

GREISINGER

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Quick reference guide

EN

G 1107 / G 1113

Fine manometer | manometer



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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 is designed as a manometer and measures even the smallest pressure differential pressures of up to ± 200 hPa with a maximum resolution of up to 0.1 Pa in air or in non-corrosive/non-ionising gases between the two pressure connections.

	G 1107	G 1113
Differential pressure	± 200 hPa	± 2000 hPa
Max. resolution	0.1 Pa	1 Pa

Usual applications include precise measurements of filter condition, gas flow pressure, draught, leak integrity, dynamic pressure flow speed.

The pressure connection is made at the supplied interchangeable pressure connection ports with suitable hoses - 4 different connection options are available as standard, many other connection options can be used easily and reliably with G 1/8 adapters.

The product 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 connections and be protected from dirt and moisture.






3 The product at a glance

3.1 The G 1100 manometer series



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 graph	Trend display with the special function F_1 nE

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 , high-resolution measurement F_r or rapid measurement with mean value FV_r

3.4 Connections

Universal connection	Interchangeable pressure connection via G1/8" thread.
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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

Pa (G 1107)

hPa

mbar

bar (G 1113)

PSI

mmHg

Activatable special functions

<i>nUL</i>	Tare function available
G 1107	
<i>F_inE</i>	High-resolution measurement with 0.1 Pa activatable
G 1113	
<i>F_inE</i>	High-resolution measurement with 1 Pa activatable
AVR 0:02 / AVR 0:05 / AVR 0:10	Rapid measurement with mean value over 2 s / 5 s / 10 s activatable

Measuring rate

<i>rRE</i>	Selection of the measurement speed
<i>SLo</i>	Slow
<i>FRSt</i>	Fast

Resolution

<i>rRnG</i>	Selection display resolution
<i>RuTo</i>	Automatic switchover

G 1107

H_i Adjusted to the highest value, e.g. *-200.0 .. +200.0* hPa

L_o Adjusted to the lowest value, e.g. *-20.00 .. +20.00* hPa

G 1113

H_i Adjusted to the highest value, e.g. *-2000 .. +2000* hPa

L_o Adjusted to the lowest value, e.g. *-200.0 .. +200.0* hPa

Shut-off time

P_{oFF}

oFF No automatic shut-off

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

Backlight

L_o 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

init

no Use current configuration

YES Reset product to factory settings. *init 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.

CAUTION

Air pressure at port variant UT!

With higher pressures greater than 1 bar, the hoses must be secured to prevent unintended loosening. Suitable GDZ hose clamps are used for this purpose.

- 6x1 mm PVC GDZ-01. Up to 5 bar rel., vacuum-suitable!
- 6x1 mm PE GDZ-02. Up to 10 bar rel., vacuum-suitable!
- 6x1 mm PUR GDZ-03. Up to 9 bar rel., vacuum-suitable!



5.1.1 $n\mu LL$ Tare function

The special function $F_{unc} n\mu LL$ has been selected in the configuration menu.

The display can be zeroed by pressing the *Function key* for 4 s. If the tare function is activated, $n\mu LL$ blinks in the lower display. The tare function can be reset by pressing the *Function key* again for 4 s.

NOTE

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

5.1.2 $F_1 nE$ High-resolution measurement with 0.1 Pa (G 1107)

High-resolution measurement for the finest adjustment work, 4 Pascal Test (test of chimney draft with living-space-independent single combustion) and many other finely-adjusted pressure applications.

In the **Configuration menu**, the special function $F_{unc} F_1 nE$ has been selected.

The high-resolution measurement can be activated by pressing and holding the *Function key* for 4 s. Then the sensor is immediately zeroed and the optimised parameters for this measurement are activated.

CAUTION

When starting the special function, make sure that there is no pressure at the connections.

NOTE

The increased current consumption in this mode decreases battery life.

The quickly determined measurement replaces other devices, such as a U-tube manometer. The four bars in the lower display provide additional support.

- The two middle bars appear: Measurement is stable
- Left bars appear: the measurement decreases
- Right bars appear: the measurement increases

By pressing and holding the *Function key* for 2 s., the special function can be activated. *End Func* appears in the display.

5.1.3 F_{1nE} High-resolution measurement with 1 Pa (G 1113)

High-resolution measurement for the finest adjustment work and many other applications with the finest adjustment of pressure.

In the *Configuration menu*, the special function F_{1nE} has been selected.

The high-resolution measurement can be activated by pressing and holding the *Function key* for 4 s. Then the sensor is immediately zeroed and the optimised parameters for this measurement are activated.

CAUTION

When starting the special function, make sure that there is no pressure at the connections.

NOTE

The increased current consumption in this mode decreases battery life.

The quickly determined measurement replaces other devices, such as a U-tube manometer. The four bars in the lower display provide additional support.

- The two middle bars appear: Measurement is stable
- Left bars appear: the measurement decreases
- Right bars appear: the measurement increases

By pressing and holding the *Function key* for 2 s., the special function can be activated. *End Func* appears in the display.

5.1.4 *RVr 0:02 / RVr 0:05 / RVr 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 *RVr 0:02*, *RVr 0:05* or *RVr 0:10* has been selected.

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

Heavily fluctuating values arise particularly with dynamic pressure/compression measurements in chimney draft tests of forced-air burners and, consequently, conventional electronic manometers are not adequate for task. This special function optimises the device for this application purpose.

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.

By pressing and holding the *Function key* for 2 s., the special function can be activated. *End Func* appears in the display.

If the Tare function is activated when called up, this special function *RVr* 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.

6 Operation and maintenance

6.1 Operating and maintenance notices

! NOTE

Pressure connections must be protected from soiling.

6.2 Battery

6.2.1 Battery indicator

For additional information, refer to the operating manual!

6.2.2 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 Product is defective	Stay within allowable measurement range Send in for repair
Err.2	Measuring range is undercut	Measurement too low Product is defective	Stay within allowable measurement range Send in for repair
Err.3	Display range has been exceeded	Incorrect display unit Incorrect resolution Function active	Correct setting Deactivate function

Err.4	Display range has been undercut	Incorrect display unit	Correct setting
		Incorrect resolution	Deactivate function
		FnE Function active	
595 Err	System error	Error in the product	Switch product on/off
			Replace batteries
			Send in for repair

8 Technical data

G 1107

Measuring range	Measuring range (Hi)	Measuring range (Lo)
Accuracy	Typ.: ± 0.1 % FSS (at nominal temperature 25 °C) Max.: ± 1 % FSS	
Overload	Max. ± 1700 hPa	
Pressure connection	2 hose connections, interchangeable with G1/8 universal ports	
Measuring cycle	FR5t: approx. 25 measurements per second 5Lo: approx. 2.5 measurements per second	
Display	3-line segment LCD, additional symbols, illuminated (white, duration adjustable)	
Standard function	Min/Max/Hold Auto-power-Off function / if activated, the product switches off automatically	
Activatable special functions	nUL: Tare function Fr nE: With 0.1 Pa resolution RVr: Averaging over 2 s / 5 s / 10 s	
Adjustment	Zero point and gradient adjustment	

Housing		Break-proof ABS housing
	Protection rating	IP67 (pressure connections must be protected from soiling and moisture)
	Dimensions L*W*H [mm] and weight	108 * 54 * 28 mm without pressure connection 150 g incl. battery
Operating conditions		-20 to +50 °C; 0 to 95 % r.h. (temporarily 100 % r.h.)
Storage temperature		-20 to +70 °C
Current supply		2*AA battery (included in the scope of delivery)
	Current consumption/ Battery life	approx. 1 mA (slow measurement SLO) Operating time approx. 3000 h
	Battery indicator	4-stage battery status indicator, Note for low battery voltage: "BAT LO"
Directives and standards		<p>The devices conform to the following Directives of the Council for the harmonisation of legal regulations of the Member States:</p> <p>2014/30/EU EMC Directive</p> <p>2011/65/EU RoHS</p> <p>Applied harmonised standards:</p> <p>EN 61326-1:2013 Emission limits: Class B Immunity according to Table 2 Additional error: < 1 % FS</p> <p>EN 50581:2012</p> <p>The device is intended for mobile use and/or stationary operation in the scope of the specified operating conditions without further limitations.</p>

G 1113

Measuring range	Measuring range (Hi)	Measuring range (Lo)
	-2000 .. +2000 hPa (mbar) -2.000 .. +2.000 bar -29.00 .. +29.00 PSI -1500 .. +1500 mmHg (Torr)	-200.0 .. +200.0 hPa (mbar) -200.0 .. +200.0 mmHg (Torr)
Accuracy	Typ.: ± 0.1 % FSS (at nominal temperature 25 °C) Max.: ± 1 % FSS	
Overload	Max. ± 3100 hPa	
Pressure connection	2 hose connections, interchangeable with G1/8 universal ports	
Measuring cycle	FR5t: approx. 25 measurements per second 5Lo: approx. 2.5 measurements per second	
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	
Activatable special functions	nUL: Tare function Fr nE: With 1 Pa resolution RVr: Averaging over 2 s / 5 s / 10 s	
Calibration	Zero point and gradient adjustment	

Housing		Break-proof ABS housing
	Protection rating	IP67 (pressure connections must be protected from soiling and moisture)
	Dimensions L*W*H [mm] and weight	108 * 54 * 28 mm without pressure connection 150 g incl. battery
Operating conditions		-20 to +50 °C; 0 to 95 % r.h. (temporarily 100 % r.h.)
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9 Service

9.1 Manufacturer

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

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