SICK Service Manual

CLV650-6120

1. Description

SICK CLV650-6120 Fixed mount barcode scanners

3. Product Information

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SICK CLV650-6120 Fixed mount barcode scanners

Features

Version Standard Density

Connection type Ethernet

Reading field Oscillating mirror

Sensor type Oscillating mirror

Optical focus Auto focus

Light source Light spot, laser, Visible, Red, 658 nm

Laser class 2, complies with 21 CFR 1040.10 except for the conformance according to “Laser Notice No.

56” from May 8, 2019 (EN 60825-1:2014+A11:2021, IEC 60825-1:2014)

Aperture angle ≤ 50°

Reading distance 125 mm ... 1,570 mm

Scanning frequency 600 Hz ... 1,000 Hz

Code resolution 0.25 mm ... 1 mm

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°

Mechanics/electronics

Connection type 2 x M12 cylindrical connectors (12-pin male connector, 4-pin female connector) on swivel connector

Supply voltage 18 V DC ... 30 V DC

Power consumption 9.5 W

Housing material Aluminum die cast

Housing color Light blue (RAL 5012)

Window material Glass

Enclosure rating IP65 (EN 60529)

Protection class III (EN 61140)

Weight 250 g, without connecting cable

Dimensions (L x W x H) 95 mm x 107 mm x 41 mm

MTBF 100,000 h

MTTF 40,000 h (Laser diode)

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Performance

Readable code structures 1D codes

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

Code printing process Label (printed codes)

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

Interfaces

Ethernet ✔ , TCP/IP

Function Data interface (read result output), Service interface

Data transmission rate 10/100 MBit/s

PROFINET ✔

Function PROFINET Single Port, PROFINET Dual Port (optional via external connection module

CDF600-2)

Data transmission rate 10/100 MBit/s

EtherNet/IP™ ✔

Data transmission rate 10/100 MBit/s

EtherCAT® ✔

Type of fieldbus integration Optional over external fieldbus module CDF600

Serial ✔ , RS-232, RS-422, RS-485

Function Data interface (read result output), Service interface

Data transmission rate 2,400 Baud ... 115.2 kBaud, AUX: 57.6 kBaud (RS-232)

CAN ✔

Function SICK CAN sensor network CSN (CAN controller/CAN device, 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

Digital inputs 3 (“Sensor 1”, 2 inputs via optional parameter storage CMC600 in CDB620/CDM420)

Digital outputs 2 (Via optional CMC600 parameter memory in CDB620/CDM420)

Reading pulse Digital inputs, 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)

Control elements 2 buttons (choose and start/stop functions)

Configuration software SOPAS ET

Memory card MicroSD memory card (flash card), optional

Ambient data

Electromagnetic compatibility (EMC) EN 61000-6-3 (2001-10) / EN 61000-6-2:2005

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 barcode

Bar code print contrast (PCS) ≥ 60 %

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