

AX 131



Precision Analog Type K Temperature Probe



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

DESCRIPTION

The AX 131 are precision analog type K thermocouple temperature probes.

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 sensing thermocouples are based on class 1 material, which is the highest available precision class.

The probes can be optionally supplied with ISO 9001 or DAKKS-/ACCREDIA accredited calibration ISO/IEC 17025 when combined to a suitable display instrument (e.g. PRO 131.2/ 135.2 or ECO 130).

Following variants of probe tip are available:

D / -M Immersion probe Ø 3 mm		
	AX131-D3/ AX131-DH3/ AX131-M3	
	AX131-M1.5	
-I Insertion probe Ø 1.5 mm		
	AX131-I1.5	
	AX131-D1.5	
I / -IH Insertion probe Ø 3 mm		
	AX131-I3	
	AX131-IH3	

TECHNICAL SPECIFICATION

Sensor	Type K
Measuring range	
AX 131-D3/D1.5	immersion: -40 ... +550 °C,
AX 131-I3/I1.5	Insertion: -40 ... +550 °C
AX 131-DH3/IH3	Insertion: -40 ... +800 °C
AX 131-M	immersion mineral insulated*): -200 ... +1150 °C
Thermocouple	Type K: Nickel-chromium / nickel-aluminum, IEC 60584-1
Accuracy	Class 1: ±1.5°C or 0.40% across measuring range (valid range -40 ... +1000 °C)
Response time (T ₉₀)	Ø 1.5 mm / 1.5 mm mineral ins.: water 0.4 m/s < 1 s, air 2 m/s approx. 12 s Ø 3 mm: water 0.4 m/s < 2 s, air 2 m/s approx. 40 s Ø 3 mm mineral insulated: water 0.4 m/s < 5 s, air 2 m/s approx. 60 s
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: Ø 1.5 mm or Ø 3 mm L = 130 mm (other lengths on request)
Weight	L = 130 mm: 60 g with 1 m cable, 65 g with 1.2m coiled cable
Stem Material	AISI 316, mineral insulated-Inconel 600
Handle Materials	Polyamide (PA6-GF30), grommet Santoprene (both up to +120 °C)
Protection degree	IP67, except connector
Applications	Immersion, insertion

*) Mineral-insulated temperature probes are filled with aluminum oxide powder inside the sensor tube, thus achieving a higher temperature resistance, and the probes can be bent within certain limit.

ORDERING CODES

Type K Immersion/Insertion Probes

AX131 - 1 - 2 - 3 - 4 - 5

1	Variant	
	D	immersion blunt, type K, class 1, not potential free
	DH	immersion blunt, high temperature, type K, class 1, not potential free
	M	immersion blunt, high temperature, type K, class 1, mineral isolated
	I	Insertion probe, needle type, type K, class 1, not potential free
	IH	Insertion probe, high temperature, type K, class 1, not potential free
2	Diameter stem	
	1.5	Ø 1,5 mm (not for high temperature -DH/-IH)
	3	Ø 3 mm (potential free at M)
3	Probe length L	
	100	100 mm, robust
	130	130 mm, standard
	150	150 mm, standard for mineral insulated
	xxx	Others on request
4	Cable type & length	
	L01-S	1 m silicon cable
	L02-S	2 m silicon cable
	LXX-S	other length on request
	CC12	coiled cable approx. 1.2 m stretched
5	Connection	
	MF	Miniature-Flat Pin plug
	LE	Loose ends with ferrules

STANDARD ARTICLES

AX131-M1.5-150-L01-S-MF	Type K immersion probe, mineral insulated not potential free, probe tube Ø 1.5 x 150 mm, 1 m silicon cable, miniature flat plug	Art no. 486822
AX131-M3-300-L01-S-MF	Type K immersion probe, mineral insulated potential free, probe tube Ø 3 x 300 mm, 1 m silicon cable, miniature flat plug	Art no. 488275
AX131-D1.5-130-L01-S-MF	Type K immersion probe, not potential free, probe tube Ø 1.5 x 130 mm, 1 m silicon cable, miniature flat plug	Art no. 488276
AX131-DH3-130-L01-S-MF	Type K immersion probe. High temperature, not potential free, probe tube Ø 3 x 130 mm, 1 m silicon cable, miniature flat plug	Art no. 486731
AX131-I1.5-130-L01-S-MF	Type K insertion probe, not potential free, probe tube Ø 1.5 x 130 mm, 1 m silicon cable, miniature flat plug	Art no. 486828
AX 131-I3-130-L01-S-MF	Type K insertion probe, not potential free, probe tube Ø 3 x 130 mm, 1 m silicon cable, miniature flat plug	Art no. 486829
AX 131-IH3-130-L01-S-MF	Type K insertion probe, high temperature, not potential free, probe tube Ø 3 x 130 mm, 1 m silicon cable, miniature flat plug	Art no. 488277

ACCESSORIES

VKA-L002	Extension cable, type K 2 , silicone thermo-line with miniature flat-pin plug and -socket	Art no. 602910
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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