TestMate® Series HMG 2500

Features and Benefits

- Simple and user-friendly operation
- Large, full color graphics display
- Quick and independent basic setting by use of automatic sensor recognition
- HMG 2500 can only be used with Schroeder HSI and Schroeder SMART sensors
- Up to 4 sensors and 32 measurement channels can be connected simultaneously
- Sampling rates up to 0.1 ms
- Very large data memory for archiving measurement curves
- Various measurement modes: Normal measuring, Fast curve recording, Long-term measurement
- 2 independent triggers, can be linked logically
- Simple sensor connection with M12x1 push-pull connector
- PC connection: USB and RS 232
- Convenient visualization, archiving and data processing using the HMGWIN software supplied
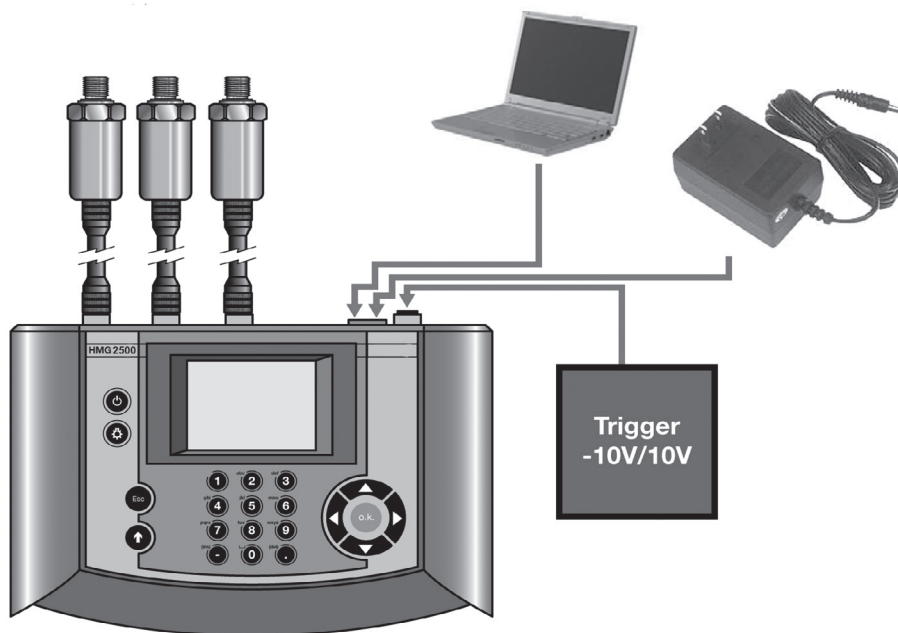
Description

Automated setting procedures, a simple, self-explanatory operator guide and many comprehensive functions ensure the operator is able to carry out a wide range of measurement tasks within a very short time. This makes the HMG 2500 an ideal companion for employees in maintenance, commissioning and service.

The device is designed primarily to record pressure, temperature and flow rate values, which are the standard variables in hydraulics and pneumatics. For this purpose, special sensors are available. The HMG 2500 recognizes the measured variable, measuring range and the unit of these sensors and automatically carries out the basic device settings accordingly.

In addition to this, the HMG 2500 has a digital input, e.g. for frequency or speed measurement, as well as a virtual measurement channel for the measurement of difference or performance.
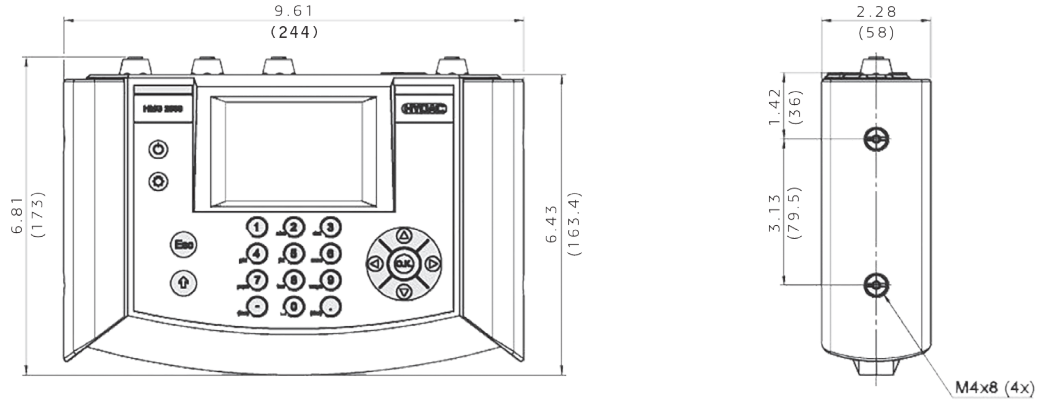
Due to the wide range of functions and its simple handling, the HMG 2500 is just as appropriate for users who take measurements only occasionally as it is for professionals for whom measuring and documentation are routine.

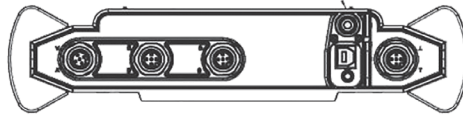The HMG 2500 is designed to accept future upgrades of the device software.

Dimensions

9.61
(244)

6.81
(173)

6.43
(163.4)

2.28
(58)

1.42
(36)

3.13
(79.5)

M4x8 (4x)

Shown with protective cover open

Function

■ Clear and graphical selection menus guide the operator intuitively to all the device functions available. A navigation pad on the keypad ensures rapid operation

■ The HMG 2500 can monitor signals from up to 4 sensors simultaneously.

■ The following sensors can be connected to 3 of these input sockets:
  - 3 analogue sensors (e.g. for pressure, temperature and flow rate) with the special digital HSI interface (Sensor Interface); this means the basic device settings (measured variable, measuring range and unit of measurement) are undertaken automatically

  - 3 analogue sensors (e.g. for pressure, temperature and flow rate) with the special digital HSI interface (Sensor Interface); reference HSI information above

■ Frequency measurements, counter functions or triggers for data logging can be implemented via the fourth input socket with one digital input

■ Additionally, the HMG 2500 has a virtual measurement channel which enables a differential measurement or a performance measurement by means of the sensors connected to the measurement channels "A" & "B"

■ All input channels can operate simultaneously at a sampling rate of 0.5 ms (1.0 ms for SMART sensors). For the recording of highly dynamic processes, a sampling rate of 0.1 ms can be achieved

■ The most impressive function of the HMG 2500 is without doubt its ability to record dynamic processes as a measurement curve "online", i.e. in real-time, and to render them as graphs in the field

■ The data memory for recording curves or logs can hold up to 500,000 measured values per recording. Over 100 of such data recordings in full length can be stored in an additional archiving memory

■ For specific, event-driven curves or logs, the HMG 2500 has two independent triggers, which can be linked together logically

■ User-specific device settings can be stored and re-loaded at any time as required. This means that repeat measurements can be carried out on a machine again and again using the same device settings

■ Measured values, curves or texts are visualized on a full color graphics display in different selectable formats and display forms

■ Numerous useful and easy-to-use auxiliary functions are available, e.g. zoom, ruler tool, differential value graph creation and individual scaling, which are particularly for use when analyzing the recorded measurement curves
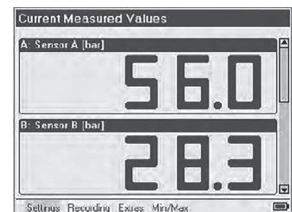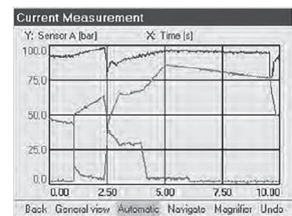
Software

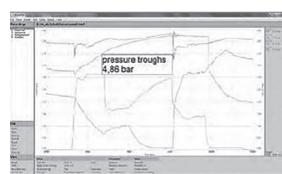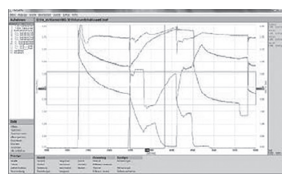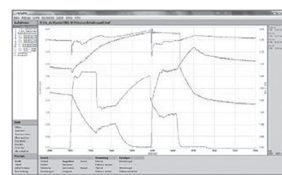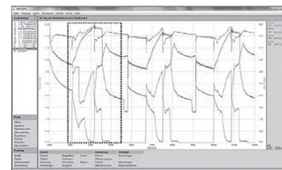The HMG 2500 communicates with a computer via a USB or RS 232 port. Schroeder offers HMGWIN 2500, the matching software for the HMG 2500, for convenient post-processing, rendering, and evaluation of measurements on a pc. It also enables the HMG 2500 to be operated directly from a computer in real time.

The HMG 2500 is equipped with specially developed software providing for fast data collection and processing. A measurement curve can comprise up to 500,000 measured values. The HMG 2500's measured value memory is capable of storing at least 100 of these curves.

The Schroeder software, CMWIN, is also supplied that allows direct communication with SMART (HSI) sensors connected to the HMG 2500 from your PC.

Some examples of the numerous useful additional functions:

■ Transfer and archiving of measurements recorded using the HMG 2500

■ Display of the measurements in graph form or as a table

■ Zoom function: Using the mouse, a frame is drawn around an interesting section of a measurement curve, which is then enlarged and displayed

■ Accurate measurement of the curves using the ruler tool (time values, amplitude values and differentials)

■ Individual comments and measurement information can be added to the graph

■ Overlay of curves, for example to document the wear of a machine (new condition/current condition)

■ Using mathematical operations (calculation functions, filter functions), new curves can be added

■ Snap-shot function: Comparable to the function of a digital camera, a picture can be taken immediately of any graph and saved as a .jpg file

■ A professional measurement report can be produced at the click of a mouse: HMGWIN has an automatic layout function. Starting with a table of contents, all recorded data, descriptions and graphics and/or tables are combined into a professional report and saved as a .pdf file

■ Online function (HMGWIN only): Starting, recording, and online display of measurements (similar to the function of an oscilloscope)

■ Change of axis assignment of the recorded measurement parameters in graph mode (e.g. to produce a p-Q graph)
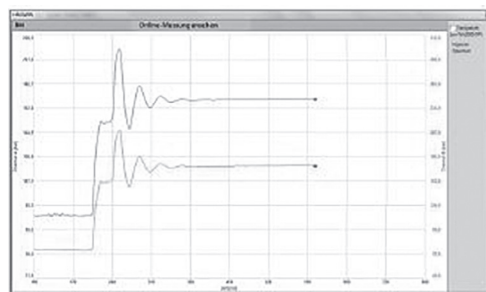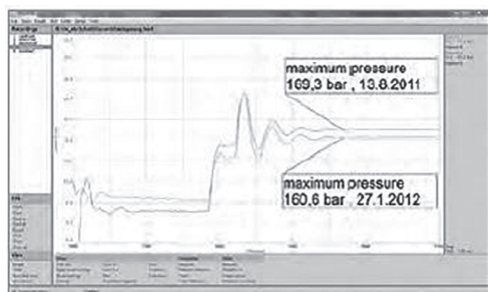
Technical Data

Analog Inputs	
Input signals	HSI analogue sensors
3 channels M12x1 Ultra-Lock flange sockets (5-pin) channel A to channel C	HSI SMART sensors
Accuracy	$\leq \pm$ 0.1% FS
Digital Input	
1 channel via M12x1 Ultra-Lock flange socket Channel D	Digital status (high/low) Frequency (0.01 to 30,000 Hz)
Calculated channel	
Quantity	1 channel via virtual channel E
Sampling rate (dependent on number of active channels)	0.1 ms, max. 1 input channel 0.2 ms, max. 2 input channels 0.5 ms, all 3 input channels 1.0 ms, for SMART sensors
Resolution	12 bit
Memory	Min. 100 measurement curves, each with 500,000 measured values
Display	3.5" color display 7-segment display
Interfaces	1 USB, 1 serial interface RS 232
C E mark	EN 61000-6-1 / 2 / 3 / 4
Safety	EN 61010
IP class	IP 40
Ambient conditions	
Operating temperature	32°F to 122°F (0°C to 50°C)
Storage temperature	-4°F to 140°F (-20°C to 60°C)
Relative humidity	70%, non-condensing max
Weight	approx. 2.43 lb (1.1 kg)

Order Details

Model Code
Description: HMG 2500 - 000 - US
P/N 925295

Operating manual and documentation
US = English

Scope of delivery
- HMG 2500
- Power supply for 90 to 230 V AC
- Operating Instructions
- Data carrier with USB drivers. HMGWIN software
- USB connector cable

Accessories
- Additional accessories, such as electrical and mechanical connection adapters, power adapters, etc. can be found in the "Accessories for HMG Series" catalog pages.