



Thermocouple Probe TCP KA



- ▶ Thermocouple Type K
- ▶ Thermo material: NiCr-Ni
- ▶ Measurement range: 0 to 1,250°C
- ▶ Analog output (0 to 5 V)

This sensor is designed to measure exhaust gas temperatures up to 1,250°C.

Thermocouples are temperature sensors, which supply a temperature corresponding voltage, due to its thermoelectric behavior, without any additional external energy source. The mantle thermocouple has a metal mantle which includes two inner wires made of thermo material (Ni CrSi - NiSi). The wires are isolated. The voltage is amplified by an electronic circuit, which is powered by 12 V and supplies an output signal from 0 to 5 V. Please note that the operating temperature of the external electronics is from 0 to 120°C.

The main feature and benefit of this sensor is the combination of high quality production part, robust design and its integrated amplifier.

Application

Application	0 to 1,250°C
Operating temp. range (ext. electronics)	0 to 120°C

Technical Specifications

Mechanical Data

Male thread	M12x1
Wrench size	17 mm
Installation torque	15 Nm
Weight with wire	85 g
Length	250 mm

Electrical Data

Voltage supply	12 V
Full scale output	0 to 5 V

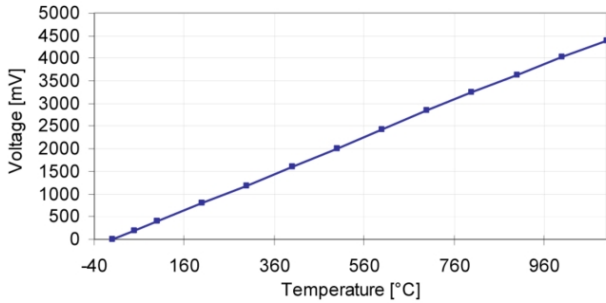
Characteristic Application

Measuring range	0 to 1,250°C
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T [°C]	U [mV]
0	0
50	197
100	399
200	793
300	1,190
400	1,598
500	2,012
600	2,427
700	2,839

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800	3,243
900	3,638
1,000	4,022
1,100	4,396
1,200	4,759
1,250	5,000



Connectors and Wires

Connector	F 02U B00 292-01
Mating connector	D 261 205 357
Pin 1	Sig
Pin 2	Gnd
Pin 3	U _S

Pin 4	-
Pin 5	-
Sleeve	DR-25
Wire size	AWG 24
Wire length L	15 to 75 cm

Installation Notes

The TCP KA can be connected to Bosch Motorsport ECUs with a 0 to 5 V analog signal input (w/o pull-up resistor) or to external data logging devices.

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

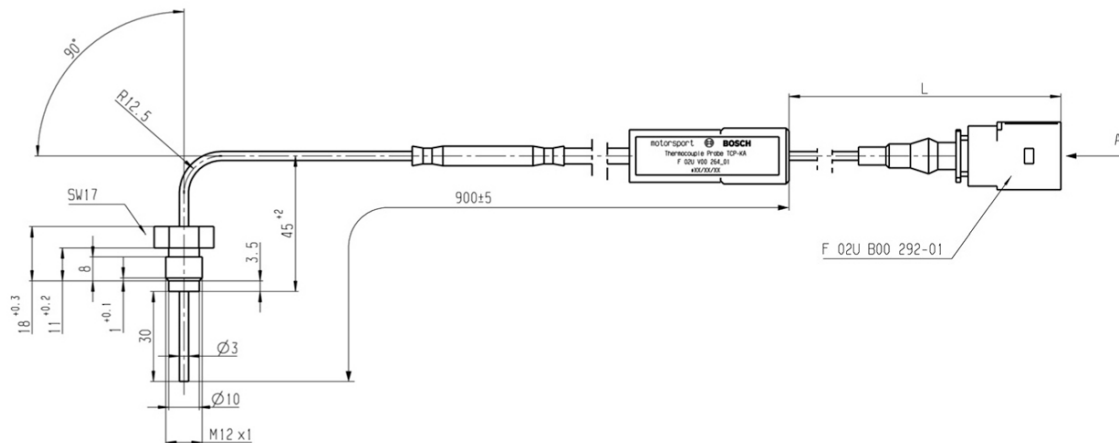
Please note that the operating temperature range of the external electronics is from 0 to 120°C.

Recommended bending radius of the wire of the sensor element is minimum 20 mm to ensure the sensor works properly and for a longer lifespan of the sensor.

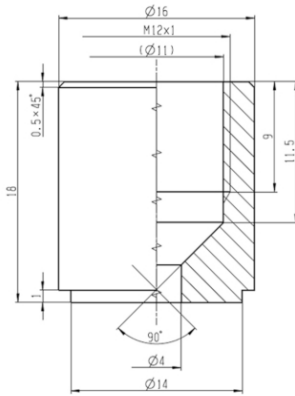
Any mounting orientation is possible.

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

Dimensions



Thermocouple Probe TCP KA



Thermocouple Probe TCP KA Adapter

Ordering Information

Thermocouple Probe TCP KA	F 02U V00 264-01
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Accessories

Thermocouple Probe TCP KA Adapter	F 02U V01 185-01
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