GREISINGER

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Quick reference guide

EN

G 1110

barometer | altimeter

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1 About this documentation

1.1 Purpose of the document

- This document is intended as a quick reference option.
- It does not replace the operating manual.
- For this reason, read the operating manual before operating the product for the first time.

1.2 Legal notices

This document is entrusted to the recipient for personal use only. Any impermissible transfer, duplication, translation into other languages or excerpts from this operating manual are prohibited.

The manufacturer assumes no liability for print errors.

1.3 Further information

Software version of the product:

- V1.1 or later

Link to the complete operating manual:

http://www.greisinger.de

For the exact product name, refer to the type plate on the rear side of the product.

2 Safety

2.1 Explanation of safety symbols

DANGER

This symbol warns of imminent danger, which can result in death, severe bodily injury, or severe property damage in case of non-observance.

CAUTION

This symbol warns of potential dangers or harmful situations, which can cause damage to the device or to the environment in case of non-observance.

NOTE

This symbol indicates processes, which can have a direct influence on operation or can trigger an unforeseen reaction in case of non-observance.

2.2 Foreseeable misuse

The fault-free function and operational safety of the product can only be guaranteed if applicable safety precautions and the device-specific safety instructions for this document are observed.

If these notices are disregarded, personal injury or death, as well as property damage can occur.

DANGER

Incorrect area of application!

In order to prevent erratic behaviour of the product, personal injury and property damage, the product must be used exclusively as described in the chapter Description in the operating manual.

- The product is not suitable for use in explosion-prone areas!
- The product must not be used for diagnostic or other medical purposes on patients!
- For measurements requiring devices that are subject to authorisation or special approvals, this product is not a substitute for such products and can only be used as an aid in preparatory or comparison measurements!

2.3 Safety instructions

NOTE

This product does not belong in children's hands!

2.4 Intended use

The device measures the absolute pressure in the air.
The ambient pressure is measured directly via the integrated sensor. Pressure equalisation between the unit and the environment takes place via a water-impermeable membrane on the front side.

Applications include:

- Barometric measurements (e.g. weather)
- Elevation determination

The device must only be used under the conditions and for the purposes for which it was designed.

It must be handled with care and used according to the technical data (do not throw, strike, etc.). Suitable measures must be used to protect the pressure equalisation opening and be protected from dirt.

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3 The product at a glance

3.1 The G 1100 barometer series

LCD Display

Front view

Top view

3.2 Display elements

Display

Battery indicator	Evaluation of the battery status
Unit display	Display of the units or Min/Max/Hold information text
Main display	Measurement of the current pressure or value for min/max/hold
Auxiliary display	Measurement of the current pressure in Min/Max/Hold mode
Bar display	Trend display in 7 steps ■□□□ / ■■□□ / □■□□ falling (strong / medium / slight) □■■□ stable □□■□ / □□■■ / □□□■ rising (slight / medium / strong)

3.3 Operating elements

On / Off button

Press briefly	Switch on the product
	Activate / deactivate lighting
Long press	Switch off the product
	Reject changes in a menu

Up / Down button

Press briefly	Display of the min/max value
	Change value of the selected parameter
Long press	Reset the min/max value of the current measurement
Both simultaneously	Rotate display, overhead display

Function key

Press briefly	Freeze measurement (Hold)
	Return to measurement display
	Call up next parameter
Long press, 2s	Start menu configuration, ConF appears in the display
	Close menu, changes are saved
Long press, 4s	Depending on the selected special function: Activation of the Tare function nuLL or rapid measurement with mean value AVr

4 Operation

4.1 Opening the configuration menu

1. Press the *Function key* for 2 seconds to open the ***Configuration*** menu.
2. ConF appears in the display. Release the *Function key*.

Parameter	Values	Meaning
		
Display unit		
Unit		
	hPa	Barometer in [hPa]
	mbar	Barometer in [mbar]
	PSI	Barometer in [psi]
	mmHG	Barometer in [mmHg]
	m	Altimeter/Elevation display in [m]
	Ft	Altimeter/ Elevation display in [feet]
Activatable special functions		
	nuLL	Function key  At barometer display: tare function At altimeter display: setting the altitude
	AVR 0:02 / AVR 0:05 / AVR 0: 10	Rapid measurement with mean value over 2 s / 5 s / 10 s activatable

Measuring rate

rAtE		Selection of the measurement speed
	SLo	Slow
	FASt	Fast *(not recommended for altimeter display)*

Nautical norm correction

SEA.L

	no	Inactive, display measured air pressure directly
	YES	Active, display air pressure compensated to sea level
ALt,	-500 .. 9000	Height above sea level in m for correction

Trend display

tEnd

	oFF	Bar display and tendency value display deactivated
	1_S / 60_S	Time base for bar display 1 second (0.2 hPa / bar level corresponds to ~1.7 m / 5 ft at sea level) or 60 seconds (12 hPa / bar level corresponds to ~100 m / 328 ft at sea level)
	1_h / 3_h	Time base for bar display 1 hour (1 hPa / bar level) or 3 hours (3 hPa / bar level) for usual meteorological assessments.
		The value will be renew every minute.

Additional information

Lcd.2

	oFF	No additional information in auxiliary display
	°C	Temperature in °C
	°F	Temperature in °F

With activated tEnd – display additionally:

tEnd	Trend value
°C tE	Temperature in °C and trend value
°F tE	Temperature in °F and trend value
°C P t	Temperature in °C, trend value and air pressure (only available at altimeter display units)
°F P t	Temperature in °F, trend value and air pressure (only available at altimeter display units)

Shut-off time

PoFF

oFF	No automatic shut-off
0:15 0:30 1:00 4:00 12:00	Automatic shut-off after a selected time in hours and minutes, during which no buttons have been pressed

Backlight

Lt tE

oFF	Backlight deactivated
0:15 0:30 1:00 4:00	Automatic shut-off of the backlight after a selected time in minutes and seconds, during which no buttons have been pressed
on	No automatic shut off of the backlight

Factory settings

ini t

no	Use current configuration
YES	Reset product to factory settings. ini t donE appears in the display

4.2 Open the adjustment menu

For information refer to the operating manual!

5 Measurement Basics

5.1 Special functions

With the special functions that can be selected via the ***Configuration menu***, the device can be optimised for special measuring tasks. After it is switched on, the device starts up in standard measuring mode, the relevant special function is started by pressing and holding the *Function key* for 4 s.

5.1.1 nuLL Tare function / Altimeter altitude adjustment

The special function Func nuLL has been selected in the configuration menu.

Barometer display: The display can be zeroed by pressing the *Function key* for 4 s. If the tare function is activated, nuLL blinks in the lower display. The tare function can be reset by pressing the *Function key* again for 4 s.

Altimeter display: In the altimeter operating mode, after calling up the tare function, the user is prompted to enter the current altitude.

NOTE

The tare function is independent of the zero point correction accessible via the settings menu.

5.1.2 AVr 0:02 / AVr 0:05 / AVr 0: 10

Fast measurement with mean value over 2 s / 5 s / 10 s

Mean value mode for measurement of heavily fluctuating pressures.

In the ***Configuration mode***, a special function AVr 0:02, AVr 0:05 or AVr 0: 10 has been selected.

By pressing and holding the *Function key* for 4 s. the measurement with mean value can be activated.

The different mean value times of 2, 5 or 10 seconds can be selected depending on the requirement.

The first parameter is shown in the auxiliary display.

If the Tare function is activated when called up, this special function AVr can be reset by pressing and holding the *Function key* for 4 s. In order to reactivate the Tare, the special function must be switched in the configuration menu.

5.2 Use of the trend indicator

5.2.1 Meteorology: weather forecasting

Observation of variable weather conditions by assessing the rate of change of air pressure.

To do this, set the device to:

Unit	hPa	(international standard)
Func	nuLL	(no signification)
rAtE	SLo	(power saving during continuous operation)
SEA.L	YES	
ALti		altitude of the location above sea level
tEnd	1_h or 3_h	1 hour (1 hPa / bar level) or 3 hours (3 hPa / bar level)
Lcd.2	°C.tE	
PoFF	oFF	continuous operation

This results in the following display, for example:

display unit hPa

current pressure at sea level

trend: + 0,4 hPa per hour

□■■□ stable (trend lower 1 hPa)

5.2.2 Hiking, cycling, flying, motor sports: use as a variometer

A variometer or inclinometer indicates the change in altitude per unit of time, i.e. the rate of ascent or descent. Common units are [ft/min] or [m/s] for flight and motor sports, or [m/h] for example in hiking/running.

NOTE

The output value of the tendency display in the setting 1_S or 60_S shows the current value for the tendency based on the measurements of the last 5 seconds, scaled to the selected setting. In the 60_S setting, the resolution is reduced to 1 m or 5 ft.

To do this, set the device to:

Unit	Ft or m	(Altimeter)
Func	null	for convenient correction of the current altitude
rAtE	SLo	(power saving during continuous operation)
SEA.L	no	
tEnd	1_S or 60_S	(time base 1 second for m/s or 60 seconds for ft/min)
Lcd.2	tEnd	or for more information: °C.P.t or °F.P.t
PoFF	oFF	continuous operation

This results in the following display, for example:

display unit m or m/s

current altitude above sea level

trend: - 2.8 m per s

□■□□ slightly falling

6 Operation and maintenance

6.1 Battery

6.1.1 Battery indicator

If the empty frame in the battery display blinks, the batteries are depleted and must be replaced. However, the device will still operate for a certain length of time.

If the BAT display text appears in the main display, the battery voltage is no longer adequate for operation of the product. The battery is fully depleted.

6.1.2 Changing battery

Only use new, high-quality and suitable alkaline batteries!

For additional information, refer to the operating manual!

7 Error and system messages

Display	Meaning	Possible causes	Remedy
----	Calculation not possible	Measurement data acquisition is running	Waiting for data collection
No display, unclear characters or no response when buttons are pressed	Battery depleted System error Product is defective	Battery depleted Error in the product Product is defective	Replace battery Send in for repair
bAt	Battery depleted	Battery depleted	Replace battery
bAt Lo	Battery depleted	Battery depleted	Replace battery
Err.1	Measuring range exceeded	Measurement too high	Stay within allowable measurement range
		Product is defective	Send in for repair
Err.2	Measuring range is undercut	Measurement too low	Stay within allowable measurement range
		Product is defective	Send in for repair
Err.3	Display range has been exceeded	Incorrect display unit Value not displayable	Correct setting
Err.4	Display range has been undercut	Incorrect display unit Value not displayable	Correct setting
SYS Err	System error	Error in the product	Switch product on/off Replace batteries Send in for repair

8 Technical data

Measuring range	Barometer	300,0 .. 1100,0 hPa (mbar) abs. 4,350 .. 15,950 PSI abs. 225,0 .. 825,0 mmHg (Torr) abs.
	Altimeter	-500,0 .. 9000,0 m -1640 .. 19999 ft.
	Temperature	-20,0 .. 50,0 °C -4,0 .. 122,0 °F
Accuracy	Barometer	± 1 hPa typical (at T: 0 .. 30 °C) ± 0,25 % FSS max. corresponds to ± 2 hPa
	Altimeter	typ. ± 1 m relative (over a short period at constant ambient pressure @ 25°C)
	Temperature	typ. ± 0,5 °C @ 25°C
Measuring cycle		FASt: approx. 10 measurements per second SLo: approx. 1 measurement per second
Overload		4000 hPa abs.
Pressure connection		No connection, integrated sensor Pressure equalisation via diaphragm-protected opening
Display		3-line segment LCD, additional symbols, illuminated (adjustable white, permanent illumination)
Standard function		Min/Max/Hold Auto-power-Off function / if activated, switches the product off automatically Trend display, time base selectable (1s, 60s, 1h, 3h) Only with altimeter function: The altitude metres covered are calculated (ascent ASC, descent dESC, resolution 1m)
Additional functions		nuLL: Tare function AVr: Averaging over 2 s / 5 s / 10 s As altimeter: switchable variometer display with units ft/h, m/s, m/h

Calibration		Zero point and gradient adjustment
Housing		Break-proof ABS housing
	Protection rating	IP67
	Dimensions L*W*H [mm] and weight	108 * 54 * 28 mm without pressure connector 140 g, incl. battery
Operating conditions		-20 to 50 °C; 0 to 95 %RH (short-term condensation possible)
Storage temperature		-20 to 70 °C
Current supply		2*AA battery (included in the scope of delivery)
	Current require-ment/ Battery life	approx. 0.4 mA (slow measurement SLO) Operating time approx. 6000 h
	Battery indicator	4-stage battery status indicator, Charge indicator for low charge level: "BAT LO"
Auto-power-OFF function		The device switches off automatically if this is activated
Directives and standards		The devices conform to the following Directives of the Council for the harmonisation of legal regulations of the Member States: 2014/30/EU EMC Directive 2011/65/EU RoHS Applied harmonised standards: EN 61326-1:2013 Emission limits: Class B Immunity according to Table 1 Additional error: < 1 % FS EN 50581:2012 *The device is intended for mobile use and/or stationary operation in the scope of the specified operating conditions without further limitations.*

9 Service

9.1 Manufacturer

If you have any questions, please do not hesitate to contact us:

Contact

GHM Messtechnik GmbH

GHM GROUP - Greisinger

Hans-Sachs-Str. 26

93128 Regenstauf | GERMANY

Email: info@greisinger.de | www.greisinger.de

WEEE reg. no. DE 93889386