

Low-Cost Strain Gauge Hand-Held Measuring Amplifier GM77



Performance Features

- Display and decimal point freely scalable
- Mains-, battery-, accumulator-operation
- Cut-off after 15 min
- Calibration control switch
- Maximum value memory
- Signal conversion switch
- Integrated accumulator charger
- 4½-digit LCD-display
- Easiest calibration

Application

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

Description

The GM77 is a cost-effective hand-held measuring instrument with a 4½-digit, freely scalable LCD display for strain gauge (SG) signals of 0.35 to 3.5 mV/V.

The compact hand-held measuring instrument is flexibly applicable. Selectively, it can be used with commercial, external accessible batteries, accumulators or a plug power-pack with integrated accumulator charging function.

The battery saving mode with a 15 min timer switches the instrument off automatically.

By a key, an integrated maximum value memory and a signal inverse function are connectable and disconnectable at any time; the status is indicated on the keys by LEDs.

Another key applies 100 % calibration control (if available - see sensor data sheet) of the sensor, thus the GM77 can easily be calibrated to a sensor and the calibration can be checked at any time.

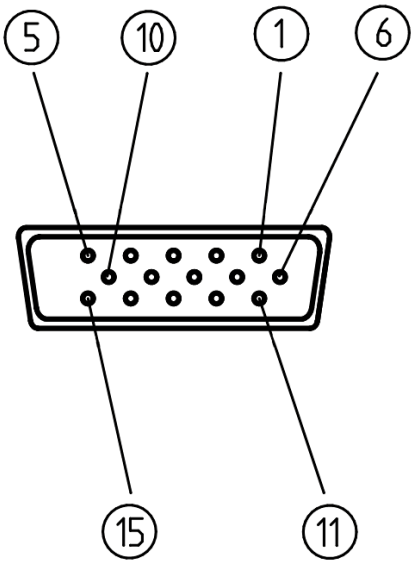
Technical Data

Low-Cost Strain Gauge Hand-Held Measuring Amplifier GM77

Type	GM77
Article-No.	107960
Measurement accuracy	0.2 % full scale ± 3 digits
Rise time maximum value memory	250 ms -3 dB
Display rate	2.5/s
Display range	0 ... ± 19999
Bridge resistance of the SG	350 ... 2000 Ω
Input sensitivity	0.35 ... 3.5 mV/V
Supply voltage SG	4V, max. 15 mA
Operating time at 50% duty ratio with accumulator	>40 h
Operating time at 50% duty ratio with batteries	>50 h
Nominal temperature range	15 ... 35 $^{\circ}\text{C}$
Service temperature range	5 ... 45 $^{\circ}\text{C}$
Storage temperature range	-10 ... 70 $^{\circ}\text{C}$
Dimensions (L x W x H)	125 x 80 x 40 mm
Weight	250 g
Level of protection	IP40

Pin Assignment

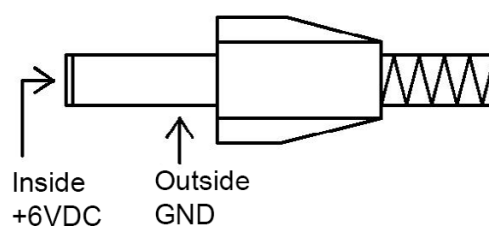
15-pin	
Pin 1	Excitation (-)
Pin 2	NC
Pin 3	NC
Pin 4	NC
Pin 5	NC
Pin 6	NC
Pin 7	NC
Pin 8	Excitation (+)
Pin 9	NC
Pin 10	Control signal
Pin 11	Signal (+)
Pin 12	Signal (-)
Pin 13	Shielding
Pin 14	NC
Pin 15	NC



The diagram shows a 15-pin connector with pins 5, 10, 1, 6, 15, and 11 labeled. Pin 5 is at the top left, pin 10 is at the top center, pin 1 is at the top right, pin 6 is at the top far right, pin 15 is at the bottom left, and pin 11 is at the bottom right.

Attention: Do not use pins that are not used! These are used factory-side!

Supply connector 2.1 mm



Options / Equipment

Article-No.	Description	Type
107961	Accumulator set 4 x AAA, 1.2V, 800 mAh	GM77/AK
106864	Desktop power supply for mains operation and accumulator charging	GM77/80/NT
110564	mV/V adjusted sensitivity with simulator	mV/V
10293	D-SUB male cable connector, high density, 15-pin	KSSH15
10477	Connection cable for passive sensors, 3 m, with 5-pin female cable connector and 15-pin D-SUB male cable connector	KDM5/A-KSSH15/A-3m/PVC
10365	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
10269	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
10621	Connection cable for passive sensors, 3 m, with 12-pin female cable connector and 15-pin D-SUB male cable connector	KD12/A-KSSH15/A-3m/PVC

Calibrations mV/V¹

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

¹ Lorenz-Standard:

- Supply voltage 5V, calibration range ± 1 mV/V in 10 steps, calibration range ± 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