

## EX-Thermometers

On the next pages you will find our re-released EX-thermometers of the TFN 5x0 series, together with accessories. The various probes, specifically examined for their aptitude for EX applications, allow for the measurement of temperature within potentially explosive areas.

### Applications

- Temperature measurement within potentially explosive areas:



**II 2G Ex ia IIC T4 Gb**

**II 2G Ex ia IIIB T135°C Db**

for environmental temperatures up to +60 °C

- Process and facility monitoring
- Examination in laboratories
- Usage during the production or examination of e.g. solvent-based products, fuels and gases



## TFN 520-EX Typ K Thermometer

### 1-channel high accuracy thermometer for EX-areas



Without probe. Probe variants can be found on the following pages.



- With lemo connector
- Robust design for years of industrial use
- Approximately 5 years battery life time

#### Technical Data

Measurement range	-20 °C ... +80 °C
Accuracy at +25 °C ambient temperature	±0.3 °C
Resolution	0.1 °C
Operating temperature	-5 °C ... +60 °C
Storage temperature	-25 °C ... +60 °C
Measurement interval	0.5 sec. to 15 sec.
Sensor	External; thermo element type K
Sensor connection	LEMO size 0
Channels	1
Battery	Lithium, 3 V CR 2477
Battery life time	5 years
Dimensions (l x w x h)	115 x 54 x 22 mm
Weight	Approximately 90 g
Housing material	ABS, metalized
Protection class	IP52
Factory calibration certificate	-100 °C, 0 °C, +200 °C and +1,000 °C

The accuracy of the used probe adds to the accuracy of the device. E.g. probes with class 1 of DIN EN 60584 have ± 0,5 °C between -40 °C ... +125 °C.

Type	Description	Part No.
TFN 520-EX	1-channel EX thermometer	1340-5521-EXA

## TFN 530-EX Type K Thermometer

### 2-channel high accuracy thermometer for EX-areas



Without probe. Probe variants can be found on the following pages.



- With two lemo connectors
- Robust design for years of Industrial use
- Approximately 5 years battery life time

#### Technical Data

Measurement range	-20 °C ... +80 °C
Accuracy at +25 °C	±0.3 °C
Resolution	0.1 °C
Operating temperature	-5 °C ... +60 °C
Storage temperature	-25 °C ... +60 °C
Measurement interval	0.5 sec. to 15 sec.
Sensor	External; thermo element type K
Sensor connection	LEMO size 0
Channels	2
Battery	Lithium, 3 V CR 2477
Battery life time	5 years
Dimensions (l x w x h)	115 x 54 x 22 mm
Weight	Approximately 90 g
Housing material	ABS, metalized
Protection class	IP52
Factory calibration certificate	-100 °C, 0 °C, +200 °C and +1,000 °C

The accuracy of the used probe adds to the accuracy of the device. E.g. probes with class 1 of DIN EN 60584 have ± 0,5 °C between -40 °C ... +125 °C.

Type	Description	Part No.
TFN 530-EX	2-channel EX thermometer	1340-5531-EXA

## Thermo element Type K-probes for TFN 5x0 EX thermometers

### EX-rod probes

*Temperature measurement of air, surfaces, fluids and gases*

#### TPN 100-EX

- Probe (L = 185 or 300 mm, Ø 0.5 mm, blunt, inconel needle, with Lemo connection)
- Accuracy: exceeds DIN EN 60584, class 2
- Response time ( $t_{99}$  water 0.2 m/s): 0.4 sec



#### TPN 110-EX

- Probe (L = 185, 300 or 500 mm, Ø 1 mm, blunt, inconel needle, with Lemo connection)
- Accuracy: exceeds DIN EN 60584, class 2
- Response time ( $t_{99}$  water 0.2 m/s): 1sec



#### TPN 120-EX

- Probe (L = 185, 300, 500, 600, 700 or 1,000 mm, Ø 1.5 mm, blunt, inconel needle, with Lemo connection)
- Accuracy: exceeds DIN EN 60584, class 2
- Response time ( $t_{99}$  water 0.2 m/s): 2sec



#### TPN 140-EX

- Probe (L = 185 or 300 mm, Ø 3 mm, blunt, inconel needle, with Lemo connection)
- Accuracy: exceeds DIN EN 60584, class 2
- Response time ( $t_{99}$  water 0.2 m/s): 4 sec



## EX-Thermal wire probes

### Temperature measurement of air, surfaces and gases

#### TPN 600-EX

- Probe (L = 1 m, outside 1.9 x 1.2 mm, Isolation: glass/silk meshwork, with Lemo connection)
- Accuracy: exceeds DIN EN 60584, class 2
- Response time  
( $t_{99}$  Air 0.2 m/s): 25 sec



*Additional accessories for using the TFN 5x0 EX thermometers outside the EX-area can be found from page 54.*

Type	Description	Part No.
TPN 100-EX	Rod probe without cable, L = 185 mm, Ø 0.5 mm, blunt	1341-0611-EX
TPN 100-30-EX	Rod probe without cable, L = 300 mm, Ø 0.5 mm, blunt	1341-0805-EX
TPN 110-EX	Rod probe without cable, L = 185 mm, Ø 1 mm, blunt	1341-0810-EX
TPN 110-30-EX	Rod probe without cable, L = 300 mm, Ø 1 mm, blunt	1341-0812-EX
TPN 110-50-EX	Rod probe without cable, L = 500 mm, Ø 1 mm, blunt	1341-0814-EX
TPN 120-EX	Rod probe without cable, L = 185 mm, Ø 1.5 mm, blunt	1341-0609-EX
TPN 120-30-EX	Rod probe without cable, L = 300 mm, Ø 1.5 mm, blunt	1341-0400-EX
TPN 120-50-EX	Rod probe without cable, L = 500 mm, Ø 1.5 mm, blunt	1341-0406-EX
TPN 120-60-EX	Rod probe without cable, L = 600 mm, Ø 1.5 mm, blunt	1341-0409-EX
TPN 120-100-EX	Rod probe without cable, L = 1,000 mm, Ø 1.5 mm, blunt	1341-0414-EX
TPN 140-EX	Rod probe without cable, L = 185 mm, Ø 3 mm, blunt	1341-0607-EX
TPN 140-30-EX	Rod probe without cable, L = 300 mm, Ø 3 mm, blunt	1341-0415-EX
TPN 600-EX	Flexible thermal wire probe without cable, L = 1 m, outside 1.9 x 1.2 mm	1341-0646-EX