



# C45S-1601AA220

C4000 Micro in IP69K Housing

**SAFETY LIGHT CURTAINS**

**SICK**  
Sensor Intelligence.



Illustration may differ

### Ordering information

Type	part no.
C45S-1601AA220	1055516

Other models and accessories → [www.sick.com/C4000\\_Micro\\_in\\_IP69K\\_Housing](http://www.sick.com/C4000_Micro_in_IP69K_Housing)

### Detailed technical data

#### Features

<b>System part</b>	Sender
<b>Resolution</b>	14 mm
<b>Scanning range</b>	4 m
<b>Protective field height</b>	1,650 mm
<b>Synchronization</b>	Optical synchronization

#### Safety-related parameters

<b>Type</b>	Type 4 (IEC 61496-1)
<b>Safety integrity level</b>	SIL 3 (IEC 61508)
<b>Category</b>	Category 4 (EN ISO 13849)
<b>Performance level</b>	PL e (EN ISO 13849)
<b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b>	$15 \times 10^{-9}$ (EN ISO 13849)
<b>T<sub>M</sub> (mission time)</b>	20 years (EN ISO 13849)
<b>Safe state in the event of a fault</b>	At least one OSSD is in the OFF state.

#### Functions

<b>Protective operation</b>	✓
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#### Interfaces

<b>System connection</b>	
Direction of cable connection	Straight
Cable diameter	6 mm
Conductor cross section	0.25 mm <sup>2</sup>
Permitted cable length	15 m
<b>Configuration method</b>	Hard wired
<b>Display elements</b>	7-segment display

## Electronics

<b>Protection class</b>	III (IEC 61140)
<b>Supply voltage <math>V_S</math></b>	24 V DC (19.2 V ... 28.8 V) <sup>1)</sup>
<b>Residual ripple</b>	$\leq 10\%$ <sup>2)</sup>

<sup>1)</sup> The external voltage supply must be capable of buffering brief mains voltage failures of 20 ms as specified in EN 60204-1. Suitable power supplies are available as accessories from SICK.

<sup>2)</sup> Within the limits of  $V_S$ .

## Mechanics

<b>Housing diameter</b>	50 mm
<b>Material</b>	
End caps	Stainless steel V4A
Plastic tube	PMMA
Compensating element (membrane)	PA 6
PG connector	PA 6

## Ambient data

<b>Enclosure rating</b>	IP69K, IP67, IP66, IP65 (IEC 60529)
<b>Ambient operating temperature</b>	-30 °C ... +55 °C
<b>Storage temperature</b>	-30 °C ... +70 °C
<b>Air humidity</b>	15 % ... 95 %, Non-condensing
<b>Vibration resistance</b>	5 g, 10 Hz ... 55 Hz (EN 60068-2-6)
<b>Shock resistance</b>	10 g, 16 ms (EN 60068-2-27)

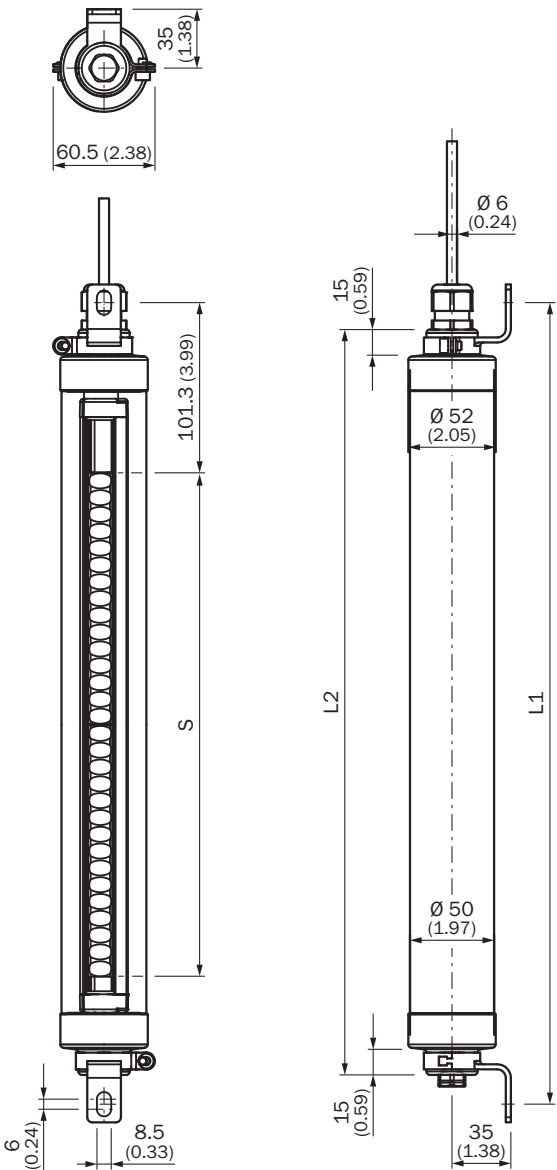
## Other information

<b>Wave length</b>	850 nm
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## Classifications

<b>ECLASS 5.0</b>	27272704
<b>ECLASS 5.1.4</b>	27272704
<b>ECLASS 6.0</b>	27272704
<b>ECLASS 6.2</b>	27272704
<b>ECLASS 7.0</b>	27272704
<b>ECLASS 8.0</b>	27272704
<b>ECLASS 8.1</b>	27272704
<b>ECLASS 9.0</b>	27272704
<b>ECLASS 10.0</b>	27272704
<b>ECLASS 11.0</b>	27272704
<b>ECLASS 12.0</b>	27272704
<b>ETIM 5.0</b>	EC002549
<b>ETIM 6.0</b>	EC002549
<b>ETIM 7.0</b>	EC002549
<b>ETIM 8.0</b>	EC002549
<b>UNSPSC 16.0901</b>	46171620

Dimensional drawing









Dimensions in mm (inch)  
illustration sender (receiver mirror image)

Protective field height S	L1	L2
150	357	324
300	476	443
450	626	593
600	777	744
750	927	894
900	1.078	1.045
1.050	1.228	1.195
1.200	1.377	1.344
1.350	1.529	1.496
1.500	1.680	1.647

Protective field height S	L1	L2
1.650	1.830	1.797
1.800	1.981	1.948

## Recommended accessories

Other models and accessories → [www.sick.com/C4000\\_Micro\\_in\\_IP69K\\_Housing](http://www.sick.com/C4000_Micro_in_IP69K_Housing)

	Brief description	Type	part no.
device protection and care			
	<ul style="list-style-type: none"> <li><b>Product family:</b> Cleaning agents</li> <li><b>Description:</b> Cloth for cleaning optical surfaces</li> </ul>	Lens cloth	4003353
	<ul style="list-style-type: none"> <li><b>Description:</b> Bidirectional ventilation membrane made from Gore-Tex</li> </ul>	Bidirectional ventilation membrane	5309082
Mounting systems			
	<ul style="list-style-type: none"> <li><b>Description:</b> Stainless steel bracket, rotatable</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4350, stainless steel 1.4301</li> <li><b>Packing unit:</b> 4 pieces</li> </ul>	BEF-2SMMEAES4	2023708
	<ul style="list-style-type: none"> <li><b>Description:</b> Reinforced stainless steel bracket, rotatable</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4350, stainless steel 1.4301</li> <li><b>Packing unit:</b> 4 pieces</li> </ul>	BEF-2SMMVAES4	2026850
	<ul style="list-style-type: none"> <li><b>Description:</b> Stainless steel support bracket</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4350</li> <li><b>Packing unit:</b> 2 pieces</li> </ul>	BEF-2AAAADES2	2026849
	<ul style="list-style-type: none"> <li><b>Description:</b> Reinforced stainless steel bracket, rotatable</li> <li><b>Material:</b> Stainless steel</li> <li><b>Details:</b> Stainless steel 1.4350, stainless steel 1.4301</li> <li><b>Packing unit:</b> 2 pieces</li> </ul>	BEF-2SMMVAES2	2048373

## 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:

Contacts and other locations –[www.sick.com](http://www.sick.com)