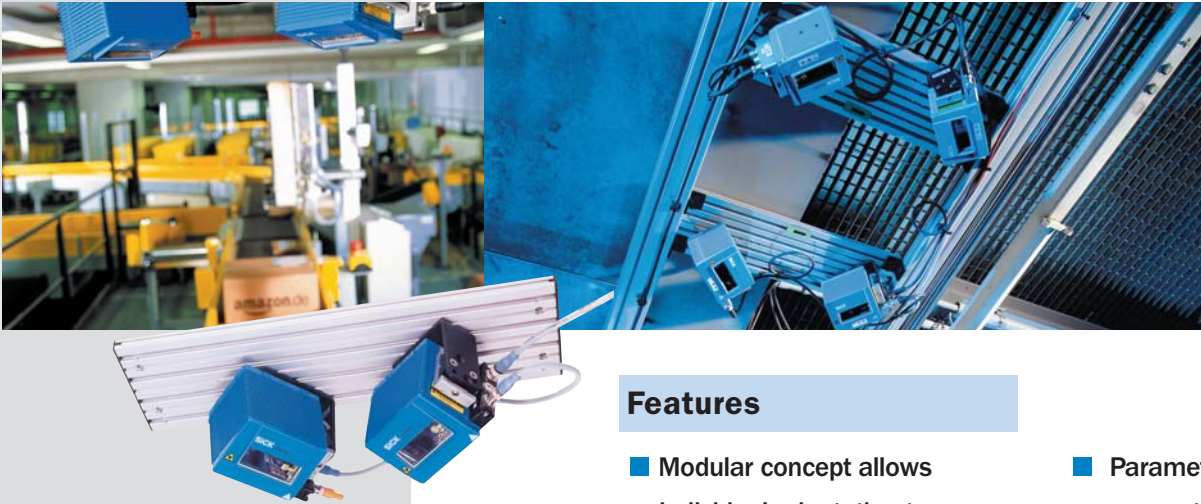


# OPS 290/490/360/560

## Omni Directional Scanning Systems



### Features

- Modular concept allows individual adaptation to your application
- Use of CLV 490 high-end scanners (see CLV 490 features, pages 58-63)
- Real-time Auto Focus Control function without additional hardware
- Parameters stored in the connecting plug and Quick Release Brackets allow easy scanner replacements
- Extremely large depths of field even with narrow module widths due to the Auto Focus Control function and state-of-the-art optics design

Stocked, Distributed, and Supported by

**SENSORS**  
INCORPORATED

507 Kelsey Street • Delano, MN 55328  
Phone 763-972-1040 Fax 763-972-1041  
Toll Free 888-920-0939  
Sensorsincorporated.com

The SICK OPS (Omni Portal System) is a modular bar code reading system that meets the most modern logistical demands. For bar code labels to be read in random orientation, it is important to optimize the design of the scanning system according to the individual requirements of the application. The modular concept of the SICK OPS makes it easy - the use of individual scanners allows the ideal configuration for your individual application.

The SICK OPS utilizes CLV 490 Scanners with patented, real-time Automatic Focus Control to provide optimum read rates at maximum depths of field. The CLV 490 also has SMART code recognition technology to provide reliable identification even if

bar codes are damaged, dirty, tilted, or partially hidden. Via its cloning capabilities, parameters for each individual scanner are stored in the connecting plug. This allows for easy device replacement with minimal downtime, resulting in extremely high productivity. All OPS Systems include a tracking module to accurately assign a bar code to a package when package gaps are small.

The OPS is ideal for identifying bar codes on goods and freight in retail distribution, warehousing, and parcel logistics environments. SICK offers a comprehensive system solution: from electronics, photoelectric switches and evaluation software to commissioning and worldwide service.

## Comparison Table

	OPS 290 Standard	OPS 490 Standard
Number of Scanners and Angle to Conveyor	2 line scanners at 45°	4 line scanners at 45°
Maximum Tilt	45°	45°
Scan Frequency	600...1200 Hz per scan line	600...1200 Hz per scan line
Coverage Width	31.5 in (800 mm)	59.1 in (1500 mm)
Coverage Height	31.5 in (800 mm)	31.5 in (800 mm)
Line Speed	up to 590 ft/min (180 m/min)	up to 590 ft/min (180 m/min)

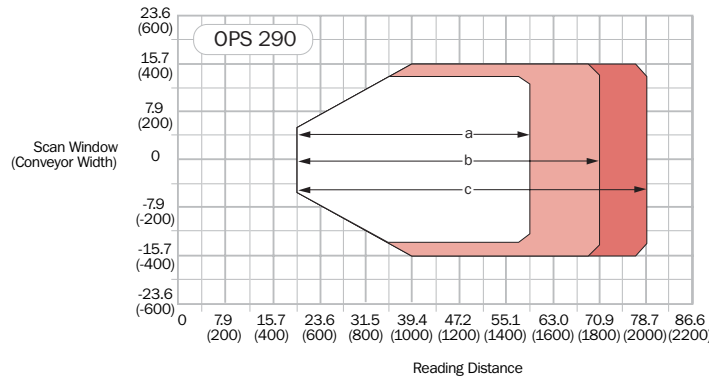
	OPS 360 Standard	OPS 560 Standard
Number of Scanners and Angle to Conveyor	2 line scanners at 30° 1 line scanner at 90°	4 line scanners at 30° 1 line scanner at 90°
Maximum Tilt	45°	45°
Scan Frequency	600...1200 Hz per scan line	600...1200 Hz per scan line
Coverage Width	23.5 in (597 mm)	42.5 in (1080 mm)
Coverage Height	31.5 in (800 mm)	31.5 in (800 mm)
Line Speed	up to 590 ft/min (180 m/min)	up to 590 ft/min (180 m/min)

Omni Directional  
and Dimensioning



Reading Ranges

Dimensions in inches (mm)



**Code Resolution**

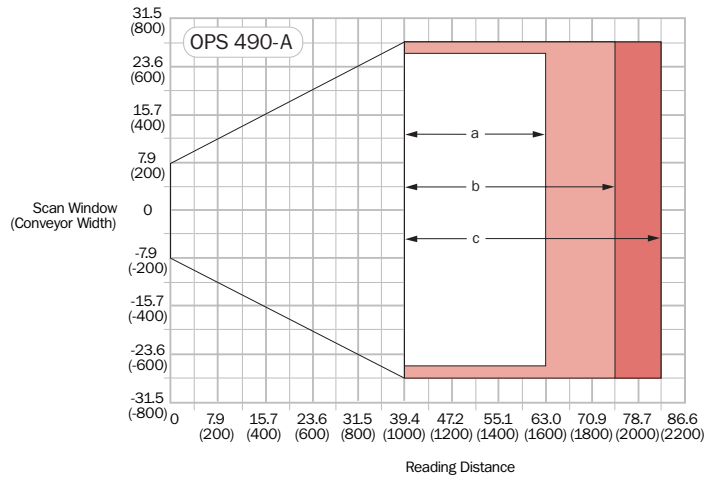
- a: 0.011 in (0.30 mm)
- b: 0.013 in (0.35 mm)
- c: 0.020 in (0.50 mm)

**Conveyor Width**

- a: 27.6 in (700 mm)
- b: 31.5 in (800 mm)
- c: 31.5 in (800 mm)

**Depth of Field**

- a: 21.7 in (550 mm)
- b: 31.5 in (800 mm)
- c: 37.4 in (950 mm)



**Code Resolution**

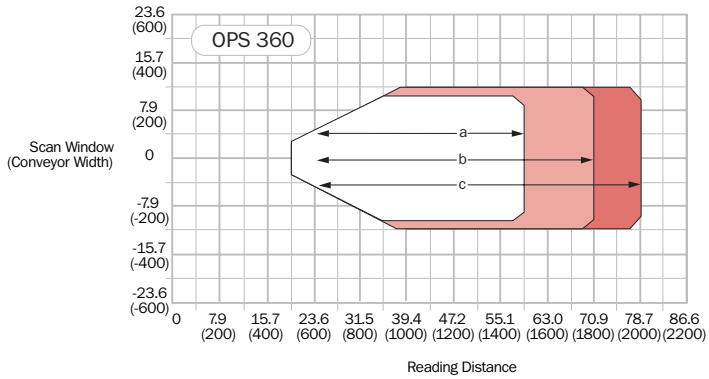
- a: 0.011 in (0.30 mm)
- b: 0.013 in (0.35 mm)
- c: 0.020 in (0.50 mm)

**Conveyor Width**

- a: 51.2 in (1300 mm)
- b: 55.2 in (1400 mm)
- c: 55.2 in (1400 mm)

**Depth of Field**

- a: 23.6 in (600 mm)
- b: 31.5 in (800 mm)
- c: 39.4 in (1000 mm)



**Code Resolution**

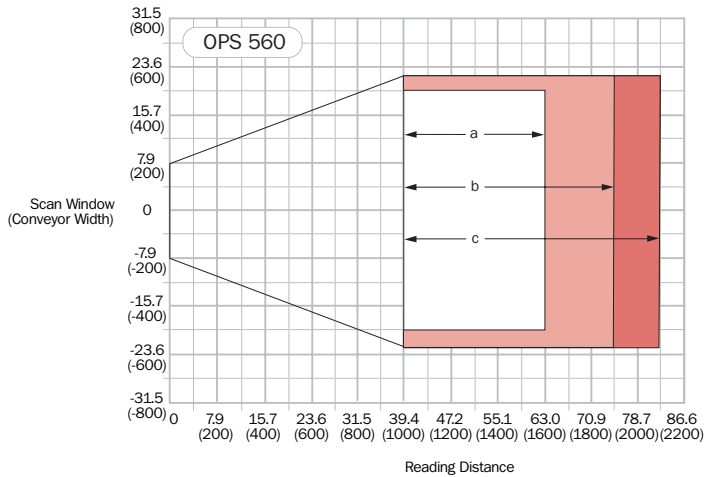
- a: 0.011 in (0.30 mm)
- b: 0.013 in (0.35 mm)
- c: 0.020 in (0.50 mm)

**Conveyor Width**

- a: 19.7 in (500 mm)
- b: 23.6 in (600 mm)
- c: 23.6 in (600 mm)

**Depth of Field**

- a: 21.7 in (550 mm)
- b: 31.5 in (800 mm)
- c: 37.4 in (950 mm)



**Code Resolution**

- a: 0.011 in (0.30 mm)
- b: 0.013 in (0.35 mm)
- c: 0.020 in (0.50 mm)

**Conveyor Width**

- a: 35.5 in (900 mm)
- b: 39.4 in (1000 mm)
- c: 39.4 in (1000 mm)

**Depth of Field**

- a: 23.6 in (600 mm)
- b: 31.5 in (800 mm)
- c: 39.4 in (1000 mm)

## Technical Specifications

	OTS Controller	OTC
Number of Bar Codes per Object	Maximum 20 (with maximum 4 scanners)	
Number of Bar Codes per Reading Field	Maximum 15 (auto-discriminating)	
Bar Code Types	Code 39, Code 128, Code 93, Codabar, EAN, EAN 128, UPS, Interleaved 2/5	
Bar Code Length	Maximum 50 characters (maximum 600 characters for all bar code per reading gate)	
Print Ratio	2:1 to 3:1	
Optical Indicators	26 x LED status and function indicators	
Reading Timing	Switching inputs "Triggers 1, 2 and 3" / Software trigger	
"Host" Data Interface	RS 232 or RS 422	
Electrical Connections	1 x AUX connection (9-pin D-Sub HD plug for diagnosis, serial) 1 x CAN connection (9-pin D-Sub HD socket)	
Operating Voltage/Power Consumption	115 V AC (230 V AC) +10%/-15%	24 V +20%/-10%
Housing	Sheet steel, lacquered, reading window from PC	Continuous cast aluminum sections
Protection Category	IP 65 (DIN 40 050)	
Protection Class	Class II (VDE 0106 / IEC 1010-1)	
EMC	IEC 801	
Vibration	IEC 68-2-6 Test FC	
Shock	IEC 68-2-27 Test EA	
Weight	Approx. 22.7 lb (10.3 kg)	Approx. 2.9 lb (1.3 kg)
Operating Temperature	32...122°F (0...50°C)	
Storage Temperature	-13...158°F (-25...70°C)	
Maximum Relative Humidity	90%, non-condensing	

OPS 290	
Number of Scanners and Angle to Conveyor	2 line scanners at 45°
Maximum Tilt	45°
Scan Rate	600...1200 Hz per scan line
Coverage for 0.014...0.02 in (0.35...0.5 mm)	
Width	31.5 in (800 mm)
Height	31.5 in (800 mm)
Speed	Up to 590 ft/min (180 m/min)
Code Height for Speed 1 m/s	>0.6 in (>15 mm) (C128) >0.8 in (>20 mm) (ITF2/5)
Code Height for Speed 2 m/s	>0.8 in (>20 mm) (C128) >1.0 in (>25 mm) (ITF2/5)

OPS 490	
Number of Scanners and Angle to Conveyor	4 line scanners at 45°
Maximum Tilt	45°
Scan Rate	600...1200 Hz per scan line
Coverage for 0.014...0.02 in (0.35...0.5 mm)	
Width	59.1 in (1500 mm)
Height	31.5 in (800 mm)
Speed	Up to 590 ft/min (180 m/min)
Code Height for Speed 1 m/s	>0.6 in (>15 mm) (C128) >0.8 in (>20 mm) (ITF2/5)
Code Height for Speed 2 m/s	>0.8 in (>20 mm) (C128) >1.0 in (>25 mm) (ITF2/5)

\* For complete CLV 490 specification, please see page 64.

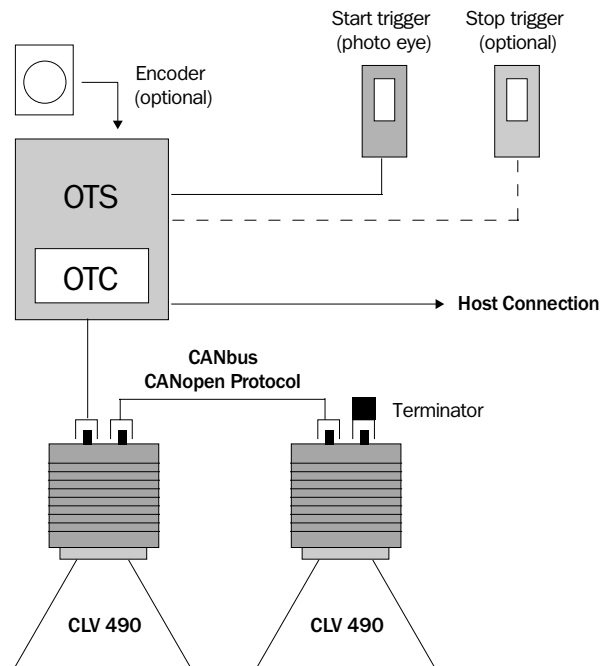
Technical Specifications

OPS 360	
Number of Scanners and Angle to Conveyor	2 line scanners at 30°, 1 line scanner at 90°
Maximum Tilt	45°
Scan Rate	600...1200 Hz per scan line
Coverage for 0.014...0.02 in (0.35...0.5 mm)	
Width	23.6 in (600 mm)
Height	31.5 in (800 mm)
Speed	Up to 590 ft/min (180 m/min)
Code Height for Speed 1 m/s	>0.5 in (>12 mm) (C128)
	>0.7 in (>17 mm) (ITF2/5)
Code Height for Speed 2 m/s	>0.7 in (>17 mm) (C128)
	>0.9 in (>23 mm) (ITF2/5)

OPS 560	
Number of Scanners and Angle to Conveyor	4 line scanners at 30°, 1 line scanner at 90°
Maximum Tilt	45°
Scan Rate	600...1200 Hz per scan line
Coverage for 0.014...0.02 in (0.35...0.5 mm)	
Width	43.3 in (1100 mm)
Height	31.5 in (800 mm)
Speed	Up to 590 ft/min (180 m/min)
Code Height for Speed 1 m/s	>0.5 in (>12 mm) (C128)
	>0.7 in (>17 mm) (ITF2/5)
Code Height for Speed 2 m/s	>0.7 in (>17 mm) (C128)
	>0.9 in (>23 mm) (ITF2/5)

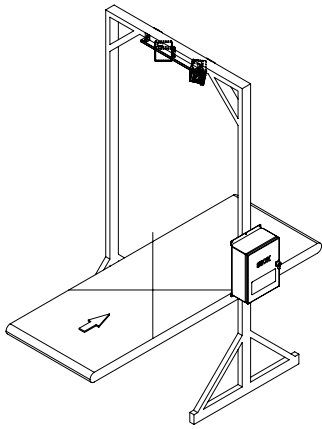
\* For complete CLV 490 specification, please see page 64.

OPS-XXX System Hardware

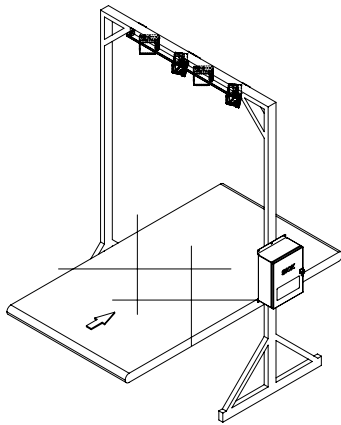


# Drawings

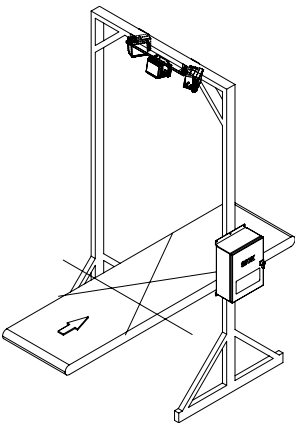
Dimensions in inches (mm)



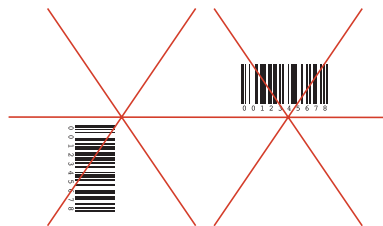
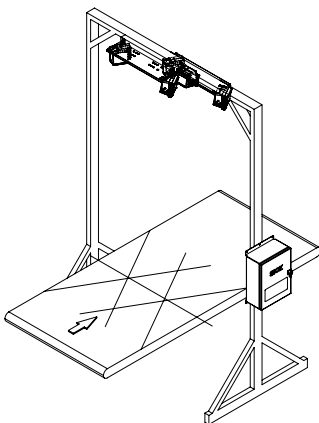
**OPS 290**  
Omni Directional Scanner



**OPS 490**  
Omni Directional Scanner



**OPS 360**  
Omni Directional Scanner



**OPS 560**  
Omni Directional Scanner