



# 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

## Application

ExPro-C... sensors



Application room



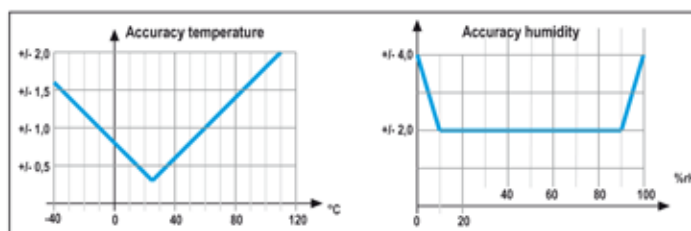
Application duct



Accessory cable extension VL3



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-CT-100 = 100 mm ExPro-CT-150 = 150 mm ExPro-CT-200 = 200 mm	ExPro-CF- 50 = 50 mm ExPro-CF-100 = 100 mm ExPro-CF-150 = 150 mm ExPro-CF-200 = 200 mm	ExPro-CTF- 50 = 50 mm ExPro-CTF-100 = 100 mm ExPro-CTF-150 = 150 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		



## 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

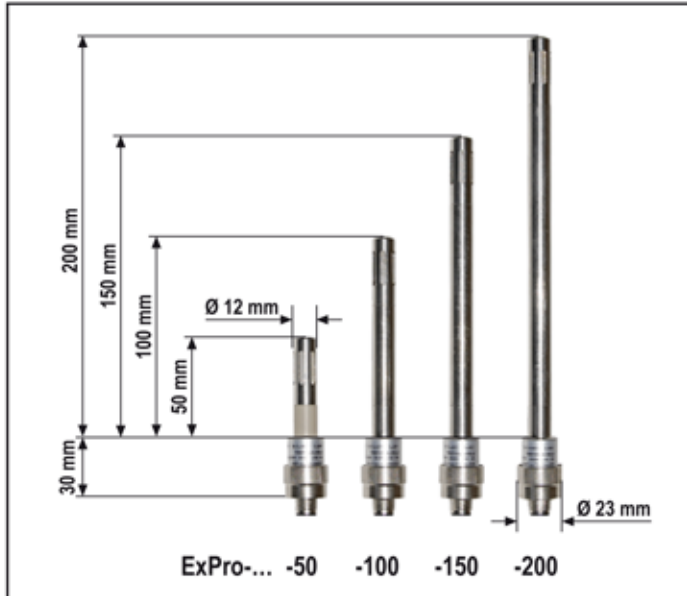
MFK	Flange for duct mounting, for variable depth of immersion in ducts
TH-VA	Immersion sleeve stainless steel V4A 1.4571, length 120 mm. other length on request
FA-VA	Filter element stainless steel, pore size 10µm <b>not for high humidity!</b>
MKR	Mounting bracket for duct Ø 600 mm
VL3	Cable extension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



### 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 intrinsically safe (IS) circuit from the ExCos-D. Unused probe-entries at the ExCos-D have to be closed with the black caps.

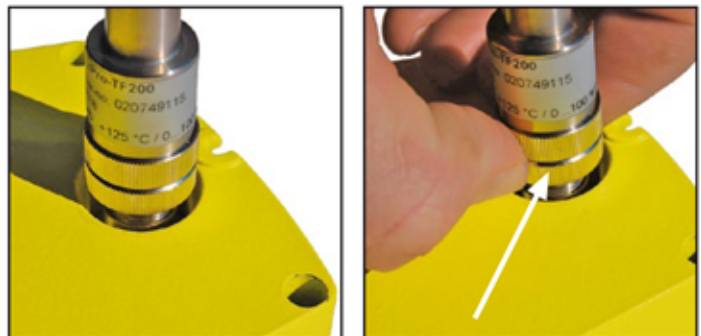
#### B. Temperature-flow

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 screwed 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.