> **WEBTEC** ®
>
> **HYDRAULIC MEASUREMENT AND CONTROL**

HPM7000

Hydraulic Data Logger

Make it **BLUE** ®

The HPM7000 series, is a highly versatile portable hydraulic data logger and the evolution of the HPM6000. It is ideal for diagnostic testing of hydraulic systems, use on hydraulic test benches, pre-dispatch inspection or for Research and Development (R&D). There are a variety of different data logging modes with the ability to data log up to 16 million measured values per test at a variable interval from 1 ms, with a total possible storage size of 12GB (approx. 250 measurements).

The base model enables you to simultaneously measure up to 48 Webtec CAN channels. Alternatively, up to 5 External CANOpen channels can be connected. Two frequency inputs or Digital Input/ Digital Output are also possible thanks to a dual-function connector.

The HPM7000 features a unique modular system which means two input Modules can be added or changed by the user, allowing you to upgrade the device over time to meet the needs of the most demanding application.

The CAN Input Module allows the connection of up to 48 CAN, CANOpen, J1939 or any mixture of several CAN protocols in a passive way (no power is supplied to the sensors from this module). This allows the user to 'listen' to the other CAN signals travelling on a bus, without disturbing them.

The Analogue Input Module enables back compatibility with sensors that have Sensor Recognition (SR). It also enables connection to current (e.g. 0-20 mA or 4-20 mA) and/or voltage (e.g. 0-5, 0-10 V) sensors.

The 7-inch colour touch display is suitable to use with gloves and additional large tactile buttons at the right of the screen ensure operation even in adverse conditions. The screen can be configured to display the readings in numerical, bar graph, dials and graphical display mode.

Analysis of measurements can be done thanks to two cursors that can be inserted to obtain measured and delta values. All data can be exported to a PC running HPMComm 7.6 for further analysis or storage off the unit.

Connecting to a PC USB slave and USB host allow the unit to stream to a PC or laptop and allow for the connection of additional storage. The HPM7000 can also be controlled and monitored remotely using the LAN connection and a VNC remote desktop application which runs on a PC.

The HPM7000 is loaded with technology, yet is simple to configure and easy to use.

Features

- Complete range of sensors - pressure, flow, temperature, RPM, contamination.

- Webtec CAN sensors for plug and play functionality.

- Third Party CAN sensors (External CAN) can be displayed and logged. A CAN Monitor assists during installation of CAN channels and analysis of the CAN bus.

- Two slots for Input Modules (CAN/J1939 and Analogue) are availabe on the Base Model. These can be added/ changed by the user.

- IP65 and rubberised case surround for protection in harsh environments.

- Complete with HPMComm 7.6 - PC software. Connectivity - USB, Ethernet.

- Illuminated and anti-glare, 7 inch touch screen colour display.

- Foldable stand and VESA- standard points on the back for wall mounting on fix installations (e.g. Test Benches)

Specifications

Ambient Temperature:	-10 to 50 °C, 14 to 122 °F
Memory:	12 GB
Ports:	USB device (data transmission between device and PC)
	USB host 1 (connection with external storage media)
	USB host 2 (connection with external storage media)
	LAN (connection with network cable)
Material:	Body materials:
	ABS/PC (thermoplastic)
	Body Protective Materials:
	TPE (thermoplastic elastomer)
Weight:	1.88 kg, 4.1 lb (without input modules)
Mounting:	Carrying Strap,
	Folding Stand and VESA
	standard 100 x 100 mm / M4 metric
Electrical	
IP Rating:	IP65
Battery:	Lithium-ion pack,
	+14.4 V d.c/3250 mAh
External Power Supply:	110/240 V a.c - 24 V d.c/3750 mA
Connector Type:	3 pin

Sales Order Code

Please contact our technical sales team to discuss any special order requirements.

MODEL NUMBER	PART TYPE	DESCRIPTION
HPM7000-BS	Measuring Device	Base model without input modules. 2 CAN bus networks, 24 Webtec CAN bus channels each. Alternative at CAN Y up to 5 external CANopen channels. Dual-function input (D-IN/D-OUT or Frequency).
HPM7000-IM-CAN	Input Module	CAN input module. 2 CAN bus networks, 24 CAN bus channels each for connection with CAN (CAN 2.0 A, CAN 2.0 B) systems like CANopen, CAN generic and SAE-J1939.
HPM7000-IM-ANO	Input Module	Analogue input module. 3 SR sensors (up to 6 channels), 2 configurable auxiliary inputs

Additional Specification/Functional Specification

Input/Output

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Base Model CAN sensor Input:	2 CAN bus networks, 24 Webtec CAN bus channels each. Alternative at CAN Y up to 5 external CANopen channels. Baudrate at different CAN adjustable. 24 V d.c power supply/ max. 250 mA. Internal termination impedance 120 Ohm fixed. Supports CAN 2.0 A/CAN 2.0 B.
Connector Type:	M12 x 1, 5 pin with SPEEDCON®, Plug
Sampling rate:	1ms = 1000 measurement values/s
Base Model D-IN/OUT FREQ.1/2:	Dual-function input, which can be used either as DIGITAL-IN or DIGITAL-OUT, or through a changeover in software, two frequency inputs are made available.
Connector Type:	M12 x 1, 5 pin with SPEEDCON®, Socket
Supply:	24 V d.c, 80 mA, galvanic isolated
Frequency Range:	0 Hz to 20 kHz
Signal Level:	Low: 0-1.4 V, high: 3-30 V
Precision:	$\leq\pm$ 0.1%
Input Module Analogue: (HPM7000-IM-ANO)	3 sensor inputs (up to 6 channels) with sensor recognition for Webtec SR sensors
Connector Type:	5 pin, push-pull, combination connector/socket
Sampling Rate:	1 ms = 1000 measured values/sec.
	2 sensor inputs (analogue) for auxiliary sensors measuring current and voltage
Connector Type:	M12 x 1, 5 pin, Socket.
Sampling Rate:	1 ms = 1000 measured values/sec.
Voltage input range:	-10 to 10 V d.c
Current input range:	0 to 20 mA / 4 to 20 mA
Supply to ext. Sensors:	+24 V d.c/max. 100 mA
Accuracy:	±0.1 % FS
Weight:	0.152 kg
Input Module CAN: (HPM7000-IM-CAN)	2 CAN bus networks, 24 CAN bus channels each for connection with CAN (CAN 2.0 A, CAN 2.0 B) systems like CANopen, CAN generic and SAE-J1939. Mixed mode of several CAN protocols possible.
Connector Type:	M12 x 1, 5 pin with SPEEDCON®, Socket
Supply:	Passive. Each CAN port galvanically isolated.
Termination Impedance:	120 ohm, selectable ON or OFF in software.
Weight:	0.127 kg

Definitions

Sensor:	A physical device (e.g. Pressure Transducer, Turbine Flow Meter, etc.)
Channels:	Number of variables that a sensor is capable to measure (e.g. Webtec Turbine Flow Meters with CAN output measure flow and temperature therefore two channels are used)
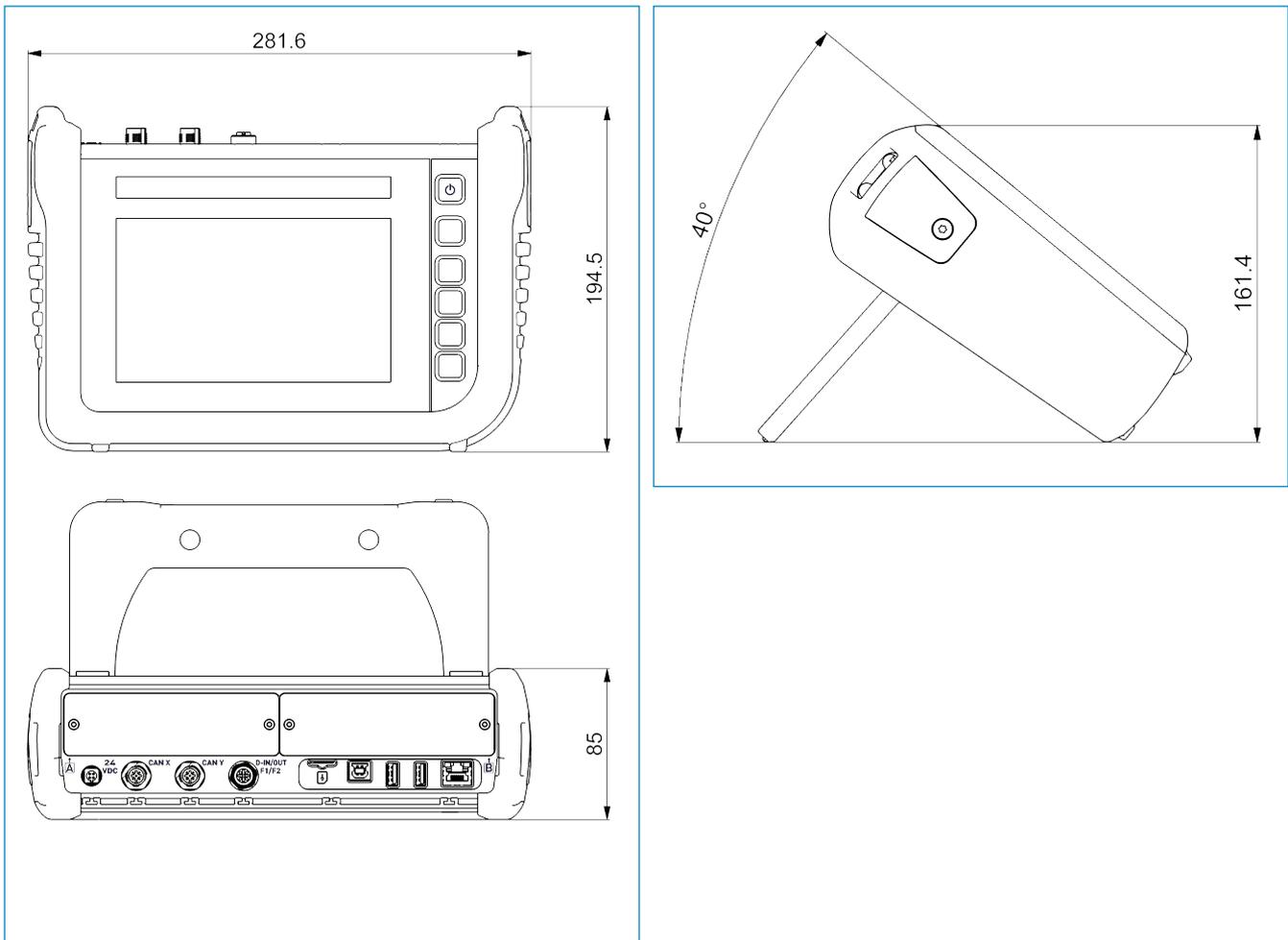
PC Software HPMComm 7.6

- Compatible with Windows 10 & Windows 11 (32- and 64-bit)
- Zoom functions
- Conjunction of measurement curves
- Cursor functions
- Export function
- Extensive filter function
- Remote connection/remote control of the HPM7000
- Freely definable calculation channels
- Online measurement
- Easy operation

Recorded measurements can be effectively represented using diagrams. Manipulating the curves in these diagrams allows for accurate hydraulic analysis. Performance curves can be generated to evaluate pump functions, with pressure losses and leaks detected by analysing the differences in pressure curves.

Using the cursor, hydraulic procedures can be examined over time, providing comprehensive information for each curve. Adjustments to scale factor and units can be reflected in the diagrams, and the smoothing of measurement curves alongside mathematical operations are crucial for detailed hydraulic system analysis.

Each measurement includes documented date, time, and notes, facilitating easy allocation and reference. Consequently, documentation and certificates can be quickly and cost-effectively generated using the HPMComm software, which leverage's all features and benefits of Windows. These measurements can be exported in CSV format.

Current findings, such as pressure peaks, are viewable in real-time (Online Measurement function). For preventive maintenance, test results from different times can be imported, overlaid, and compared to identify performance deterioration.

Creating certificates is streamlined with tools that allow for the creation and saving of templates (e.g., company name, logo, and address in the header or footer), which can be reused across multiple measurements or test results.