GM 80
PORTABLE LOAD MONITOR

FEATURES

- Data Logger for over 15 000 Measurements
- Battery-Powered Device
- Trigger Input for External Controlling
- Fast Measurement up to 1 000 / s
- Display units
- Active or Passive Sensors
- 10 Sensor Parameter Sets
- Min.-Max. Value Memory (Peak and Valley)
- Time and Date

Fig. 1: GM 80 | Portable Load Monitor

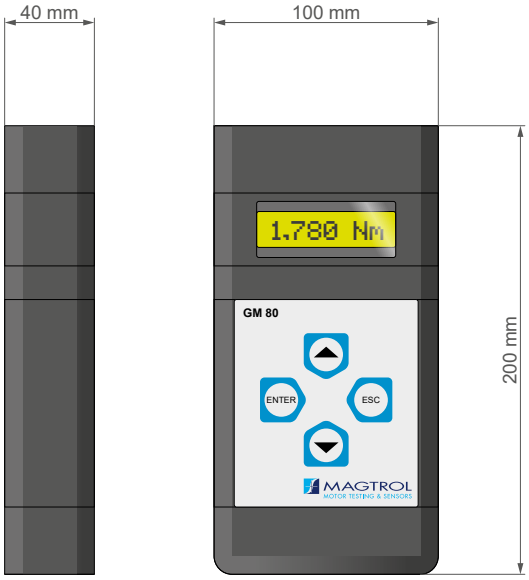
DESCRIPTION

The measuring amplifier can process sensor strain gauge (SG) signals of ± 3.3 mV / V and active signals of ± 10 V and 0/4 … 20 mA. Due to its battery-powered operation, the GM 80 is portable; but can also be supplied with an external power adapter. High measuring accuracy, paired with fast measuring rates, is ensured by using highly precise amplifiers and components including a 16-bit A / D converter and a fast microcontroller.

The versatile data logger can store a series of measurements with date and up to 15 288 measured values and allows configuration of 10 parameter sets. It also stores the adjustment data, sensor designation and physical unit. Functions, such as TARE, recall of min.-max. value and/ or delete min.-max. are available during the measurement. Through the additional trigger input, the data logger or the interface can be actuated externally.

When the GM 80 is not in the measuring mode, the device will automatically switch-off after 3 minutes.

DIMENSIONS



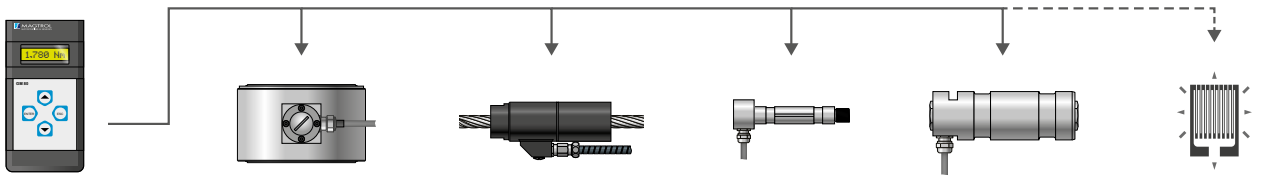
SPECIFICATIONS

MEASUREMENT	
Measuring accuracy	0.1 ±1 digit
Adjustable measuring rate	1 / 10 / 100 / 1000 s
Display rate	5 s
Display scope	±9 999 (+3 digits for unit)
Zero point adjustment	Automatic / Manual
Sensor parameter sets	10

ELECTRICAL CHARACTERISTICS	
Bridge resistance of strain gauge	from 350 Ω to 2 000 Ω
Passive input sensitivity	±3.3 mV/V
Active input sensitivity	±10 V
Current input sensitivity	0/4 ... 20 on 75 Ω burden
Current connection	2 or 3 wire connection
Excitation voltage passive / active	5 V, 20 mA / ±12 V each 100 mA ±12 V combined max. 120 mA
Protection class	IP40

MECHANICAL CARACTERISTICS & ENVIRONMENT	
Nominal temperature range	15 °C to 35 °C
Service temperature range	5 °C to 45 °C
Storage temperature range	-10 °C to 70 °C
Weight	500 g

SYSTEM CONFIGURATION



GM-80
Portable Measuring Amplifier

HRL Series
Anchor Load Cell

SG-01
Cable Sensor

MB-02 Series
Miniature Load Pins

LB Series
Load Measuring Pins
(Special Version)

Custom Sensor
(Strain Gauge based)

CABLE ASSEMBLY

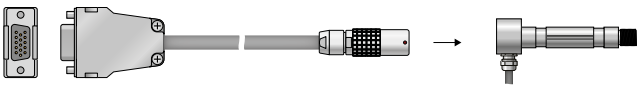
GM 80 FOR USE WITH HRL SERIES

Connector
D-sub HD15

Connector LEMO

HRL Series
Anchor Load Cell

GM 80 FOR USE WITH MB-02 SERIES



Connector
D-sub HD15

Connector LEMO

MB-02 Series
Miniature Load Pins

SYSTEM OPTION & ACCESSORIES

MB-02 SERIES - MINIATURE LOAD PINS

Fig. 2: **MB-02-10-10-2**
Miniature Load Pin

Magtrol MB-02 Series Miniatures Load Measuring Pins are used to measure load and force and provide overload protection. The pins are mounted into machines in place of normal shafts and fitted with strain gauges, allowing them to produce a signal proportional to the measured load.

Manufactured in Switzerland, Magtrol's MB-02 Series Load Pins are rugged with high resistance stainless steel and tight construction. The compact design as well as the high protection class give this sensor an excellent aptitude for the measurement and monitoring of forces and overloads on mechanical compact applications, as well as in hostile environments.

SG-01 - CABLE SENOR

Fig. 3: **SG-01** | Cable sensor

The SG-01 cable sensor is designed for providing supervision of permanent and temporary anchors and allowing continuous load measuring using either a direct or remote reading system.

Its specific design allow to use this sensor in harsh, tropical or harbor environments. The SG-01 cable sensor is particularly suitable for bridge strand and stay cables permanent mounting under hostile environmental conditions.

HRL SERIES - ANCHOR LOAD CELL

Fig. 4: **HRL-4** | 600 kN
with connector and screw cap

HRL Series load cells consist of a high quality stainless steel.This compact load cell is designed specifically for heavy duty use on anchore and civil engineering, with load cells that are available in the range of 600 to 2 700 kN. Special designs are available upon request.

The attached shielded cable includes a water-proof connector with cap. Version without connector are available as an option. Cable lengths are customisable according to the installation requirements; for further information please contact us.

LB SERIES - LOAD MEASURING PINS

Fig. 5: **LB 210** & **LB 217**
Load Measuring Pins

LB Series Load Measuring Pins are used to measure load and force and to provide overload protection. The pins are mounted into machines in place of normal shafts and fitted with strain gauges, allowing them to produce a signal proportional to the measured load. Manufactured in Switzerland, Magtrol's our Load Pins are rugged with high resistance stainless steel and tight construction, designed specifically for use in hostile industrial environments.

LB Series Load Pins are used for load measuring devices and overload protection on cranes, hoisting gear, elevators, winches, and force measurement for regulation processes in industrial installations and machinery production. Moreover it is an idealy transducer to detect and measure forces in harsh, tropical, offshore, marine and harbor environments.

Further information on accessories are available in their specific data sheets. Please visite our website: **www.magtrol.com**

ORDERING INFORMATION

ORDERING NUMBER	854 - 025 - 000 - 0	_	X	_
2 : GM 80 for use with MB-02 Series **3** : GM 80 for use with HRL Series				
blank : Standard version **C** : with calibration				

Example: GM 80 Portable Load Monitor for use with HRL Series and calibrated would be ordered as follows: 854-025-000-03XC.

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Worldwide Distribution Network

ISO 9001 BUREAU VERITAS Certification
GM80 - EN 11/2019