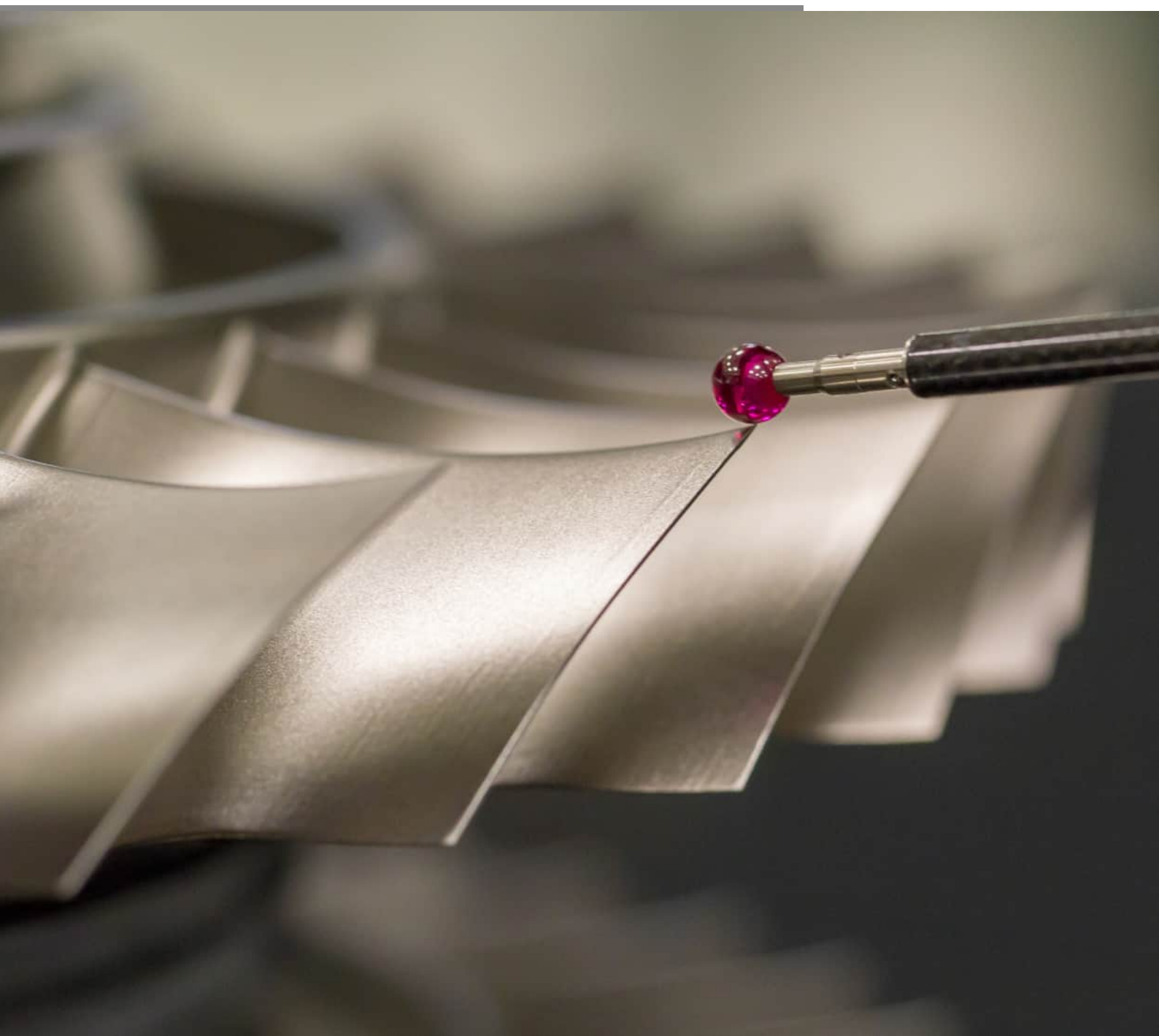


HySense®
The synonym of
uncompromising quality and
precision!





Measuring systems

Hydrotechnik measuring systems: Continuity and innovation

Trendsetting details and innovative solutions

As you well know, you need pressure, temperature, and volumetric flow rate measurements in order to monitor, control, and diagnose your pressurized systems.

Moreover, by keeping a record of your measurement data, you can obtain a basis for analyzing measured data.

With their product characteristics, Hydrotechnik handheld measuring devices are sure to provide you with the functions you need for your condition monitoring applications when used in combination with our professional software. Moreover, our measuring systems are able to record stationary and mobile sensor data with three to 42 channels. In addition, continuous and event-based measurements (i.e., the measurement starts only after a specific reading is reached or a specific event occurs) can be configured, and our measuring

systems feature the option of conveniently and safely transmitting measurements wirelessly in real time.

Hydrotechnik measuring systems are also designed to enable you to graphically prepare your measurements, generate measurement reports, and reproduce test and measuring specifications without any programming skills. One of the main characteristics is the devices' user friendliness and flexibility, which make it possible to work with virtually any industrial measurement variable. From the entry-level model to our mobile all-rounder, Hydrotechnik measuring devices are designed to be universally easy to use.

Measuring systems



MH2025

MH3020

Channels	3	4
Analog		
Number	(2)	2
Signals	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V	0 ... 20 mA, 4 ... 20 mA
Analog channels for V/I measurement	–	–
Signals	–	–
Analog outputs	–	–
Analog output signals	–	–
Frequency		
Number	(2)	1
Frequency signals	FRQ, ±FRQ, CNT, ±CNT	FRQ
Frequency range	1 ... 10 kHz	0.25 Hz ... 5 kHz
Configurable (*)		
Number	2	–
Calculated / CAN		
Number	1	1
CAN interface	–	–
Digital		
Digital inputs	–	–
Digital outputs	–	–
Memory		
Fastest recording rate	1 ms	1 ms
Number of recordings	5	14
Number of readings per recording	120,000	1 Mio
Internal memory	2 MB	2 MB
Sampling rate	1 ms, 10 ms, 100 ms, 1 s, 10 s	1 ms ... 16 h
Recording duration	60 s ... 166 h	1 s ... 999 h
Triggers	–	1



MS4070

MS5070

MS8050

17	42	32/40
3 (4)	6 (8)	10
0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V, ± 10 V	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V, ± 10 V	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, ± 10 V
–	–	2
–	–	± 2 ADC (one), ± 48 ADC (one)
–	–	2
–	–	0 ... 20 mA (x1) -20 ... 20 mA (x1)
1 (2)	(2)	4
FRQ, \pm FRQ, CNT, \pm CNT, \pm CNT(4Q)	FRQ, \pm FRQ, CNT, \pm CNT, \pm CNT(4Q)	FRQ, \pm FRQ, CNT, \pm CNT
0.25 Hz ... 20 kHz	0.25 Hz ... 20 kHz	0.05 Hz ... 5 kHz
1	2	–
10	32	6/14
1	2	1
1	1	4
1	1	4
1 ms	0.1 ms	0.1 ms
100	500	200
2 Mio	6 Mio	6 Mio
4 GB	4 GB	2 GB
1 ms ... 16 h	0.1 ms ... 16 h	0.1 ms ... 16 h
1 s ... 999 h	1 s ... 999 h	1 s ... 999 h
4	4	2

Measuring systems



MH2025

MH3020

	MH2025	MH3020
Sampling rate / Filter		
Fastest sensor sampling rate	1 kHz	1 kHz
Fastest CAN sampling rate	–	–
Configurable filter	–	–
Display		
Display size	2.6"	2.1"
Display type	Monochrome LCD display	Monochrome LCD display
Graphic / color display	–	–
Max. channels shown	3	4
Min/Max	Yes	Yes
General		
Sensor detection	ISDS	ISDS
Calculated measurement values	Differential, hydraulic power	Differential, hydraulic power, dx/dt, total
Special applications	–	–
Connectivity	–	–
Oil condition	–	–
Expansions	MultiXtend UI, Split	MultiXtend UI, Split
Degree of protection	IP40	IP40
Operating temperature	-10 ... 60 °C	0 ... 50 °C
Battery	NiMH	NiMH
Battery duration	> 10 h (two sensors)	> 16 h (three sensors)
Battery charging time	< 12 h	< 14 h



MS4070



MS5070



MS8050

1 kHz	10 kHz (all channels)	10 kHz (2 channels)	
1 kHz	1 kHz	0.1 kHz	
Digital FIR software filter	Digital FIR software filter	Software filter (arithmetic mean)	
3.5"	5"	10.4"	
TFT color display (QVGA)	TFT color display (QVGA)	TFT touch color display (VGA)	
Yes	Yes	Yes	
17	42	30	
Yes	Yes	Yes	
ISDS	ISDS	ISDS	
Differential, hydraulic power, definable formula, viscosity	Differential, hydraulic power, definable formula, viscosity	Addition, subtraction, multiplication, division, formula, hydraulic power (with formula)	
HYDRORun, HySense® QT 600, HySense® QL 326	HYDRORun, HySense® QT 600, HySense® QL 326	HYDRORun	
MultiXtend Bluetooth, LAN	MultiXtend Bluetooth, LAN	MultiXtend Bluetooth, LAN	
Patrick, HySense® CX 197, HySense® CL 100, HySense® CM 100, HySense® CW 100, HySense® CV 100	Patrick, HySense® CX 197, HySense® CL 100, HySense® CM 100, HySense® CW 100, HySense® CV 100	Patrick, HySense® CX 197, HySense® CL 100, HySense® CM 100, HySense® CW 100, HySense® CV 100	
MultiXtend A, f, Thermo, Split, Trigger	MultiXtend A, f, Thermo, Split, Trigger	MultiXtend A, f, Thermo, Split, Trigger	
IP40	IP40	IP40	
-10 ... 50 °C	-10 ... 50 °C	0 °C ... 40 °C	
Li-ion	Li-ion	–	
> 10 h (five sensors)	> 8 h (eight sensors)	–	
< 3 h	< 2 h	–	

MultiHandy 2025

Are you interested in using high-precision measurements for complex technical systems instead of the old analog measurements? Then make the switch to Hydrotechnik digital measuring technology and see how your measurements become more accurate and reliable than ever before!

- | Easy and fast: Connect, measure, document!
- | Flexible and versatile: Current, voltage, and frequency inputs for all industrial sensors.
- | Digital and powerful: Test probes can be immediately detected and analyzed.
- | Precise and enduring: Legally required documentation can be documented.
- | Ready to go: Fast data transmission and intuitive report generation.

Our MultiHandy 2025 is available in a kit customized according to your needs and including two HySense® PR 509 pressure sensors.



MultiHandy 2025	
Channels	3
Analog	
Number	(2)
Signals	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V
Frequency	
Number	(2)
Frequency signals	FRQ, \pm FRQ, CNT, \pm CNT
Frequency range	1 ... 10 kHz
Configurable (*)	
Number	2
Calculated / CAN	
Number	1
CAN interface	–
Memory	
Fastest recording rate	1 ms
Number of recordings	5
Number of readings per recording	120,000
Internal memory	2 MB
Sampling rate	1 ms, 10 ms, 100 ms, 1 s, 10 s
Recording duration	60 s ... 166 h
Sampling rate / Filter	
Fastest sensor sampling rate	1 kHz
Display	
Display size	2.6"
Display type	Monochrome LCD display
Max. channels shown	3
Min/Max	Yes
General	
Sensor detection	ISDS
Calculated measurement values	Differential, hydraulic power
Expansions	MultiXtend UI, Split
Degree of protection	IP40
Operating temperature	-10 ... 60 °C
Battery	NiMH
Battery duration	> 10 h (two sensors)
Battery charging time	< 12 h

MultiHandy 2025 pp kit

MultiHandy 2025 pp kit

Part Nos. for measuring kit versions

2025D-pp-15-15	2025D-pp-15-18	2025D-pp-18-18	2025D-pp-18-21
0 ... 400 bar, 0 ... 400 bar	0 ... 400 bar, 0 ... 600 bar	0 ... 600 bar, 0 ... 600 bar	0 ... 600 bar, 0 ... 60 bar

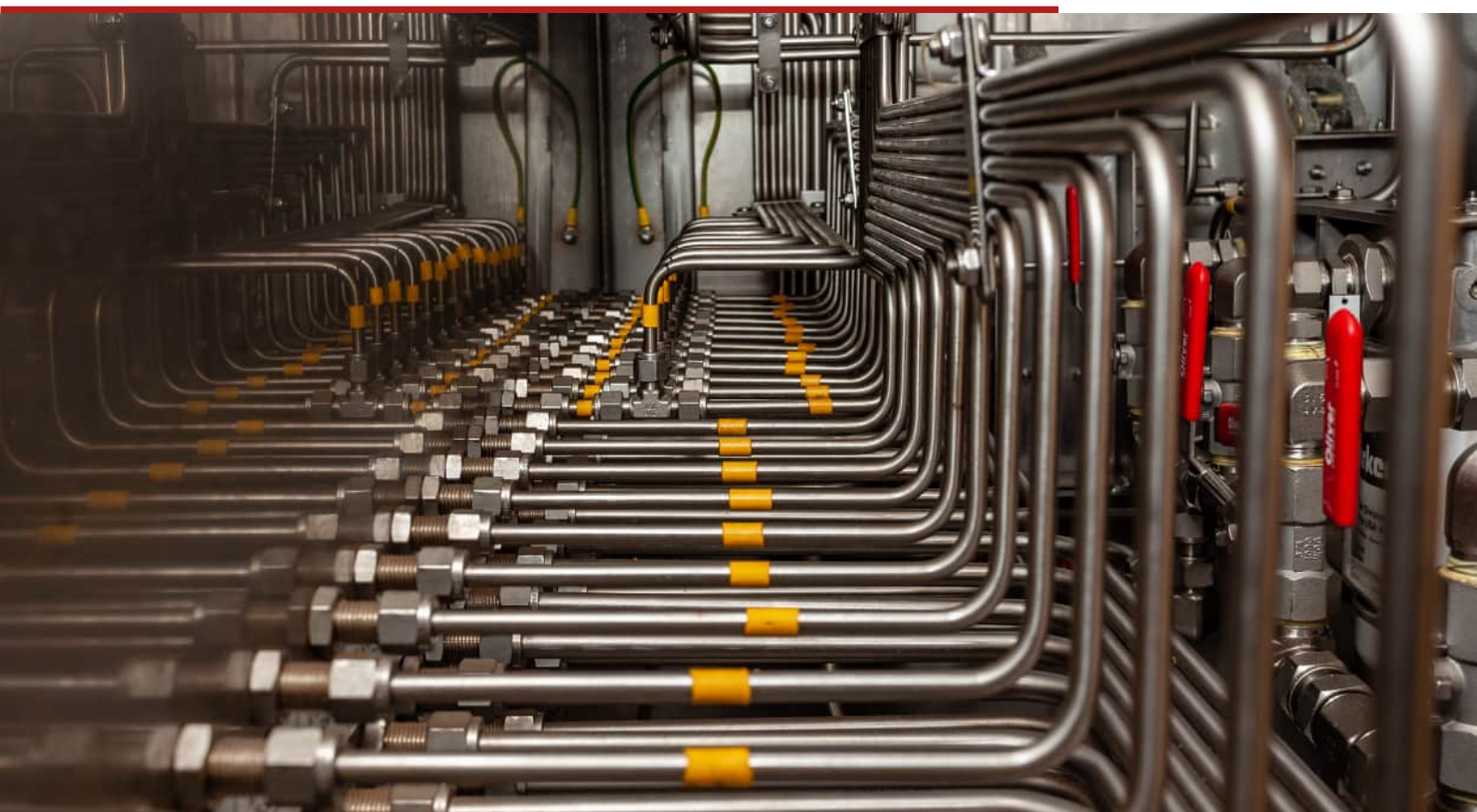
Included:

One MultiHandy 2025	One quick start guide
Two HySense® PR 509 pressure sensors, incl. cables	One shoulder strap kit
Two MINIMESS® 1620 direct adapters	One plastic case
One power adapter, incl. a USB cable	

Cables

Part No.	HySense®/ MultiXtend	xx.xx (length in meters)
8824-S1-xx.xxS*	PR, TE, QT, QG / UI, SPLIT	02.50 / 05.00 / 10.00
8824-S1-xx.xxH**	PR, TE, QT, QG / UI, SPLIT	
* S = Basic ** H = High-end	Degree of protection IP40 IP67	Extraction force 160 Nm 300 Nm

For additional information regarding cables, please refer to page 226



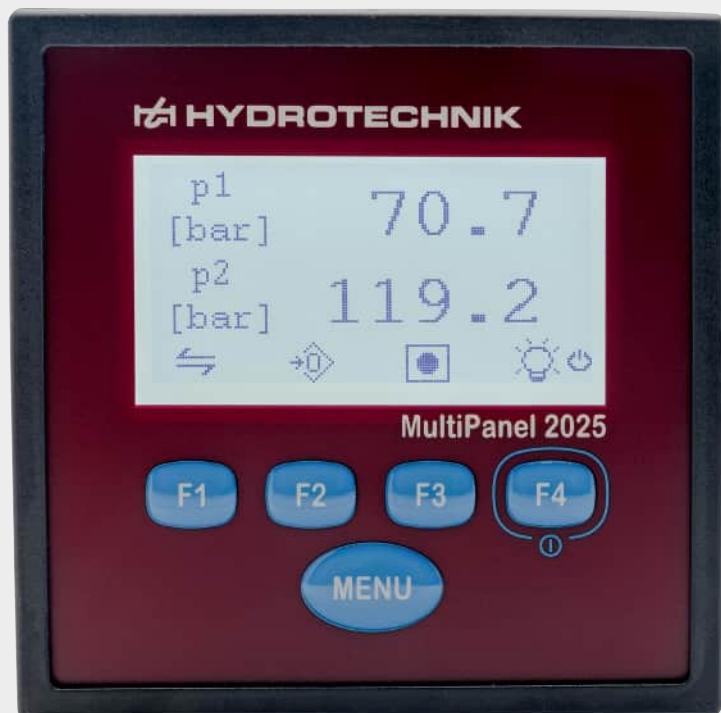
MultiPanel 2025

The display that can remember! The **MultiPanel 2025** is designed to cost-effectively consolidate both recording and displaying measurement data into a single unit. You can also use the integrated HYDROlink6 ADVANCED software key with a PC or laptop in order to visualize measured values on external monitors.

- | Simple and intuitive menu navigation despite small dimensions.
- | Backlit LCD display makes it easy to read measurement values.
- | Integrated HYDROlink6 ADVANCED software key (makes it possible to show measurement values on external monitors by using a PC or laptop)
- | Excellent connectivity: TTL switching contact and trigger inputs and outputs



MultiPanel 2025 kit	
Part No.	3160-00-80.00
Included:	
One MultiPanel 2025	One quick start guide
One terminal block	One mounting kit



MultiPanel 2025	
Channels	8
Analog	
Number	(2)
Signals	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V
Analog outputs	2
Analog output signals	0/4 ... 20 mA (x1), 0/2 ... 10 V (x1)
Frequency	
Number	(2)
Frequency signals	FRQ, \pm FRQ, CNT, \pm CNT
Frequency range	1 ... 10 kHz
Configurable (*)	
Number	2
Calculated / CAN	
Number	1
CAN interface	–
Digital	
Digital inputs	1
Digital outputs	1
Relays	
Relay output	1
Type	NC / NO / Changeover
Memory	
Fastest recording rate	1 ms
Number of recordings	5
Number of readings per recording	120,000
Internal memory	2 MB
Sampling rate	1 ms, 10 ms, 100 ms, 1 s, 10 s
Recording duration	60 s ... 166 h
Sampling rate / Filter	
Fastest sensor sampling rate	1 kHz
Display	
Display size	2.6"
Display type	Monochrome LCD display
Max. channels shown	3
Min/Max	Yes
General	
Sensor detection	ISDS
Calculated measurement values	Differential, hydraulic power

MultiHandy 3020

Are you looking for a measuring device that will enable you to monitor small to medium-sized systems in harsh environments?

We have the answer for you: The MH3020!

With three input channels, a heavy-duty aluminum housing, and a USB port, the MultiHandy 3020 reliably and cost-effectively meets the essential requirements for the mobile acquisition of measurement data in harsh environments.

- | Versatile: Two analog channels and one frequency input channel
- | User-friendly: Large buttons, backlit display
- | Field-ready: Heavy-duty construction with aluminum housing
- | Large internal memory: For approx. 1 million readings per recording
- | High-capacity battery: For measuring the whole day without having to stop and charge



MultiHandy 3020

Part No.	3160-00-72.00
----------	---------------

Included:

One power adapter	One USB cable
One CD with manual	

Cables

Part No.	HySense [®] / MultiXtend	xx.xx (length in meters)
8824-S1-xx.xxS*	PR, TE, QT, QG / UI, SPLIT	02.50 / 05.00 / 10.00
8824-S1-xx.xxH**	PR, TE, QT, QG / UI, SPLIT	
* S = Basic ** H = High-end	Degree of protection IP40 IP67	Extraction force 160 Nm 300 Nm

For additional information regarding cables, please refer to page 226



MultiHandy 3020	
Channels	4
Analog	
Number	2
Signals	0 ... 20 mA, 4 ... 20 mA
Frequency	
Number	1
Frequency signals	FRQ
Frequency range	0.25 Hz ... 5 kHz
Calculated / CAN	
Number	1
CAN interface	–
Memory	
Fastest recording rate	1 ms
Number of recordings	14
Number of readings per recording	1 Mio
Internal memory	2 MB
Sampling rate	1 ms ... 16 h
Recording duration	1 s ... 999 h
Triggers	1
Sampling rate / Filter	
Fastest sensor sampling rate	1 kHz
Display	
Display size	2.1"
Display type	Monochrome LCD display
Max. channels shown	4
Min/Max	Yes
General	
Sensor detection	ISDS
Calculated measurement values	Differential, hydraulic power, total
Expansions	MultiXtend UI, Split
Degree of protection	IP40
Operating temperature	0 ... 50 °C
Battery	NiMH
Battery duration	> 16 h (three sensors)
Battery charging time	< 14 h

MultiHandy 3020 pp kit



MultiHandy 3020 pp kit

Part No.

3020A-pp-xx¹-xx¹

¹ Measuring range code for the pressure sensors

Measuring range

HySense® PR 100 pressure sensor

Code

0 ... 600 bar

18

0 ... 400 bar

15

0 ... 250 bar

17

0 ... 60 bar

21

-1 ... 6 bar

32

Included:

One MultiHandy 3020

One power adapter

Two HySense® PR 100 pressure sensors

One USB cable

Two standard 5-m measuring cables

One plastic case

Two MINIMESS® 1620 direct adapters

MultiHandy 3020 pTQ kit



MultiHandy 3020 pTQ kit

Part No.

3020A-pTQ-xx¹-yy²

¹ Measuring range code for the pressure sensors

² Measuring range code for the volumetric flow meter

Measuring range HySense® PR 100 pressure sensor	Code	Measuring range HySense® QT 500 flow meter	Code
0 ... 600 bar	18	600 l/min	72
0 ... 400 bar	15	300 l/min	71
0 ... 250 bar	17		
0 ... 60 bar	21		
-1 ... 6 bar	32		

Included:

One MultiHandy 3020	One MINIMESS® 1620 direct adapter
One HySense® PR 100 pressure sensor	One power adapter
One HySense® TE 300 temperature sensor	One USB cable
One HySense® QT 500 flow meter	One HYDROcom6 ADVANCED software
Three standard 5-m measuring cables	One plastic case

MultiSystem 4070

Do you need measurements other than just pressure, temperature, and flow rate? Do you want to integrate data for multiple measurements or entire test sequences into your recording in a user-friendly and cost-effective manner? Do you want to know how your measurements are doing at any time and from anywhere?

The completely new MultiSystem 4070 is the most efficient way to get started with the next level of measurement data recording!



- | New menu structure: ICON graphical user interface
- | Unbeatable connectivity: CAN bus, MultiXtend Bluetooth, LAN
- | Viscosity-compensated volumetric flow measurements: HySense® QT 600
- | Oil condition monitoring: HySense® CX 197, CV 100, CM 100, CL 100, CW 100, and Patrick
- | Maximum effectiveness: Lithium-ion battery technology; runtime ≥ 10 h
- | Fast charging function ≤ 3 h

MultiSystem 4070	
Part No.	3160-00-83.00
Included:	
One MultiSystem 4070	One USB Stick
One power adapter	One Software HYDROcom6 ADVANCED
1x USB cable	1x plastic case
The measuring systems MS4070 & MS5070 require a country-specific power supply cable for the power	
Part-No.	
EU power cord	8812-20-12-03
UK power cord	8812-20-12-04
USA/Japan power cord	8812-20-12-05
Australia power cord	8812-20-12-06



NEW

MultiControl 4070

Do you want to monitor your vehicles or systems during operation and record measurement data comprehensive and efficient? A harsh environment with dirt and moisture posed challenges to your previous measurement technology? The MultiControl 4070 offers the identical performance of the MultiSystem 4070 and convinces with a robust design and the IP65 protection class. Operation and configuration are very easy and comfortable with the integrated HYDROlink6 Advanced Software via your PC or laptop.



MultiControl 4070	
Part No.	3160-00-84.00
Included:	
One MultiControl 4070	One USB drive
One power adapter	One Software HYDROlink6 ADVANCED
One USB cable	One plastic case
One ethernet cable	

Cables

Part No.	HySense®/ MultiXtend	xx.xx (length in meters)
8824-S1-xx.xxS*	PR, TE, QT, QG / UI, SPLIT	02.50 / 05.00 / 10.00
8824-S1-xx.xxH**	PR, TE, QT, QG / UI, SPLIT	
8824-R7-xx.xx	MultiXtend A, f, Thermo	02.50 / 05.00
8824-J2-xx.xx	MultiXtend Bluetooth, LAN	
8824-F2-xx.xx	MultiXtend Trigger	
8824-T6-xx.xx	Patrick (power from device)	
8824-T2-xx.xx	Patrick, ext. power (power adapter, Y splitter)	
*S = Basic **H = High-end	Degree of protection IP40 IP67	Extraction force 160 Nm 300 Nm

For additional information regarding cables, please refer to page 226

MultiSystem 4070 / MultiControl 4070

Channels	17
Analog	
Number	3(4) / 3(5)
Signals	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V, ±10 V
Frequency	
Number	1(2) / (2)
Frequency signals	FRQ, ±FRQ, CNT, ±CNT, ±CNT(4Q)
Frequency range	0.25 Hz ... 20 kHz
Configurable (*)	
Number	1 / 2
Signals	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V, ±10 V, FRQ, ±FRQ, CNT, ±CNT, ±CNT(4Q)
Frequency range	0.25 Hz ... 20 kHz
Calculated / CAN	
Number	10
CAN interface	1

MultiSystem 4070 / MultiControl 4070

Digital

Digital inputs	1
----------------	---

Digital outputs	1
-----------------	---

Memory

Fastest recording rate	1 ms
------------------------	------

Number of recordings	100
----------------------	-----

Number of readings per recording	2 Mio
----------------------------------	-------

Internal memory	4 GB
-----------------	------

Sampling rate	0.1 ms ... 16 h
---------------	-----------------

Recording duration	1 s ... 999 h
--------------------	---------------

Triggers	4
----------	---

Sampling rate / Filter

Fastest sensor sampling rate	1 kHz
------------------------------	-------

Fastest CAN sampling rate	1 kHz
---------------------------	-------

Configurable filter	Digital FIR software filter
---------------------	-----------------------------

Display (only MultiSystem 4070)

Display size	3.5"
--------------	------

Display type	TFT color display (QVGA)
--------------	--------------------------

Graphic / color display	Yes
-------------------------	-----

Max. channels shown	17
---------------------	----

Min/Max	Yes
---------	-----

General

Sensor detection	ISDS
------------------	------

Calculated measurement values	Differential, hydraulic power, definable formula, viscosity
-------------------------------	---

Special applications	HYDR0run, HySense® QT 600, HySense® QL 326, oil condition analysis
----------------------	--

Connectivity	MultiXtend Bluetooth, LAN / LAN-Interface
--------------	---

Oil condition	Patrick, HySense® CX 197, HySense® CL 100, HySense® CM 100, HySense® CW 100, HySense® CV 100
---------------	--

Expansions	MultiXtend A, f, Thermo, UI, Split, Trigger
------------	---

Degree of protection	IP40 / IP65
----------------------	-------------

Operating temperature	-10 ... 50 °C
-----------------------	---------------

Battery	Li-ion
---------	--------

Battery duration	> 10 h (five sensors)
------------------	-----------------------

Battery charging time	< 3 h
-----------------------	-------

MultiSystem 4070 pp kit



MultiHandy 4070 pp kit

Part No.

4070-pp-xx¹-xx¹

¹ Measuring range code for the pressure sensors

Measuring range
HySense® PR 100 pressure sensor

Code

0 ... 600 bar

18

0 ... 400 bar

15

0 ... 250 bar

17

0 ... 60 bar

21

-1 ... 6 bar

32

Included:

One MultiSystem 4070

One USB cable

Two HySense® PR 100 pressure sensors

One USB drive

Two standard 5-m measuring cables

One HYDR0com6 ADVANCED software

Two MINIMESS® 1620 direct adapters

One plastic case

One power adapter

For notes regarding country-specific power cords, please refer to page 193

MultiSystem 4070 ppTQ kit



MultiSystem 4070 ppTQ kit

Part No.

4070-ppTQ-xx¹-xx¹-yy²

¹ Measuring range code for the pressure sensors

² Measuring range code for the volumetric flow meter

Measuring range HySense® PR 100 pressure sensor		Code	Measuring range HySense® QT 500 flow meter		Code
0 ... 600 bar		18	600 l/min		72
0 ... 400 bar		15	300 l/min		71
0 ... 250 bar		17			
0 ... 60 bar		21			
-1 ... 6 bar		32			

Included:

One MultiSystem 4070	One power adapter
Two HySense® PR 100 pressure sensors	One USB cable
One HySense® TE 300 temperature sensor	One USB drive
One HySense® QT 500 flow meter	One HYDRocom6 ADVANCED software
Four standard 5-m measuring cables	One plastic case
Two MINIMESS® 1620 direct adapters	

For notes regarding country-specific power cords, please refer to page 193

MultiSystem 5070

Do your tasks require maximum performance and capacity when it comes to mobile measurement data recording? Do you need to record and visualize a large number of measuring channels and highly complex test sequences precisely, including in danger zones?

The MultiSystem 5070, combined with professional software, is the perfect solution for recording and analyzing your readings regardless of the application. To put it simply, it is essential for every fluid specialist and a valuable tool for professional service technicians.

Wireless data transmission via MultiXtend Bluetooth minimizes the time spent in danger zones, and complex measuring tasks can be safely and efficiently recorded with predefined test sequences. Moreover, favorites can be freely chosen and screenshots can be saved, ensuring maximum ease of use.



- | Precise representation: 5" sunlight-readable color display
- | User friendly: ICON graphical user interface
- | Maximum memory: 500 recordings with up to 6 million readings per recording
- | Maximum sampling rate: Up to 10 kHz
- | 2 separate CAN interfaces: Incl. wake-up / trigger function
- | Viscosity-compensated volumetric flow measurements: HySense® QT 600
- | Oil condition monitoring: HySense® CV 100, CM 100, CL 100, CW 100, and Patrick





MultiSystem 5070

Part No.

3160-00-82.00

Included:

One MultiSystem 5070

One USB drive

One power adapter

One HYDROcom6 ADVANCED software

One USB cable

One plastic case

The MS4070 & MS5070 measuring systems require a country-specific power cord for the power adapter

Part No.

EU power cord

8812-20-12-03

UK power cord

8812-20-12-04

USA/Japan power cord

8812-20-12-05

Australia power cord

8812-20-12-06

Cables

Part No.	HySense®/ MultiXtend	xx.xx (length in meters)
8824-S1-xx.xxS*	PR, TE, QT, QG / UI, SPLIT	02.50 / 05.00 / 10.00
8824-S1-xx.xxH**	PR, TE, QT, QG / UI, SPLIT	
8824-R7-xx.xx	MultiXtend A, f, Thermo	02.50 / 05.00
8824-J2-xx.xx	MultiXtend Bluetooth, LAN	
8824-F2-xx.xx	MultiXtend Trigger	
8824-T6-xx.xx	Patrick (power from device)	
8824-T2-xx.xx	Patrick, ext. power (power adapter, Y splitter)	
* S = Basic ** H = High-end	Degree of protection IP40 IP67	Extraction force 160 Nm 300 Nm

For additional information regarding cables, please refer to page 226

MultiSystem 5070

Channels	42
Analog	
Number	6(8)
Signals	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V, ± 10 V
Frequency	
Number	(2)
Frequency signals	FRQ, \pm FRQ, CNT, \pm CNT, \pm CNT(4Q)
Frequency range	0.25 Hz ... 20 kHz
Configurable (*)	
Number	2
Signals	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 2 ... 10 V, 1 ... 5 V, 0.5 ... 4.5 V, ± 10 V, FRQ, \pm FRQ, CNT, \pm CNT, \pm CNT(4Q)
Frequency range	0.25 Hz ... 20 kHz
Calculated / CAN	
Number	32
CAN interface	2

MultiSystem 5070	
Digital	
Digital inputs	1
Digital outputs	1
Memory	
Fastest recording rate	0.1 ms
Number of recordings	500
Number of readings per recording	6 Mio
Internal memory	4 GB
Sampling rate	0.1 ms ... 16 h
Recording duration	1 s ... 999 h
Triggers	4
Sampling rate / Filter	
Fastest sensor sampling rate	10 kHz (all channels)
Fastest CAN sampling rate	1 kHz
Configurable filter	Digital FIR software filter
Display	
Display size	5"
Display type	TFT color display (QVGA)
Graphic / color display	Yes
Max. channels shown	42
Min/Max	Yes
General	
Sensor detection	ISDS
Calculated measurement values	Differential, hydraulic power, definable formula, viscosity
Special applications	HYDR0run, HySense® QT 600, HySense® QL 326, oil condition analysis
Connectivity	MultiXtend Bluetooth, LAN
Oil condition	Patrick, HySense® CX 197, HySense® CL 100, HySense® CM 100, HySense® CW 100, HySense® CV 100
Expansions	MultiXtend A, f, Thermo, UI, Split, Trigger
Degree of protection	IP40
Operating temperature	-10 ... 50 °C
Battery	Li-ion
Battery duration	> 8 h (eight sensors)
Battery charging time	< 2 h

MultiSystem 5070 pp kit



MultiHandy 5070 pp kit

Part No.

5070-pp-xx¹-xx¹

¹ Measuring range code for the pressure sensors

Measuring range
HySense® PR 400 pressure sensor

Code

0 ... 600 bar

18

0 ... 400 bar

15

0 ... 250 bar

17

0 ... 60 bar

21

Included:

One MultiSystem 5070

One USB cable

Two HySense® PR 400 pressure sensors

One USB drive

Two standard 5-m measuring cables

One HYDR0com6 ADVANCED software

Two MINIMESS® 1620 direct adapters

One plastic case

One power adapter

For notes regarding country-specific power cords, please refer to page 199

MultiSystem 5070 ppTQ kit



MultiSystem 5070 ppTQ kit

Part No.

5070-ppTQ-xx¹-xx¹-yy²

¹ Measuring range code for the pressure sensors

² Measuring range code for the volumetric flow meter

Measuring range HySense® PR 400 pressure sensor	Code	Measuring range HySense® QT 500 flow meter	Code
0 ... 600 bar	18	600 l/min	72
0 ... 400 bar	15	300 l/min	71
0 ... 250 bar	17		
0 ... 60 bar	21		

Included:

One MultiSystem 5070	One power adapter
Two HySense® PR 400 pressure sensors	One USB cable
One HySense® TE 300 temperature sensor	One USB drive
One HySense® QT 500 flow meter	One HYDROcom6 ADVANCED software
Four standard 5-m measuring cables	One plastic case
Two MINIMESS® 1620 direct adapters	

MultiSystem 8050

Do you need a large number of channels and the perfect proportion of input/output channels for your recording tasks? Are you interested in optimally visualizing and safely recording an extensive amount of readings for your stationary measuring task?

The MultiSystem 8050 is the perfect measuring system for your stationary applications. With a total of 32 (optionally 40) channels and a large touch display, it is able to visualize a large number of readings in a clear and manageable manner, regardless of whether as numeric values or as a line chart.

- | Perfect for complex measurements: Up to 30 channels simultaneously on the TFT monitor
- | User-friendly and clearly laid out: Touchscreen monitor and logical menu structure
- | Live reading analysis: A large graphic display for perfect line charts
- | Universal versatility: Analog and digital inputs and outputs and a wide variety of interfaces



MultiSystem 8050

Part No.	3160-00-65.00	
	3160-00-65.01	(14x Calculated / CAN)

Included:

One MultiSystem 8050	One HYDROcom6 PROFESSIONAL software
One power adapter	One service connector
One USB cable	

Cables

Part No.	HySense®/ MultiXtend	xx.xx (length in meters)
8824-S1-xx.xxS*	PR, TE, QT, QG / UI, SPLIT	02.50 / 05.00 / 10.00
8824-S1-xx.xxH**	PR, TE, QT, QG / UI, SPLIT	
8824-N1-xx.xx	MultiXtend A, f, Thermo	02.50 / 05.00
8824-TA-xx.xx	MultiXtend Bluetooth	
8824-F2-xx.xx	MultiXtend Trigger	
8824-T5-xx.xx	Patrick, ext. power (power adapter, Y splitter)	
* S = Basic ** H = High-end	Degree of protection IP40 IP67	Extraction force 160 Nm 300 Nm

For additional information regarding cables, please refer to page 226

MultiSystem 8050	
Channels	32(40)
Analog	
Number	10
Signals	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, ± 10 V
Analog channels for V/I measurement	2
Signals	± 2 ADC (one), ± 48 ADC (one)
Analog outputs	2
Analog output signals	0 ... 20 mA (x1) -20 ... 20 mA (x1)
Frequency	
Number	4
Frequency signals	FRQ, \pm FRQ, CNT, \pm CNT
Frequency range	0.05 Hz ... 5 kHz
Calculated / CAN	
Number	6(14)
CAN interface	1
Digital	
Digital inputs	4
Digital outputs	4
Memory	
Fastest recording rate	0.1 ms
Number of recordings	200
Number of readings per recording	6 Mio
Internal memory	2 GB
Sampling rate	0.1 ms ... 16 h
Recording duration	1 s ... 999 h
Triggers	2
Sampling rate / Filter	
Fastest sensor sampling rate	10 kHz (2 channels)
Fastest CAN sampling rate	0.1 kHz
Configurable filter	Software filter (arithmetic mean)
Display	
Display size	10.4"
Display type	TFT touch color display (VGA)
Graphic / color display	Yes
Max. channels shown	30
Min/Max	Yes

MultiSystem 8050

General

Sensor detection	ISDS
Calculated measurement values	Addition, subtraction, multiplication, division, definable formular, hydraulic power
Special applications	HYDRORun
Wireless	MultiXtend Bluetooth, LAN
Oil condition	Patrick, HySense® CX 197, HySense® CL 100, HySense® CM 100, HySense® CW 100, HySense® CV 100
Expansions	MultiXtend A, f, Thermo, UI, Split, Trigger
Degree of protection	IP40
Operating temperature	0 ... 40 °C

MultiControl 8050

The MultiControl 8050 is a version of the MultiSystem 8050 without a display, but packs the same amount of power and performance as the latter. Simply hook up the device to your PC or laptop via USB or LAN and use the integrated HYDROlink6 ADVANCED software key to configure it easily and conveniently.

MultiControl 8050

Part No.	3160-00-66.00
	3160-00-66.01 (14x Calculated / CAN)



Included:

One MultiControl 8050	One HYDROcom6 PROFESSIONAL software
One power adapter	One HYDROlink6 ADVANCED software
One USB cable	One service connector

SEG 1060

Simply display your readings! Use the **SEG 1060** flush-mounting device for control panels in order to show your readings clearly. The small installation size makes it easy to integrate into systems, and the four buttons on the front panel, together with the logical menu structure, guarantee ease of use.

The large digital display can be comfortably read from a distance. Finally, the **SEG 1060** is optionally available with an analog and digital output.

- | Measuring device for flush-mounting in control panels: With configurable input for analog or frequency sensors
- | Optimum visualization: The large digital display is easy to read
- | Great flexibility: With optional outputs
- | Easy to use: Only four buttons and a logical menu structure

Product discontinued



SEG 1060		
Part No.	3192-04-10.00	24 VDC
	3192-04-11.00	24 VDC, digital and analog output
	3192-04-20.00	230 VAC
	3192-04-21.00	230 VAC, digital and analog output

Included:	
One SEG 1060	One manual
One mounting kit	

SEG 1060	
Channels	1(3)
Analog	
Analog outputs (opt)	(1)
Analog output signals	0 ... 20 mA, 4 ... 20 mA
Configurable	
Number	1
Signals	0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, FRQ
Frequency range	1 ... 10 kHz
Digital	
Digital outputs (opt)	(1)
Relays	
Relay output (opt)	(1)
Type	NC / NO
Sampling rate / Filter	
Fastest sensor sampling rate	1 kHz
Display	
Display size	Seven-segment LED
Numbers	4
Max. channels shown	1
General	
Expansions	MX UI
Degree of protection	IP40
Operating temperature	-20 ... 50 °C

“Patrick” the particle counter

Do you want to significantly reduce machine downtimes due to failure or maintenance and schedule them in the most cost-effective manner possible?

That is where the “Patrick” particle counter comes in. This unit makes it possible to monitor contamination levels and fluid contamination trends with high precision, and changes in specific parameters can be used to draw conclusions regarding the need for maintenance and repairs. In other words, “Patrick” makes it possible to diagnose and monitor the oil quality in hydraulic systems.

The contamination class can be displayed in conformity with ISO4406:99 / SAE AS 4059 / NAS 1638 / GOST 17216.

- | Detect contamination in fluids
- | Minimize machine failures
- | Schedule downtimes in a cost-effective manner
- | Data transmission via CAN, USB (adapter), or RS-232



Patrick Optical particle counter	
Part No.	3160-00-76.00
Sensor principle	Light obscuration
Included:	
One Patrick	One quick start guide
Attachments	
Flow control valve max. 350 bar	2103-A0-02.00
Contamination classes	
Number	4
Type	ISO 4406:99 // SAE AS 4059 // NAS 1638 // GOST 17216
Measuring range (ISO 4406:99)	0 ... 24
Calibrated range (ISO 1171:2010)	10 ... 22
Measuring accuracy	±1
Fluids	
Type	Mineral oil (e.g., HLP) // Ester fluids (e.g., HEES) // Biodegradable fluids (e.g., HETG) // Diesel fuels
Temperature	-20 ... 85 °C
System conditions	
Flow rate	50 ... 400 ml/min
Static operating pressure	600 bar / 8700 psi
Dynamic operating pressure	420 bar / 6100 psi
Connection	
Fluid connection	Two MINIMESS® 1620 units
Interface	RS-232, CANOpen, J1939
Analog outputs	1
Analog output signals	4 ... 20 mA
Memory	
Data memory	3072 measurements
Display	
Display size	2.2"
Display type	Monochrome LCD display
Max. classes shown	4
General	
Degree of protection	IP65
Operating temperature	-20 ... 85 °C at 0 ... 95% rel. humidity

Patrick in the Box

Patrick in the Box is our offering for anyone looking for a portable particle monitoring solution!

The device can be used to immediately analyze samples from oil tanks and sample bottles in regard to contamination, ensuring that you can prevent hydraulic system failures and schedule servicing work as appropriate. This proactive maintenance approach is ideal for locations with multiple storage tanks / systems and makes this analysis device the ultimate solution for measuring and diagnostic work.



Patrick in the Box	
Part No.	3402-CP20-D200-000
Sensor principle	Light obscuration
Included:	
One Patrick in the Box	One DN4 hose, incl. suction filter
One power adapter	One manual
One DN4 hose, incl. suction filter	
Attachments	
Pressure reducing valve max. 350 bar	5117-06-20.00

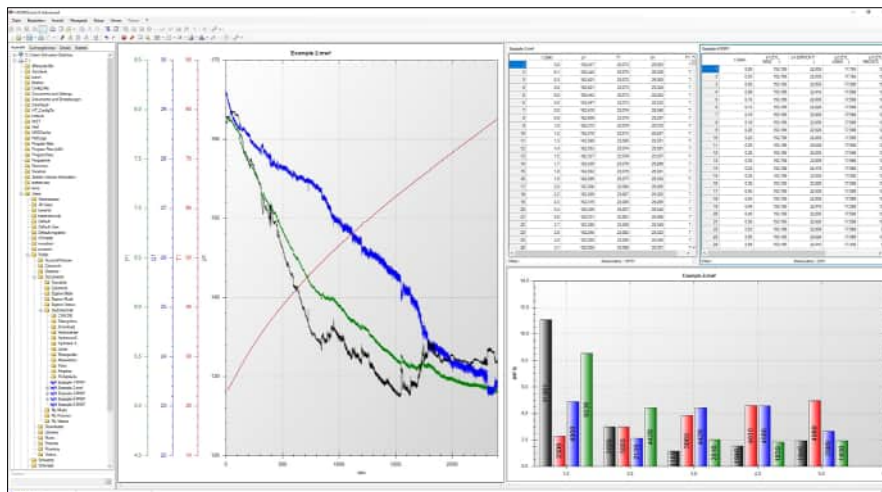
Patrick in the Box	
Contamination classes	
Number	4
Type	ISO 4406:99
	SAE AS 4059
	NAS 1638
	GOST 17216
Measuring range (ISO 4406:99)	0 ... 24
Calibrated range (ISO 1171:2010)	10 ... 22
Measuring accuracy	±1
Fluids	
Type	Mineral oil (e.g., HLP)
	Ester fluids (e.g., HEES)
	Biodegradable fluids (e.g., HETG)
	Diesel fuels
Temperature	-20 ... 85 °C
Fluid sampling	
Internal pump type	Gear pump
Max. operating pressure	2.5 bar / 36 psi
Operating pressure (optional)	350 bar / 5075 psi
Sampling variants	Tank samples
	Bottle samples (min. 1000 ml)
	Pressure line (optional)
Connection	
Fluid connection	Two MINIMESS® 1604 units
Interface	RS-232, CANOpen, J1939
Analog outputs	1
Analog output signals	4 ... 20 mA
Display	
Display size	2.2"
Display type	Monochrome LCD display
Max. classes shown	4
General	
Degree of protection (closed)	IP67
Degree of protection (open)	IP54
Operating temperature	0 ... 50 °C at 0 ... 95% rel. humidity
Battery duration	> 3 h
Battery charging time	< 5 h

HYDROcom6

In addition to professional measuring equipment, comprehensive measuring tasks require powerful software for processing recorded data. And HYDROcom6 Base, which is available for free, is designed to provide you with a large part of the functionalities you need to do just that.

Meanwhile, HYDROcom6 Advanced/Professional can be used not only to visualize real-time readings, but also download, visualize, analyze, process, and present existing measurement data. And to generate your own measurement reports configured according to your specific needs, of course.

- | Fast data transfers: Transfer, import, and export data
- | Fast data processing: Evaluate, analyze, and process data
- | Present measurement results: Charts, tables, bar charts
- | Digital documentation: Test reports, measurement reports, QA reports



HYDROcom6			
Part No.	---	BASE	(Available for download free of charge at www.hydrotechnik.com)
	8874-19-01.05	ADVANCED	One license
	8874-19-01.06	PROFESSIONAL	One license
	8874-19-02.00	Upgrade from ADVANCED to PROFESSIONAL	One license
	8874-19-03.03	ADVANCED	15 licenses
	8874-19-03.01	PROFESSIONAL	15 licenses
Included:			
HYDROcom6		One serial number key	

HYDROlink6

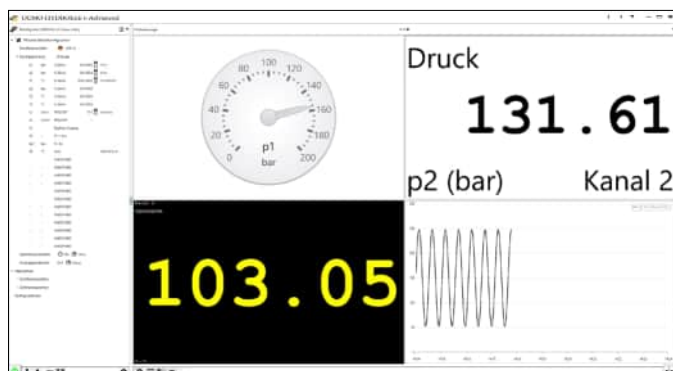
Sometimes you just need to be elsewhere! That is why Hydrolink6 makes it possible to completely configure your measuring systems with your PC or laptop regardless of whether you are on-site or on the go.

Take advantage of the highly effective remote access setup option for all measuring device/ channel / memory parameters and implement whole CANopen databases in order to make your work even more efficient.

Create highly complex test sequences for desktop and measuring system applications with the help of the new HYDROlink6 Professional.

Use a single click to generate personalized measurement reports, or use the simple real-time visualization / measurement function and the broad selection of associated layout options.

- | Efficient measuring device / channel / memory configuration
- | Full control of all functions via remote measuring system control
- | Implement CANopen databases
- | Easily generate complex test sequences (HL6 PRO)
- | Real-time visualization, incl. a wide selection of layout options



HYDROlink6

	---	BASE	(Available for download free of charge at www.hydrotechnik.com)
Part No.	8874-19-10.01	ADVANCED	One license
	8874-19-11.01	PROFESSIONAL	One license

Included:

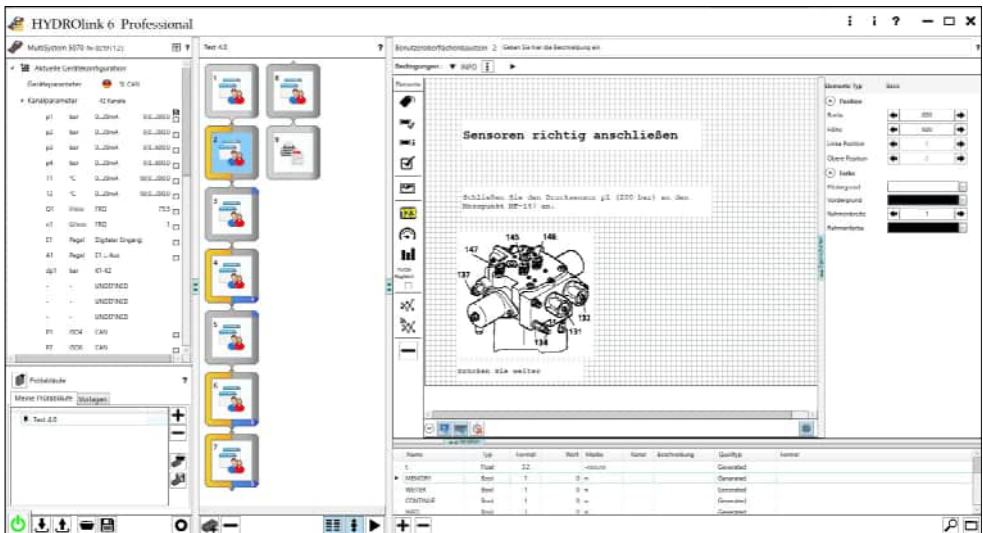
HYDROlink6	One serial number key
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HYDRORun6

Do you want to reliably visualize highly complex test sequences? Are you interested in minimizing measurement errors with predefined test plans?

If so, you can use HYDRORun or HYDRORun lite to visualize test sequences (generated with HYDROLink6 Professional) in a user-friendly manner. Depending on the software version, you can get a license for your existing measuring system e.g. MS4070/MS5070 or a desktop version.

- | Reliably visualize complex test sequences
- | Minimize errors with predefined test plans
- | Available as measuring system and desktop version.



HYDRORun			
Part No.	8874-19-11.04	HYDRORun	One license
	8874-19-11.05	HYDRORun lite	One license
Included:			
HYDRORun / lite		One serial number key	

HYDROcenter

Stay up to date at all times! Manuals, technical data sheets, software, and firmware updates –

HYDROcenter is there to make sure that you are always using the latest Hydrotechnik software and firmware versions. This way, your Hydrotechnik products can be updated quickly, reliably, and easily.

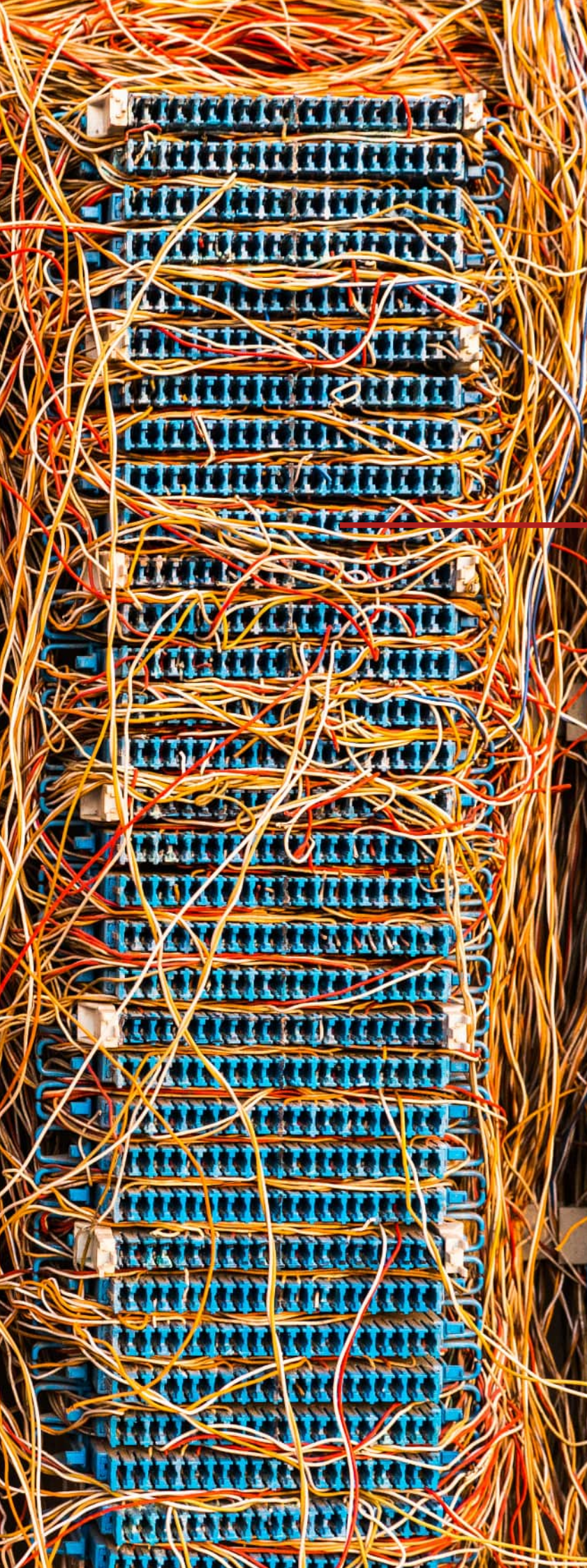
- | Keeps Hydrotechnik measuring systems and software products up to date at all times
- | Actively reminds you of software and firmware updates
- | Eliminates the need to spend time searching for updates
- | Provides the right product documentation directly



HYDROcenter

Part No. –

(Available for download free of charge at www.hydrotechnik.com)



Measuring systems

MultiXtend

Do more with your measuring system! With the MultiXtend product family, you can expand your measuring system or add additional functions to it. These additional devices can, for example, provide additional inputs for sensors with an analog or frequency input signal, measure electrical variables, be used to connect thermocouples, or connect to your existing network via LAN or wirelessly via Bluetooth.

MultiXtend Bluetooth

Not interested in staying in danger zones any longer than you have to? Or in transporting, connecting, and possibly damaging unnecessary cables?

Then the MultiXtend Bluetooth module, which makes it possible to take advantage of all the benefits of wireless data transmission, is the perfect device for your needs. Reduce costs by using fewer expensive measuring cables. Make use of reliable data transfers at distances of up to 300 mm with the paired transmitter / receiver unit. Safely record readings (for rotating machines, for example) outside of danger zones.



MultiXtend Bluetooth

Part No.

316A-00-10.00

Included:

MultiXtend Bluetooth module

J2 connecting cable (MX BT – measuring system)

USB Bluetooth receiver

MultiXtend LAN

Do you want to be able to access your measuring system from anywhere in the world? How about editing parameters and starting measurements remotely?

You can do so by quickly, easily, and affordably expanding your existing measuring system with the MultiXtend LAN. With this expansion, you can connect your MultiSystem to an existing network (TCP/IP).

Take advantage of network-based reading acquisition, incl. measuring device / measuring channel setup options via HYDROlink6 ADVANCED.



MultiXtend LAN

Part No.

316A-00-12.00

Included:

MultiXtend LAN module

MultiXtend A / f / Thermo

Does your measuring task go beyond what your existing measuring equipment can handle? No problem! With the devices in the MultiXtend A, f, and Thermo series, you can connect additional sensors to a MultiSystem. The sensor signals are digitized and transmitted to the measuring device through the CAN bus. And while MultiXtend channel expansions A and f each provide four M16 inputs for analog/frequency sensors and can be used with input ranges of 0 ... 20 mA or 4 ... 20 mA, MultiXtend channel expansion Thermo makes it possible to connect type J or K thermocouples.



MultiXtend A, f, Thermo

Part No.	A	3160-00-00.72AB
	f	3160-00-00.77
	Thermo type J	3160-00-00.73JB
	Thermo type K	3160-00-00.73KB

Included:

MultiXtend (A/ f/ Thermo) module

MultiXtend UI

Are you missing the right tool for integrating current or voltage measurements into your system? In that case, you can use the MultiXtend UI to measure current or voltage at an analog measuring input (0 ... 20 mA). In addition to the galvanic isolation of the measuring inputs, the unit comes with the option of manually activating a PWM filter.

Available in two versions:

- I. MultiXtend UI ± 30 VDC / ± 2 ADC
- II. MultiXtend UI ± 60 VDC / ± 4 ADC



MultiXtend UI

Part No.	I.	316A-00-00.20
	II.	316A-00-00.30

Included:

MultiXtend UI module

MultiXtend Split

Do you want to provide a single analog sensor signal to two receivers? We have the solution for you! The MultiXtend Split is a galvanically isolated, passive, feedback-free signal splitter that can be used to connect a single analog sensors to two receivers at the same time. This means, for example, that you can connect a permanently installed pressure sensor to a controller while also using that signal for diagnostic purposes.



MultiXtend Split

Part No.

316A-00-00.40

Included:

MultiXtend Split module

MultiXtend Trigger

Are you on the lookout for a solution for storing readings on multiple measuring systems simultaneously? The MultiXtend Trigger matches this description, and can be used to send a trigger signal to a maximum of three measuring systems. A storage operation trigger will then be, for example, sent by a MultiSystem 5070 to a maximum of three additional measuring systems at the same time. This makes it possible to carry out simultaneous storage operations on up to 96 channels so that the stored information can then be automatically grouped together on a PC with HYDRocom6 or with the use of HYDROlink6.







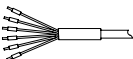






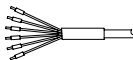
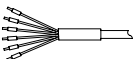


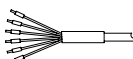
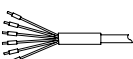


















MultiXtend Trigger

Part No.





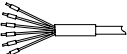





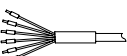

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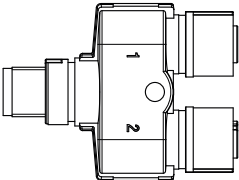
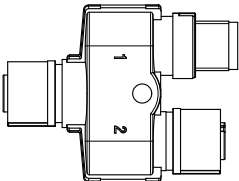
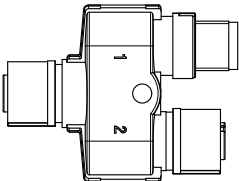
Included:

MultiXtend Trigger module

Cables						
	Male connector		Female connector		Part No.	Description
Sensor (A output)	M12, 4-pin		M12, 4-pin		8824-V2-xx.xx	
	M16, 6-pin		M12, 4-pin		8824-V3-xx.xxS	
	Unterminated cable end		M12, 4-pin		8824-V1-xx.xx	
CANopen	M12, 5-pin		M12, 5-pin		8824-N3-xx.xx	
	M12, 5-pin		M12, 8-pin		8824-J0-xx.xx	
	M12, 5-pin		Unterminated cable end		8824-M7-xx.xx	
	Unterminated cable end		M12, 5-pin		8824-M8-xx.xx	
	M12, 8-pin		M12, 8-pin		8824-T6-xx.xx	
	M12, 8-pin		Unterminated cable end		8824-R9-xx.xx	
	Unterminated cable end		M12, 8-pin		8824-T1-xx.xx	
	M12, 8-pin				8824-T2-xx.xx	
	M12, 8-pin					
	M12, 8-pin		M12, 5-pin		8824-R7-xx.xx	
	M12, 8-pin		D-sub, 9-pin		8824-T7-xx.xx	
	D-sub, 9-pin		M12, 5-pin		8824-N1-xx.xx	
	M12, 8-pin D-sub, 9-pin	 			8824-T5-xx.xx	
	M12, 8-pin		USB A		8824-T4-02.00	
	Product-specific	M12, 8-pin		M12, 8-pin (three)		8824-TB-00.00
M12, 5-pin			M12, 5-pin (three)		8824-I0-00.00	QL326
M16, 5-pin 2x			M16, 8-pin		8824-D6-xx.xx	TP180
Unterminated cable end			AMP DIN 72585, 3-pin		8824-K8-xx.xxS	TE380

xx.xx (length in meters) 02.50 / 05.00

Cables						
	Male connector		Female connector		Part No.	Description
Standard (basic)	M16, 6-pin		M16, 6-pin		8824-S1-xx.xxS	
	M16, 6-pin		M16, 6-pin		8824-S3-xx.xxS	Extension cable
	Unterminated cable end		M16, 6-pin		8824-S6-xx.xxS	
Standard (high-end)	M16, 6-pin		M16, 6-pin		8824-S1-xx.xxH	
	M16, 6-pin		M16, 6-pin		8824-S3-xx.xxH	Extension cable
	Unterminated cable end		M16, 6-pin		8824-S6-xx.xxH	
Triggers	Digital input/output				8824-F2-00.50	
Ethernet	M12 8p X-Coded male		M12 RJ45 VBL802		8824-V7-02.00	MultiControl 4070
Data cable	USB A / B				8824-F4-02.00	
	USB A / Micro				8824-R4-02.00	
	USB A / Micro (bayonet)				8812-20-09.01	MultiHandy 2025
	USB A / C				8824-V6-02.00	MultiControl 4070
xx.xx (length in meters) 02.50 / 05.00 / 10.00						

Y splitters				
M12 x 1		Description		Part No.
8-pin		One male connector to	One female connector	8808-50-01.02
			One female connector	
5-pin		One female connector to	One male connector	8808-50-01.01
			One female connector	
8-pin		One female connector to	One male connector	8808-50-01.03
			One female connector	

Measuring system shock protection

We are happy to introduce you to our MS4070 / MS5070 shock protectors, which are designed to make systems even easier to use under adverse conditions.

This convenient accessory, which is made of rugged NBR, improves grip and provides shock absorption protection for your MS4070 / MS5070.



Part No.

MultiSystem 5070

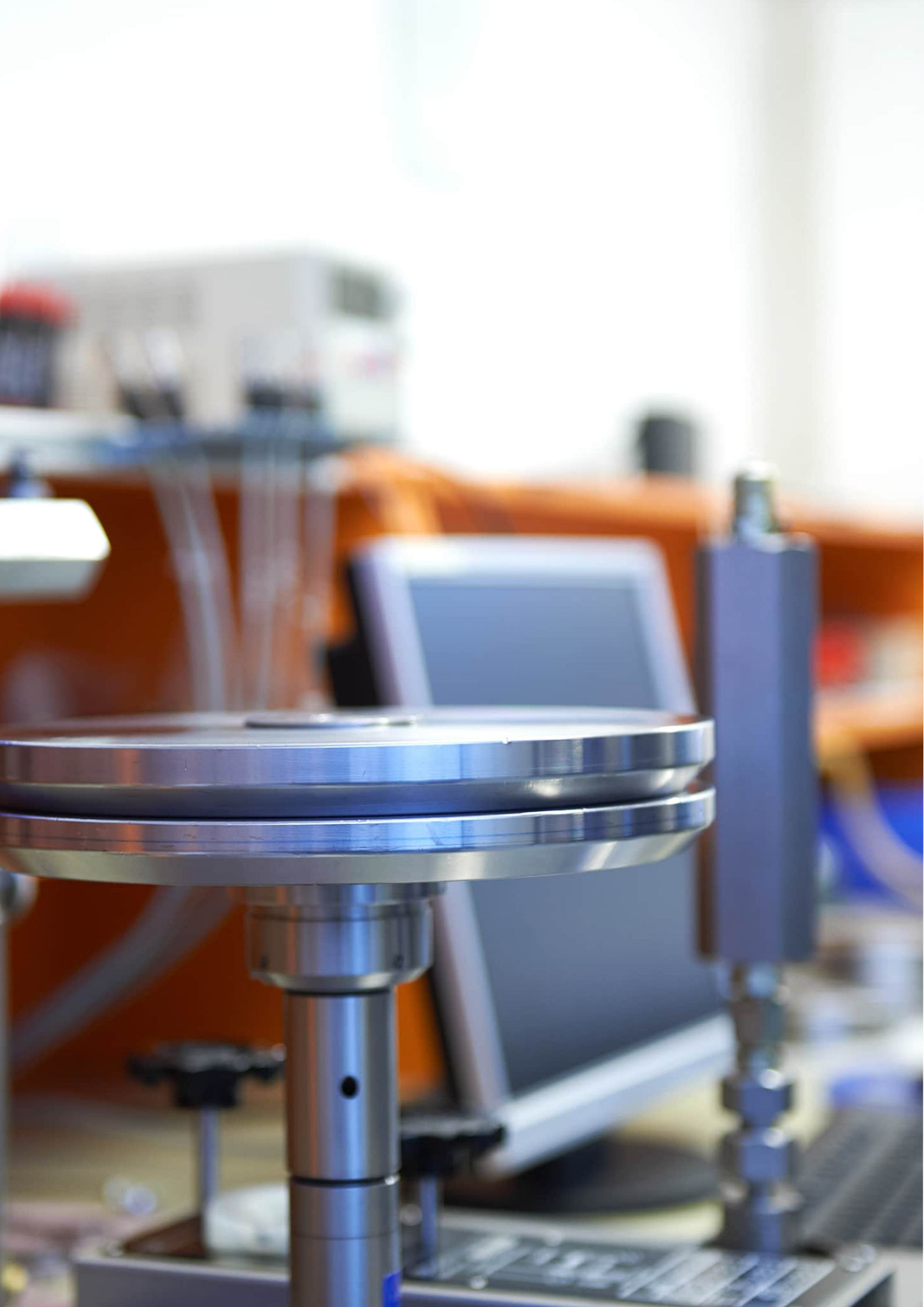
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MultiSystem 4070

8854-40-01.13

Accessories

	Note	Part No.
Power adapters		
	MultiHandy 2025	8812-20-09.00
	MultiHandy 3020	8812-20-11.00
	MultiSystem 4070/5070	8812-20-11.00
	MultiSystem / MultiControl 8050	8812-02-00.03
	8-pin female connector (e.g., Patrick)	8812-00-00.36
	5-pin female connector (e.g., CAN, MultiXtend A/f/Thermo)	8812-00-00.34
Country specific power cords		
	MS4070/MS5070	
	EU	8812-20-12.03
	UK	8812-20-12.04
	USA / Japan	8812-20-12.05
	Australia	8812-20-12.06
Spare batteries		
	MultiHandy 2025	AK-012120
	MultiHandy 3020	8873-08-02.00
	MultiControl 4070	8873-09-01.00
	MultiSystem 4070/5070	8873-09-01.00
Cases		
	MultiHandy 2025	3160-00-78.01
	MultiHandy 3020	3160-00-72.02
	MultiControl / MultiSystem 4070	8859-02-10.02
	MultiSystem 5070	8859-02-10.01
Diverse		
Soiling protector	M16 measuring channel inputs	8822-06-03.15
Top hat DIN rail	MultiHandy 2025 / MultiSystem 4070/5070	8854-00-00.02
Car USB Adapter		8812-09-06.00
Car connection cable	MultiHandy 3020 / MultiSystem 4070/5070	8824-64-05.00
Car connection cable	Patrick	8824-T8-05.00



Service and calibration

Service and calibration

In order for readings to be accurate and reliable and yield solid analyses, measuring devices and sensors need to be precisely adjusted and calibrated.

For us at Hydrotechnik, our customer relationships do not simply end when we sell a product. Instead, we offer professional, reliable, and high-quality maintenance, repair, and calibration services designed to help you maintain your product's value. These services are not just limited to Hydrotechnik products, but can also cover all other competing products.

Maintenance

With regular high-quality maintenance, you can rest assured knowing that your sensors and measuring devices are working perfectly and are delivering meaningful measurement results. We are experts at checking sensors and measuring devices as quickly as possible so as to minimize downtimes.

Repairs

Uncompromising quality is not just an empty slogan for Hydrotechnik, but rather something that defines everything we do. All our operations consistently conform to all the applicable quality standards, and this conformity is documented and backed up by our ISO 9001 certification, which we have had since November 1996. In the unlikely event that your equipment experiences a problem, however, we will repair your sensor or device reliably, quickly, and cost-effectively.

Calibration

Since 1986, Hydrotechnik has operated a calibration laboratory accredited by DAkkS. In 2019, this accreditation was successfully updated to the new DIN EN ISO/IEC 17025:2018 standard.

We have over 30 years of calibration experience with pressure, fluid flow rates, temperature, and electrical parameters, and our test stands conform to traceable standards and meet all the requirements for an accredited calibration entity. Calibrations are carried out in conformity with all applicable guidelines and documented with internationally accepted DAkkS calibration certificates.

It is important to note that calibrating sensors, measuring devices, and measuring chains on a regular basis is essential and a prerequisite for accurate and reliable measurement results.

Measured variables and functionalities at a glance

Fluid flow rates

The Hydrotechnik calibration laboratory has three different state-of-the-art flow test stands for factory and DAkkS calibrations. A wide variety of mineral oils, plus the ability to keep them at constant temperatures, makes it possible to adjust viscosities as required with high precision.

Flow test stand I

- | Measuring range: 0.005 ... 40 L/min
- | Adjustable viscosity range: 1.2 ... 178 mm²/s
- | DAkkS and factory calibration

Flow test stand II

- | Measuring range: 2 ... 1000 L/min
- | Adjustable viscosity range: 21 ... 46 mm²/s
- | Factory calibration

Flow test stand III

- | Measuring range: 0.2 ... 600 L/min
- | Adjustable viscosity range: 1.2 ... 280 mm²/s
- | DAkkS and factory calibration

Pressure

We have two different high-precision dead weight testers for factory and DAkkS calibration available for pressure calibration. All calibration methods used are accredited in conformity with DIN EN ISO IEC 17025:2018 and adhere to guideline DKD 6-1.

Vacuum and overpressure:

- | Measuring range: -1 ... 7 bar
- | Pressurizing fluid: Gas
- | DAkkS and factory calibration

Overpressure:

- | Measuring range: 3 ... 1200 bar
- | Pressurizing fluid: Oil
- | DAkkS and factory calibration

Temperature

We have various temperature calibration baths with special temperature calibration oils available for temperature calibration. These calibrations are carried out with comparison measurements using traceable standards.

- | Temperature range: -50 ... 250 °C
- | Temperature calibration fluids: Silicone oils and water
- | Factory calibration

Electrical variables

We have a variety of calibration devices available for calibrating Hydrotechnik measuring devices.

Typical variables:

- | Current (A)
- | Voltage (V)
- | Frequency (Hz)
- | Factory calibration
- | Loaners upon request

Viscosity and density

The Hydrotechnik calibration laboratory has a falling ball viscometer and the corresponding density determination balance for determining the viscosity and density of liquids.

Measured variables

- | Dynamic viscosity (mPa*s)
- | Density (g/cm³)

Additional services

Our decades of experience, combined with our professional measuring equipment, enable us to cover a broad range of specific measuring tasks. Upon request, we will be glad to take care of specific calibrations and measurements, such as determining the performance of one-way restrictors (measuring the pressure differential vs. flow).

Certifications and accreditations

- | Hydrotechnik GmbH in conformity with DIN EN ISO 9001:2015
- | Accredited calibration laboratory in conformity with DIN EN ISO/IEC 17025:2018
- | Accredited methods for fluid pressure and flow



A member of **DKD**



Disclaimer

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