Product data sheet



VISIC100SF-1300

VISIC100SF

AIR QUALITY MEASURING DEVICES

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
VISIC100SF-1300	1069478

Our regional sales organization will help you to select the optimum device configuration.

Other models and accessories ➜ www.sick.com/VISIC100SF

Detailed technical data

Technical specifications

Description	Visibility sensor for measuring K-values in tunnels with internal heater for correction on fog
Measured values	Visibility (K-value), CO, NO, NO_2
Measurement principles	Scattered light forward, electrochemical cell
Measuring ranges	
Visibility (K-value)	0 ... 15 km^{-1}
CO	0 ... 300 ppm
NO	0 ... 100 ppm
NO_2	0 ... 5 ppm
Response time (t_{90})	≤ 60 s
Accuracy	
CO (0 ... 200 ppm):	≤ 1 ppm For 0 ... 30 ppm
CO (0 ... 200 ppm):	≤ 1 % Of measuring range full scale (according EN 50545). For 30 ... 100 ppm
CO (0 ... 200 ppm):	≤ 2 % Of measuring range full scale (according EN 50545). For 100 ... 200 ppm
NO:	≤ 3 % Of measuring range full scale (according EN 50545)
NO_2:	≤ 2 % Of measuring range full scale (according EN 50545)
CO (0 ... 300 ppm):	≤ 1 ppm For 0 ... 30 ppm
CO (0 ... 300 ppm):	≤ 1 % Of measuring range full scale (according EN 50545). For 30 ... 150 ppm
CO (0 ... 300 ppm):	≤ 2 % Of measuring range full scale (according EN 50545). For 150 ... 300 ppm
Resolution	
Visibility (K-value)	± 0.001 km^{-1}
CO	± 0.5 ppm
NO	± 0.5 ppm
NO_2	± 0.05 ppm
Repeatability	

Visibility (K-value)	≤ 2 %
Ambient temperature	
	–20 °C ... +55 °C
Storage temperature	
Measuring device without electrochemical cells:	–30 °C ... +85 °C
CO, NO and NO_2 sensor:	+5 °C ... +20 °C
Ambient pressure	
	860 hPa ... 1,080 hPa
Ambient humidity	
	10 % ... 100 % Relative humidity; non-condensing
Conformities	ASTRA "Guideline - Ventilation of Road Tunnels" (2008) RABT 2006 RVS 09.02.22
Electrical safety	CE
Enclosure rating	
	IP6K9K
Analog outputs	3 outputs: 4 ... 20 mA, 500 Ω Electrically isolated; short-circuit proof
Digital outputs	2 relay contacts: 48 V, 0.5 mA, 24 W Preset for failure and maintenance request
Modbus	✓
Remark	Not available when a TAD is used
Type of fieldbus integration	RTU RS-485
PROFIBUS DP	✓
Type of fieldbus integration	RS-485
Indication	
	LC display, inside
	Status LEDs: “Operational”, “Maintenance required”, and “Fault”
Input	Functional keys
Operation	Via LC-display and function keys
Dimensions (W x H x D)	
	266 mm x 159 mm x 117 mm (for details see dimensional drawings)
Weight	
	≤ 2.8 kg
Material	Stainless steel 1.4571
Mounting	Wall-mounting, vertical, up to a wall inclination of 45°
Energy supply	
Voltage	18 V DC ... 28 V DC, ± 10 %
	Other voltages with optional connecting unit or TAD control unit
Current consumption	≤ 1 A
Power consumption	Without heating: ≤ 5 W With heating: ≤ 20 W

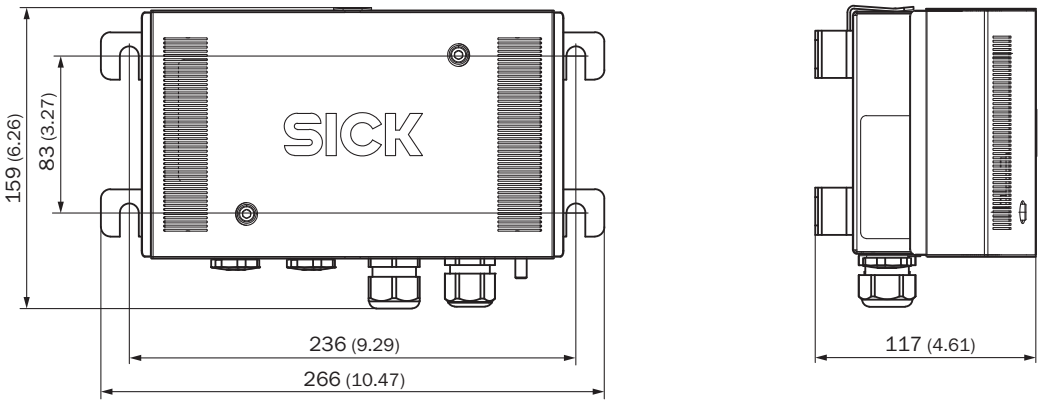
Test functions	Contamination monitoring of glass pane Drift and plausibility check Automatic self-test Functional monitoring of the optional heating
Options	CO sensor NO sensor NO_2 sensor TAD control unit Connection unit Internal heating

Classifications

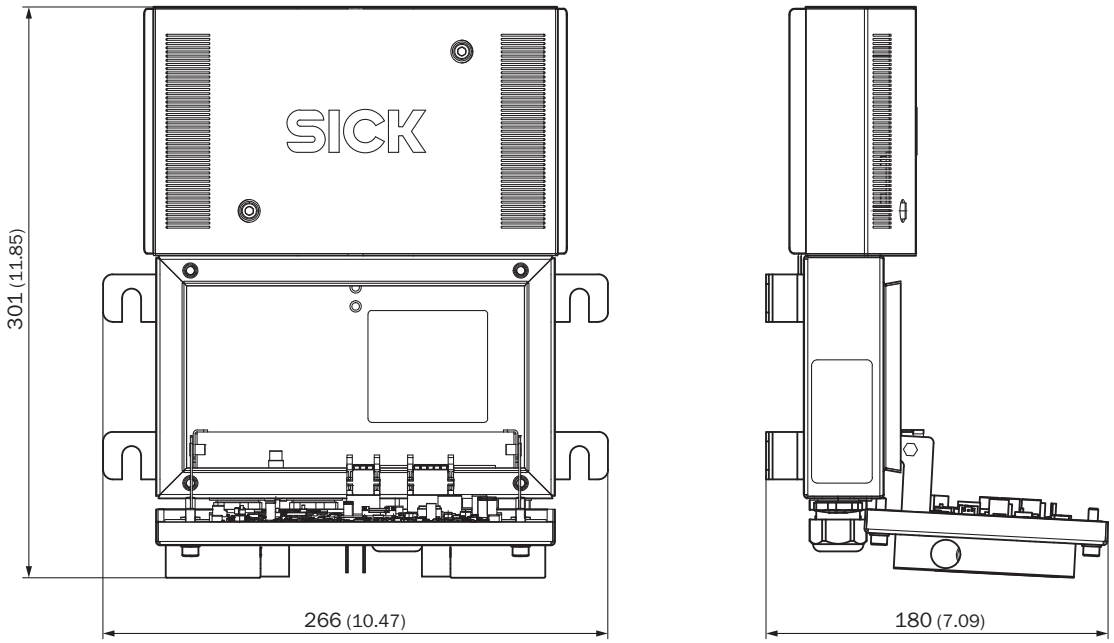
ECLASS 5.0	27150305
ECLASS 5.1.4	27150305
ECLASS 6.0	27150305
ECLASS 6.2	27150305
ECLASS 7.0	27150305
ECLASS 8.0	27150305
ECLASS 8.1	27150305
ECLASS 9.0	27150305
ECLASS 10.0	27150305
ECLASS 11.0	27150305
ECLASS 12.0	27150305
ETIM 5.0	EC001190
ETIM 6.0	EC001190
ETIM 7.0	EC001190
ETIM 8.0	EC001190
UNSPSC 16.0901	41115406

Dimensional drawing (Dimensions in mm (inch))

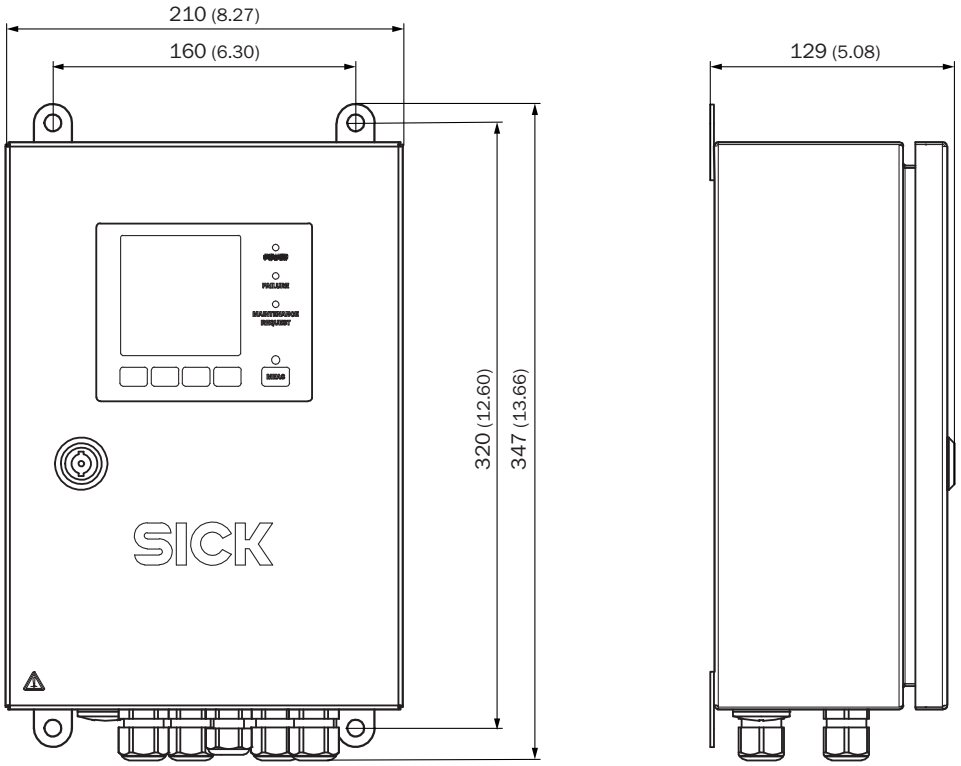
VISIC100SF sensor unit closed



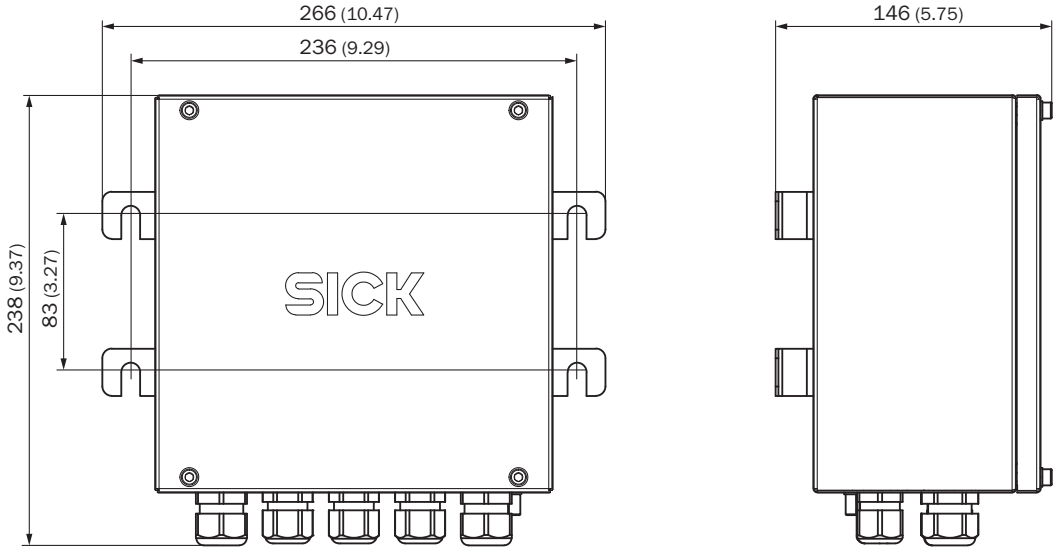
VISIC100SF sensor unit open with clipped-on front cover



TAD control unit

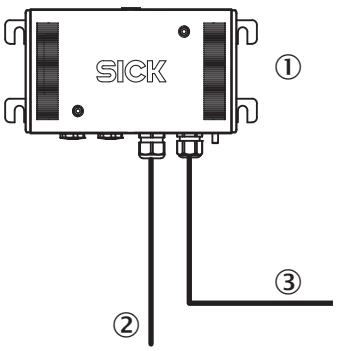


VISIC100SF connector unit



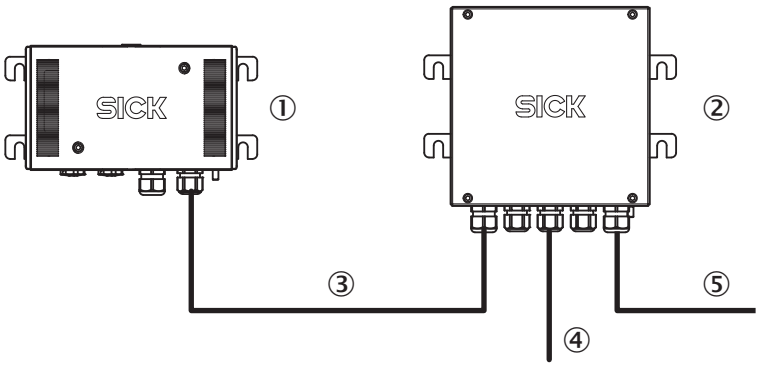
Connection types

Standard version



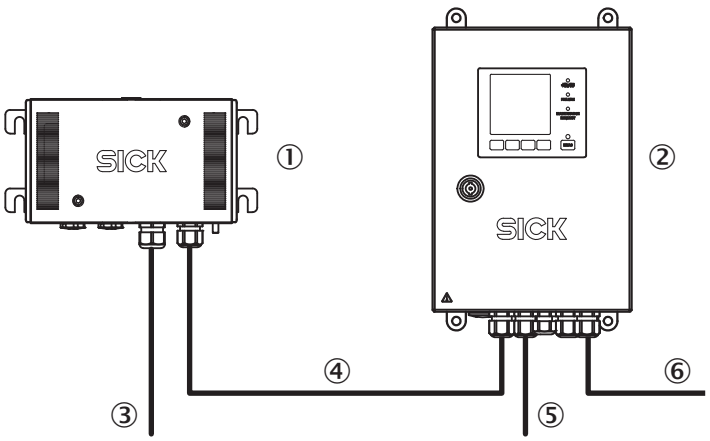
① VISIC100SF sensor unit
② Power supply (24 V)
③ Analog and digital signals or data bus

Version with terminal box



① VISIC100SF sensor unit
② VISIC100SF connector unit
③ Analog and digital signals or data bus, incl. power supply (24 V)
④ Power supply (230 V)
⑤ Analog and digital signals or data bus

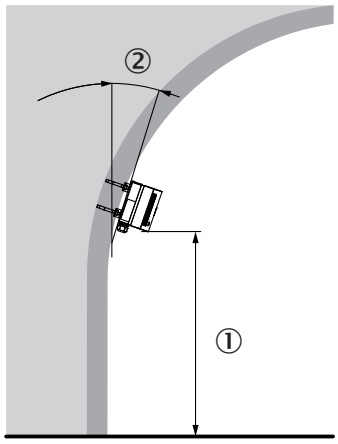
Version with TAD control unit



① VISIC100SF sensor unit
② TAD control unit
③ Power supply (24 V)
④ Analog and digital signals or data bus (max. length = 1,200 m)
⑤ Power supply (230 V)
⑥ Analog and digital signals or data bus

Instruction for installation

VISIC100SF sensor unit: allowed inclination and installation heigth



① The mounting heigth depends on the application. SICK recommends an installation above the splash water zone.
② Maximum allowed inklination angle = 45°

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