

## Mobile SG-display unit



### Performance Features

- Easy to use
- Display and decimal point freely scalable
- Mains and battery operation
- Power off after timer function
- High contrast OLED display
- Display of physical unit and characteristic value mV/V
- Tare function
- Integrated charge controller
- Free selectable physical units
- Maximum value memory
- Control signal switch-on
- 4- and 6- wire measurement
- Optional analog output with  $\pm 5V$

### Application

- Research and development
- Process measuring and control technology
- Automotive engineering
- Energy and environmental technology
- Mechanical engineering

### Description

The GM 78 is a cost-effective hand-held measuring device with freely scalable OLED display with high contrast for strain gauge signals with  $-3.5mV/V \dots +3.5mV/V$ . The physical units are freely selectable and scalable.

The compact hand-held measuring device can be used flexibly. It can be operated with commercially available Li Ion batteries as well as a USB-C plug-in power supply and the integrated battery charging function.

The energy-saving mode with adjustable timer switches the device off automatically.

An integrated maximum value memory and a signal reversal function can be switched on and off at any time via the menu function; the status is shown on the display.

A 100% control signal (if available, see sensor data sheet) can be connected to the sensor. This makes it very easy to calibrate 3 sensors to the GM 78 and check the calibration at any time.

4/6- wire measurement can be switched via menu function.

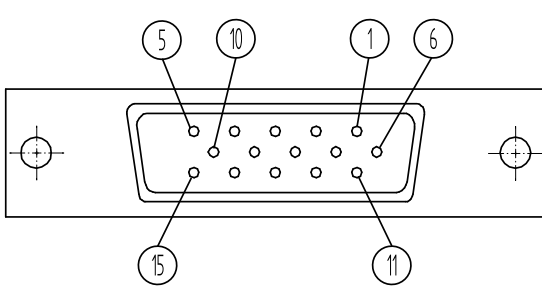
## Technical Data

Type		GM78
Article-No.		119892
Measurement accuracy	% F.S. <sup>1</sup>	0.05 (±3 Digit)
AD converter resolution	Bit	24
AD converter sampling rate	Hz	60
Rise time maximum value memory	ms	250 -3 dB
Display rate	1/s	>24
Display range		7 digits
Bridge resistance of the SG	Ω	240 ... 4000
Input sensitivity	mV/V	-3.5 ... 3.5
Excitation voltage SG	VDC	4, max. 17 mA
Operating time at 50% duty ratio with accumulator (Li-Ion 2x 14500 3,7V 900mA)	h	>10
Rated temperature range	°C	10 ... 35
Service temperature range	°C	5 ... 45
Storage temperature range	°C	-10 ... 60
Charge/supply port		USB-C socket
Dimensions (L x W x H)	mm	170 x 90 x 30
Level of protection	EN 60529	IP40
Weight	kg	0.25

<sup>1</sup> Full Scale

## Pin Assignment

15-pin		Description
Pin 1	NC	
Pin 2	Excitation (-)	Bridge excitation voltage
Pin 3	Excitation (+)	Bridge excitation voltage
Pin 4	Connection detection	Connect with Pin 9
Pin 5	Signal (+)	
Pin 6	NC	
Pin 7	Sensing (-)	
Pin 8	Sensing (+)	
Pin 9	Connection detection	Connect with Pin 4
Pin 10	Signal (-)	
Pin 11	NC	
Pin 12	NC	
Pin 13	NC	
Pin 14	NC	
Pin 15	Control signal	
Housing	Shielding	



**Attention:** Please leave unused pins free! These are required at the factory!

## Scope of delivery

Article-No.	Description
119892	GM 78
	2x Rechargeable battery Li-Ion 3.6V, 900 mAh
	Plug-in power supply 100 ... 240VAC / 5VDC 3A
	Storage- / Transport case

## Options / Equipment

Article-No.	Description	Type
110564	mV/V adjusted sensitivity with simulator	mV/V
10293	D-SUB-Connector, High Density, 15-pin	KSSH15
119894	Option analog output $\pm 5V$	GM78/U
119895	Extended input sensitivity up to 8 mV/V	GM78/8mV/V
10660	Connection cable for passive sensors, 3 m, with 6-pin female cable connector and 15-pin D-SUB male cable connector	KDM5/A-KSSH15/A-3m/PVC
10661	Connection cable for passive sensors, 3 m, with 7-pin female cable connector and 15-pin D-SUB male cable connector	KDM7/A-KSSH15/A-3m/PVC
10662	Connection cable for passive sensors, 3 m, with 6-pin female cable connector and 15-pin D-SUB male cable connector	KD6/A-KSSH15/A-3m/PVC

## Calibrations mV/V<sup>1</sup>

Article-No.	Description	
401010	Proprietary calibration acc. to ISO 10012	10 steps
401011	Proprietary calibration acc. to ISO 10012	20 steps

<sup>1</sup>Lorenz-Standard:

- Supply voltage 5V, calibration range  $\pm 1$  mV/V in 10 steps, calibration range  $\pm 2$  mV/V in 10 or 20 steps
- Language of the Certificate: German and English
- Calibration at DC: Normal K3608, if so display above Keithley 2000 or Lorenz VS3 (Lorenz amplifier with USB interface)
- Calibration at 225 Hz: Normal K3608, if so display above HBM MGCplus + ML38
- Calibration at 225 Hz: Normal BN100A, if so display above HBM DMP40