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 measurement technology. Pure measurement with a focus on precision, speed and reliability packaged in a compact housing distinguish an impressive price/performance ratio.
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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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	-200.0 ... +450.0 °C (-328.0 ... +842.0 °F) observe permissible range of probe!	-70.0 ... +250.0 °C (-94.0 ... +482.0 °F)
Accuracy (nominal temperature)	-20 ... +100 °C: ±0.1 K ±1 digit Other range: ± 0.2 % of value ± 2 digits plus probe inaccuracy acc. to class	-20 ... +100 °C: ±0.1 K ±1 digit Other range: ±0.2 % of value ±2 digits
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	configurable by the user	
Operating conditions instrument	-20 ... 50 °C; 0 ... 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 (incl. BNC: 116 x 54 x 28 mm)	
Weight	approx. 130 g (without probe)	
Housing	Impact resistant ABS, Polyester (front panel)	

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ORDERING CODES

ECO120			
Waterproof alarm thermometer for exchangeable probes BNC (formerly G 1700)			
	1	**Set-Option**	
		-	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
ECO121-3			
Waterproof alarm thermometer with immersion probe (formerly G 1710)			
	1	**Probe (permanently connected)**	
		-	With immersion probe GF 1TK-T3, 100 mm, Ø3 mm, handle and cable short time 250°C, permanent 230°C
	2	**Set-Option**	
		-	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)
ECO121-I3			
Waterproof alarm thermometer with insertion probe (formerly G 1720)			
	1	**Probe (permanently connected)**	
		-	With robust insertion probe, 100 mm, Ø3 mm, handle and cable short time 250°C, permanent 230°C
	2	**Set-Option**	
		-	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

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