

SP2600-H/C/I/BB/F/1K190

## Gas Sample Probe Series SP®

Versions SP2600-H/C/I/BB/F/1K190 and SP2600-H/C/I/BB/F/0,1GF190, electrically heated

### Special Features

- **Filter element with particularly large filter surface**
- **Reliable Operation**
- **Universal applicability**
- **Adaptation to nearly all process conditions due to its compact and modular design**
- **Easy installation and maintenance**
- **Low dead volume**
- **Patented design**
- **Integrated possibility for blowback and shutting off the sample gas outlet**

### Application

The probes M&C type SP2600-H/C/I/BB/F, based on type SP2000-H (for more information see SP2000-H data sheet), are used for continuous gas sampling in processes with high dust levels, high temperatures and/or high humidity.

Due to the particularly large filter surface and the blowback possibility for the filter element, this type of probes achieves a very long service life especially in those cases where pre-filters cannot be used. For this purpose, a check valve for blowback and a pneumatic isolation valve for the sample gas outlet are already integrated into the probe.

Version SP2600-H/C/I/BB/F/0,1GF is suitable for dusts with extremely fine particles of up to 0.1 µm grain size. Version SP2600-H/C/I/BB/F/1K190 can be purged back very efficiently due to its double-ply filter element with an outer filter membrane of 1 µm porosity.

### Description

The sample probes are designed for easy installation, reliable operation, trouble-free maintenance and a variety of applications. Depending on the application, different sample tubes (see data sheets for sample tubes with G 3/4" connection thread and "Electrically Heated Sample Probe Tube Series SP® Versions SP30-H, SP30-H1.1-V, SP35-H") that are not included in the scope of delivery of the probe, are screwed into the thread (G 3/4" i) of the filter housing.

The large-surface filter element made of ceramic or glass fiber is placed in a housing with low dead volume outside the process area.

The probes are designed in such a way that changing the filter element does not require the sample line to be dismantled and therefore, a contamination of the clean gas is avoided.

The special design of the heating element of the SP2600 (with weather protection cover) permits controlled heating of the complete filter housing including the mounting flange up to 180 °C [356 °F]. This ensures reliable operation outside the process and preventing the temperature from falling below the dew point.

In the standard version, the temperature is controlled by an integrated capillary sensor thermostat with high-temperature limiter and low-temperature alarm function in a compact arrangement directly at the probe. Feeding calibration gas is possible via an integrated check valve.

Additional functions of the probe SP2600-H/C/I/BB/F:

- Calibration gas is injected into the probe through a check valve /C directly to the sample outlet. No calibration gas is lost into the stack.
- An isolation valve /I shuts off the sample outlet from the internal filter chamber.
- With a high flow rate check valve /BB/F, which is fixed to the heated filter housing wall, blowback of the integrated filter element including the filter chamber and the sample tube or the pre-filter is carried out.

Gas Sample Probe Version	SP2600-H/C/I/BB/F/0,1GF190	SP2600-H/C/I/BB/F/1K190
Part No.	20S3550	20S3540
Integrated blowback	Via filter element	
Weather protection cover	Yes	
Terminal box	IP54 EN60529	
Filter housing material	Stainless steel 316/316Ti*	
Sealing materials	FPM*	
Probe flange sealing material	Novapress®	
Sample tube/pre-filter	Optional	
Sampling pressure max.	0.4 to 6 bar* abs.	
Ambient temperature	-20 to +60 °C*** [-4 to 140 °F*] /PT100, /Fe-CuNi, /Ni-CrNi** = -20 to +80 °C [-4 to 176 °F]	
Filter chamber volume	280 cm <sup>3</sup>	
Filter element porosity	0.1 µm	1 µm
Thermostat, temperature adjustment	0 to 180 °C* [32 to 356 °F*] /PT100** /Fe-CuNi** /Ni-CrNi**	
Ready for operation	After 40 min	
Low-temperature alarm contact	Change-over contact, contact rating: 250 V, 3 A~, 0.25 A = Alarm point: ΔT 30 °C	
Sample gas outlet connection	1 x 1/4" NPTi* tube connectors ø 6, 8 or 10 mm**	
Blowback/test gas connection	Blowback: tube Ø 8 mm, test gas: tube Ø 6 mm	
Shut-off valve connection /I	1/8" NPT i	
Pressure range control air /I	3 to 10 bar	
Power supply	230 V, 50/60 Hz, 800 W /115 V** = 115 V, 60 Hz, 800 W (fuse protection 10 A)	
Electrical connections	Terminals max. 4 mm <sup>2</sup> , 2 x PG 13.5 cable gland	
Electrical equipment standard	EN 61010, EN 60519-1	
Mounting flange	DN 65 PN 6-B, SS 316Ti* > DN or ANSI possible**	
Weight	19 kg* [≈ 42 lbs]	

\* Standard

\*\* Options

\*\*\* In case of higher ambient temperatures, use option PT100 (Part No. 20S9025) or thermocouple Fe-CuNi and Ni-CrNi, respectively (Part No. 20S9027 or 20S9028) instead of the thermostat controller. Then, an additional electronic temperature controller (see data sheet "Microprocessor-Controlled Temperature Controller Type 70304") is necessary. Novapress® is a registered trademark for elastomer-bonded gasket material used by Frenzelit GmbH, Germany.

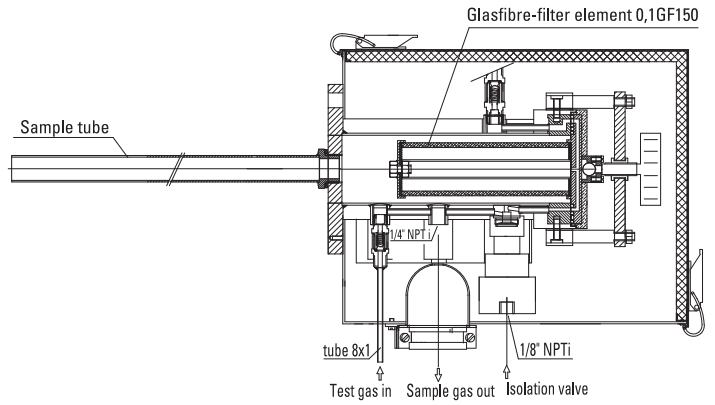
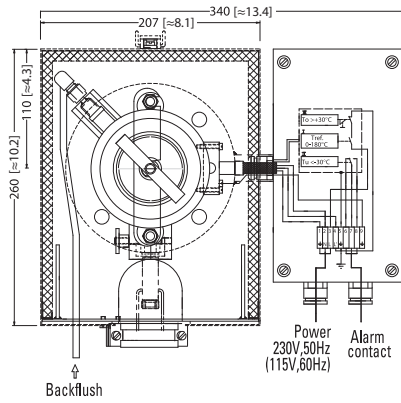
## Differential Pressure and T<sub>90</sub> Time

ΔP and T <sub>90</sub> at a flow rate of:	100	200	500	1000	1500	NI/h
ΔP with new filter element S-1K190/0,1GF190	0.007	0.011	0.02	0.035	0.040	bar
T <sub>90</sub> time for SP2600-H without sample tube	8	5.5	3	1	< 0.5	s

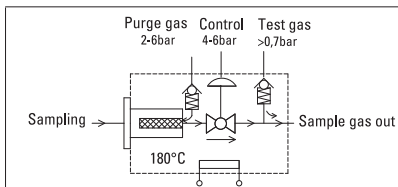
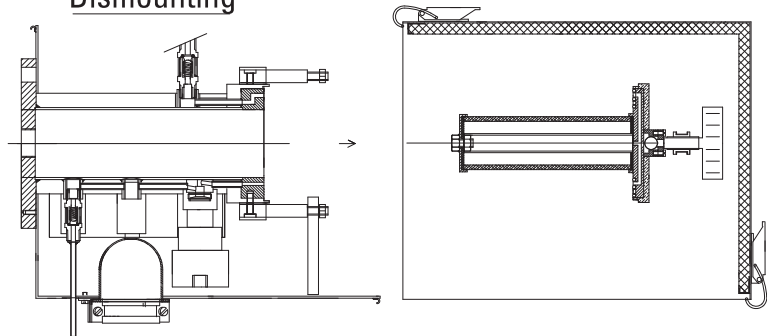
Please note: NI/h and NI/min refer to the German standard DIN 1343 and are based on these standard conditions: 0 °C [32 °F], 1013 mbar.

## Versions and Options (Extract)

Options (Extract)	Version	Part No.
Version with power supply 115 V/60 Hz	/115 V	20S9030
Version with second outlet for sample gas 1/4" NPT i*	/2 x*	20S9015
Version with with PT00 sensor instead of the thermostat, without temperature controller	/PT100	20S9025
Version with thermocouple FE-CuNi ( type J) instead of thermostat, without temperature controller	/Fe-CuNi	20S9027
Version with thermocouple Ni-CrNi (type K) instead of thermostat, without temperature controller	/Ni-CrNi	20S9028
Version with second PT100 sensor	/2-PT100	20S9026
Version with special adapter flange size DN...PN6 or ANSI...150 lbs	/DN	20S9004
Version with gas pre-heater GVW1, material: SS 304	/GVW1	20S9058
Version with connection of the gas pre-heater to valve "BB" and to gas inlet	/GVW	20S9062
Version with steam heating, without controller and valves, instead of the thermostat	/D	20S9033

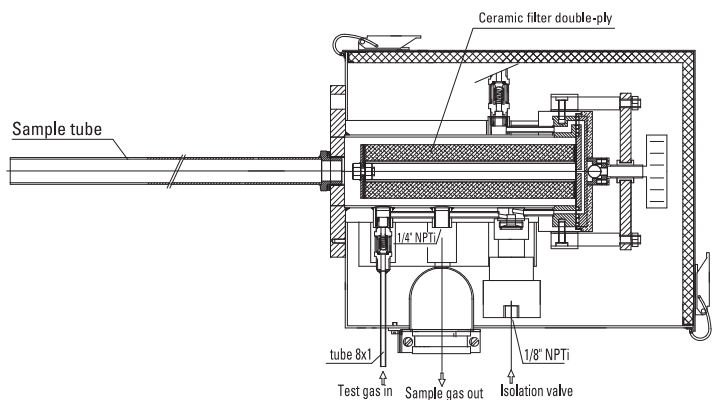
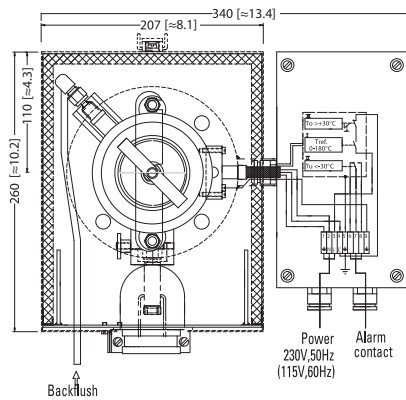


**Dismounting**

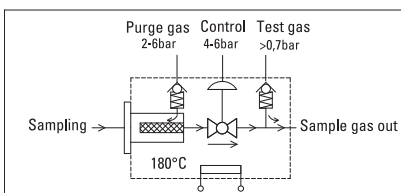
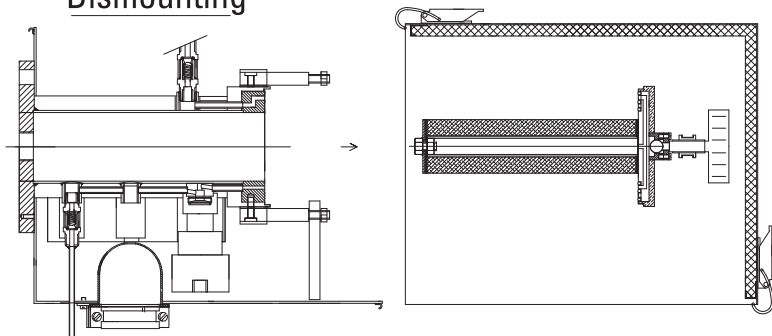


Dimensions in mm [inches]

**SP2600-H/C/I/BB/F/1K190**



**Dismounting**



Dimensions in mm [inch]