



CLV650-6000

CLV65x

BAR CODE SCANNERS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
CLV650-6000	1042124

Other models and accessories → www.sick.com/CLV65x



Detailed technical data

Features

Version	Standard Density
Connection type	Cable
Reading field	Oscillating mirror
Scanner design	Line scanner
Focus	Auto focus
Light source	Visible red light (658 nm)
MTBF	40,000 h
Laser class	2 (IEC 60825-1:2014, EN 60825-1:2014)
Aperture angle	≤ 50°
Scanning frequency	600 Hz ... 1,000 Hz
Code resolution	0.25 mm ... 1 mm
Reading distance	125 mm ... 1,570 mm ¹⁾
Oscillating mirror functions	Fixed (adjustable position), oscillating (variable or fixed amplitude), one shot
Oscillation frequency	0.5 Hz ... 6.25 Hz
Angle of deflection	-20° ... 20°
Heating	Optional

¹⁾ For details see reading field diagram.

Performance

Bar code types	All current code types, Code 39, Code 128, Code 93, Codabar, GS1-128 / EAN 128, UPC / GTIN / EAN, Interleaved 2 of 5, Pharmacode, GS1 DataBar, Telepen, MSI/Plessey
Print ratio	2:1 ... 3:1
No. of codes per scan	1 ... 20 (Standard decoder) 1 ... 6 (SMART decoder)
No. of codes per reading interval	1 ... 50 (auto-discriminating)
No. of characters per reading interval	5,000 500 (for multiplexer function in CAN operation)

No. of multiple readings	1 ... 99
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Interfaces

PROFINET	✓
Function	PROFINET Dual Port (optional via external connection module CDF600-2)
EtherCAT®	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600
Serial	✓, RS-232, RS-422, RS-485
Function	Host, AUX
Data transmission rate	2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)
CAN	✓
Function	SICK CAN sensor network CSN (master/slave, multiplexer/server)
Data transmission rate	20 kbit/s ... 1 Mbit/s
CANopen	✓
Data transmission rate	20 kbit/s ... 1 Mbit/s
PROFIBUS DP	✓
Type of fieldbus integration	Optional over external fieldbus module CDF600-2
DeviceNet™	✓
Type of fieldbus integration	Optional, over external connection module CDM + CMF
Switching inputs	4 ("Sensor 1", "Sensor 2", 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)
Switching outputs	4 ("Result 1", "Result 2", 2 outputs via optional parameter storage CMC600 in CDB620/CDM420)
Reading pulse	Switching input "Sensor 1", non-powered, serial interface, auto pulse, CAN
Optical indicators	6 LEDs (Ready, Result, laser, Data, CAN, LNK TX, Bar graph for displaying the reading rate percentage (10 LEDs))
Acoustic indicators	Beeper/buzzer (can be switched off, can be allocated as a result indication function)
Operating elements	2 buttons (choose and start/stop functions)
Configuration software	SOPAS ET
Memory card	MicroSD memory card (flash card) 512 MB, optional

Mechanics/electronics

Electrical connection	1 x 15-pin D-Sub HD male connector (0.9 m)
Operating voltage	18 V DC ... 30 V DC
Power consumption	9.5 W
Housing	Aluminum die cast
Housing color	Light blue (RAL 5012)
Front screen	Glass
Enclosure rating	IP65 (EN 60529)
Protection class	III (EN 61140)
Weight	320 g, with connecting cable
Dimensions (L x W x H)	95 mm x 96 mm x 41 mm

Ambient data

Electromagnetic compatibility (EMC)	EN 61000-6-3 (2001-10) / EN 61000-6-2:2005
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Vibration resistance	EN 60068-2-6 (1995)
Shock resistance	EN 60068-2-27 (1993)
Ambient operating temperature	0 °C ... +40 °C
Storage temperature	-20 °C ... +70 °C
Permissible relative humidity	90 %, Non-condensing
Ambient light immunity	2,000 lx, on bar code
Bar code print contrast (PCS)	≥ 60 %

General notes

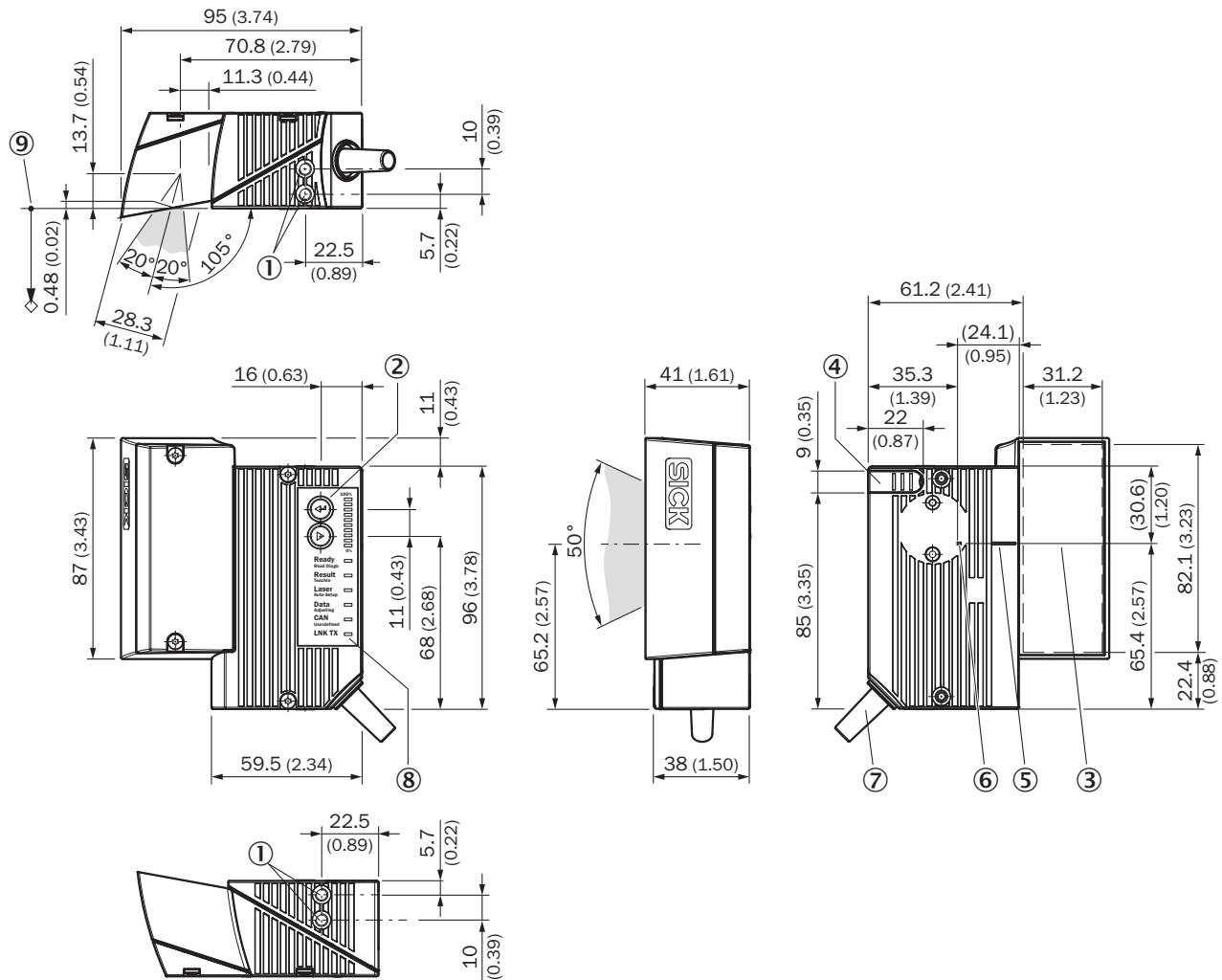
Note on use	For Ethernet connection please use an Ethernet version of CLV6xx
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Classifications

ECl@ss 5.0	27280102
ECl@ss 5.1.4	27280102
ECl@ss 6.0	27280102
ECl@ss 6.2	27280102
ECl@ss 7.0	27280102
ECl@ss 8.0	27280102
ECl@ss 8.1	27280102
ECl@ss 9.0	27280102
ETIM 5.0	EC002550
ETIM 6.0	EC002550
UNSPSC 16.0901	43211701

Dimensional drawing (Dimensions in mm (inch))

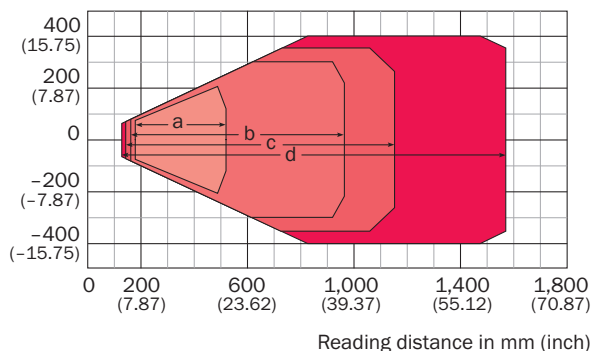
CLV63x/64x/65x Standard, oscillating mirror



- ① Blind hole thread M5, 5 mm deep (2 x), for mounting
- ② Function button (2 x)
- ③ Reading field
- ④ Cover for the microSD memory card
- ⑤ Central position of the deflected laser beam in the V-shaped aperture angle
- ⑥ Internal impact point: rotation point of the variable direction laser beam
- ⑦ Cable with 15-pin D-sub HD male connector
- ⑧ LED status indicator (6x) and bar graph
- ⑨ Reference point for reading distance (from housing edge to object)

Reading field diagram

Reading field height in mm (inch)









Resolution

- a: 0.25 mm (9.8 mil)
- b: 0.35 mm (13.8 mil)
- c: 0.50 mm (19.7 mil)
- d: 1.00 mm (39.4 mil)

Recommended accessories

Other models and accessories → www.sick.com/CLV65x

	Brief description	Further accessories	Type	Part no.
Mounting brackets and plates				
	Hanger-shaped mounting bracket, thermally isolated for use with heating devices, mounting hardware included		Mounting bracket	2050705
	Hanger-shaped mounting bracket, mounting hardware included		Mounting bracket	2042800
Modules				
	Small connection module for one sensor, 4 cable glands, base for CMC600	Modules	CDB620-001	1042256
	Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 2 x M12, male connector/female connector, 5-pin)		CDF600-2100	1058965
	Fieldbus proxy/gateway for connecting identification sensors to PROFIBUS-DP networks (PROFIBUS interface: 1 x D-Sub, female connector, 9-pin)		CDF600-2103	1058966
	Modular connection module for one sensor		CDM420-0001	1025362

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. 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 a wide range of 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 complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

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