Always well-focused.
The CLV 490 Bar-Code Scanner.
With autofocus.

Advanced Line

SICK

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° ... + 45°
- 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
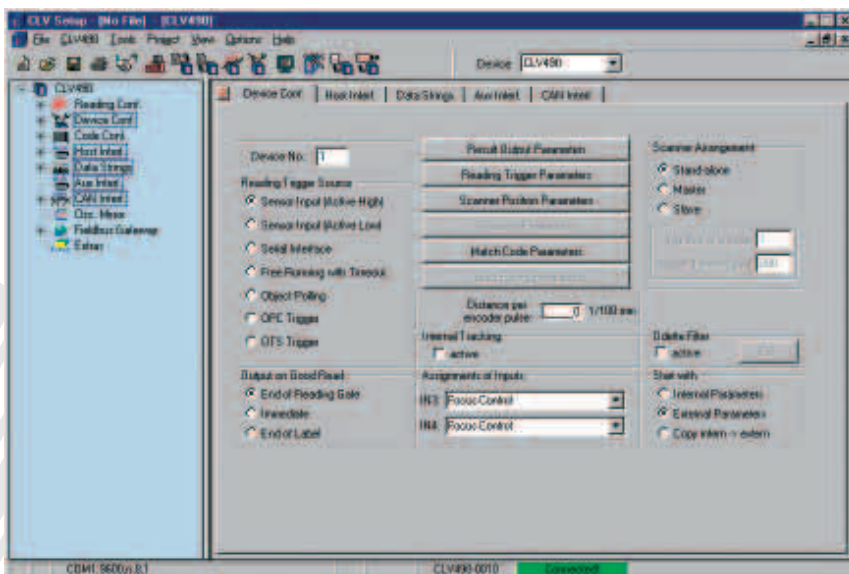- Optional heater

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

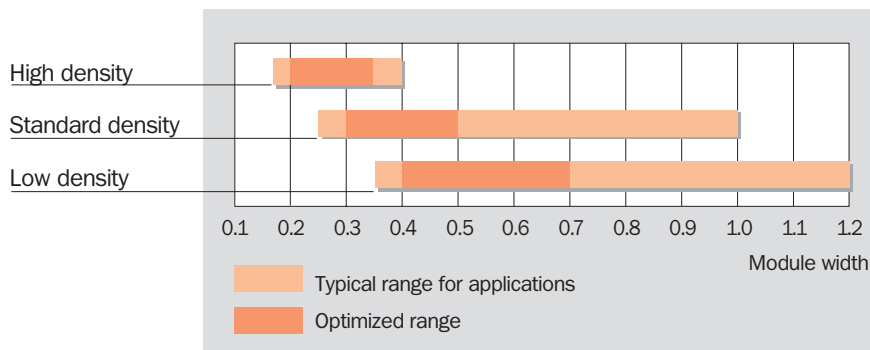## With SMART Code Recognition Technology

Line scanner with oscillating mirror

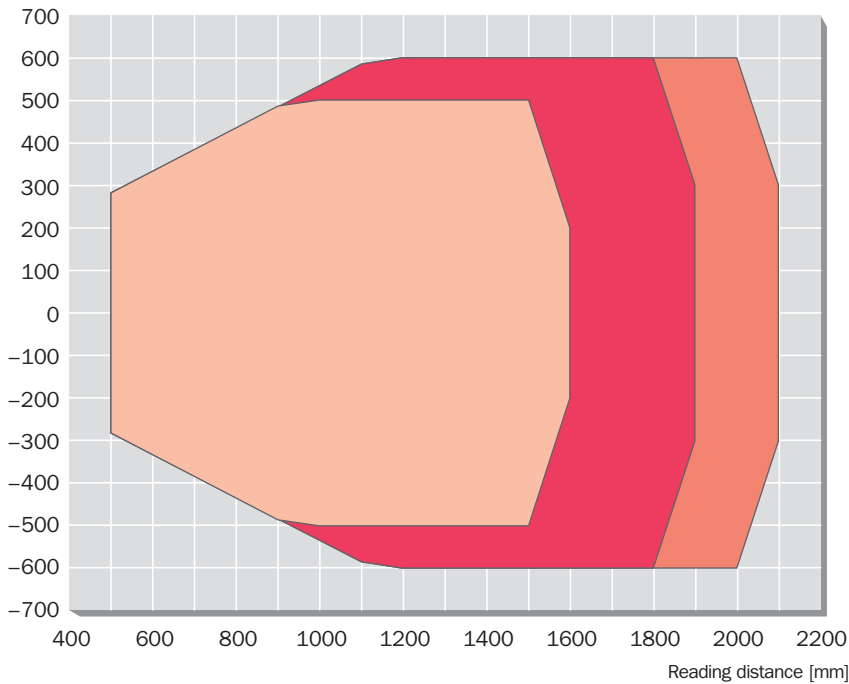*Easy to operate and configure with the CLV Setup program*

- 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]

Resolution:
- 0.30 mm
- 0.35 mm
- 0.50 mm

Reading distance [mm]

Reading conditions:
Test code: code 128
Print contrast: > 90 %
Ambient light: < 2000 lx
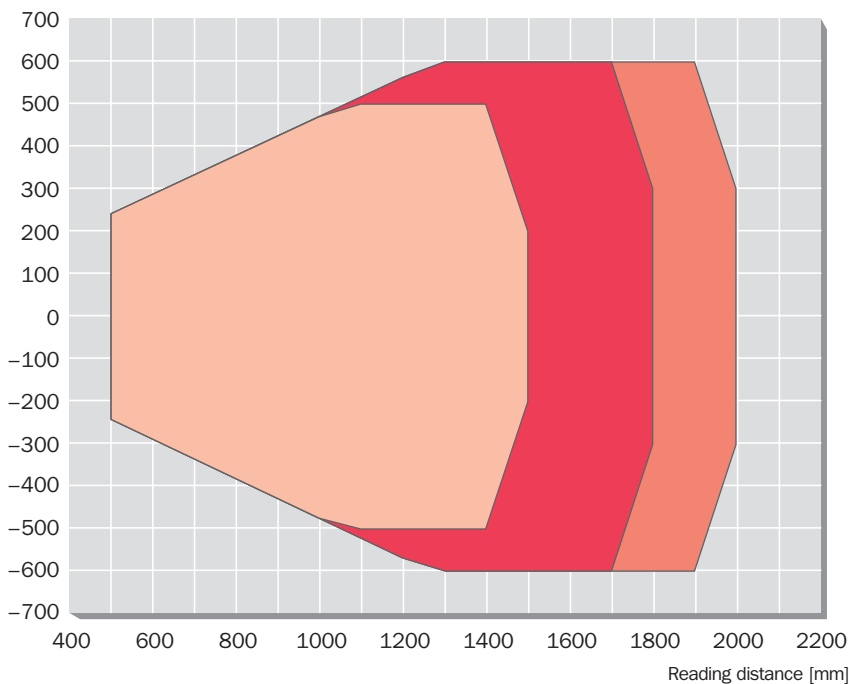
Tilt: − 45° ... + 45°
Pitch: − 15° ... + 15°
Skew: − 15° ... + 15°

Reading field diagram CLV 490 line scanner: standard density

Line scanner with oscillating mirror.
(standard density)

Reading field height
[mm]

Resolution:
- 0.30 mm
- 0.35 mm
- 0.50 mm

Reading distance [mm]

Reading conditions:
Test code: code 128
Print contrast: > 90 %
Ambient light: < 2000 lx
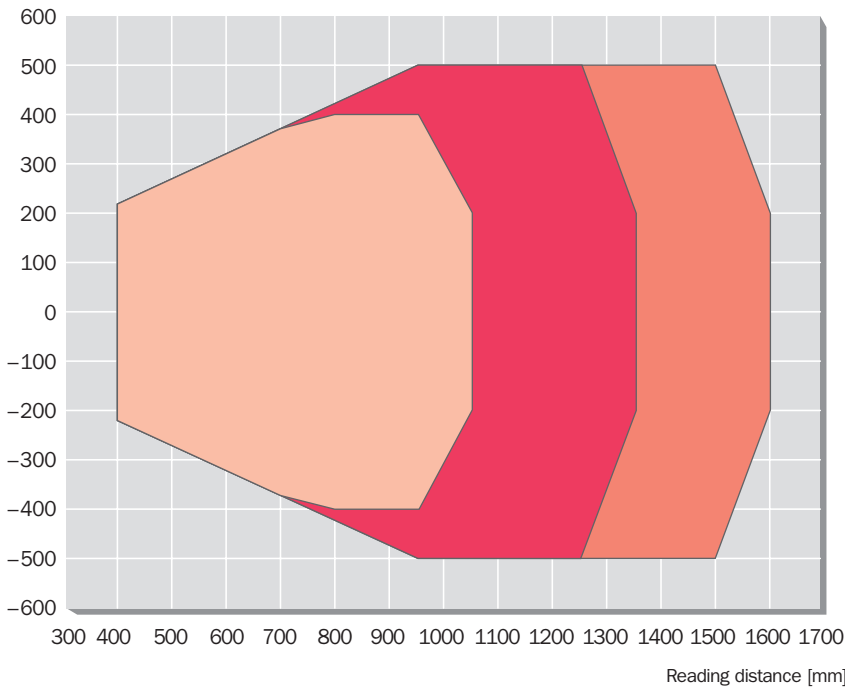
Tilt: − 45° ... + 45°
Pitch: − 15° ... + 15°
Skew: − 15° ... + 15°

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

Line scanner.
(high density)

Reading field height
[mm]

Resolution:

- 0.20 mm
- 0.25 mm
- 0.30 mm

Reading distance [mm]

Reading conditions:
Test code: code 128
Print contrast: > 90 %
Ambient light: < 2000 lx

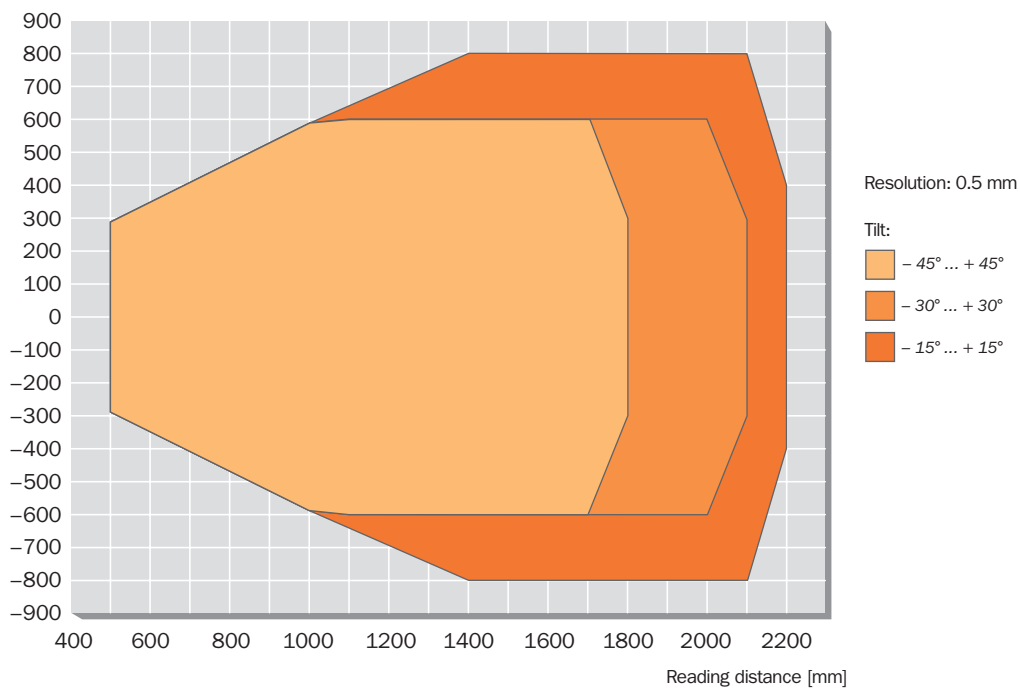Tilt: − 45° ... + 45°
Pitch: − 15° ... + 15°
Skew: − 15° ... + 15°

Reading field diagram CLV 490 line scanner: high density

Line scanner.
(low density)

Reading field height
[mm]

Resolution: 0.5 mm

Tilt:

- − 45° ... + 45°
- − 30° ... + 30°
- − 15° ... + 15°

Reading distance [mm]

Reading conditions:
Test code: code 128
Print contrast: > 90 %
Ambient light: < 2000 lx

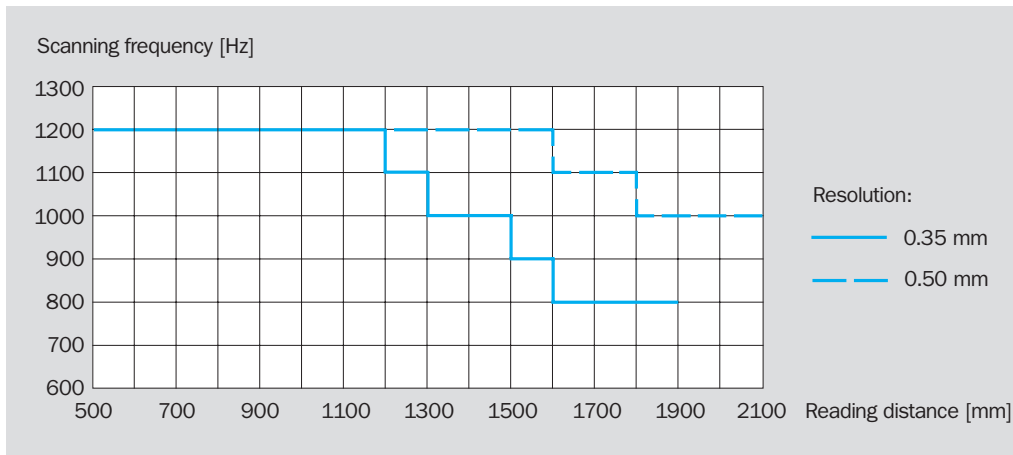Pitch: − 15° ... + 15°
Skew: − 15° ... + 15°

Reading field diagram CLV 490 line scanner: low density

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Line scanner.
Line scanner with oscillating mirror.
(standard density)

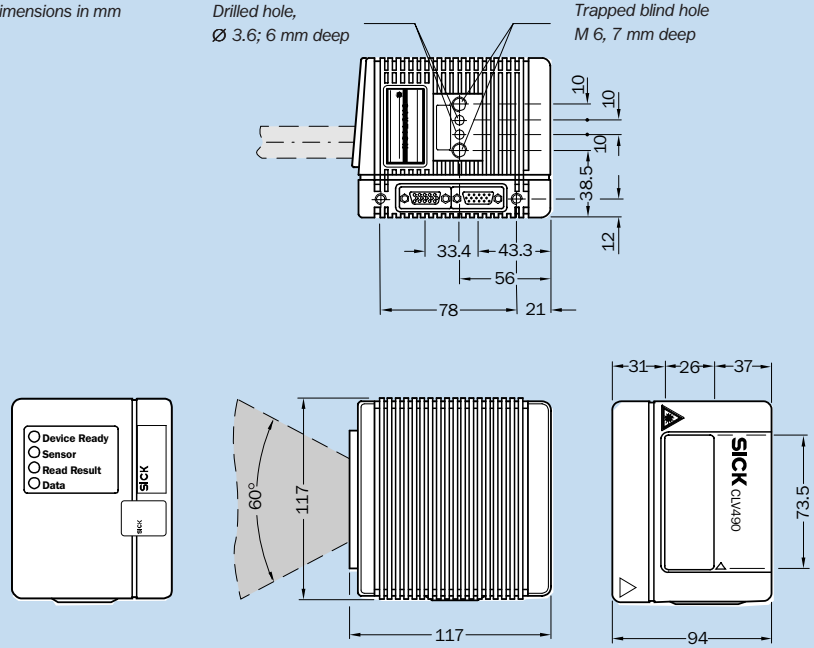### Reading distance as a function of the scanning frequency for line scanner

Scanning frequency [Hz]

Resolution:

———— 0.35 mm

— — — 0.50 mm

Reading distance [mm]

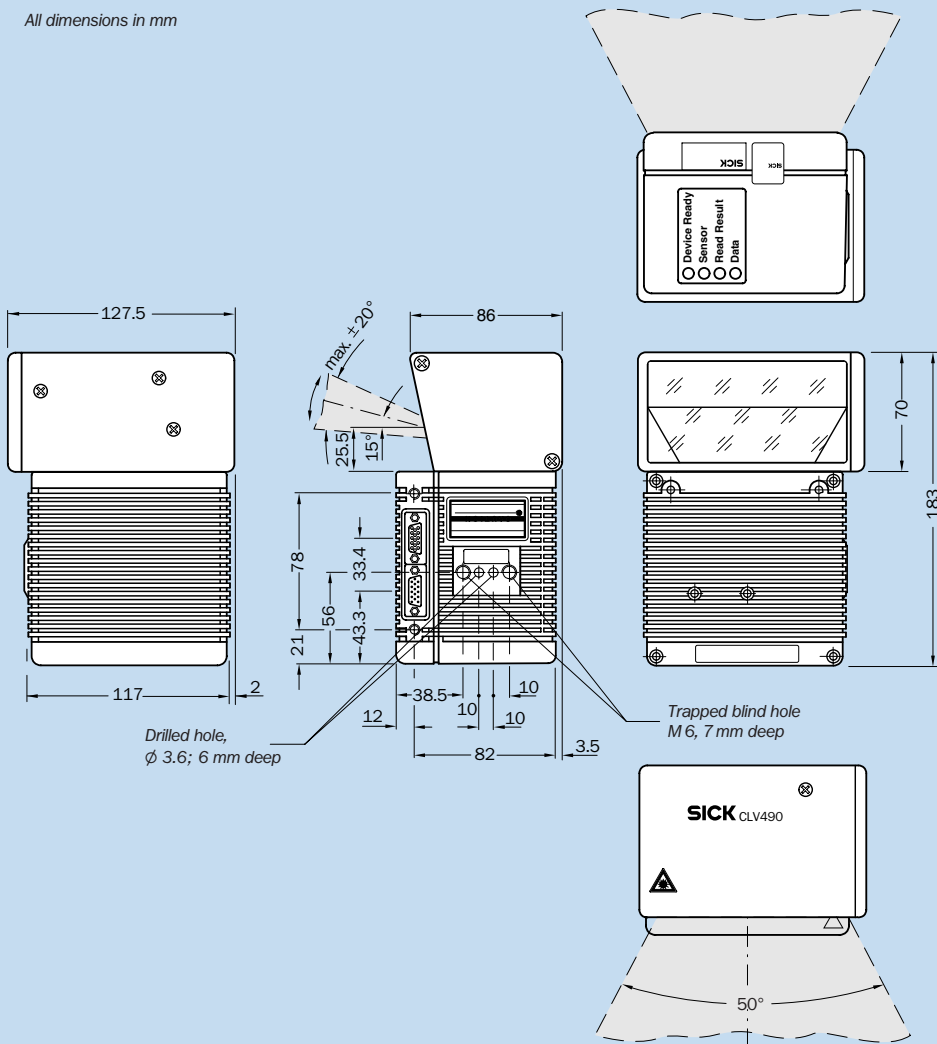| CLV 490 Bar-Code Scanner	
Design	Line scanner, options: with oscillating mirror, heating
Resolution	Standard density, high density, low density
Light source	Laser diode, red light ($\lambda = 650$ nm)
Laser class	2 (to EN 60825-1)
Ambient light compability	2000 lx (on bar code)
Scanning/decoding frequency	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

All dimensions in mm

Drilled hole,
Ø 3.6; 6 mm deep

Trapped blind hole
M 6, 7 mm deep

10
10
10
38.5
12

33.4
43.3
56
78
21

Device Ready
Sensor
Read Result
Data

SICK

SICK

60°
117

117

31
26
37

SICK CLV490

73.5

94

*Dimensional drawing
CLV 490 line scanner*

All dimensions in mm

SICK

Device Ready
Sensor
Read Result
Data

127.5

max. ±20°
25.5
15°

86

78
33.4
56
43.3
21

70

183

117
2

12
38.5
10
10
10

82
3.5

Drilled hole,
Ø 3.6; 6 mm deep

Trapped blind hole
M 6, 7 mm deep

SICK CLV490

50°

*Dimensional drawing CLV 490
line scanner with oscillating mirror*

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.

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.

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.

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.

SICK
Sensor Intelligence.

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