

# GREISINGER

Member of GHM GROUP

## Quick reference guide

EN

# G 1107 / G 1113

Fine manometer | manometer



Members of GHM GROUP

**GREISINGER**

**HONSBERG**

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**VAL.CO**

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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 generally 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  $\pm 200$  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.

	<b>G 1107</b>	<b>G 1113</b>
Differential pressure	$\pm 200$ hPa	$\pm 2000$ 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 must 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 $F_{nE}$

#### 3.3 Operating elements

	<b>On / Off button</b>	
	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  $F, nE$  or rapid measurement with mean value  $RVr$ 

### 3.4 Connections

Universal connection

Interchangeable pressure connection via 1/8" thread.



## 4 Operation

### 4.1 Opening the configuration menu

1. Press the *Function* key for 2 seconds to open the **Configuration** menu.
2.  $\text{CONF}$  appears in the display. Release the *Function* key.

Parameter	Values	Meaning
	 	

### Anzeigeeinheit

Unit

Pa	Only G 1107
hPa	
mbar	
bar	Only G 1113
PSI	
mmHG	

### Activatable special functions

nULL	Tare function available
G 1107	
F <sub>1</sub> nE	High-resolution measurement with 0.1 Pa activatable
G 1113	
F <sub>1</sub> nE	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

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## Measuring rate

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

---

## Resolution

<i>rAnG</i>		Selection display resolution
	<i>Auto</i>	Automatic switchover
	G 1107	
	<i>Hi</i>	Adjusted to the highest value, e.g. $-200.0 \dots +200.0$ hPa
	<i>Lo</i>	Adjusted to the lowest value, e.g. $-20.00 \dots +20.00$ hPa
	G 1113	
	<i>Hi</i>	Adjusted to the highest value, e.g. $-2000 \dots +2000$ hPa
	<i>Lo</i>	Adjusted to the lowest value, e.g. $-200.0 \dots +200.0$ hPa

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## Shut-off time

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

---

## Backlight

*Li 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

## 5 Bases for measurement

### 5.1 Special functions

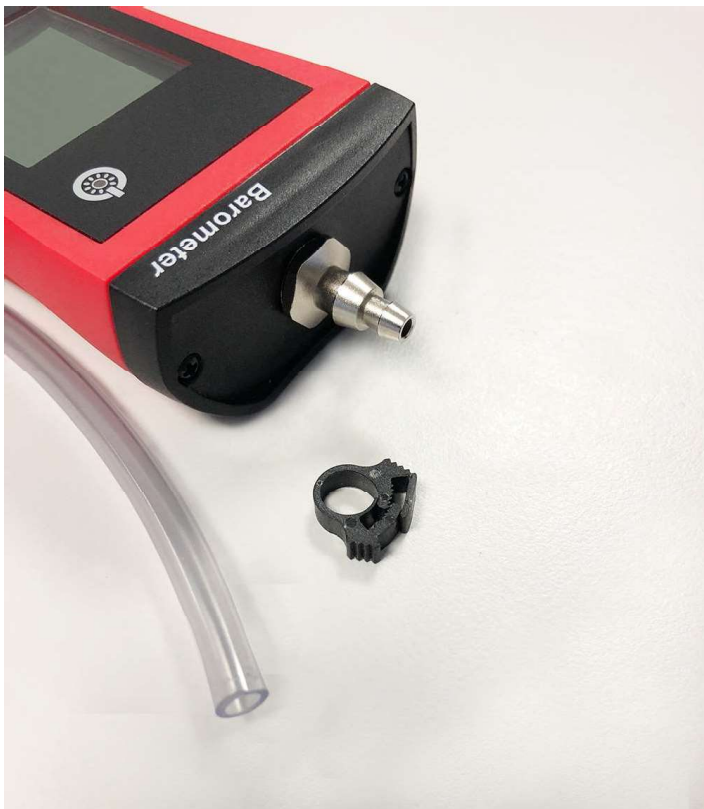
With the special functions that can be selected via the *Configuration menu*, the device can be optimised for special measuring tasks. After it is switched on, the device starts up in standard measuring mode, the relevant special function is started by pressing and holding the *Function key* for 4 s.

#### CAUTION

##### **Air pressure!**

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 *nULL* Tare function

The special function *Func nULL* 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, *nULL* 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<sub>i</sub> 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 *Func F<sub>i</sub> 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.  $End F_{1nE}$  appears in the display.

### 5.1.4 $AV_r 0:02$ / $AV_r 0:05$ / $AV_r 0:10$

#### 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  $AV_r 0:02$ ,  $AV_r 0:05$  or  $AV_r 0:10$  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  $\bar{AV}_r$  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

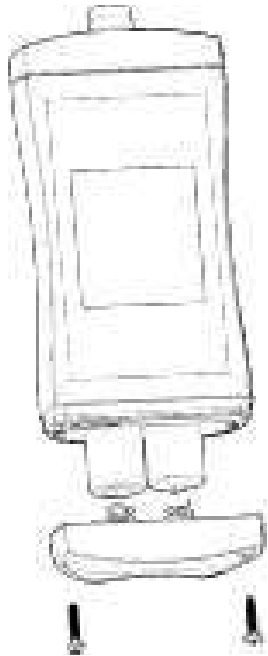
Pressure connections must be protected from soiling.

### 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
No display, unclear characters or no response when buttons are pressed	Battery depleted	Battery depleted	Replace battery
	System error	Error in the product	Send in for repair
	Product is defective	Product is defective	
<i>bAt</i>	Battery depleted	Battery depleted	Replace battery
<i>bAt Lo</i>	Battery depleted	Battery depleted	Replace battery
<i>Err.1</i>	Measuring range exceeded	Measurement too high	The measurement is above the permissible range
		Product is defective	Send in for repair
<i>Err.2</i>	Measuring range is undercut	Measurement too low	The measurement is below the permissible range
		Product is defective	Send in for repair
<i>Err.3</i>	Display range has been exceeded	Incorrect display unit	Correct setting
		Incorrect resolution	Deactivate function
		<i>F, nE</i> Function active	
<i>Err.4</i>	Display range has been undercut	Incorrect display unit	Correct setting
		Incorrect resolution	Deactivate function
		<i>F, nE</i> Function active	
<i>595 Err</i>	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)
	-200.0 .. +200.0 hPa (mbar) -2.900 .. +2.900 PSI -150.0 .. +150.0 mmHg (Torr)	-2000 .. +2000 Pa -20.00 .. +20.00 hPa (mbar) -20.00 .. +20.00 mmHg (Torr)
Accuracy	± 0,1 % FSS typical (at nominal temperature 25 °C) ± 1 % FSS max.	
Overload	Max. ± 1700 hPa	
Pressure connection	2 hose connections, interchangeable with G1/8 universal ports	
Measuring cycle	F <sub>Fast</sub> : approx. 25 measurements per second S <sub>Low</sub> : 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	n <sub>ULL</sub> : Tare function F <sub>i</sub> n <sub>E</sub> : With 0.1 Pa resolution AV <sub>r</sub> : 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: &lt; 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	± 0,1 % FSS typical (at nominal temperature 25 °C) ± 1 % FSS max.	
Overload	Max. ± 3100 hPa	
Pressure connection	2 hose connections, interchangeable with G1/8 universal ports	
Measuring cycle	FAST: approx. 25 measurements per second SLO: 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	NULL: Tare function F, nE: With 1 Pa resolution AVr: 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.)	

Storage temperature	-20 to +70 °C	
Current supply	2*AA battery (included in the scope of delivery)	
	Current requirement/ Battery life	approx. 1 mA (slow measurement SLO) Operating time approx. 3000 h
	Battery indicator	4-stage battery status indicator, Note for low charge level: "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: &lt; 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>	

## 9 Service

### 9.1 Manufacturer

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

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