

VisGuard

Reliable visibility measurement



Applications

- Visibility measurement
- Ventilation control
- Early fire/smoke detection in road and rail tunnels

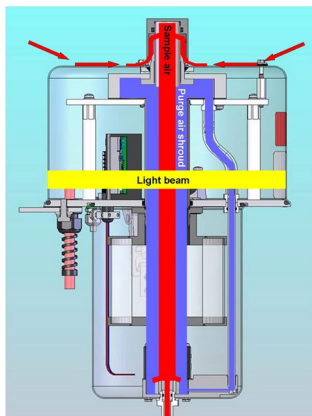
Industries

- Tunnel

Properties

- Precise and long-term stable visibility measurement
- Compact design
- Simple mounting
- Flexible system integration
- Permanent instrument monitoring in the background
- Rapid and reliable smoke detection without false alarms
- Fog elimination by optional heating elements
- Simple re-calibration with checking unit
- LED light source, very low power consumption
- Low maintenance costs

Innovations with tangible benefits



Purge air shroud

The use of a purge air shroud allows the optical components to be effectively protected from contaminations, which guarantees an exact measurement without drift.

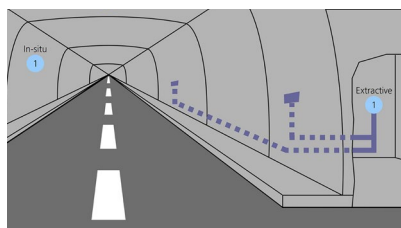
Active extraction

Active extraction of the air to be measured ensures that the measurement is a representative value even at low or no flow velocities.

Different types of installations are available

The VisGuard 2 is available in different types of installations including in-situ, extractive and multiple sampling systems. Extraction lengths of 500m max. are possible.

The advantage of extractive systems is that the instruments are accessible at any time. Maintenance work or repairs do not affect traffic flow.



Checking unit

A solid reference to check the correct operation of the instrument is provided. This allows simple checking and, if need be, re-calibration of the instrument.



Compatibility with FireGuard 2

The VisGuard 2 has a compatibility mode to the smoke detector FireGuard 2. Thus, VisGuard 2 can also be used for early detection of fires. VisGuard 2 and FireGuard 2 are compatible at all interfaces so that mixed systems are easy to realize.



Minimal maintenance

No tools are necessary for maintenance. Maintenance requirements are very low. As a rule, an annual checking is sufficient, which only takes about 10 minutes. As a result of an LED light source, replacement of the light source as maintenance is not needed. Replacement of the purge air filter depends on the traffic load and is necessary every 1 to 5 years.

Technical Data

Sensor:

Measuring principle: 30° scattered light
 Wavelength: 880 nm
 Measuring span: 0 .. 1000PLA / 0 .. 30 E/m
 Resolution: ± 0.001 mE/m
 Response time: 2s
 Material of housing: Stainless steel 1.4435 / 1.4571
 Ambient temperature: -30 °C .. +55 °C
 Ambient humidity: 0..100% rel. humidity
 Protection class: IP66 (only with mounted protection caps)

Supply voltage: 24 VDC
 Power input: 7 W (In-situ), 1 W (Extractive) + 10 W (heater, optional)

Weight: 6.5 kg (In-situ), 5.0 kg (Extractive)
 Dimensions: approx. Ø 209 x 366 mm (In-situ)
 approx. Ø 209 x 254 mm (Extractive)

Connection box SIPORT 2:

Power supply: 100..240 VAC; 47..63 Hz
 Power input max: 25 W / 45VA
 Protection class: IP66
 Enclosure: Polyester, fibre glass reinforced
 Weight: 1.3 kg
 Dimensions: 220 x 155 x 91 mm

Modules for SIPORT 2:

Module Profibus DP: Interface Profibus DP
 Module Modbus RTU: Interface Modbus RTU with repeater
 Module StromRel: 2 x 0/4..20 mA, max. 500 Ω galv. isolated.
 3 x semiconductor relays max. 30V, max. 0.12A, Ron max. 25 Ω

Hand-held control unit SICON-C for SIPORT 2:

Display: 3.5" Graphics TFT with touch operation

Control unit SICON (M):

Power supply: 24 VDC
 Power input: Max. 5 W + photometer
 Display: 3.5" Graphics TFT with touch operation
 Ambient temperature: -10 .. +50 °C
 Ambient humidity: 0 .. 100% rel. humidity
 Protection class: IP66
 Dimensions: 160 x 157x 60 mm
 Weight: 0.6 kg
 Output: 4 x 0/4 .. 20 mA, galv. isolated
 7 x digital
 5 x digital
 Input: Ethernet, microSD card, Modbus TCP
 Digital interfaces:
 Optional modules (max. 2): Profibus DP, Modbus RTU, HART, 4 x 0/4 .. 20 mA output, galv. isolated
 4 x 0/4 .. 20 mA input

Sampling systems:

In-situ: In-situ instrument for direct mounting in the tunnel
 Mini-Extractive: In-situ instrument with tube extension of up to 2.5m
 Extractive 0-5m: sampling system 0..5m
 Extractive 5-30m: sampling system 5..30m
 Extractive 30-500m: sampling system 30..500m
 Multiple sampling: multiple sampling of up to 8 ducts

Your representative:



photometer.com/vis2

SIGRIST
 PROCESS-PHOTOMETER

SIGRIST-PHOTOMETER AG

Hofurlistrasse 1 · CH-6373 Ennetbürgen
 Tel. +41 41 624 54 54 · Fax +41 41 624 54 55
 www.photometer.com · info@photometer.com