sigrist photometer

FireGuard 2

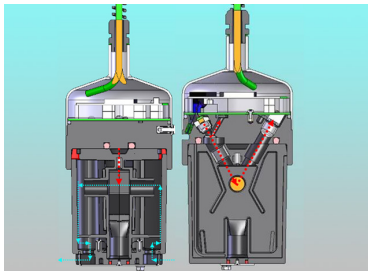
The most genious smoke detector: simple – safe – reliable



Applications
- Fire/smoke detection in road and rail tunnels

Advantages
- Rapid, reliable smoke detection without false alarms
- Fog elimination by optional heating elements
- Compact design, no moving parts
- Mounting at the wall, the ceiling, the intermediate ceiling or in the ventilation damper
- Flexible system integration
- LED light source, very low power consumption
- Permanent instrument monitoring in the background
- Simple recalibration with checking rod
- No consumables
- Extremely low maintenance costs

Innovations with tangible benefits

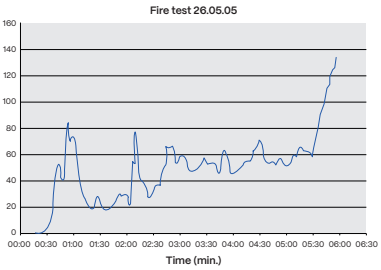


Ingenious design

The sensor uses the available natural air stream in the tunnel. It is very compact and has neither moving parts nor wear parts nor does it need consumables. As a light source, an economical LED is used:

- No risk of failure due to wear
- Guaranteed operational reliability for years
- Extremely low operating costs





Rapid, reliable reaction without false alarms

The sensor detects emerging fires already at their early stages (cold smoke) and thus reacts faster than a fire alarm cable. Any influence caused by fog will be eliminated by optional heating elements. The measurement is not affected by extraneous light, reflexes or other influences as is the case for video detection. Individual setting of parameters allows an optimal object and location related setting of alarms:

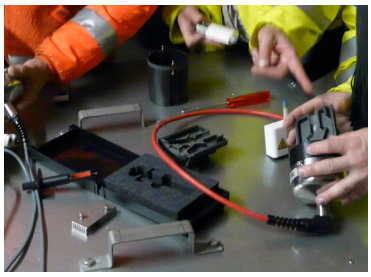
- More time for self-rescue
- No false alarms
- Reduction of a possible damage to the object and of subsequent costs



Flexible mounting – Simple system integration

An adjustable bracket allows mounting at the wall, in the arched section or at the ceiling. Special models for installation in the intermediate ceiling or directly in the ventilation dampers are available as are various connection boxes:

- Installation is simple and not dependent on the tunnel profile
- Fast, flexible system integration



Minimum maintenance and upkeep

Maintenance is limited to occasional cleaning and the automatic adjustment with a checking rod. Soiling monitoring provides information on the state of the instrument:

- Maintenance is only necessary when required, from experience only about every 5 years
- No special tools required. The time required per instrument is normally between 15 and 25 minutes at the most

Main technical details

Measuring principle / Wave length:	120° Scattered light / 670 nm
Nominal range:	0 .. 3000 mE/m
Resolution:	0.1 mE/m
Conformity:	ASTRA «Guideline fire detection in road tunnels (2007)» RABT (2006)
Ambient temperature:	–30 °C .. +55 °C
Ambient humidity:	0 .. 100% rel. humidity
Protection:	IP66 (only electronic part)
Operating voltage:	24 VDC
Power input:	4 W (without heater) 13 W (heater, optional)

Full details and technical data:

Subject to change without notice, Doc. No. 13654E/6

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FireGuard 2

Technical data

Sensor

Measuring principle:	120° Scattered light
Wave length:	670 nm
Nominal range:	0 .. 3000 mE/m
Resolution:	0.1 mE/m
Temperature sensor:	–30 °C .. +55 °C
Conformity:	FEDRO «Guideline fire detection in ruad tunnels (2007)», RABT (2006)
Installation:	Wall mounting, under-ceiling mounting, intermediate ceiling mounting, mounting in ventilation damper
Material flow cell:	PC/ ABS
Material housing:	Stainless steel 316Ti
Ambient temperature:	–30 °C .. +55 °C
Ambient humidity:	0 .. 100% rel. humidity
Protection:	IP66 (only electronic part)
Operating voltage:	24 VDC
Power input:	4 W (without heater) 13 W (heater, optional)
Weight:	0.9 kg
Dimensions:	approx. Ø 107 × 283 mm

Connection box SIPORT 2

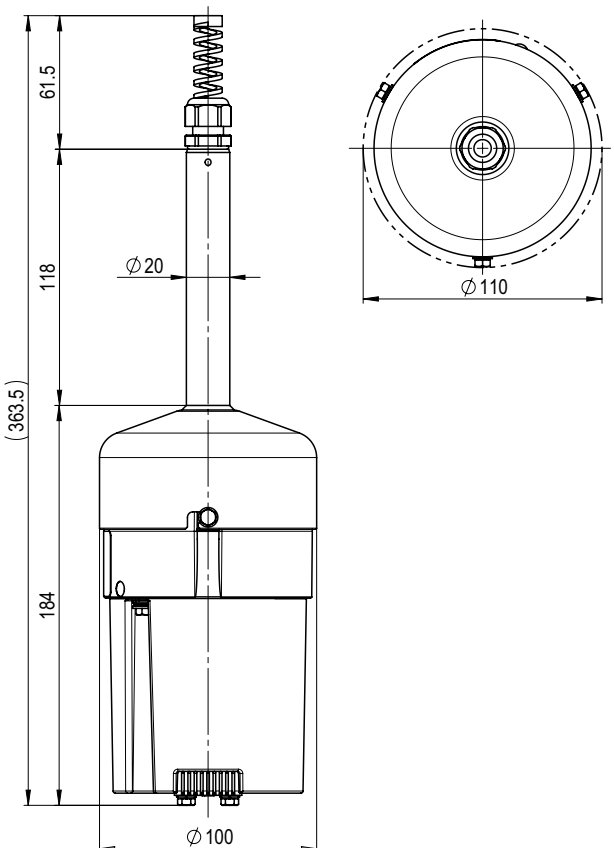
Power supply:	85 .. 264 VAC; 47 .. 63 Hz
Power input max.:	25 W
Protection class:	IP66
Material:	Polyester, fibre glass reinforced
Weight:	1.3 kg
Dimensions:	approx. 220 × 120 × 95 mm

Modules for SIPORT 2

Module Profibus DP:	Interface Profibus DP
Module Modbus RTU:	Interface Modbus RTU
Module Profinet IO:	Interface Profinet IO
Module PowerRel:	2 × 0/4 .. 20 mA, max. 500 Ω, galvanic separated. 2 × Semiconductor relays max. 30 V, max. 0.12A, Ron max. 25 Ω

Hand-held control unit SICON-C

Power supply:	24 VDC
Display:	Graphic TFT with touch operation
Weight:	0.6 kg
Dimensions:	130 × 160 × 60 mm
Protection class:	IP65



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