

Mobile Measuring Systems

Multi-Handy – the first step and more (see page 10)

The Multi-Handy range of products is designed for uncomplicated on-site use. Exact recording and reliable storage of measurements, together with user-friendly evaluation and transmission of the data are the important features of these easy-to-use measuring instruments.

Multi-System – more than just a measuring instruments (see page 13)

The Multi-System range of products perform many more tasks than conventional measurement instruments. Their flexible system-capability allows for the programming of complex measurement tasks and test procedures, including internal or external trigger control – this adds to their ability to process the data of a CAN bus. All Multi-System instruments also offer all the measurement functions and qualities now required by Measurement Technicians.

Multi-Handy 2020 – the immediate lead-in to the world of professional measuring technology

This integrated system of measurement instrument, sensors and accessories allows plug-and-play without any problems: connect – switch on – measure. Stored measuring data can be transferred to a PC via USB, and the evaluation is done by an adapted version of the software HYDRocomsys.



- Two analogue measuring inputs for 0 to 20 mA or 4 to 20 mA
- 12 bit Analog/Digital-converter
- Automatic calculation of the difference from two measuring channels
- LCD graphic display with switchable backlight and automatic display adaption
- 128 kB of measuring value memory (one measuring series with 60.000 values)

- Measuring rate 1 ms
- Simple operation with only four keys
- Light plastic housing with battery compartment for standard NiMH chargeable batteries
- Fast data transmission with USB virtual COM-interface
- Available as measuring set in a case, see page 30

Order data measuring sets

Measuring sets – all from one source

The Hydrotechnik measuring sets offer all the equipment for an immediate start. The components are completely intergrated, and the contents of the measurement case is practically oriented. Additional elements in the contents are always possible, just tell us your requirements.

Measuring set 2020 p/p

contains:

- Multi-Handy 2020
- Power pack 6 VDC with country adaptor for EU, UK, US
- Plastic case in red color
- 2 pressure sensors with fixed cable length 2,5 m acc. to ordered pressure ranges, see table
- 2 MINIMESS® direct connection 1620 for pressure sensors



Name Measuring set	Pressure ranges	Order number
2020-pp-600-600	2x 0 to 600 bar (0 to 60 MPa)	3160-18-18-69.00
2020-pp-400-400	2x 0 to 400 bar (0 to 40 MPa)	3160-15-15-69.00
2020-pp-200-200	2x 0 to 200 bar (0 to 20 MPa)	3160-10-10-69.00
2020-pp-60-600	1x 0 to 60 bar (0 to 6 MPa) 1x 0 to 600 bar (0 to 60 MPa)	3160-21-18-69.00
2020-pp-60-60	2x 0 to 60 bar (0 to 6 MPa)	3160-21-21-69.00
2020-pp-6-60	1x -1 to 6 bar (-0.1 to 0,6 MPa) 1x 0 to 60 bar (0 to 6 MPa)	3160-32-21-69.00

You can download the evaluation and presentation software *HYDROcomsys-Basic* that is adapted to the Multi-Handy from www.hydrotechnik.com free of charge.

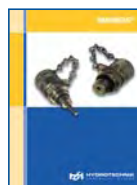
The full version *HYDROcomsys* is available directly from Hydrotechnik or your Hydrotechnik partner.

The pressure sensors contained in this measuring set can be used with the MH 2020, only.



Further technical details are mentioned in the two catalogues MINIMESS® and sensors.

Available in September 2007.



Order data measuring instruments

Multi-Handy 2020



Short profile	Order number
2x analogue	see page 34

Only available as measuring set.

Multi-Handy 3010



Short profile	Order number
2x analogue/1x frequency	3160-00-67.00

Multi-Handy 3050



Short profile	Order number
3x analogue/1x frequency	3160-00-63.00

Multi-System 5060






Short profile	Order number
6x analogue/2x frequency/14x CAN Power pack and USB data cable are part of the delivery	3160-00-70.00

Technical data

Multi-Handy 2020

Multi-Handy 3010

Multi-Handy 3050

			
Mobile measuring systems			
Measuring inputs	Total 2 input connection sockets 2x 6-pol, analogue inputs 0 to 20 mA, 4 to 20 mA	Total 3 input connection sockets 2x 6-pol, analogue inputs 0 to 20 mA, 4 to 20 mA 1x 6-pol, digital signal inputs 0,25 Hz to 5 kHz	Total 4 input connection sockets 3x 6-pol, analogue signal inputs 0 to 20 mA, 4 to 20 mA 1x 6-pol, digital signal inputs 0,25 Hz to 5 kHz
Standard measurands	Connecting ISDS sensors pressure, temperature, volume flow via f/I converter a.s.o. only pressure measurement when connecting sensors without ISDS	Pressure, temperature, frequency, volume flow, rotational speed, current, power, torque, way and speed a.s.o	Pressure, temperature, frequency, volume flow, rotational speed, current, power, torque, way and speed a.s.o
Measuring rate	Analogue inputs: 1 ms	Analogue inputs: 1 ms	Analogue inputs: 1 ms
Resolution A/D-converter	12 bit	10 bit	12 bit
Error limit	+0,2 % of FV	Analog: +0,2 % of FV Digital: +0,2 % of MV	Analog: +0,2 % of FV Digital: +0,2 % of MV
Extreme value memory	Min and Max value storing of all measuring channels, selectable with key	Min and Max value storing of all measuring channels, selectable with key	Min and Max value storing of all measuring channels, selectable with key
Measuring value memory	128 kB, 60.000 analogue measuring values in max. 1 series, 2 bytes/measuring value, scan rate: 1 ms	256 kB, est. 115.000 analogue measuring values or 57.500 frequency values in max. 5 series, scan rate: 1 ms to 10 min	900 kB, est. 450.000 analogue measuring values or 150.000 frequency values in max 15 series, scan rate: 1 ms to 10 min
Trigger	None	Settable with pre-trigger	Settable with one of the four channels with pre-trigger, manual trigger start or without trigger
Display	LCD graphic display (75 x 50 mm) backlight illumination	Operation display with 8 lines, illuminated 3,2" display, digit height 4 mm; auto doubled digit size for max. 4 lines measurement value display	Operation display with 8 lines, illuminated 3,2" display, digit height 4 mm; auto doubled digit size for max. 4 lines measurement value display
Interfaces	USB	RS 232	Centronics, RS 232, USB
Power supply	NiMH batteries 2,4 V, with est. 2000 mAh, allow supply-independent operation of up to 6 hours	14,4 V NiCd batteries with 700 mAh, 8 hours continuous operation	Internal 14,4 V NiCd batteries with 1,1 Ah for approx. 8 hours of continuous operation
CE labelling	EN 50081-1 and EN 50082-1	EN 50081-1 and EN 50082-1	EN 50081-1 and EN 50082-1
Protection type	IP 40	IP 40	IP 40
Ambient conditions	Operation temp.: 0 °C to +60 °C relative humidity: < 80 % (not condensing) storage: -20 °C to +70 °C	Operation temp.: 0 °C to +50 °C relative humidity: < 80 % (not condensing) storage: -20 °C to +70 °C	Operation temp.: 0 °C to +50 °C relative humidity: < 80 % (not condensing) storage: -20 °C to +70 °C
General	Housing material: ABS plastic	Housing material: Al dye-casting casing	Housing material: ABS plastic
	Dimensions: 185 x 90 x 46 mm	Dimensions: 160 x 80 x 40 mm	Dimensions: 222 x 105 x 75 mm
	RoHs conformity	RoHs conformity	RoHs conformity
	Weight: est. 0,292 kg	Weight: est. 0,661 kg	Weight: est. 0,826 kg
Outputs			

Further products

MINIMESS®,
Measuring hoses a.s.o. ...



Further products

Sensors for pressure, temperature,
rotational speed, volume flow, a.s.o. ...



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