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

2-1.9.6 11.09

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 demage by cooling and condenstaion 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 and 1,0 m, 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"i thread connector at the tube end. This enables fixing a standard non heated sample tube or pre-filter to the heated insitu tube.

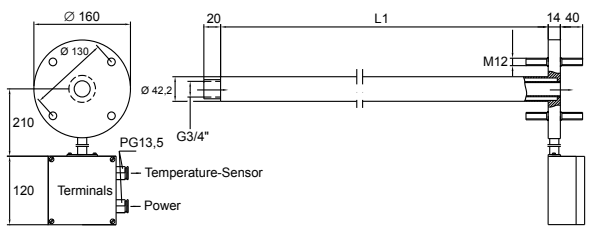
The electrical cartridge heater is located inside a double tube system, completely separated from the process. At the version SP30-H1.1-V/EX2 the included large pre-filter V20-2/30 is heated up with the sample tube.

The temperature of the heated tube has to be adjusted in relation to the process temperature and corresponding to the max. admissable sampling temperature of 185°C. The tube versions SP30-H1.1/EX2 and SP30-H2/EX2 have an internal diameter of 22 mm. The internal diameter of the version SP30-H1.1-V/EX2 is reduced to 6 mm to optimise the tube dead volume.

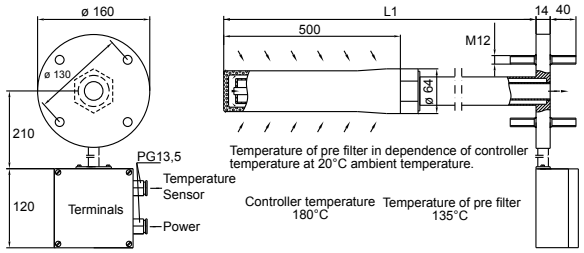
For temperature control of the heated sample tube the electronic controller HEX5-0.2.08 is used. It is applicable for separate mounting in Ex-zone 2. The controller depending on the desired temperature class is programmed correspondingly ex works.

Dimensions

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

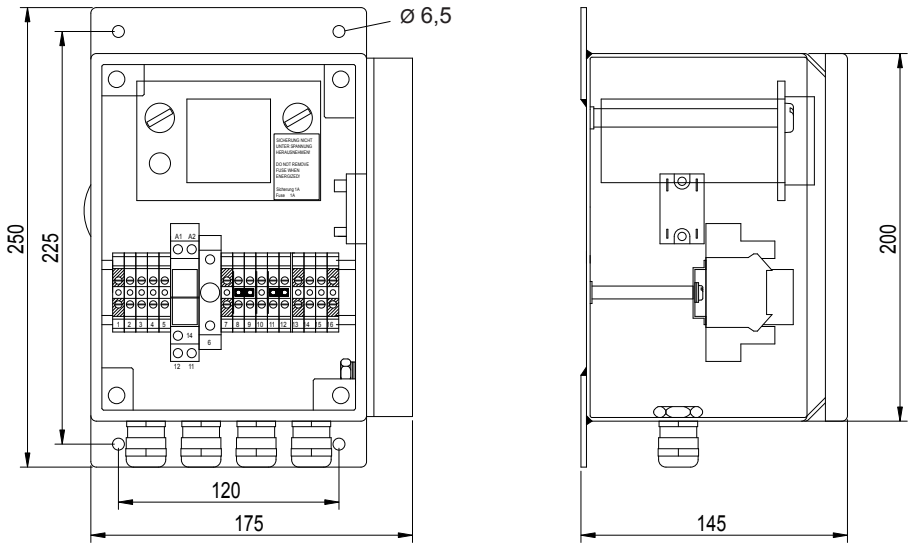


Probe tube with pre-filter SP30-H1.1-V/EX2



Dimensions in mm

Temperatue controller HEX5-0.2.08



Dimensions in mm

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		
Sample temperature max.	max. 185 °C depending on the temperature class. Please specify with order.		
Operating temperature max.	max. 185 °C depending on the temperature class. Please specify with order.		
Pre-filter	optional	optional	V20-2/30 insiti filter length 520 mm, ø 60 mm, filter porosity 2µm, 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/m³		>2 g/m³
Probe tube volume	380 ml/m		420 ml
Sample pressure max.	5 bar g		
Storage temperature	-30 °C to +70 °C		
Ready for operation	2 h		
Power supply	230V 50/60Hz or 115V 50/60Hz		
Heating capacity	0,6m: 600W, 1m: 800W (other length/capacities on request)		
Electrical connections	terminals, max. 4 mm², 2x PG13,5 cable gland, terminal range 6-12mm		
Electrical standard	EN 61010, EN60519-1		
Degree of protection	IP54 EN 60529		
Ex-marking	Ex 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		
Mounting flange	DN65 PN6, Form B with 4 welded screws on both sides M 12x 40 mm		
Material of parts in contact with the sample	stainless steel 1.4539		1.4539, SS316Ti/SS316

M&C | TechGroup Germany GmbH
Rehhecke 79, D-40885 Ratingen
info@mc-techgroup.com
www.mc-techgroup.com
Fon +49 (0)2102 935-0
Fax +49 (0)2102 935-111

Temperature controller type	HEX5-0.2.08
Ex-marking	Ex II 3 G Ex nA nC nL IIC T5
Ambient temperature	0°C to +50°C
Power supply	230V 50/60Hz max. 800W or 115V 50/60Hz max. 830W
Electrical connection	Cable gland, terminal range 6-12mm, terminals max. 4mm^2
Electrical standard	EN 61010, EN60519-1
Degree of protection	IP65 EN 60529
Temperature status alarm	-10°C to T_{set} switching capacity 250V 3A AC, 0,25A DC potential free
Excess temperature limiter	+5°C to T_{set} manual reset
Mounting	Wall mounting

Temperature classes

Temperature class	Operating temperature °C	Limiter °C
T3	185	190
T4	120	125
T5	85	90

Pressure difference and T90-time

ΔP and T_{90} at flow:	100	200	500	1000	Nl/hr
ΔP Pressure loss SP30-H../EX2 length 1m	< 1	< 1	< 1	< 1	mbar
ΔP pressure loss SP30-H1.1-V/EX2 length 1m with new pre-filter V20-2/30	< 1	< 1	1,5	4	mbar
T_{90}- time	14	7	< 3	< 2	sec

M&C | TechGroup Germany GmbH
Rehhecke 79, D-40885 Ratingen
info@mc-techgroup.com
www.mc-techgroup.com
Fon +49 (0)2102 935-0
Fax +49 (0)2102 935-111