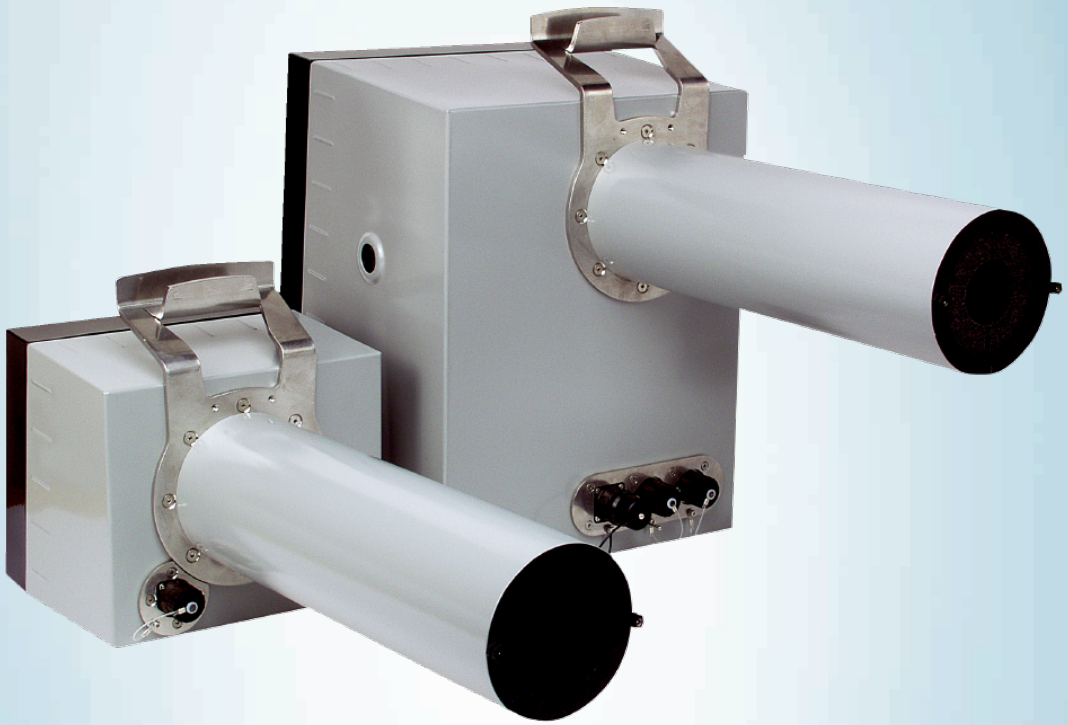
Product data sheet

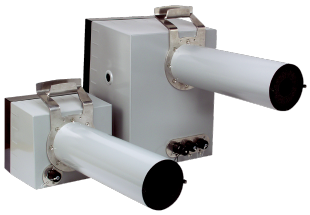


System VICOTEC320

VICOTEC320

AIR QUALITY MEASURING DEVICES

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
System VICOTEC320	On request

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

Other models and accessories ➜ www.sick.com/VICOTEC320

Detailed technical data

Technical specifications

Measured values	Visibility (K-value), NO, NO_2, NO_x, CO, Temperature
Maximum number of measurands	5
Measurement principles	Differential optical absorption spectroscopy (DOAS), transmittance measurement, electro-chemical cell, Resistance thermometer
Length of measuring path	10 m
Measuring ranges	
K-value	0 ... 15 km^{-1} / 0 ... 200 km^{-1}
NO	0 ... 20 ppm / 0 ... 45 ppm
NO_2	0 ... 1 ppm / 0 ... 5 ppm
CO	0 ... 100 ppm / 0 ... 300 ppm
Temperature	–25 ... +55 °C / –25 ... +75 °C
Response time (t_{90})	Visibility (K-value): 5 s ... 360 s Adjustable (45 s pre-configured) NO, NO_2: 5 s ... 360 s Adjustable (45 s pre-configured) CO: ≤ 60 s
Linearity	NO: ± 0.48 ppm NO_2: ± 0.035 ppm CO: ± 2 ppm < 60 ppm CO: ± 5 ppm 60 ppm < x < 150 ppm CO: ± 9 ppm 150 ppm < x < 300 ppm
Detection limit	
Visibility (K-value)	0.03 km^{-1}
NO	0.002 ppm
NO_2	0.007 ppm
Repeatability	
Visibility (K-value)	0.017 km^{-1}
NO	0.031 ppm
NO_2	0.007 ppm
Ambient temperature	

	–20 °C ... +55 °C
CO sensor:	–20 °C ... +55 °C
Storage temperature	
	–25 °C ... +75 °C
CO sensor:	0 °C ... +20 °C
Ambient pressure	
	700 hPa ... 1,200 hPa
Ambient humidity	
	10 % ... 95 % Relative humidity; non-condensing
Conformities	ASTRA "Guideline - Ventilation of Road Tunnels" (2008) RABT 2006 RVS 09.02.22
Electrical safety	CE
Enclosure rating	
	IP69K
Analog outputs	6 outputs: 0 ... 20 mA Depending on device version
Digital outputs	4 relay contacts: Depending on device version
Digital inputs	4 potential-free contacts
I/O extensions	Optical fiber connection optional
Ethernet	✓
Function	Connection to SOPAS ET software or OPC server
Modbus	✓
Type of fieldbus integration	TCP
CAN bus	✓
Function	For connection of a SCU control unit
Operation	Via software SOPAS ET
Dimensions (W x H x D)	
Sender/receiver unit	718 mm x 470 mm x 310 mm (for details see dimensional drawings)
Reflector unit	617 mm x 278 mm x 245 mm (for details see dimensional drawings)
Connection unit	450 mm x 254 mm x 148 mm (for details see dimensional drawings)
Weight	
Sender/receiver unit:	20 kg
Reflector unit:	9 kg
Connection unit:	8 kg
Material	Stainless steel 1.4571, powder-coated
Energy supply	
Voltage	115 V AC, ± 10 % 230 V AC, ± 10 %
Frequency	50 Hz / 60 Hz
Power consumption	≤ 200 VA
Test functions	Automatic check cycle for zero and span point Contamination check

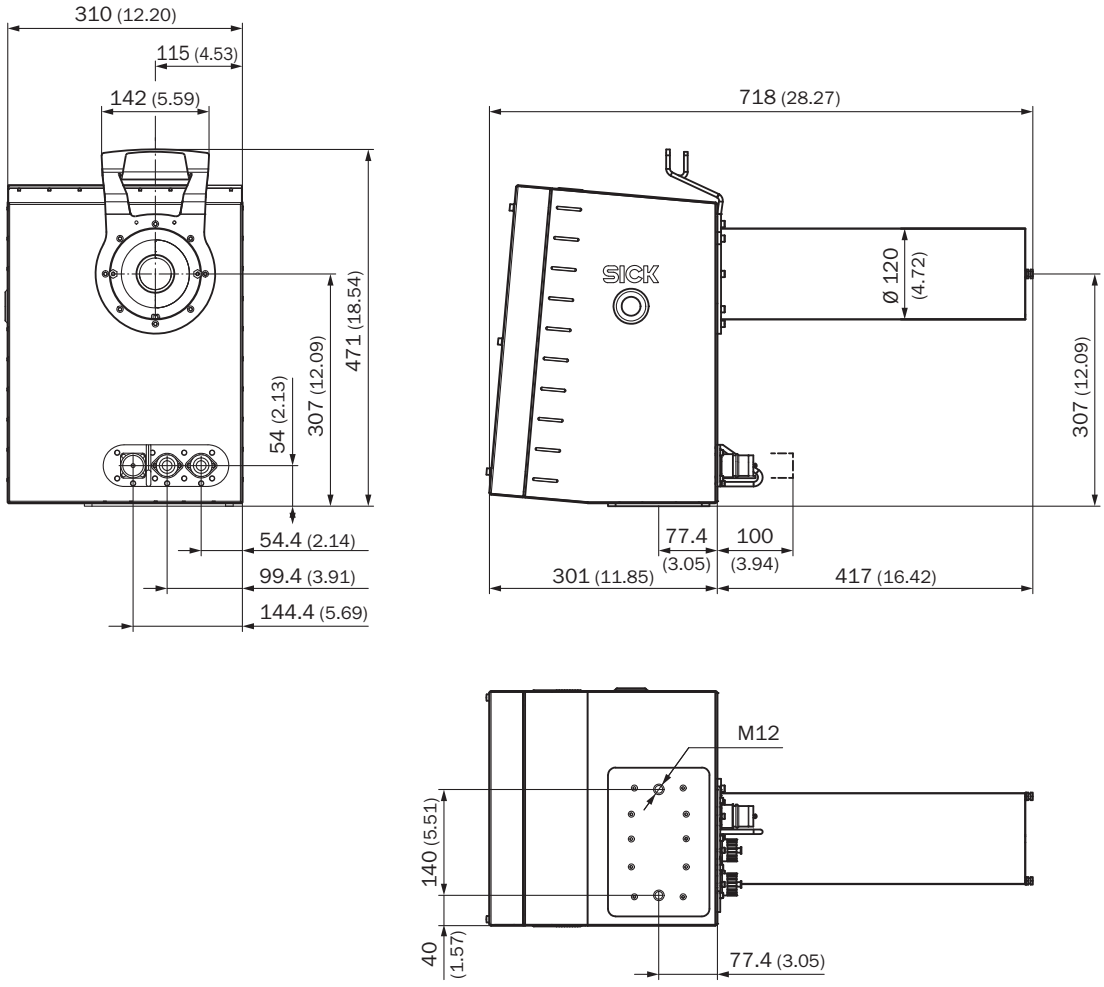
	Manual linearity check
Options	CO sensor

Classifications

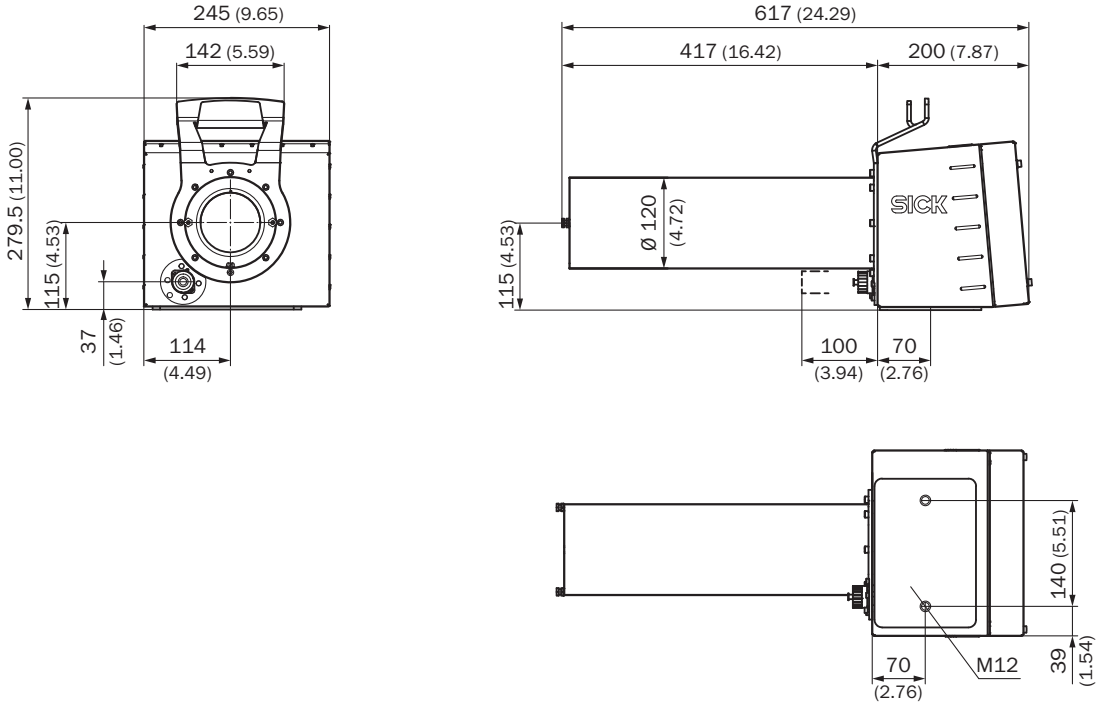
ECLASS 5.0	27150202
ECLASS 5.1.4	27150202
ECLASS 6.0	27150202
ECLASS 6.2	27150202
ECLASS 7.0	27150202
ECLASS 8.0	27150202
ECLASS 8.1	27150202
ECLASS 9.0	27150202
ECLASS 10.0	27150202
ECLASS 11.0	27150202
ETIM 5.0	EC001190
ETIM 6.0	EC001190
ETIM 7.0	EC001190
ETIM 8.0	EC001190
UNSPSC 16.0901	41115403

Dimensional drawing (Dimensions in mm (inch))

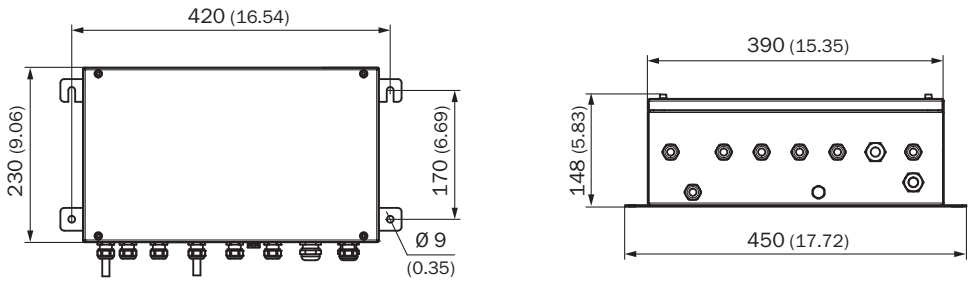
VICOTEC320 sender/receiver unit



Reflector unit



VICOTEC320 connection unit



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