



# V3S153-1AAAAAAP01

Visionary-B

3D MACHINE VISION

**SICK**  
Sensor Intelligence.



Illustration may differ

Ordering information

Type	part no.
V3S153-1AAAAAP01	1072939

Other models and accessories → [www.sick.com/Visionary-B](http://www.sick.com/Visionary-B)

Detailed technical data

Features

Task	Position determination Collision awareness
Technology	3D snapshot stereoscopy
Product category	Configurable, Streaming, pre-calibrated
Working distance	0.5 m ... 6 m
Detection angle	105° x 90°
Illumination	No internal illumination necessary, works only with ambient light
Factory calibrated	✓
Detection zone	6 m × 7 m for standard configuration
Further functions	2D camera integrated
Description	1 x sensor head, 1 x evaluation unit, 1 x 7" monitor, assembly accessories

Mechanics/electronics

Connection type	1 x USB 2 x sensor head, male/female Monitor (VGA/sound) Additional alarm output; two discrete outputs Machine-to-machine interface (reserved) Ethernet (reserved) Evaluation unit supply
Supply voltage	12 V DC, - 10 % 24 V DC, + 40 %
Power consumption	≤ 40 W, Kit A
Enclosure rating	IP69K IP67
Weight	1.3 kg, sensor head 5 kg, evaluation unit
Mounting	Height 1 m ... 2.4 m, angle according to the detection zone

Performance

Detectable object shape	See HMI and operating instruction
On delay	< 50 s
Response time	< 200 ms
Integrated application	3D driver assistance system for collision warning outdoors, image capturing option integrated

Interfaces

Configuration software	Via provided monitor
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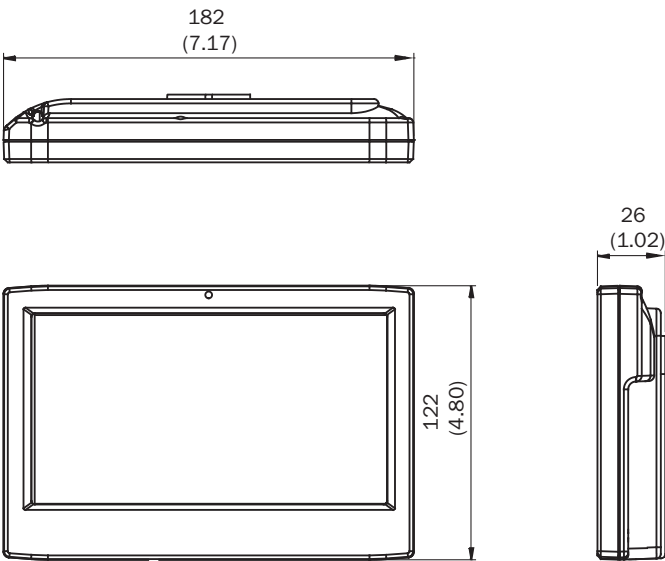
## Ambient data

<b>Electromagnetic compatibility (EMC)</b>	EN 55016-2-3:2010 + A1:2011 + A2:2014 (interference immunity) / EN 55012:2008-06 + A1:2009 (radiated emission)
<b>Fulfilled standards</b>	ISO 13766:2006-05 (earth-moving machinery), EN 12895:2015-09 (industrial trucks), EN 13309:2010-09 (construction machinery), ISO 14982:2009-02 (agricultural and forestry machinery), ISO 7637-2:2011-03, ISO 16750-2:2012-11, ISO16001:2017, EN 62311:2008, FCC PART 15:2006-08
<b>Shock load</b>	EN 60068-2-29:1994-01 (50 g / 6 ms)
<b>Vibration load</b>	EN 60068-2-64:2008-11 (5,9 g / 10 Hz - 2 kHz)
<b>Ambient operating temperature</b>	-40 °C ... +75 °C, sensor head -20 °C ... +40 °C, evaluation unit
<b>Ambient light immunity</b>	200 lx ... 80,000 lx

## Classifications

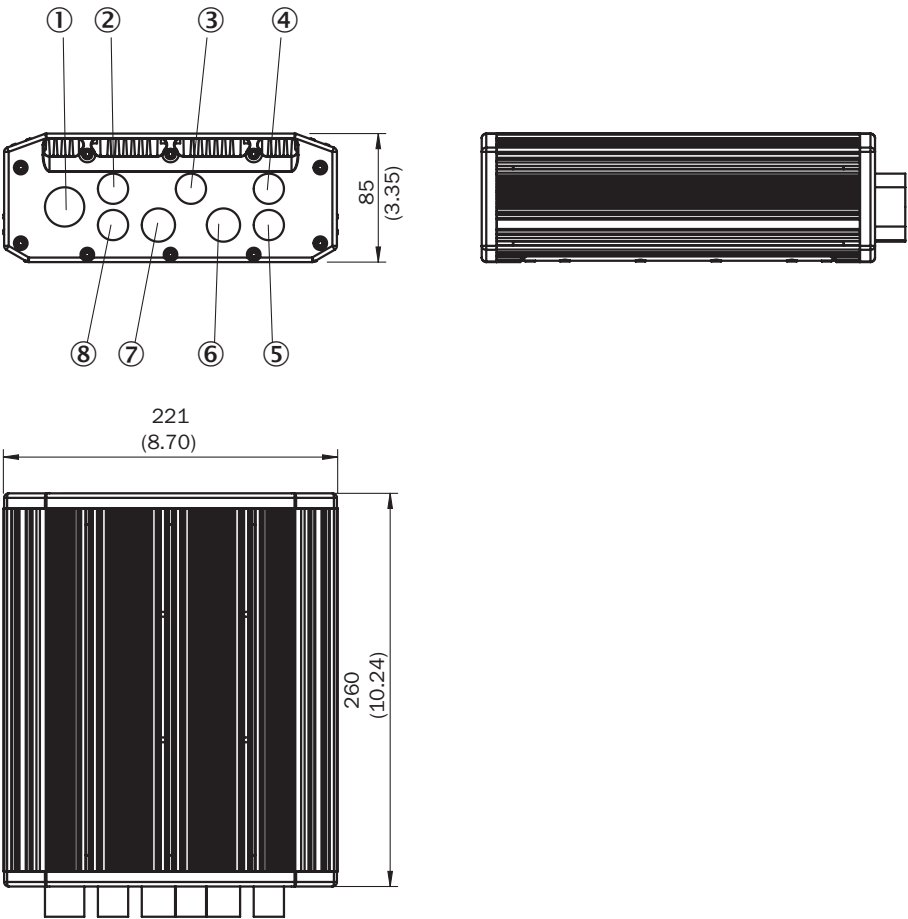
<b>ECLASS 5.0</b>	27310205
<b>ECLASS 5.1.4</b>	27310205
<b>ECLASS 6.0</b>	27310205
<b>ECLASS 6.2</b>	27310205
<b>ECLASS 7.0</b>	27310205
<b>ECLASS 8.0</b>	27310205
<b>ECLASS 8.1</b>	27310205
<b>ECLASS 9.0</b>	27310205
<b>ECLASS 10.0</b>	27310205
<b>ECLASS 11.0</b>	27310205
<b>ECLASS 12.0</b>	27310205
<b>ETIM 5.0</b>	EC001820
<b>ETIM 6.0</b>	EC001820
<b>ETIM 7.0</b>	EC001820
<b>ETIM 8.0</b>	EC001820
<b>UNSPSC 16.0901</b>	43211731

Dimensional drawing Monitor



Dimensions in mm (inch)

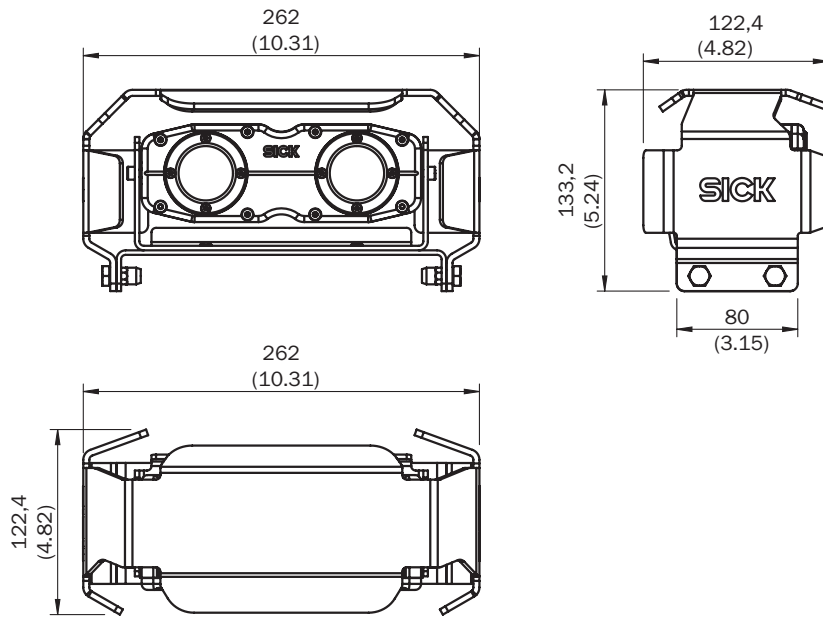
Dimensional drawing Evaluation unit



Dimensions in mm (inch)

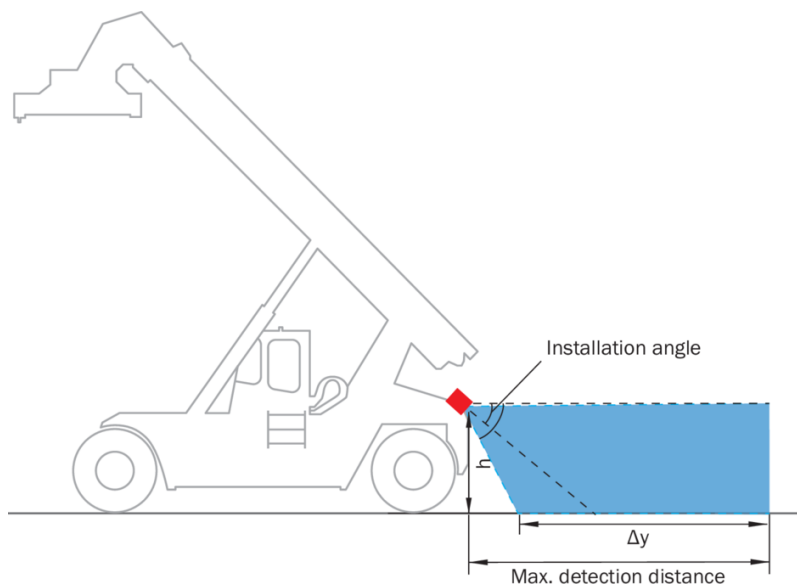
- ① M20, USB
- ② M14, 6-pin power supply EU, 12/24 V
- ③ M14, 9-pin machine interface (Kit C)
- ④ M14, 2-pin external power supply (reserved, not implemented)
- ⑤ M14, 4-pin, additional alarm output
- ⑥ Bayonet, 10-pin sensor head, female
- ⑦ Bayonet, 10-pin sensor head, male
- ⑧ M14, 9-pin VGA/sound

## Dimensional drawing Sensor head



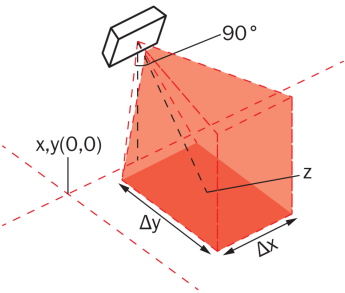
Dimensions in mm (inch)

## Field of view

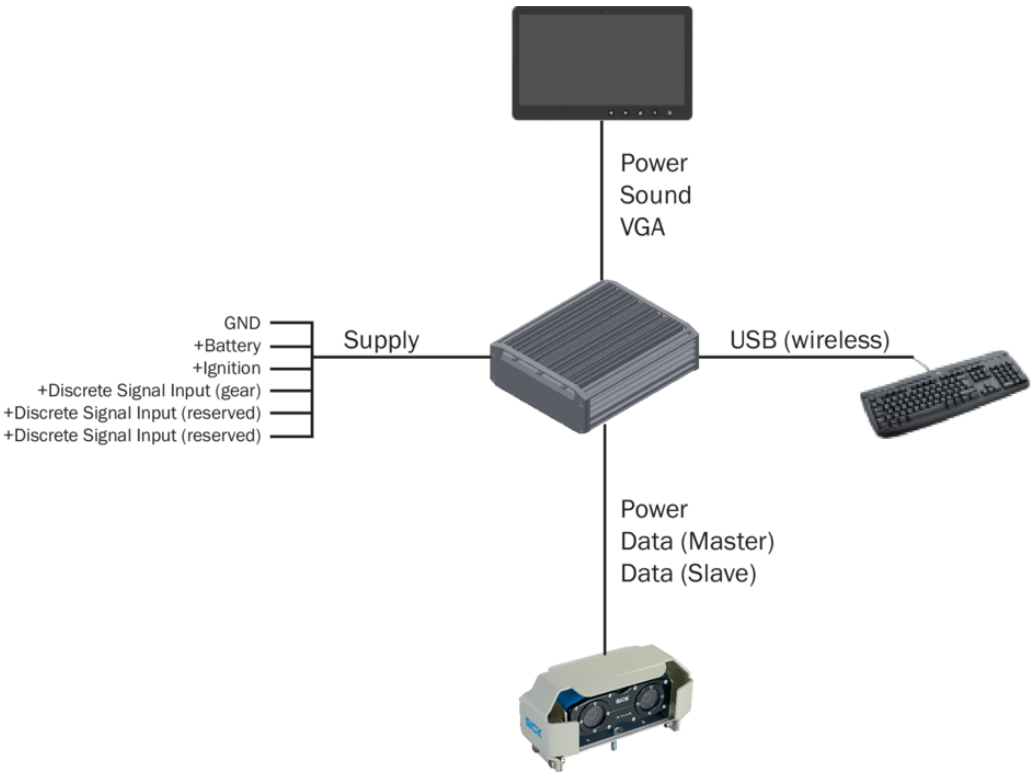


Mounting height (m)	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4
Mounting angle (°)	0	-6	-11	-17	-23	-29	-31	-33

Field of view

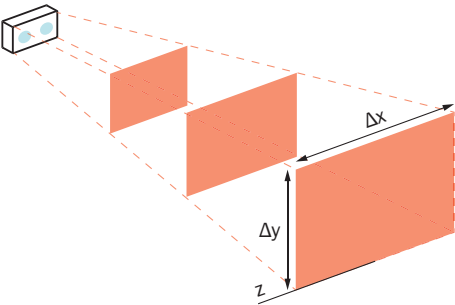


Connection diagram Kit A



Keyboard and cable sets are not included in any of the kits

Functional principle Detection volumes and 2D measuring ranges



Working distance absolute (z)	Measuring range (Δx)	Measuring range (Δy)	2D image pixel size (x × y)
0.5 m	1.73 m	0.77 m	2 mm × 1 mm
1.0 m	3.46 m	1.53 m	4 mm × 3 mm
1.5 m	5.20 m	2.30 m	6 mm × 4 mm
2.0 m	6.93 m	3.07 m	8 mm × 6 mm
3.0 m	10.39 m	4.60 m	13 mm × 8 mm
4.0 m	13.86 m	6.14 m	17 mm × 11 mm
5.0 m	17.32 m	7.67 m	21 mm × 14 mm
10.0 m	34.64 m	15.35 m	42 mm × 28 mm
15.0 m	51.96 m	23.02 m	63 mm × 42 mm
20.0 m	69.28 m	30.69 m	84 mm × 56 mm
40.0 m	138.56 m	61.39 m	167 mm × 113 mm

## 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)