



CLV 490 Bar Code Scanner with autofocus

Advanced Line

Real-time AUTOFOCUS.

The CLV 490 from SICK

The CLV 490 ensures maximum, tilt-independent read rates with minimum code height. The real-time AUTOFOCUS function provides optimum read rates at maximum depths of field (DOF), since the device is always focused in accordance with the distance of the bar code.



Line scanner

Maximum power in a compact design:

- Real-time AUTOFOCUS function
- High density, standard density, low density
- Label tilt from $-45^\circ \dots +45^\circ$
- Reliable code recognition using SMART technology
- Smallest unit in its class
- Additional interface for external parameter memory
- Flash PROM for firmware
- Available as line scanner or line scanner with oscillating mirror
- Optional heater

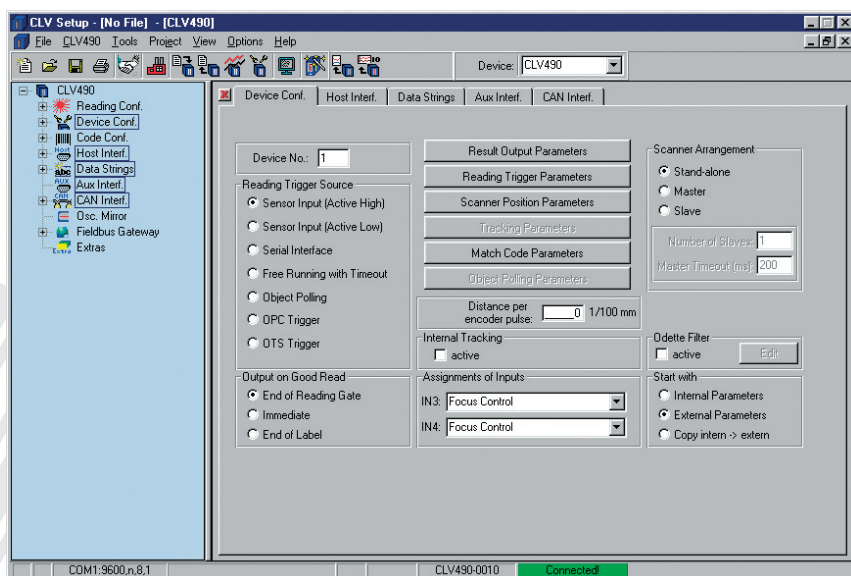
THE CLV 490 ADVANTAGES AT A GLANCE

- Enhanced reading performance compared with existing SICK bar-code scanners of the same size
- No additional components required to detect the object distance
- Extremely high depth of field even for smallest module widths thanks to the real-time AUTOFOCUS function
- External memory (connector) means that parameters do not have to be redefined each time the scanner is changed

With SMART Code Recognition Technology

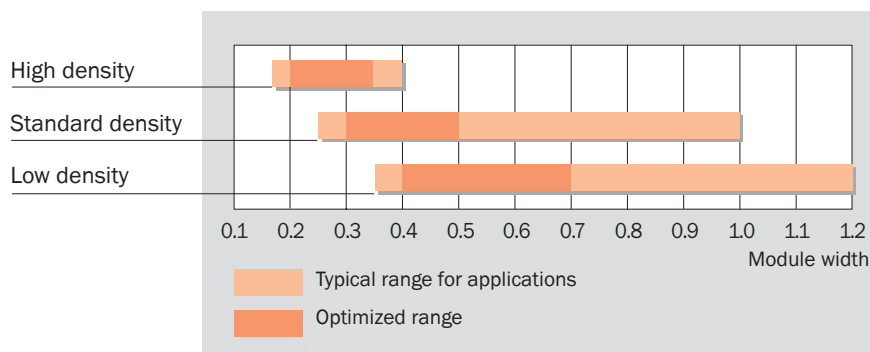


Line scanner with oscillating mirror



Easy to operate and configure with the CLV Setup program

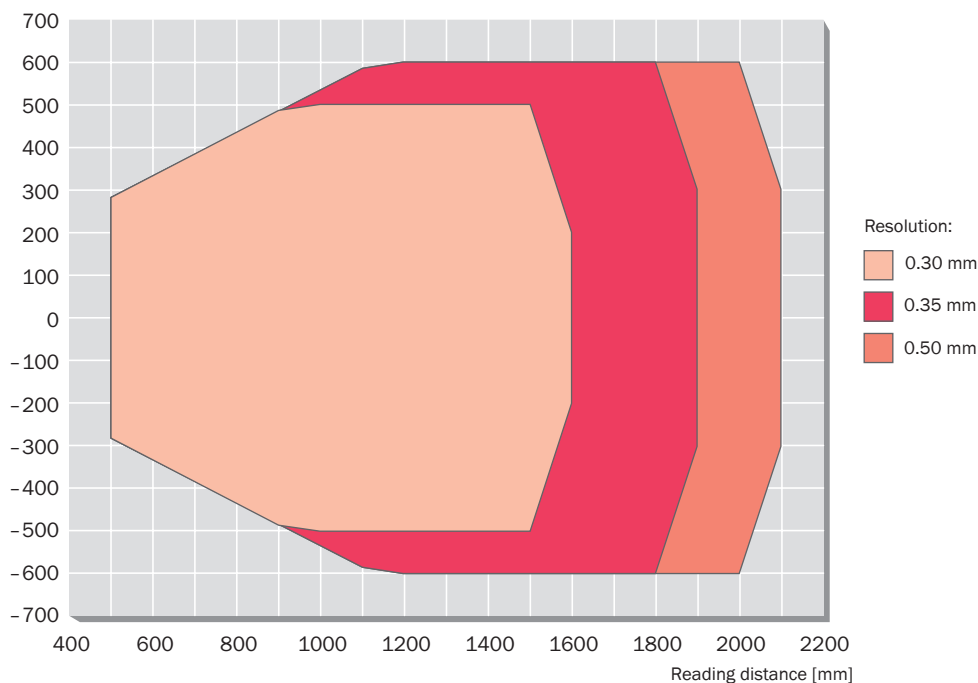
- OMNI applications
- Applications with large object distances/depth of field (DOF)
- Grid box/pallet applications
- Object identification in boxes
- Tasks in parcel and courier services



Application ranges for the variants as a function of module width

Line scanner. (standard density)

Reading field height
[mm]



Reading field diagram CLV 490 line scanner: standard density

Reading conditions:

Test code: code 128

Print contrast: > 90 %

Ambient light: < 2000 lx

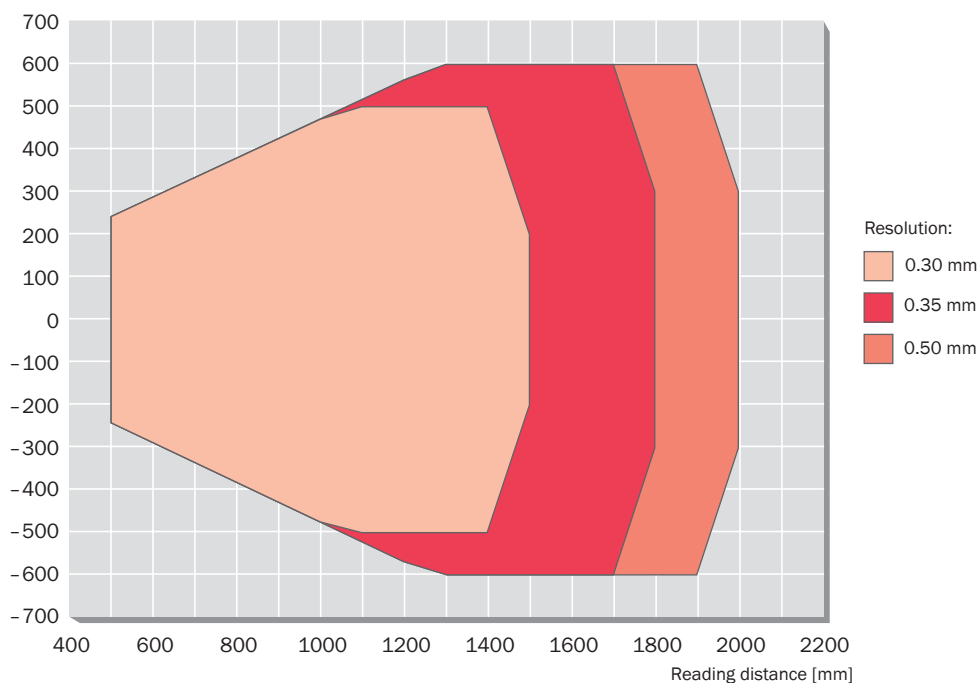
Tilt: - 45° ... + 45°

Pitch: - 15° ... + 15°

Skew: - 15° ... + 15°

Line scanner with oscillating mirror. (standard density)

Reading field height
[mm]



Reading field diagram CLV 490 line scanner with oscillating mirror: standard density

Reading conditions:

Test code: code 128

Print contrast: > 90 %

Ambient light: < 2000 lx

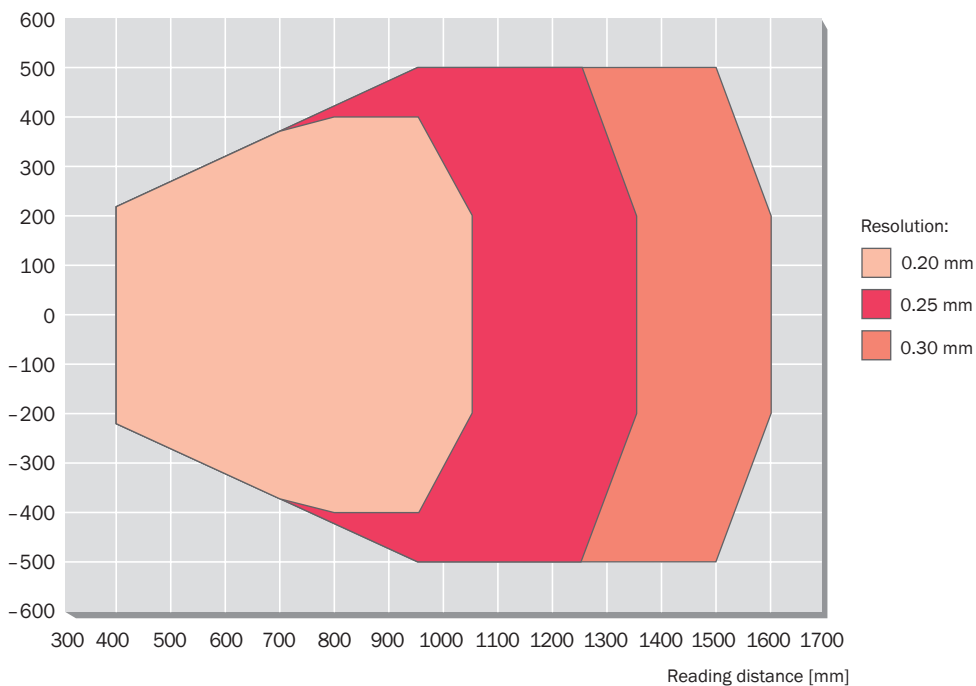
Tilt: - 45° ... + 45°

Pitch: - 15° ... + 15°

Skew: - 15° ... + 15°

Line scanner. (high density)

Reading field height
[mm]



Reading field diagram CLV 490 line scanner: high density

Reading conditions:

Test code: code 128

Print contrast: > 90 %

Ambient light: < 2000 lx

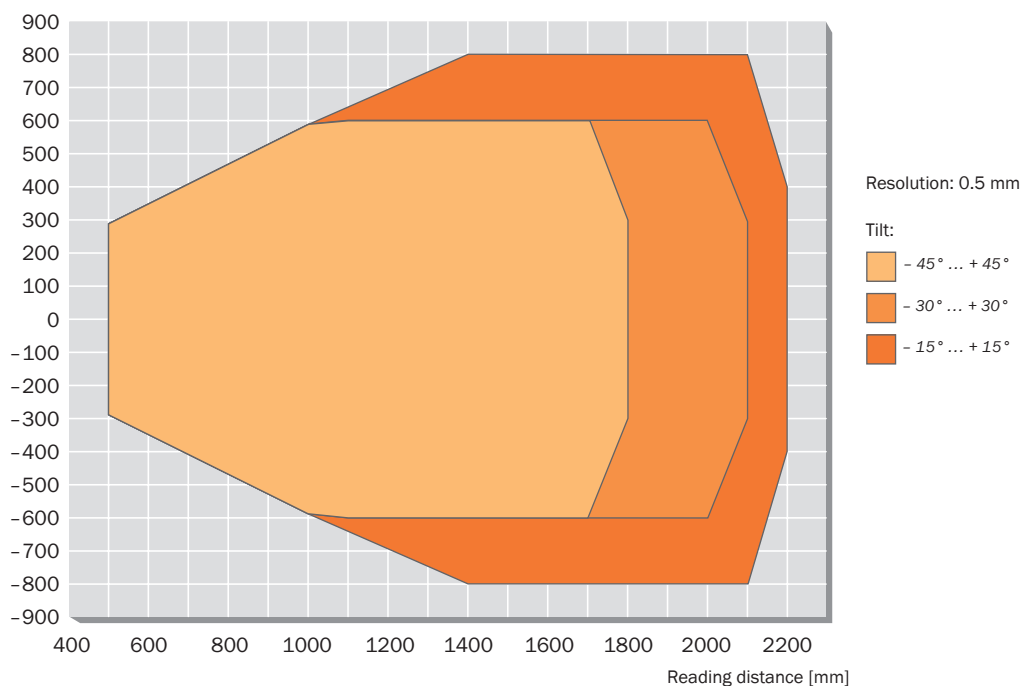
Tilt: - 45° ... + 45°

Pitch: - 15° ... + 15°

Skew: - 15° ... + 15°

Line scanner. (low density)

Reading field height
[mm]



Reading field diagram CLV 490 line scanner: low density

Reading conditions:

Test code: code 128

Print contrast: > 90 %

Ambient light: < 2000 lx

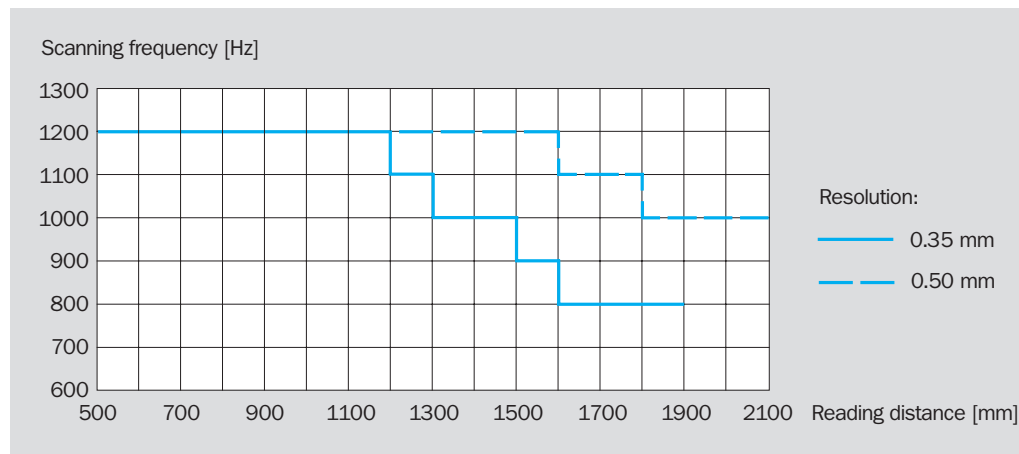
Pitch: - 15° ... + 15°

Skew: - 15° ... + 15°

Line scanner.

Line scanner with oscillating mirror. (standard density)

Reading distance as a function of the scanning frequency for line scanner



CLV 490 Bar-Code Scanner

Design	Line scanner, options: with oscillating mirror, heating
Resolution	Standard density, high density, low density
Light source	Laser diode, red light ($\lambda = 650 \text{ nm}$)
Laser class	2 (to EN 60825-1)
Ambient light compability	2000 lx (on bar code)
Scanning/decoding frequency	600 ... 1200 Hz
Aperture angle	Max. 60° (max. 50° with oscillating mirror)
Operation and parametrization	With Windows-based CLV-Setup software or command strings
Indicators	4 LED (status indicators)
Data interface	Host: RS 232, RS 422/485; terminal: RS 232
Switching inputs/outputs	6 x IN / 4 x OUT
Operating voltage	18 ... 30 V DC (24 V DC + 20 % / - 10 % with heating)
Power consumption	Line scanner: typical 11 W, max. 16 W typical 75 W, max. 90 W (with heating) Line scanner with typical 13 W, max. 18 W oscillating mirror: typical 75 W, max. 100 W (with heating)
Electrical connections	2 x 15-pin D Sub-HD plug/socket
Housing	Die-cast aluminium
Enclosure rating	IP 65 (to DIN 40 050)
Protection class	Class 3 (to VDE 0106)
EMC test	To EN 61000-6-2, EN 61000-6-3
Weight	1.5 kg (line scanner)/2.2 kg (with oscillating mirror)
Temperature (ambient operating/storage)	0 ... +40 °C (-35 ... +35 °C with heating)/-20 ... +70 °C

Technical drawing of the SICK CLV490 sensor, showing front, top, and side views with dimensions.

Front View (Left): Shows the sensor housing with a status indicator window containing four LEDs labeled: Device Ready, Sensor, Read Result, and Data. The SICK logo and model number CLV490 are visible on the right side.

Top View (Right): Shows the sensor housing with dimensions: 94 mm width, 73.5 mm height, and a 60° field of view angle. The SICK logo and model number CLV490 are visible on the right side.

Side View (Bottom): Shows the sensor housing with dimensions: 117 mm width, 117 mm height, and a 60° field of view angle. The SICK logo and model number CLV490 are visible on the right side.

Top View (Right): Shows the sensor housing with dimensions: 31 mm, 26 mm, and 37 mm. The SICK logo and model number CLV490 are visible on the right side.

Drilled hole: $\varnothing 3.6$; 6 mm deep

Trapped blind hole: M 6, 7 mm deep

All dimensions in mm

Technical drawing of the SICK CLV490 sensor, showing front, side, and top views with dimensions in mm.

Front View Dimensions:

- Total width: 127.5
- Mounting flange width: 117
- Mounting flange thickness: 2
- Mounting holes: 3 holes, spaced 56 mm apart.

Side View Dimensions:

- Total height: 183
- Mounting flange height: 70
- Mounting flange thickness: 3.5
- Mounting holes: 4 holes, spaced 38.5 mm apart.
- Internal components: 10 mm spacing.
- Drilled hole: $\varnothing 3.6$; 6 mm deep

Top View Dimensions:

- Total width: 86
- Mounting flange width: 82
- Mounting flange thickness: 3.5
- Mounting holes: 4 holes, spaced 38.5 mm apart.
- Internal components: 10 mm spacing.
- Drilled hole: $\varnothing 3.6$; 6 mm deep

Other Details:

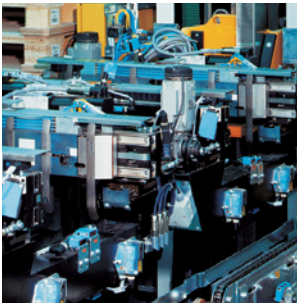
- Trapped blind hole M6, 7 mm deep
- Max. $\pm 20^\circ$ (Mounting flange angle)
- 50° (Mounting flange angle)
- Labels: SICK, Device Ready, Sensor, Read Result, Data

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RANGE OF EXPERTISE

INDUSTRIAL SENSORS

Our complete range of sensors provides answers to suit any application in the field of automation. Even under rugged ambient conditions objects are reliably detected, counted and positioned in respect of their form, location and surface finish, as well as their distances established with pin-point accuracy.



INDUSTRIAL SAFETY SYSTEMS

Comprehensive safeguarding of both personnel and machinery! As specialists in Sensor Technology, SICK develops and manufactures pioneering products for providing protection in hazardous zones, dangerous locations and for safeguarding access points. By providing services, which encompass all aspects of machine safety and security, SICK is setting new standards in Safety Technology.



AUTO IDENT

Whether the tasks involve identification, handling, classification or volume measurement, innovative Auto Ident systems and laser measuring systems function extremely reliably, even under rapid cycle times. They conform to the latest Standards and can be simply and speedily integrated in all industrial environments and external applications.



ANALYZERS AND PROCESS INSTRUMENTATION

System control, maintaining setpoints, optimising process control and monitoring the flow of materials – the instruments and services for Analysis and Process Measurement, supplied by SICK MAIHAK, are setting the standards for these applications in terms of Technology and Quality.



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