VMS4x0 CV

DETECT PROBLEMS BEFORE THEY APPEAR

Track and trace systems

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Sensor Intelligence.

DETECT PROBLEMS BEFORE THEY APPEAR

Product description

The VMS4x0 CV (Volume Measurement System Contour Verification) track and trace system is a non-contact dimensioning and deformation detection system. It is able to detect deformations on cubic objects, allowing it to prevent problems such as downtime in automated storage facilities. Software developed specifically for the system detects even the tiniest deformations, providing a perfect monitoring tool for goods storage and retrieval processes. The system can be extended to include other SICK systems, depending on the application in which it is being used – making it the ideal solution for a wide range of applications.

At a glance

- Maximum object size of 2,000 mm x 1,000 mm x 1,000 mm (L x W x H)
- Measurement accuracy of up to 5 mm x 5 mm x 5 mm (L x W x H) at 1 m/s, and up to 10 mm x 10 mm x 10 mm (L x W x H) at 2 m/s
- Minimum deviation detection of 10 mm

Your benefits

- Quality checks on moving cubic objects
- Optimization of automated processes in warehouses
- Deformed objects can be detected early on, reducing downtime
- Maintenance-optimized design saves time and money
- Full integration into existing identification solution or dynamic weighing for maximum flexibility
- All system components from a single manufacturer, making them highly reliable and easy to integrate

Additional information

➜ www.sick.com/VMS4x0_CV

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.

VMS4x0 CV

General notes

	VMS420 Contour Verification	VMS430 Contour Verification	VMS440 Contour Verification
Items supplied	1 x MSC800 1 x VMC800 1 x DFV60 2 x VMD Brackets, conection cables, frame (customized)	1 x MSC800 1 x VMC800 1 x DFV60 3 x VMD Brackets, conection cables, frame (customized)	1 x MSC800 1 x VMC800 1 x DFV60 4 x VMD Brackets, conection cables, frame (customized)

Features

	VMS420 Contour Verification	VMS430 Contour Verification	VMS440 Contour Verification
Light source	Visible light (λ = 650 nm)		
Laser class	2		
MTBF	80,000 h		
MTTR	< 10 min		
Applications	Retail and warehousing		
Field of application	Indoor		
Misalignment of the object	± 45°		
Conveyor type	Conveyor systems		
Number of main components	5	6	7

Performance

Transport speed	≤ 2 m/s
Maximum object size	2,000 mm x 1,000 mm x 1,000 mm
Minimum object size	200 mm x 100 mm x 100 mm
Minimum object distance	1,200 mm, customized
Accuracy of object coverage	± 5 mm x ± 5 mm x ± 5 mm (L x W x H, up to 1 m/s) ± 10 mm x ± 5 mm x ± 5 mm (L x W x H, up to 2 m/s)

Interfaces

Ethernet		✔ (2)
	Data transmission rate	10 Mbit/s … 100 Mbit/s
	Protocol	FTP, TCP/IP, Server/Client
Serial		✔ (2)
	Data transmission rate	300 bit/s … 57,600 bit/s
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	IP 54 (EN 60529)
Supply voltage	100 V AC≤ 264 V
Mains frequency	50 Hz … 60 Hz
Encoder	0.2 mm resolution
Power consumption	150 W, 480 W
Housing material	Stainless steel, aluminum, plastic

Ambient data

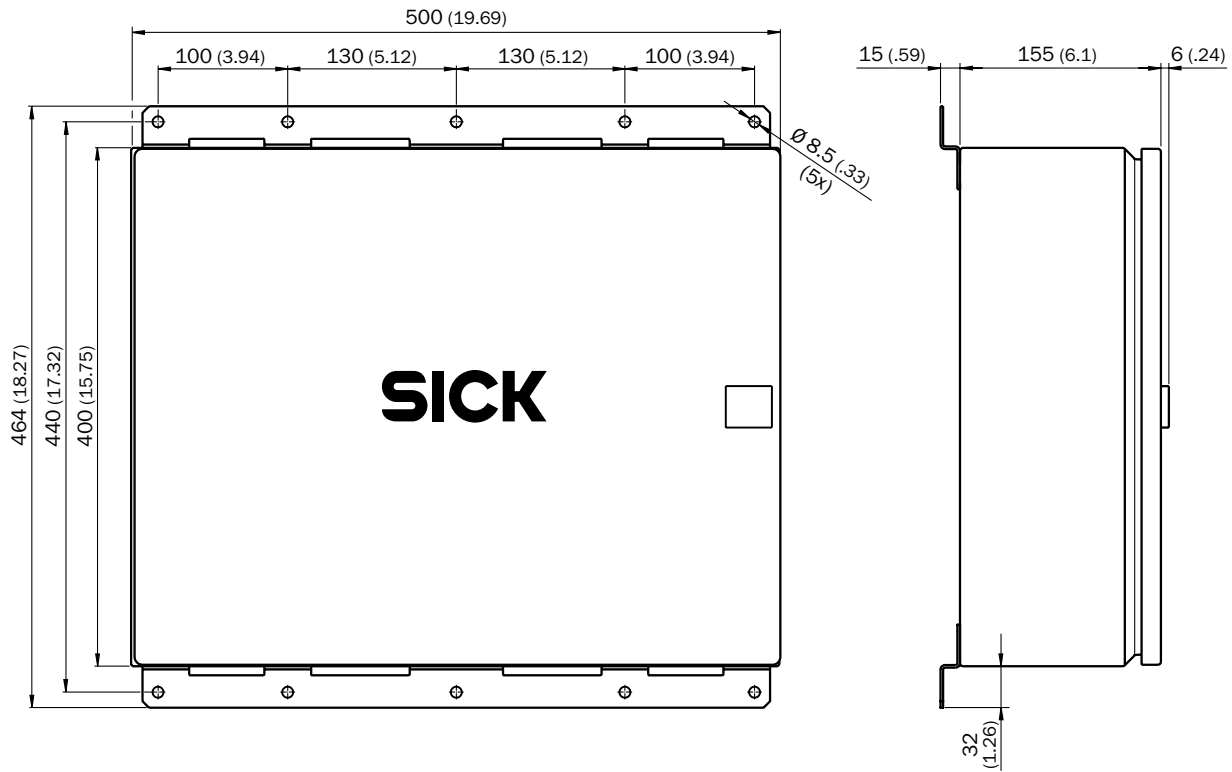| Ambient temperature operation	0 °C … +40 °C
Ambient storage temperature	−20 °C … +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light immunity	2,000 lx
Object remission	15 % … max. 200 %, (based on Kodak White Paper and red laser), not glossy (e.g., adhesive tape) For more information, see the operating instructions for the LMS400, chapters 3.6.1 and 3.6.2

Ordering information

Type	Part no.
VMS420 Contour Verification	Auf Anfrage
VMS430 Contour Verification	Auf Anfrage
VMS440 Contour Verification	Auf Anfrage

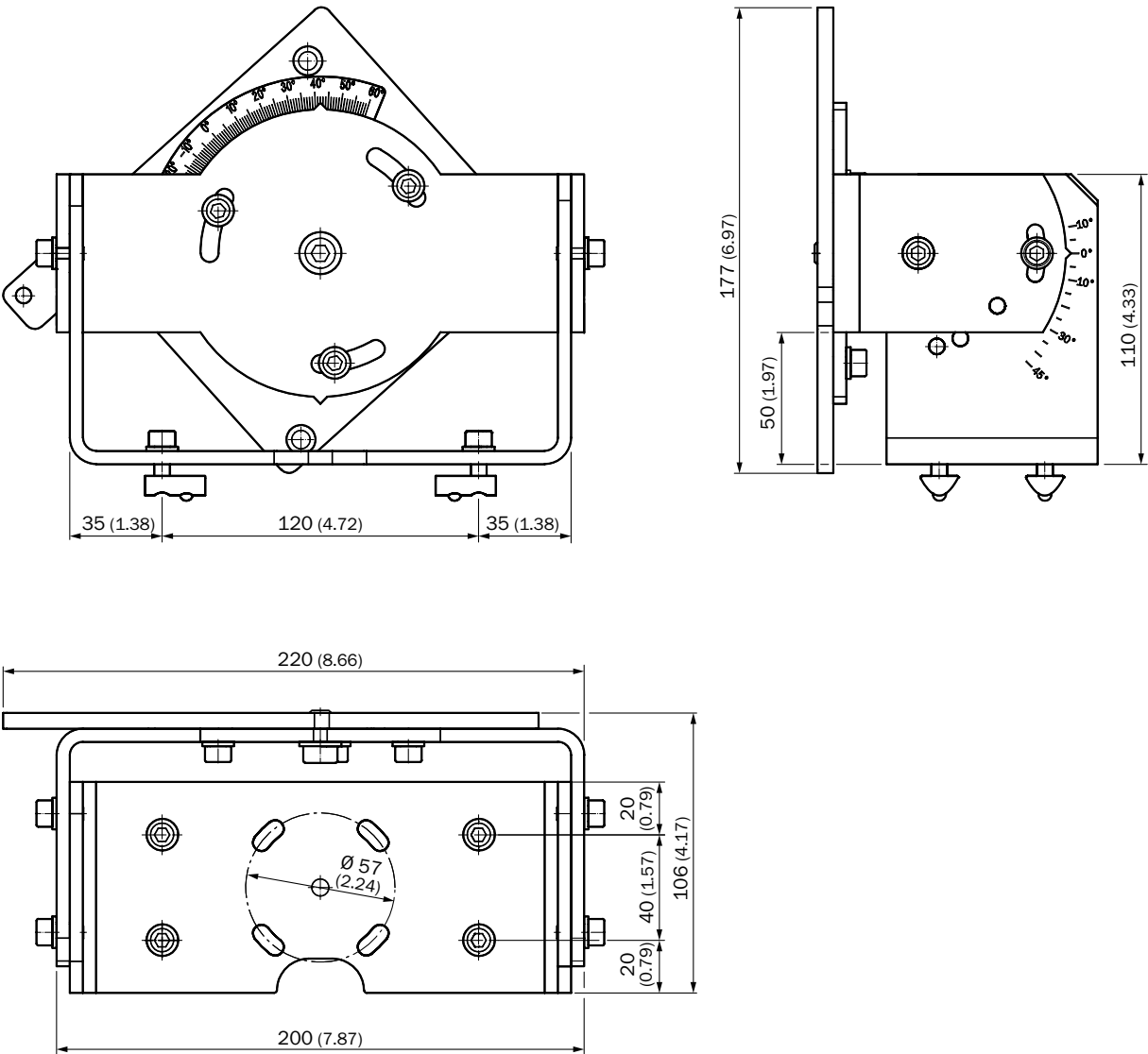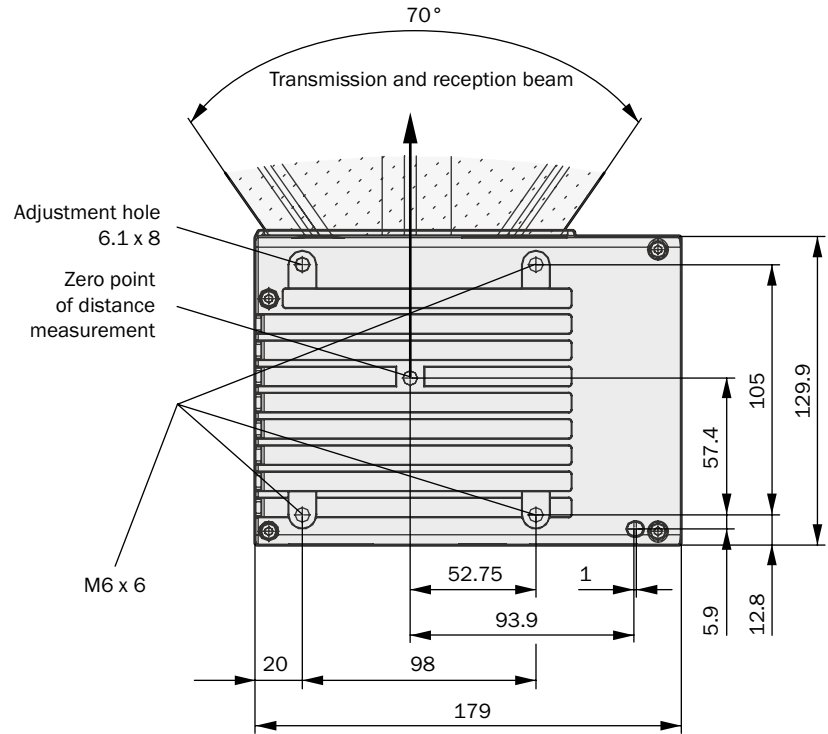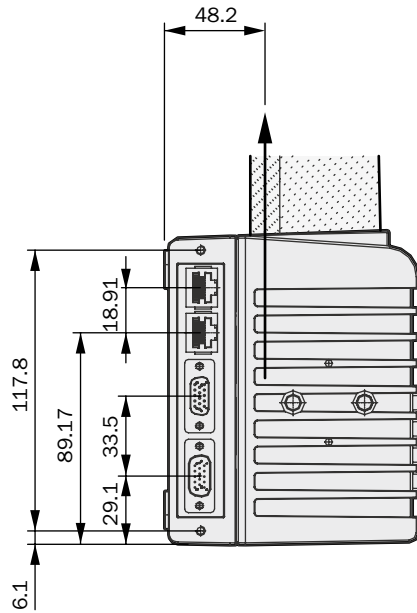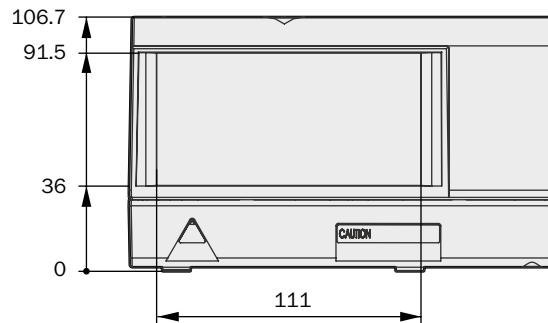## Dimensional drawings (Dimensions in mm (inch))

DFV60

VMC800

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)

VMD500

LMS400

48.2

117.8
89.17
18.91
33.5
29.1
6.1

70°

Transmission and reception beam

Adjustment hole
6.1 x 8

Zero point
of distance
measurement

M6 x 6

129.9
105
57.4
52.75
1
93.9
5.9
12.8
20
98
179

Zero point of
distance measurement

106.7
91.5
36
0
111
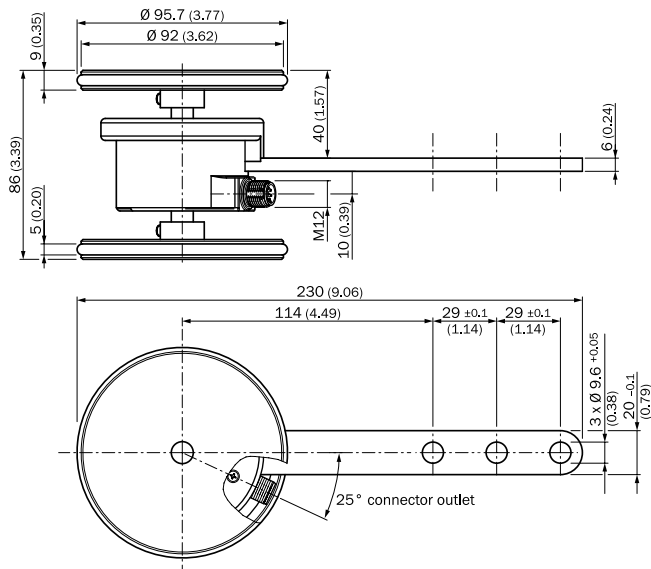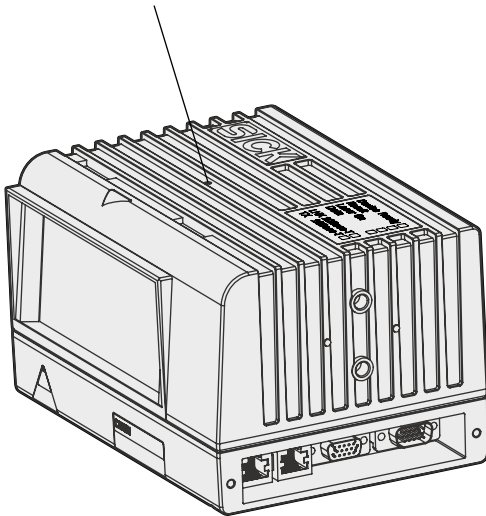
WL18-3, WS/WE18-3
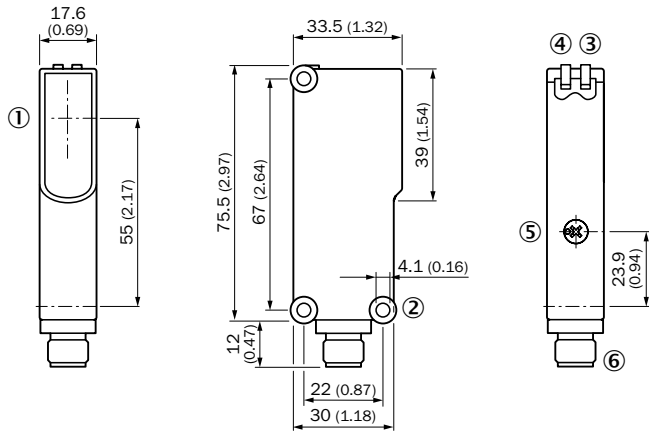
① Center of optical axis
② Mounting hole ø 4.1 mm
③ LED indicator yellow: Status of received light beam
④ LED indicator green: Supply voltage active
⑤ Sensitivity control, potentiometer 270° on WE
⑥ 4-pin M12 male connector or 2 m cable or 6-pin cubic connector

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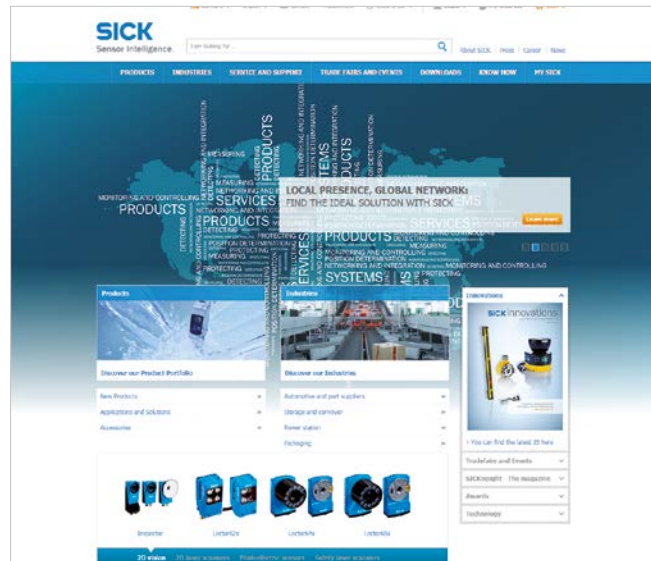
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Training and education
Practical, focused and professional

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Detailed addresses and further locations ➔ **www.sick.com**

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