



SP30-H1.1/EX2

Electrically heated sample probe tube series SP[®]



Version SP30-H1.1/EX2, SP30-H2/EX2 and SP30-H1.1-V/EX2 for gas sample probe SP3200 and SP3200V for sampling from and mounting in Ex-zone 2

Special Features

- Approval according to ATEX for sampling from Ex-zone 2
- Approval according to ATEX for mounting in Ex-zone 2
- Completely heated sample tube
- Electronic temperature controller
- Different lengths
- Unheated pre-filters or extensions possible
- Simultaneously heated pre-filter possible
- Easy mounting
- Two temperature sensor versions

Application

The electrically heated M&C sample probe tube SP30-H../EX2 is used in extractive sampling systems to avoid cooling and condensation of the sample in the insitu tube from the sample point to the heated sample probe SP3200-H. It can be used for sampling from Ex-zone 2 and mounting in Ex-zone 2.

To avoid a premature damage by cooling and condensation in dust loaded processes, we recommend a heated tube type SP30-H1.1-V/EX2, including an insitu pre-filter V20-2/30, heated up with the tube.

Description

The electrically heated M&C sample tube SP30-H../EX2 is available in 0.6 m [≈ 23.62"] and 1.0 m [≈ 39.37"], length.

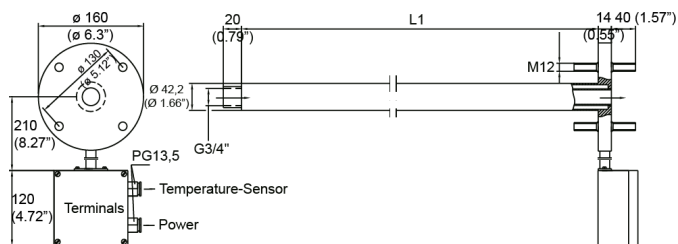
With a mounting flange with 4 welded screws the heated sample tube SP30-H../EX2 can be easily fixed both to the flange at the sample point and the probe head SP3200-H. The heated sample tubes SP30-H1.1/EX2 and SP30-H2/EX2 is equipped with a G3/4" thread connector at the tube end. This enables fixing a standard non heated sample tube or pre-filter to the heated insitu tube.

The electrical cartridge heater is located inside a double tube system, completely separated from the process. At the version SP30-H1.1-V/EX2 the included large pre-filter V20-2/30 is heated up with the sample tube.

The operating temperature of the heated tube is adjusted to the selected temperature class. The tube versions SP30-H1.1/EX2 and SP30-H2/EX2 have an internal diameter of 22 mm [≈ 0.9"]. The internal diameter of the version SP30-H1.1-V/EX2 is reduced to 6 mm [≈ 0.24"] to optimise the tube dead volume.

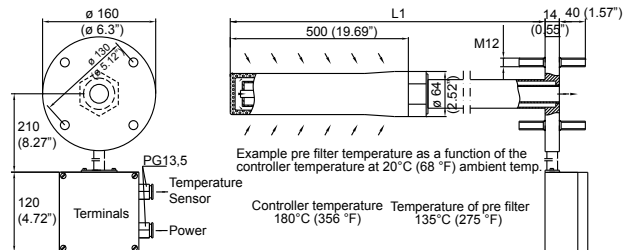
For temperature control of the heated sample tube the electronic controller HEX5-0.2.08 is used. It is applicable for separate mounting in Ex-zone 2. The controller, depending on the selected temperature class, is programmed at our facility.

Probe tube SP30-H1.1/EX2 and SP30-H2/EX2

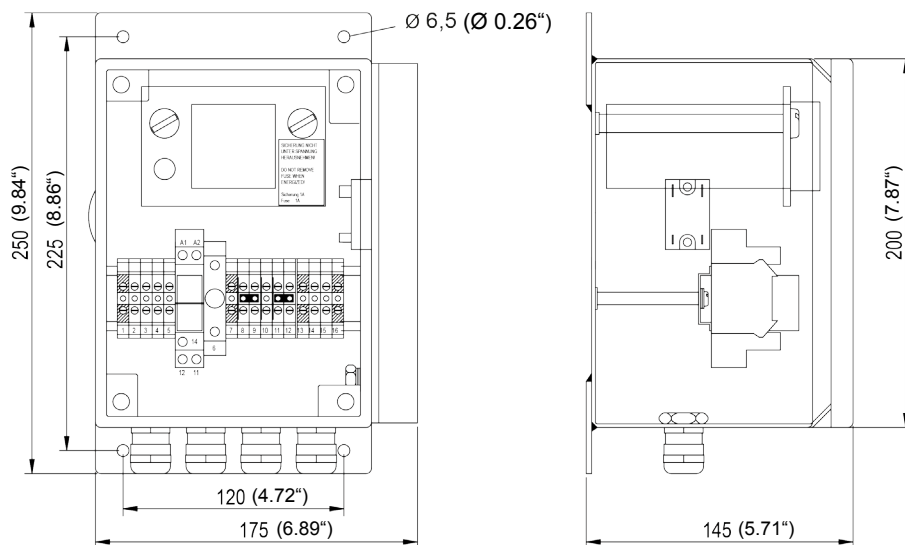


Dimensions in mm [Inch]

Probe tube with pre-filter SP30-H1.1-V/EX2




Temperature controller HEX5-0.2.08



Dimensions in mm [Inch]

Technical Data

Heated sample tube Series SP [*] Type	SP30-H1.1/EX2	SP30-H2/EX2	SP30-H1.1-V/EX2
Temperature sensor	Fe-CuNi	PT100 2 wire	Fe-CuNi
Temperature controller	External		
Probe tube length L1	Max. 1 m [≈ 39.37"]		
Sample temperature max.	Depending on temperature class. Please specify with order.		
Operating temperature max.	Depending on temperature class. Please specify with order.		
Pre-filter	Optional	Optional	V20-2/30 insitu filter length 520 mm [≈ 20.47"], ø 60 mm [≈ 2.36"], filter porosity 2 µm, integrated and heated
Sample gas inlet connection	G3/4"i DIN ISO 228/1		Pre-filter with G1 1/2"i DIN ISO 228/1
Dust loading	Max. 2 g/m ³		>2 g/m ³
Probe tube volume	380 ml per meter		420 ml
Sample pressure max.	5 bar g		
Storage temperature	-20 to +70 °C [-4 to 158 °F]		
Ready for operation	2 h		
Power supply	230 V 50 / 60 Hz or 115 V 50 / 60 Hz		
Heating capacity	0.6 m [≈ 23.62"]: 600 W, 1 m [≈ 39.37"]: 800 W (other length/capacities on request)		
Electrical connections	Terminals, max. 4 mm ² , 2 x PG13,5 cable gland, terminal range 6 - 12 mm		
Electrical standard	EN 61010, EN60519-1		
Degree of protection	IP54 EN 60529		
Ex-marking	II 3 G Ex nA II T5 to T2 see table temperature class		
Ambient temperature	Connection box of the heated sample tube: -20 to +70 °C [-4 to 158 °F]		
Mounting flange	DN65 PN6, Form B with 4 welded screws on both sides M 12 x 40 mm		
Material of parts in contact with the sample	Stainless steel 1.4539		1.4539, SS316Ti/SS316

Temperature controller type	HEX5-0.2.08
Ex-marking	 II 3 G Ex nA nC IIC T5
Ambient temperature	0 to +50 °C [32 to 122 °F]
Power supply	230 V 50/60 Hz max. 800 W or 115 V 50/60 Hz max. 830 W
Electrical connection	Cable gland, terminal range 6-12 mm, terminals max. 4 mm ²
Electrical standard	EN 61010, EN60519-1
Degree of protection	IP65 EN 60529
Temperature status alarm	-10 °C [14 °F] to T _{set} switching capacity 250 V 3 A AC, 0.25 A DC potential free
Excess temperature limiter	+5 °C [41 °F] to T _{set} manual reset
Mounting	Wall mounting

Temperature classes

Temperature class	Operating temperature °C [°F]	Limiter °C [°F]
T2	280 [536 °F]	290 [554 °F]
T3	185 [365 °F]	190 [374 °F]
T4	120 [248 °F]	125 [257 °F]
T5	85 [185 °F]	90 [194 °F]

Pressure difference and T₉₀-time

ΔP and T₉₀ at flow:	100	200	500	1000	NI/h
ΔP Pressure loss SP30-H../EX2 length 1 m [≈ 39.37"]	< 1	< 1	< 1	< 1	mbar
ΔP pressure loss SP30-H1.1-V/EX2 length 1 m [≈ 39.37"] with new pre-filter V20-2/30	< 1	< 1	1,5	4	mbar
T ₉₀ -time	14	7	< 3	< 2	sec