

# Thermocouple Probe TCP K

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Invented for life



- ▶ Thermocouple Type K
- ▶ Thermo material: NiCr-Ni
- ▶ Measurement range: -200 to 1,000°C (1,300°C)
- ▶ Flexible mounting depth
- ▶ Analog output (Thermo voltage)

This sensor is designed to measure exhaust gas temperatures up to 1,300°C. Thermocouples are temperature sensors that supply a temperature corresponding voltage without any additional external energy source. The thermocouple has a metal mantle that includes two isolated inner wires made of thermo material NiCr-Ni Type K. The benefits of this sensor are the combination of high quality production part, robust design with metal housing and motorsport connector and a very quick response time.

## Application

Application	-200 to 1,000°C (1,300)°C
Max. vibration	800 m/s <sup>2</sup> at 5 to 500 Hz

## Technical Specifications

### Mechanical Data

Male thread	See adapter
Wrench size	See adapter
Installation torque	See adapter
Weight with wire	47 g
Sensor tip bend radius	R 20

### Electrical Data

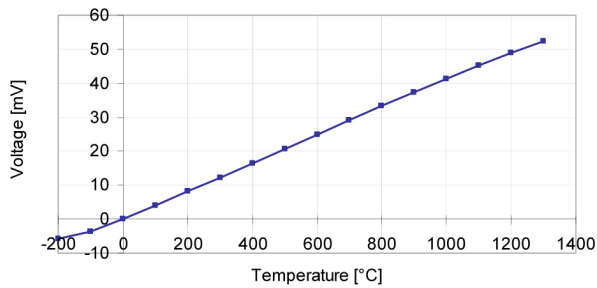
Voltage supply	NiCr/Ni Typ K
Full scale output	DIN IEC 584-1

### Characteristic Application

Accuracy (max. value) ± 1.5 °C or 0.004 \* t

T [°C]	U [mV]
-200	-5.891
-100	-3.554
0	0.000
100	4.096
200	8.138
300	12.209
400	16.397
500	20.644
600	24.905
700	29.129
800	33.275
900	37.326

1,000	41.276
1,100	45.119
1,200	48.838
1,300	52.410



### Connectors and Wires

Connector	ASL 6-06-05PD-HE
Mating connector ASL 0-06-05SD-HE	F 02U 000 229-01
Pin 1	-
Pin 2	Sig-
Pin 3	Sig+
Pin 4	-
Pin 5	Src
Sleeve	DR-25
Wire size	AWG 24
Wire length L	15 to 75 cm

Various motorsport and automotive connectors are available on request.

Please specify the required wire length with your order.

### Installation Notes

The TCP K can be connected to Bosch Motorsport ECUs with thermocouple inputs (w/o pull-up resistant) or to external devices, which amplify the sensor voltage.

Recommended max. continuous utilization temperature 1,000°C, short-term utilization temperature 1,300°C.

The sensor can be mounted individually according to the customer request.

The sensor tip is flexible/ bendable and can be fixed by a special adapter (B 261 209 159-01).

The length of the sensor tip can be modified on request.

Any mounting orientation is possible.

Please find further application hints in the offer drawing and free download of the sensor configuration file (\*.sdf) for the Bosch Data Logging System at our homepage.

### Safety Note

The sensor is not intended to be used for safety related applications without appropriate measures for signal validation in the application system.

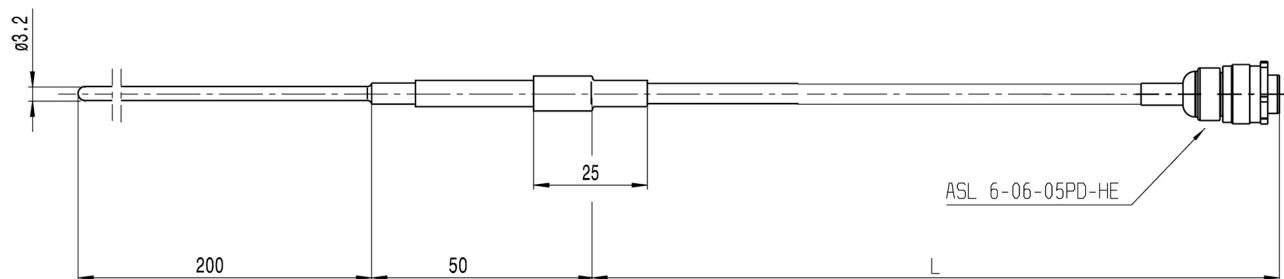
### Ordering Information

**Thermocouple Probe TCP K**  
Order number **B 261 209 385-01**

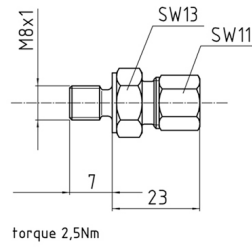
### Accessories

**Thermocouple Probe TCP K Adapter**  
Order number **B 261 209 159-01**

### Dimensions



Sensor



*Adapter*

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