

## Family Datasheet

### ECO 121-H-...

## Waterproof HACCP alarm thermometer with probe

- Modern and functional housing
- Quick and precise measurement
- For drinking water, food and pharma
- Available in different variations:
  - With insertion probes with different diameters and temperature capacities
  - With immersion probe 3mm
- Waterproof (IP65 / IP67)
- 3-line display / overhead display at keypress
- Backlight
- Alarm function
- Adjustable
- Robust, long battery life
- Hold-function
- Alternatively, auto-hold or timer function
- Min/Max-function for minimum and maximum recorded measured values



## DESCRIPTION

The primary focus in the development of the ECO-line was placed on the essential functions of the measurement technology. Pure measurement with a focus on precision, speed and reliability packaged in a compact housing distinguish an impressive price/performance ratio, Made in Germany.

Equipped with hygienically easy-to-clean housing and auto hold / timer function optimized for use in hygiene-critical applications (food, laboratory, pharmaceuticals) or for monitoring in drinking water systems, for example to prevent legionella.

The insertion probe variants ensure either low invasive or robust core temperature measurements.

The new handheld measuring devices also impress with their ergonomic design, dust and water-protected design according to IP 65/67 and the illuminated display.

The compact thermometer is available with a practical BNC connection for interchangeable sensors or as a complete device including test protocol cell and sensor with maximum overall precision alternatively orderable incl calibration certificate ex works.

### Display

Thanks to the backlight, the three-line LCD display offers ergonomic wide-angle visibility - by day and by night.

The HOLD function enables the display values to be frozen on demand.

Auto-Hold-function can catch a stable value automatically.

The timer-function can hold a value, after a defined period, for high reproducibility of measuring.

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### Power supply

2 powerful AA batteries, the energy-saving design and the configurable automatic switch-off function ensure long operation.

Configurable LCD backlight for further energy saving options.

### TECHNICAL DATA

#### Measurement specifications

Input	fixed Pt1000 probe	
Measuring range	Temperature -70.0 ... +250.0 °C (-94.0..+482.0 °F) Option -MB4: -200.0 ... +250.0 °C	
Measuring cycle	ca. 2 measurements / s	
Probe	ECO 121-H-D	Immersion probe AX 121-D3-L01S 150 mm, Ø3 mm, large handle up to 120°C, silicon cable
	ECO 121-H-I1.5	Extra thin and fast insertion probe GF1T-E1.5 100 mm, Ø1.5 mm, compact silicon handle short time 250°C, permanent 230°C, silicon cable
	ECO 121-H-I3	Robust insertion probe AX 121-I3-L01S 100 mm, Ø3 mm, large handle up to 120°C, silicon cable
	ECO 121-H-K	Robust PTFE insertion probe GES21 100 mm, Ø 3 mm, large PTFE handle, PTFE cable, each max 250 °C
Response time t90 in water 0.4 m/s	-D	<3 s
	-I3 / -K	<3 s
	-I1.5	<2 s
Accuracy (nominal temperature)	-20 ... +100 °C: ±0.1 K ±1 digit (device with fixed -70 ... +250 °C: ±0.2 % of measured value ±2 digit connected probe)	
Cable length	1 m	

#### General specifications

Display	3-line with battery status indicator, Backlight, protected by shatterproof screen, overhead display at keypress	
Power supply	2 x AA Alkaline batteries (included)	
Power consumption	ca. 0.4 mA, ca. 2 mA with backlight	
Battery life	ca. 5000 h typ. Continuous operation	
Auto-Hold stability criteria	15s < ±0.1K	
Automatic Power-Off	Yes, configurable by the user	
Operating conditions	-20 to 50 °C; 0 to 95 % r.h. (non-condensing)	
Storage temperature	-20...70 °C (without batteries)	
Protection class	IP65 / 67 (only with waterproof probes in the connected state for devices with BNC connection)	
Dimensions	108 x 54 x 28 mm (H x W x D)	
Weight	ECO 121-H-D	ca. 180 g
	ECO 121-H-I1.5	ca. 150 g
	ECO 121-H-I3	ca. 175 g
	ECO 121-H-K	ca. 190 g
Housing	Impact resistant ABS, Polyester (front panel)	

**ECO 121-H-...**

**Waterproof HACCP alarm thermometer with probe**

**ORDERING CODES**

<b>ECO121-H-</b>	<b>1</b>	<b>-</b>	<b>2</b>	
Waterproof HACCP alarm thermometer with fixed probe				
<b>1</b>	<b>Probe (permanently connected)</b>			
	D	Immersion probe AX 121-D3-L01S 150 mm, Ø3 mm, large handle up to 120°C, silicon cable		
	I1.5	Fast insertion probe GF1T-E1.5 100 mm, Ø1.5 mm, compact silicon handle short time 250°C, permanent 230°C, silicon cable		
	I3	Robust insertion probe AX 121-I3-L01S 100 mm, Ø3 mm, large handle up to 120°C, silicon cable		
	K	Robust PTFE insertion probe GES21 100 mm, Ø 3 mm, large PTFE handle, PTFE cable, each max 250 °C		
<b>2</b>	<b>Set-Option</b>			
	-	Device in carton box, test protocol, batteries, manual		
	-GKK1000	Device in case GKK 1000, test protocol, batteries, manual		
	-WPT2A	incl. WPT2A, factory calibration, test points: 0 °C / 70 °C + GKK 1000, not DAkkS accredited		
	-WPT2B	incl. WPT2B, factory calibration, test points: 0 °C / 37 °C + GKK 1000, not DAkkS accredited		
	-WPT3	incl. WPT3, factory calibration, test points: -20 °C, 0 °C, 70 °C + GKK 1000, not DAkkS accredited		
	-MB4	Measuring range -200 ... +250 °C (Standard: -70 ... +250 °C)		

**ECO 121-H-...**

**Waterproof HACCP alarm thermometer with probe**

**STANDARD ARTICLES**

**ECO121-H-D** Waterproof HACCP alarm thermometer with probe (permanently connected):  
Immersion probe AX 121-D3-L01S 150 mm, Ø3 mm, large handle up to 120°C, silicon cable



Device in carton box, test protocol, batteries

**Art no. 488157**

**ECO121-H-I1.5** Waterproof HACCP alarm thermometer with probe (permanently connected):  
Fast insertion probe GF1T-E1.5 100 mm, Ø1.5 mm, compact silicon handle short time 250 °C, permanent 230 °C, silicon cable



Device in carton box, test protocol, batteries

**Art no. 488160**

**ECO121-H-I3** Waterproof HACCP alarm thermometer with probe (permanently connected):  
Robust insertion probe AX 121-I3-L01S 100 mm, Ø3 mm, large handle up to 120 °C, silicon cable



Device in carton box, test protocol, batteries

**Art no. 488158**

**ECO121-H-K** Waterproof HACCP alarm thermometer with probe (permanently connected):  
Robust PTFE insertion probe GES21 100 mm, Ø 3 mm, large PTFE handle, PTFE cable, each max 250 °C



Device in carton box, test protocol, batteries

**Art no. 488159**

**ACCESSORIES**

G1000-Cover	ECO-line/G 1000 rubber protection cover, incl. 2 neodymium magnets	<b>Art no.: 483958</b>
ST-G1000	Protection bag with belt clip	<b>Art no.: 611373</b>
GCLIP1000	Metal belt clip self-adhesive	<b>Art no.: 475820</b>
G1000-BASE	ECO-line/G 1000 combined table base / wall suspension	<b>Art no.: 481885</b>
GKK1000	Carrying case 235 x185 x48 mm esp. for ECO121-H-I1.5	<b>Art no.: 611603</b>
GKK1100	Carrying case 275 x 229 x 83 mm universal foam lining for ECO121-H-K/-I3/-D	<b>Art no.: 601058</b>

For further articles, please visit Senseca website.