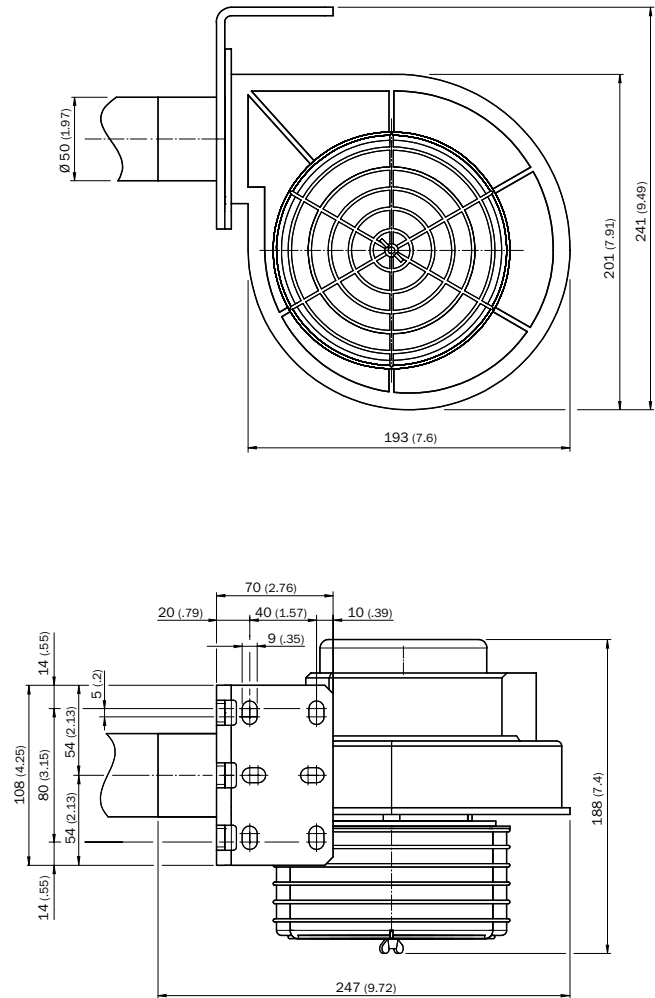③ Distance: MLG edge – first beam
④ Distance: Housing edge – first beam
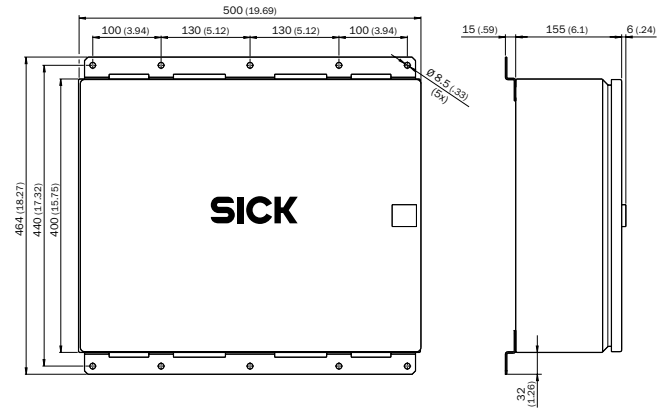
DFV60

Blower of cleaning system

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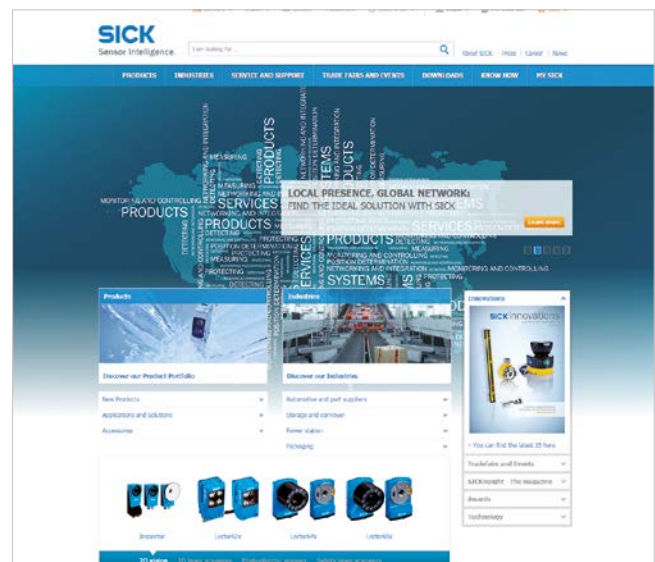
SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 7,400 employees and over 50 subsidiaries and equity investments as well as numerous representative offices worldwide, we are always close to our customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in various industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services round out our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

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Detailed addresses and additional representatives ➔ **www.sick.com**

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