

# AX 131-S



## Analog Type K Surface Probes



- Accurate: Class 1 thermoelement
- Ergonomic handle with high operating temperature up to 120 °C
- Robust for many years of professional use
- Fast

### DESCRIPTION

AX 131-S are precision analog type K thermocouple temperature surface probes.

They are optimized for contact measurement on hard surfaces.

The variants have different constructions of the measuring heads – an optimized variant is available for every application.

The immersion and insertion probes are designed for use in gases, liquids and soft materials. Stem material is corrosion and temperature resistant stainless steel, which is suitable for continuous food contact.

The standard 1 meter thermocouple cable is terminated with miniature flat plug or comes optionally with loose ends.

The probes are based on class 1 material, which is the highest available precision class for thermocouples.

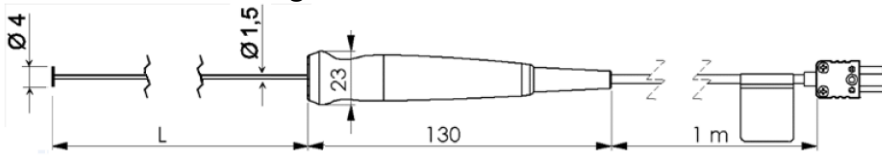
Attention: Surface probes have larger deviations in the practice than specified in this class, due to temperature gradient on point of contact.

The temperature gradient depends on the probe design and the heat transfer from the measured surface, high-quality thermocouple thermometers such as the PRO 131.2 /PRO135.2 support corresponding correction factor input.

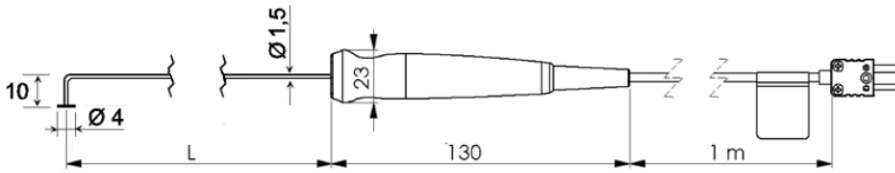
Sensor	Type K
Thermocouple	Type K: Nickel-chromium / nickel-aluminum, IEC 60584-1
Measuring range	AX 131-S15 surface: -40 ... +400 °C AX 131-S8 surface: -40 ... +900 °C
Accuracy	Class 1: $\pm 1.5^{\circ}\text{C}$ or 0.40% across measuring range (valid range -40 ... +1000 °C)
Response time ( $T_{90}$ )	Depending on surface / material
Cable	1 or 2 m silicone coated thermocouple cable (up to +200 °C) or coiled cable 300 mm stretchable to 1.2 m
Connection	miniature flat plug or lose ends
Dimensions	Stem: $\varnothing$ 1.5 mm or $\varnothing$ 3 mm L = 130 mm (other lengths on request) Surface measuring head: $\varnothing$ 8 mm or $\varnothing$ 15 mm, L = 130 mm
Insulation	Measuring head and stem are not potential free
Weight	AX 131-S4 ca. 55g, AX 131-S5 ca. 60 g AX 131-S8 ca. 70 g, AX 131-S15-HS ca. 75 g, (coiled cable + 6 g)
Stem Material	AISI 316, AX 131-S4S:-Inconel 600
Handle Materials	Polyamide (PA6-GF30), grommet Santoprene (up to +120 °C)

**AX131- S4 Surface probe with copper measuring surface  $\varnothing$  4 mm**

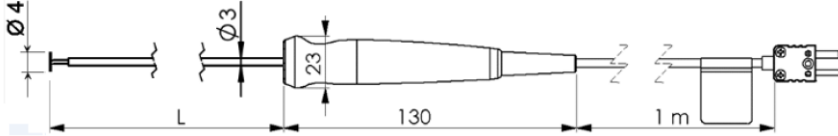
- -HS head straight



- --TA tube angled

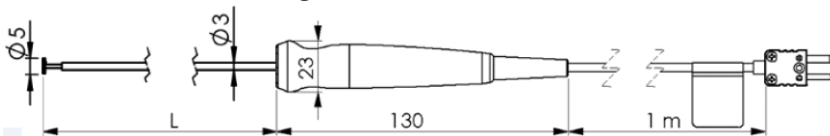


**AX131- S4S Surface probe with springy copper measuring surface  $\varnothing$  4 mm**

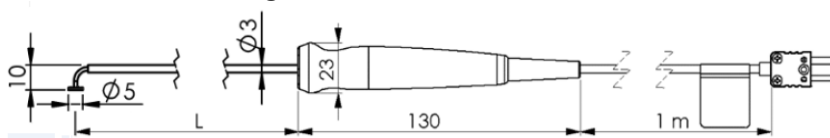


**AX131- S5 Surface probe with silver measuring surface  $\varnothing$  5 mm**

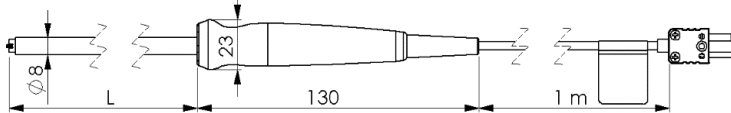
- -HS head straight



- -TA tube angled

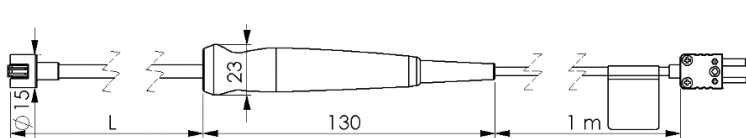


**AX131- S8 Surface probe with ceramic head  $\varnothing$  8 mm**

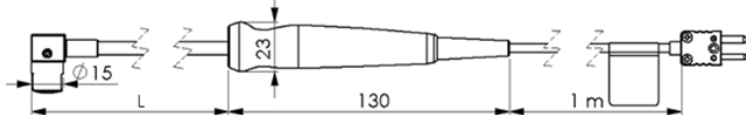


**AX131- S15 Surface probe with spring band  $\varnothing$  15 mm**

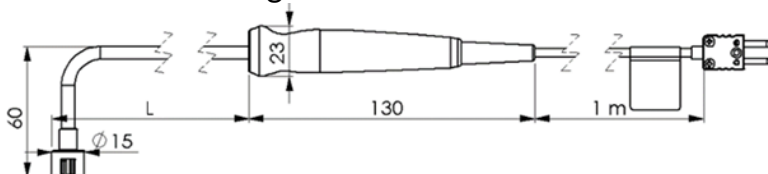
- -HS head straight



- -HA head angled



- -TA tube angled



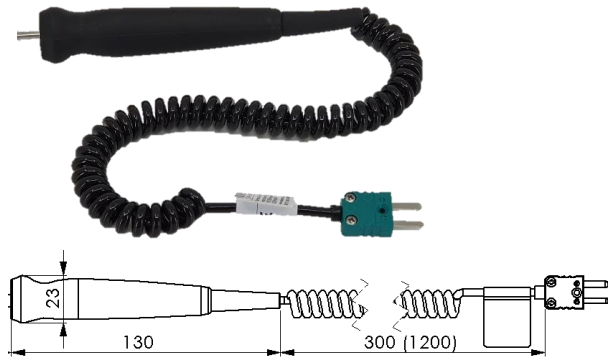
others on request!

## CABLE VARIANTS

Standard cable Lxx-S



Optional coiled cable approx. 1.2 m stretched L01.2SK



## SELECTION

	Speed	Accuracy	Robustness	Temperature	Cost
S4	+	+	++	-40 ... 500°C	+++
S4S	+	+	++	-40 ... 500°C	++
S5	++	++	+++	-40 ... 500°C	++
S8	++	+	+	-40 ... 900°C	+
S15	+++	+++	++	-40 ... 400°C	++

## ORDERING CODES

AX131 - 1 - 2 - 3 - 4

Type K Surface Probes

1	Variant		
	S4-HS		Ø 4 mm copper surface, economic, head straight
	S4-TA		Ø 4 mm copper surface, economic, tube angled
	S4S-HS		Ø 4 mm springy copper surface, head straight
	S5-HS		Ø 5 mm silver surface, robust and compact, head straight
	S5-TA		Ø 5 mm silver surface, robust and compact, tube angled
	S8-HS		Ø 8 surface, with ceramic head and coil spring, compact and high temperature resistant, head straight
	S15-HS		Ø 15 surface, with spring band, fast and precise, head straight
	S15-HA		Ø 15 surface, with spring band, fast and precise, head angled
	S15-TA		Ø 15 surface, with spring band, fast and precise, tube angled
2	Probe Tube		
	00	-S4:	Ø 1.5 mm, length 130 mm
		-S4S:	Ø 3 mm, length 130 mm
		-S5:	Ø 3 mm, length 180 mm
		-S8:	Ø 8 mm, length 130 mm
		-S15:	Ø 6 mm, length 130 mm
SLxx		Other lengths on request xx in [mm]	
3	Cable type & length		
	L01-S		1 m silicon cable
	L02-S		2 m silicon cable
	Lxx-S		other length on request
	L01.2SK		coiled cable approx. 1.2 m stretched
4	Connection		
	MF		Miniature-flat pin plug
	LE		Loose ends with ferrules

## STANDARD ARTICLES

AX131-S4-HS-00-L01-S	Type K surface probe with copper surface Ø 4 mm, probe tube length 130 mm, 1 m silicon cable, miniature flat plug	Art no. 488264
AX131-S4S-HS-00-L01-S	Type K surface probe with springy copper surface Ø 4 mm, probe tube length 130 mm, 1 m silicon cable, miniature flat plug	Art no. 488265
AX131-S5-HS-00-L01-S	Type K surface probe with silver surface Ø 5 mm, probe tube length 180 mm, straight 1 m silicon cable, miniature flat plug	Art no. 488261
AX131-S5-TA-00-L01-S	Type K surface probe with silver surface Ø 5 mm, probe tube length 180 mm, angled 1 m silicon cable, miniature flat plug	Art no. 488262
AX131-S8-HS-00-L01-S	Type K surface probe with coil spring, ceramic head straight Ø 8 mm, probe tube length 130 mm, 1 m silicon cable, miniature flat plug	Art no. 486856
AX131-S15-HA-00-L01-S-MF	Type K surface probe with spring band, fast, Ø 15 mm, probe tube length 130 mm, head angled, 1 m silicon cable, miniature flat plug	Art no. 486852
AX131-S15-HS-00-L01-S-MF	Type K surface probe with spring band, fast, Ø 15 mm, probe tube length 130 mm, 1 m silicon cable head straight, miniature flat plug	Art no. 486854
AX131-S15-HS-SL200-CC12-MF	Type K surface probe with spring band, fast, Ø 15 mm, probe tube length 200 mm, head straight, coiled cable, stretchable to 1.2 m, miniature flat plug	Art no. 488273
AX131-S15-TA-00-L01-S-MF	Type K surface probe with spring band, fast, Ø 15 mm, probe tube length 130 + 60 mm, head stem angled, 1 m silicon cable, miniature flat plug	Art no. 486853
AX131-S15-TA-SL200-CC12-MF	Type K surface probe with spring band, fast, Ø 15 mm, probe tube length 200 + 60 mm, head stem angled, coiled cable, stretchable to 1.2 m, miniature flat plug	Art no. 488274

## ACCESSORIES

VKA-L002	Extension cable, type K 2, silicone thermo-line with miniature flat-pin plug and -socket	Art no. 602910
MH 400VE	Magnet holder for AX 131-S15 and GOF 400, max 100°C	Art no. 607502



## SUITABLE INSTRUMENTS

PRO 131.2	2-channel handheld temperature meter for thermocouple probes, graphic display. Device in carton box incl batteries, QuickStart, test protocol, without temperature probe	Art no. 486119
PRO 135.2	2-channel handheld temperature meter/data logger for thermocouple probes, graphic display. Device in carton box incl batteries, QuickStart, test protocol, USB cable, without temperature probe. Free Software ProXware downloadable from Senseca website	Art no. 486118
ECO 130	Type K thermocouple quick response thermometer (formerly G 1200). Device in carton box incl batteries, Manual, test protocol, without probe	Art no. 486708
ECO 130.2	Type K quick response 2-channel-alarm-thermometer (formerly G 1202). Device in carton box incl batteries, Manual, test protocol, without probe	Art no. 486732