

HYDAC INTERNATIONAL

Portable Data Recorder HMG 510

14

Description:

The HMG 510 is a hand-held instrument for simple measurement tasks on hydraulic and pneumatic systems in mobile and industrial applications.

Compact and simple to use, the HMG 510 is an ideal tool for all those involved in maintenance, commissioning and service.

Up to two sensors with the HYDAC Sensor Interface (HSI) can be connected to the HMG 510.

Sensors are available to measure pressure, temperature and flow rate as well as sensors for condition monitoring (also known as SMART sensors). Some examples of SMART sensors are the HYDACLAB® Oil Condition Sensor, the AS 1000 AquaSensor and the CS 1000 Contamination Sensor.

The HMG 510 automatically recognizes these sensors and takes all the necessary basic settings from each sensor.

The measurement values and the corresponding physical unit are displayed on an easy-to-read LCD display.

In addition to this, the HMG 510 enables measured values which have been saved in the SMART sensors to be uploaded to a PC.

With the aid of the HYDAC PC software "CMWIN", the measurement data stored in the SMART sensors can be displayed on a PC screen in the form of a graph, then analyzed, edited and saved. The HMG has a standard integrated USB port to enable this data transfer.

To further extend the application range, the HMG 510 has a function for setting mechanical pressure and temperature switches precisely and reliably.



Special features:

- Portable 2-channel data recorder
- Simple and user-friendly key operation
- Large LCD display including battery status indication
- 2 sensor inputs, automatic sensor recognition
- Specially designed to display measured values from condition monitoring sensors (SMART sensors)
- Measuring range and unit of measurement of the sensors connected to it are recognized automatically
- Zeroing (taring) of the individual measurement channels
- Display of the actual measured values
- Display of the differential (channel A minus channel B)
- Min. or max. value indication, with reset function
- Setting device for mechanical pressure and temperature switches
- USB port

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Technical data:

Measurement inputs	2 analog inputs for HYDAC measurement transmitters with HSI interface and SMART sensors						
Accuracy*	$\leq \pm 0.1 \% \text{ FS max.}$						
Functions	<ul style="list-style-type: none"> ● Automatic recognition of measuring range and unit of measurement ● Taring of the measuring channels ● Display of the actual measured value ● Min./max. indication ● Reset of the min./max. values ● Measured values differential channel A - channel B ● Display of units, selectable ● Setting device for mechanical pressure and temperature switches ● Communication bridge to a connected PC 						
Display	4-digit 7 segment LCD display with battery status indication; 2 measured values incl. unit displayed simultaneously						
Measurement unit (depending on the sensors connected)	<ul style="list-style-type: none"> ● Selectable for <table> <tr> <td>Pressure:</td><td>bar, psi, MPa</td></tr> <tr> <td>Temperature:</td><td>°C, K, °F</td></tr> <tr> <td>Flow rate:</td><td>l/min, gallon/min (1 US gallon = 3.7853 l)</td></tr> </table> ● Permanently pre-set on SMART sensors 	Pressure:	bar, psi, MPa	Temperature:	°C, K, °F	Flow rate:	l/min, gallon/min (1 US gallon = 3.7853 l)
Pressure:	bar, psi, MPa						
Temperature:	°C, K, °F						
Flow rate:	l/min, gallon/min (1 US gallon = 3.7853 l)						
Sampling rate	0.1 ms						
Resolution	12 bit						
CE mark	EN 61000-6-1 / 2 / 3 / 4						
Safety	EN 61010						
Protection class	IP 54						
Voltage supply	<ul style="list-style-type: none"> ● 9 V battery Operating time: approx. 10 h (with 2 sensors)** ● Euro plug power supply (230 V AC) (available as an accessory) 						
Environmental conditions	<ul style="list-style-type: none"> ● Operating temperature: +41 .. +140 °F ● Storage temperature: -40 .. +158 °F ● Rel. humidity: 0 .. 70 % 						
Weight	410 g						

* FS (Full Scale) = relative to complete measuring range

** Not applicable to SMART sensors, as they require an external voltage.

Dimensions:



Ordering details:

HMG 510 - 000

Items supplied

- Case for HMG 500 / 510
- HMG 510
- Operating manual D/E/F
- 9 V battery
- USB cable
- Y adapter blue (for HLB 1300)
- Y adapter yellow (for CS 1000)
- ZBE 30-02, sensor cable M12x1, 2m
- Software CD with "CMWIN"

Accessories:

Appropriate accessories, such as electrical and mechanical connection adapters, power supply, etc. can be found in the Accessories brochure.

Examples of main accessories:

● **Pressure transmitter**
HDA 4000 with HSI interface
Pressure ranges: -14.5 .. 135.5 psi, 0 .. 150 psi, 0 .. 1500 psi, 0 .. 3000 psi, 0 .. 3000 psi, 0 .. 6000 psi, 0 .. 9000 psi

● **Temperature transmitter**
ETS 4000 with HSI interface
Measuring range: -25 .. 100 °C (-13 .. 212°F)

● **Flow rate transmitter**
EVS 3000 with HSI interface
Measuring ranges: 1.2 .. 20 l/min (0.26 .. 5.28 gpm), 6 .. 60 l/min (1.59 .. 15.9 gpm), 15 .. 300 l/min (3.96 .. 79.3 gpm), 40 .. 600 l/min (10.6 .. 159 gpm)

● **Sensor simulator**
SSH 1000, ideal for training purposes

● **Electrical connection adapter**
UVM 3000, for mechanical pressure or temperature switches

● **Hydraulic adapters**

Note:

The information in this brochure relates to the operating conditions and applications described.
For applications and operating conditions not described, please contact the relevant technical department.
Subject to technical modifications.