SP210-H

Gas Sample Probe Series SP®

Electrically heated, compact versions SP210-H/SP210-H/W

Special Features

- **Sampling of dust-loaded process gases**
- **Small volume, fast response time**
- **Easy installation and maintenance**
- **Self-regulating electrical heating**
- **Alarm contact for low temperature**
- **Outdoor mounting with protective cover**
- **Sample tube optional**

Application

The electrically heated M&C gas sample probes versions SP210-H and SP210-H/W are applicable for continuous gas sampling. The compact design requires only limited space. The gas sample probe SP210-H/W is equipped with an extra weather protection cover and is preferably used for outdoor mounting.

Description

The design of the M&C gas sample probe versions SP210-H and SP210-H/W guarantees easy installation, safe operation and problem-free maintenance.

The filter element can be replaced without tools and without dismantling the sample line. When the filter is changed, the filter unit is completely removed from the filter chamber. Simple inspection of the sealing elements, easy cleaning of the filter chamber, the possibility of pushing through the sample tube without dismantling the probe are just a few of the many advantages which M&C probes offer.

The heated stainless steel filter receptacle contains the ceramic depth filter element with 2 µm filter porosity. The compact design and the heat insulation on all sides guarantee optimum heat distribution and safe operation without the temperature falling below the dew point in the filter or probe flange area.

Heating is provided by special self-regulating heating elements up to +180 °C [356 °F] in the range from 110 V to 240 V mains voltage without any switching.

An external temperature controller or temperature limiter is not required. A separate thermal switch (< 160 °C [320 °F], NO) is provided for low temperature monitoring. The electrical connection is provided in a terminal box.

The gas sample probe SP210-H/W equipped with a protective cover that can be opened with quick clamps is recommended for outdoor mounting.

The stainless steel sample tube SP210/SS (option) is screwed into the mounting flange. The maximum operating temperature of the stainless steel (316Ti) tube is 600 °C [1112 °F].

In case of long and cold mounting nozzles or if the dew point in the process chamber is underrun, the heated double-jacket sample tubes SP30-H or SP35-H are used.

To solve specific sampling problems, you will find further sample tubes and pre-filters in M&C's extensive range of probe accessories.

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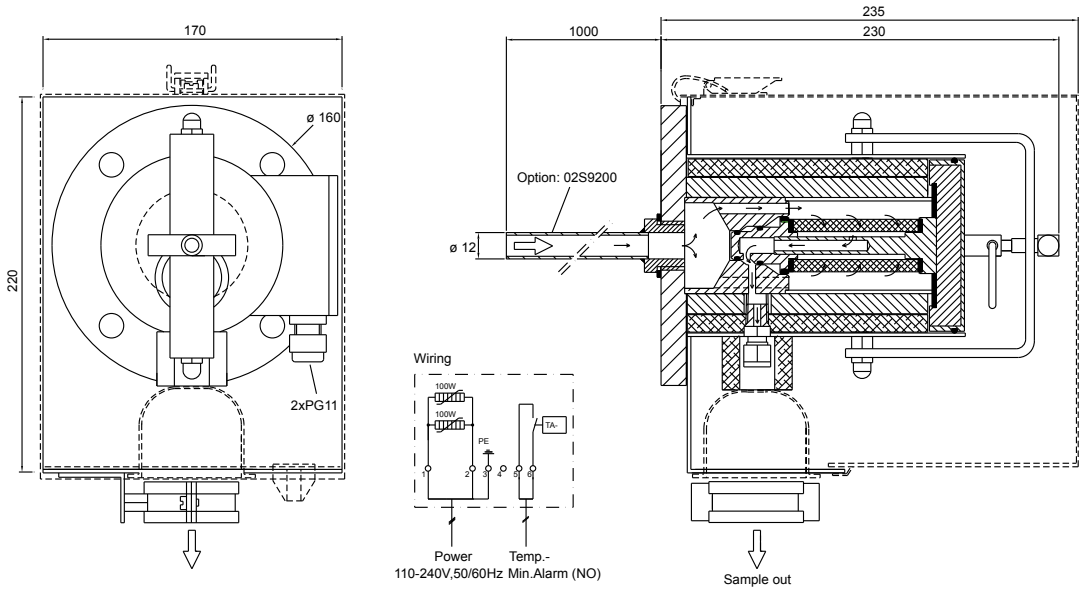
Technical Data

Probe Series SP®	Compact Version SP210-H	Compact Version SP210-H/W
Part No.	02S1000	02S1010
Protective cover	No	Yes
Degree of protection	IP54 EN 60529	IP55 EN 60529
Sample tube	SS210/SS optional*, operating temperature max. 600 °C [1112 °F]	
Flow rate	Max. 500 Nl/h at 600 °C [1112 °F]	
Sample pressure	0.4 to 2 bar abs.	
Ambient temperature	-20 to +60 °C [-4 to 140 °F]	
Dust level	Max. 1 g/m³	
Filter chamber volume	100 ml	
Filter element	Type S-2K, filter porosity 2 µm, ceramic	
Probe heating	+180 °C [356 °F) self-regulating	
Ready for operation	After 2 hours	
Low-temperature alarm contact, alarm point	< 160 °C [320 °F], NO	
Low-temperature alarm contact, contact rating	250 V-3 A AC, 30 V-3 A DC	
Connection sample outlet	1/4" NPT inside with Swagelok® tube connector ø 6 x 1 mm	
Power supply	110 up to 240 V, 50/60 Hz	
Power consumption	Start up: 400 VA, usual: 100 VA, (fuse 6 A)	
Electrical connection	Terminals max. 2.5 mm², 2 x PG11 cable glands	
Electrical equipment standard	EN 61010, EN 60335-1	
Mounting flange	DN 65 PN 6, form B, stainless steel 316Ti	
Material of sample-contacting parts	Stainless steel 316/316Ti, FPM, ceramic	
Dimensions (W x H x D)	170 x 220 x 230 mm [≈ 6.7" x 8.7" x 9.1"]	170 x 220 x 235 mm [≈ 6.7" x 8.7" x 9.3"]
Weight	6.5 kg [≈ 14.3 lbs]	8.5 kg [≈ 18.7 lbs]
Options		
02S9200	Sample tube out of stainless steel 316Ti type SP210/SS, connection G 3/4" o, ø 10/12, length 1 m [≈ 3.3 ft]*, incl. flange gasket.	
10S9005	Calibration flange, DN 65 PN 6 with 1/8" NPT connection including flange gasket and screw set M 12 x 80.	

* Standard, other versions upon request.
Swagelok® is a registered trademark for tube fittings by Swagelok Company, USA.
Please note: Nl/h and Nl/min refer to the German standard DIN 1343 and are based on these standard conditions: 0 °C [32 °F], 1013 mbar.

ΔP and T90 at a flow rate of:	100	200	500	Nl/h
ΔP pressure loss with new filter element S-2K	4	7	15	mbar
T90 time with sample tube SP210/SS	4.0	2.5	< 1.0	sec.

Dimensions



Dimensions in mm

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