

## Family Datasheet

# ECO 120 / 121 Waterproof alarm thermometer for exchangeable probes BNC / permanent probes

- Modern and functional housing
- Quick and precise measurement
- Waterproof (IP65 / IP67)
- Available in two variations:
  - With BNC connection for exchangeable probes (ECO 120)
  - With permanently connected probe (ECO 121)
- Probe and cable permanently resistant to temperatures up to 230°C (2 hours up to 250 °C)
- Waterproof (IP65 / IP67)
- 3-line display / overhead display at keypress
- Backlight
- Alarm function
- Adjustable
- Robust, long battery life
- Hold-function to freeze measured values
- 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 distinguishes an impressive price/performance ratio, Made in Germany.

The 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 sensor with maximum overall precision. The device redefines our entry-level measurement class – test protocol included.

The matching sensors can be used at temperatures of up to 250 °C (incl. handle and cable) and are distinguished by their compact design and small tube diameter. Integrated: High-quality Pt1000 sensors.



ECO 120 front: BNC for exchangeable probes

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## for exchangeable probes BNC / permanent probes

### 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.

### 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

	ECO 120	ECO 121 -3 / -I3 / -I1.5
Inputs	BNC socket for exchangeable probes, see accessories / exchangeable probes	fixed Pt1000 probe
Measuring range	Temperature -200.0 ... +450.0 °C (-328.0...+842.0 °F) observe permissible range of the probe!	Temperature -70.0 ... +250.0 °C (-94.0...+482.0 °F)
Accuracy (nominal temperature)	-20 ... +100 °C: ±0.1 K ±1 digit otherwise with 0.1 % of value ±2 digits plus probe inaccuracy acc. to class	-20 ... +100 °C: ±0.1 K ±1 digit -70 ... +250 °C: ±0.2 % of value ±2 digit
Max. cable length	3 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	
Automatic Power-Off	Yes, configurable by the user	
Operating conditions instrument	-20 to 50 °C; 0 to 95 % r.h. (non-condensing)	
Probe variant		3: Immersion 100 mm, Ø 3 mm I3: Insertion 100 mm, Ø 3 mm I1.5: thin immersion 100 mm, Ø 1,5 mm
Probe cable and handle		Silicon, short time 250°C, permanent 230°C
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	approx. 130 g (without probe)	
Housing	Impact resistant ABS, Polyester (front panel)	

# ECO 120 / 121 Waterproof alarm thermometer

## for exchangeable probes BNC / permanent probes

### ORDERING CODES

<b>ECO120</b>	
Waterproof alarm thermometer for exchangeable probes BNC (formerly G 1700)	
<b>1</b>	<b>Set-Option</b> - Device in carton box, test protocol, batteries, manual -GKK1000 Device in case GKK 1000, test protocol, batteries, manual -WPT2A Device in case GKK 1000, immersion probe GF1T-T3-AA-BNC, factory calibration WPT2A 0 / 70 °C not DAkkS accredited -WPT2B Device in case GKK 1000, immersion probe GF1T-T3-AA-BNC, factory calibration WPT2A 0 / 37 °C not DAkkS accredited -WPT3 Device in case GKK 1000, immersion probe GF1T-T3-AA-BNC, factory calibration WPT3 -20 / 0 / 70 °C not DAkkS accredited
<b>ECO121-3</b>	
Waterproof alarm thermometer with immersion probe (formerly G 1710)	
<b>1</b>	<b>Probe (permanently connected)</b> - With immersion probe GF 1TK-T3, 100 mm, Ø3 mm, handle and cable short time 250°C, permanent 230°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)
<b>ECO121-I3</b>	
Waterproof alarm thermometer with insertion probe (formerly G 1720)	
<b>1</b>	<b>Probe (permanently connected)</b> - With robust insertion probe, 100 mm, Ø3 mm, handle and cable short time 250°C, permanent 230°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 120 / 121 Waterproof alarm thermometer

## for exchangeable probes BNC / permanent probes

<b>ECO121-I1.5</b>	
Waterproof alarm thermometer with insertion probe (formerly G 1730)	
<b>1</b>	<b>Probe (permanently connected)</b> - With fast penetration probe 100 mm, Ø1.5 mm, handle and cable short time 250°C, permanent 230°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

### STANDARD ARTICLES



#### ECO 120

Device in carton box, test protocol, batteries

**Art no.: 486749**



#### ECO 121-3

Device in carton box, test protocol, batteries, manual with immersion probe 100 mm, Ø 3 mm, Pt1000 2-wire fixed connection, V4A, 1m cable

**Art no.: 486750**



#### ECO 121-I3

Device in carton box, test protocol, batteries, manual with durable insertion probe 100 mm, Ø 3 mm, Pt1000 2-wire fixed connection, V4A, 1m cable

**Art no.: 486751**



#### ECO 121-I1.5

Device in carton box, test protocol, batteries, manual with extra-thin insertion probe 100 mm, Ø 1.5 mm, Pt1000 2-wire fixed connection, V4A, 1 m cable

**Art no.: 486757**



### Technical specifications probe

Probe reaction time (T90)	Ø 3 mm: Water 0.4 m/s < 3 s
	Ø 1.5 mm: Water 0.4 m/s < 2 s

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### ACCESSORIES

**Spare parts:**

GB-AA-2 Spare batteries 2x AA Art no.: 600704

**Exchangeable probes for ECO 120:**

GF1T-T3-B-BNC Pt1000 immersion probe class B, 100 mm, Ø 3 mm, with BNC connector  
(like ECO 121-3) Art no.: 609549

GF1T-T3-AA-BNC Pt1000 immersion probe class AA, 100 mm, Ø 3 mm, with BNC connector  
Art no.: 609550



GF1T-E3-B-BNC Pt1000 insertion probe class B, 100 mm, Ø 3 mm, with BNC connector  
(like ECO 121-I3) Art no.: 609639



GF1T-E1.5-B-BNC Pt1000 insertion probe class B, 100 mm, Ø 1.5 mm, with BNC connector  
(like ECO 121-I1.5) Art no.: 609645



**Technical specifications exchangeable probes**

Class B	±0.3°C @0°C
Class AA	±0.1°C @0°C
Measuring range	-70 ... 250 °C
Cable and handle	Silicon, -50...230°C, short time 250°C, cable length ca. 1m

**Additional accessories:**

G1000-Cover ECO-line/G 1000 rubber protection cover, incl. 2 neodymium magnets Art no.: 483958

ST-G1000 Protection bag with belt clip Art no.: 611373

GCLIP1000 Metal belt clip self-adhesive Art no.: 475820

G1000-BASE ECO-line/G 1000 combined table base / wall suspension Art no.: 481885

GKK1000 Carrying case Art no.: 611603

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