ExPro-C... Digital Temperature-/Humidity Probe

Explosion proof digital probe exclusively connectable to
ExCos-D / RedCos-D transducer for temperature and/or humidity measuring
PTB-certified acc. to ATEX directive 94/9/EC for Zone 1, 2, 21, 22.

ExPro - CT...
ExPro - CF...
ExPro - CTF...

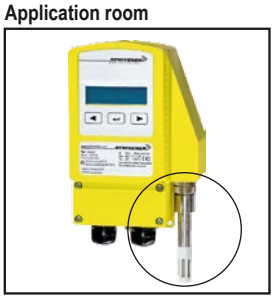
Subject to change!

Type/Probe	Function	Range	Sensor length	Applicable to transducer	Hazardous area
ExPro - CT...	Temperature Probe	–40...+125 °C*	50/100/150/200 mm	ExCos-D..., RedCos-D...	Zone 1, 2, 21, 22
ExPro - CF...	Humidity Probe	0...100 % rH	50/100/150/200 mm	ExCos-D..., RedCos-D...	Zone 1, 2, 21, 22
ExPro - CTF...	Combi Probe	–40...+125 °C*/0...100 % rH	50/100/150/200 mm	ExCos-D..., RedCos-D...	Zone 1, 2, 21, 22
		* at 50 mm length -40...**+80** °C	**Sensor length**		

Application

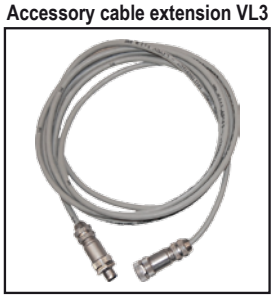
ExPro-C.. sensors

Application room



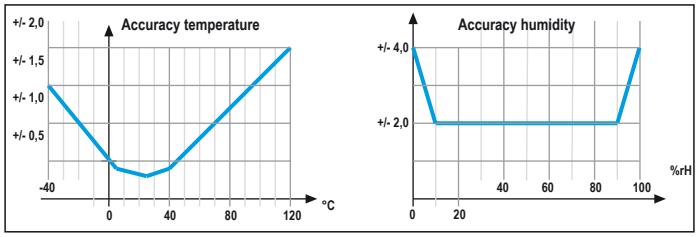
Application duct

Accessory cable extension VL3



Technical data

Technical data	ExPro-CT...	ExPro-CF...	ExPro-CTF...
Application for	**Temperature probe**	**Humidity probe**	**Combi probe temperature and humidity**
Measuring Range	–40 °C ... +125 °C	0...100 % rH	–40 °C ... +125 °C / 0...100 % rH
Sensor type and length	ExPro-CT- 50 = 50 mm	ExPro-CF- 50 = 50 mm	ExPro-CTF- 50 = 50 mm
	ExPro-CT-100 = 100 mm	ExPro-CF-100 = 100 mm	ExPro-CTF-100 = 100 mm
	ExPro-CT-150 = 150 mm	ExPro-CF-150 = 150 mm	ExPro-CTF-150 = 150 mm
	ExPro-CT-200 = 200 mm	ExPro-CF-200 = 200 mm	ExPro-CTF-200 = 200 mm
Response time	T90 / 20 s	T90 / 4 s	T90 / 20 s, T90 / 4 s
Accuracy Temperature	± 0,3 °C at 25 °C ± 0,025 °C/°C + transducer		
Accuracy Humidity	± 2 % at 10...90 % rH, ± 4% at < 10 % rH and > 90 % rH + transducer		
Hysteresis	± 1 %		
Protection class	IP66 acc. to IEC 60529		
Material thermowell, protection tube	Stainless steel 1.4305, **at length 50 mm in plastic max. temperature 80°C** (room temperature)		
Filter element	at humidity probe with plastic filter element pore size 100 µm		
Ambient temperature/-humidity	–40...+125 °C / 0...100 % rH		
Storage temperature	–40...+125 °C		
Delivery	1 ExPro-C... probe with fast connection and gasket (EPDM) for duct installation		
Installation area probe	in Ex-area zone 1, 2, 21, 22		



Values intrinsically safe

Ui = 7,9 V	Ci = 0
Ii = 48 mA	Li = 0
Pi = 95 mW	

Medium temperature

Temperature class	T6	T5	T4	T3	T2	T1
Medium temperature max [°C]	59	74	109	125	125	125

The correlation of max. medium temperature and temperature class as well as the surface temperature is shown in table above.

Accessories

MFK	Flange for duct mounting, for variable depth of immersion in ducts
TH-VA	Immersion sleeve stainless steel V4A 1.4571, length 120 mm. other length on request
FA-VA	Filter element stainless steel, pore size 10µm **not for high humidity!**
MKR	Mounting bracket for duct Ø 600 mm
VL3	Cable extension 3 m, PVC

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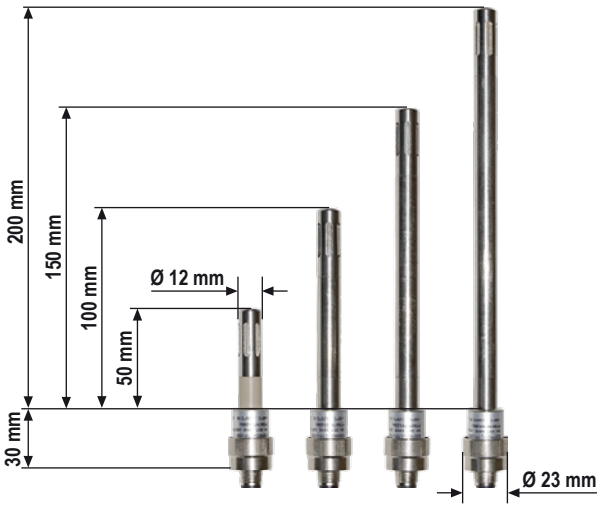
What is a ExPro-C... probe?

A ExPro-C... probe is a sensor head resp. measuring element which is in combination with a ExCos-D transducer for temperature-, humidity or combi temperature/humidity measuring. ExPro-C... probes are only for use with **ExCos-D…** transducer. The connection should be done with a socket on the front resp. on the back side of the transducer but only 1 ExPro-C... module can be used.

Dimensions



Important informations for installation and use

A. ExPro-C... Probe

The power of the ExPro-C.. probe is supplied via an instrinsically safe (IS) circuit from the ExCos-D. Unused probe-entries at the ExCos-D have to be closed with the black caps.

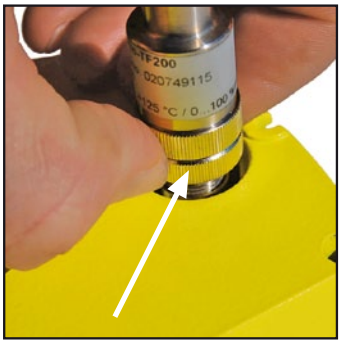
B. Temperature-flow

In case of temperature measuring over the max. allowed environmental temperature of 50 °C of the transducer, it has to be watched, that no temperature flow over the probe takes place. The mounting of the probe has to make sure, that mistakes due to heat-dissipation are within the tolerance-limits and the max. allowed environment temperature is not exceeded.

C. Mounting

The probe is being srewed into the socket of the ExCos-D. The probe cannot be opened, as parts of the element are moulded. A small distance tolerance between ExCos-D (transducer) and ExPro-C... (probe) has to be accepted due to production conditions.

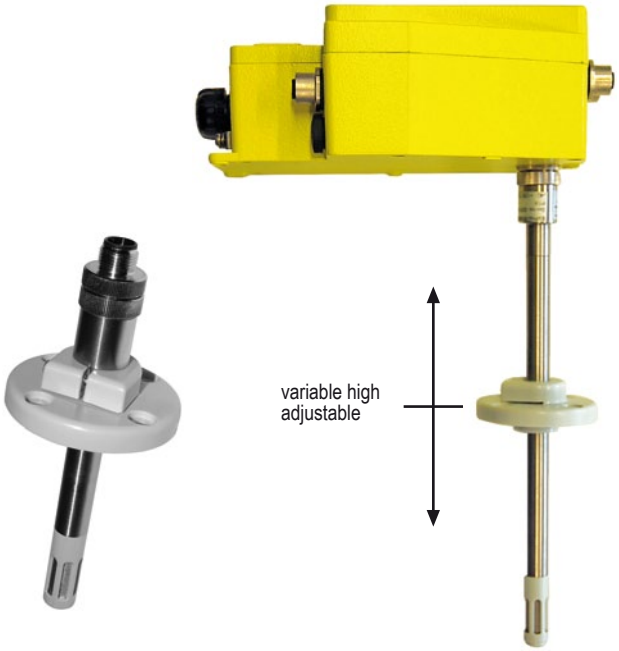
Mounting duct probe (back side ...Cos-D)



For mounting the probe plug the socket and screw on the sensor by turning the lower knurled thumb clock wise. Just screw hand tight. A small clearance between ExCos-D (transducer) and ExPro-C... (probe) has to be accepted due to production conditions.

Mounting flange (MFK) for duct installation

The flange is moved over the probe and fix it with the side wise adjusting screw. The flange can be mounted with the 4 screws direct to the duct.



Mounting room probe (terminal box side ...Cos-D)

For mounting the probe plug the socket and screw on the sensor by turning the lower knurled thumb clock wise. Just screw hand tight. A small clearance between ExCos-D (transducer) and ExPro-C... (probe) has to be accepted due to production conditions.

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