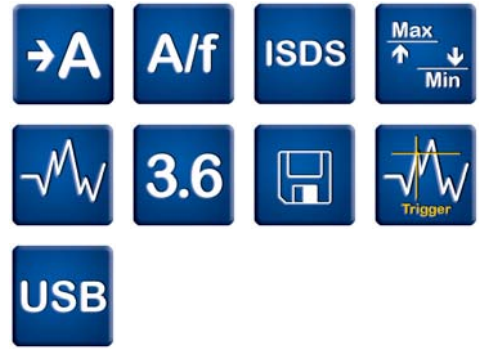# MultiHandy + MultiBox

MultiHandy are robust measuring devices, developed for daily diagnosis at small to medium sized systems. They are easy to operate and very reliable, equipped with two or three measuring inputs and a virtual channel for live calculations. Data download and PC connection via USB are standard, just as long battery performance and ISDS to automatically detect connected sensors are standard also.

MultiBox is the name of our measuring boxes for the use with a PC or Laptop. The basic version **MultiBox** 3060 is a measuring box without memory and can be operated without power pack. The **MultiBox** 3061 has an internal memory and due to its robustness it is very well suited for field measurements and tests under difficult environmental conditions. With its Ethernet interface, the **MultiBox** 3065 can be integrated into network architectures and programmed and operated with the **HYDRO**work supplied with all instruments.

MultiBox 3060

MultiBox 3061

MultiBox 3065

MultiHandy 3020

MultiHandy 2020

Up to four analog sensors with up to 1,000 values logged per second

One sensor with frequency input signal

MultiXtend extensions modules for more input signals or additional functions

MultiBox 3060 / 3061 / 3065

Whether as a measuring box connected to a PC or as an independant data logger, highest flexibility and perfect protection against environmental conditions make the **MultiBox** measuring instrument the universal solution for many industrial measuring tasks.

✓ **Fits perfectly:**
three types and six versions

✓ **Very easy to use:**
power supply and data transfer via USB

✓ **Universal use:**
measuring box via PC or an independant data logger

✓ **Robust construction:**
protected acc. to IP 54 in a stable casing (not MB 3065)

✓ **Complete software package:**
remote control, online measuring, data analysis and evaluation

✓ **Complete system integration:**
compatible with all Hydrotechnik measuring products

Versions

MultiBox 3060
with USB interface the indispensable companion of your laptop: fully fledged measuring device with user-friendly software

MultiBox 3061
like MultiBox 3060, but with internal data memory and connector for power pack or battery pack: measuring box and data logger in one

MultiBox 3065
like MultiBox 3061, but with Ethernet interface for seamless integration into networks and plant controls

HYDROwork

The comfortable operation software to use all functions of the MultiBox. Easy programming of the device parameters, clear visualisation of the measuring results and fast recording of all data are the most important features.

MultiBox 3060 / 3061 / 3065 Technical data

Inputs and channels

Analog input channels	**3x** (for sensors with or without Hydrotechnik ISDS)
Signals	**0/4 ... 20 mA** or **0/2 ... 10 V** (due to device version)
A/D converter	12 bit
Measuring rate	**1,000 values per second**
Error limits	**± 0,1 % FS**
Switchable input channel	**1x** (for sensors with or without Hydrotechnik ISDS)
Signals	**0/4 ... 20 mA** or **0/2 ... 10 V** (due to device version) **1.0 Hz ... 5 kHz** (w.D.) or **1.0 Hz ... 10 kHz** (w.o.D.)
Measuring rate	**1,000 values per second**
Error limits	**± 0.2 % of measured value**
Electrical meas. connector	6 pole jack, compatible to DIN 45 322, IEC 60130-9
Special channels	**2x**
Calculations	difference, hydraulic power

Data memory

not MultiBox 3060

Type	SD-Karte 2 GB
Measuring series	**200**
Values per series	**36,000,000** (data logger) / **15,000,000** (PC mode)
Recording rate	**1 ms ... 1 min.** (settable in steps)
Recording time	**1 s ... 48 h** (settable in steps)
Trigger	**1x** (option 4x, linkable)
Pretrigger	**0 / 10 / 20 / ... 100 %**

Equipment

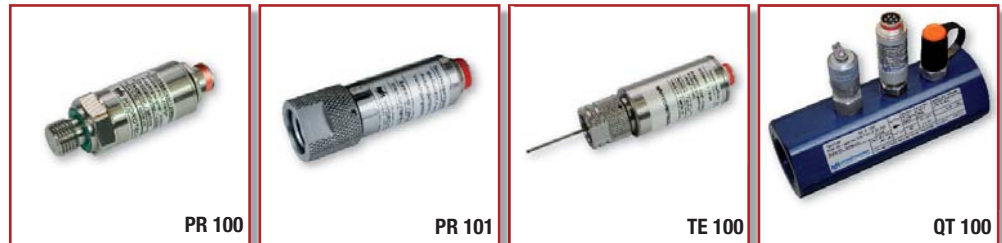|	
Interface	USB 2.0 / FS device
Power supply	**5.0 VDC** (via USB)
Mains power supply	**9 ... 30 VDC** (option, only for MB 3061 and 3065)
Current consumption	**< 500 mA** (MB 3060) / **< 600 mA** (MB 3061 and 3065)
Sensor current consumption	**max. 100 mA** (sum)

Qualities

Casing	Aluminium with protected edges and corners
Dimensions	**~ 120 x 124 x 52 mm** (L x W x H)
Weight	**~ 492 g** (MB 3060) / **~ 520 g** (MB 3065)
Protection type	**IP 54** (MB 3060 and 3061) / **IP 40** (MB 3065)
Temperature – operation	**-35 ... +60 °C** (MB 3060 and 3061) / **0 ... +50 °C** (MB 3065)
– storage	**-40 ... +70 °C**

MultiBox 3060 / 3061 / 3065 Order data

Single unit

Range of delivery	Order N°
MultiBox 3060, measuring box, input signal mA	3160-00-00.85
MultiBox 3060, measuring box, input signal V	3160-00-00.95
MultiBox 3061, USB data logger, input signal mA	3160-00-00.86
MultiBox 3061, USB data logger, input signal V	3160-00-00.96
MultiBox 3065, USB/Ethernet data logger, input signal mA	3160-00-00.87
MultiBox 3065, USB/Ethernet data logger, input signal V	3160-00-00.97
• USB cable • **HYDRO**_work_ • **HYDRO**_com_ 6 Base	

Measuring sets

PR 100   PR 101   TE 100   QT 100

Pressure measurement	Order N°
Version A • All components of the single unit (input signal mA) • 2x HySense® PR 100 pressure sensor • 2x Minimess® direct connector 1620 • 2x measuring cable standard, 5.0 m • Plastic case, black	3060A-pp-xx[1]-xx[1] 3061A-pp-xx[1]-xx[1] 3065A-pp-xx[1]-xx[1] 1: see below for measuring range codes
Version B • All components of the single unit (input signal mA) • 2x HySense® PR 101 pressure sensor • 2x measuring cable standard, 5.0 m • Plastic case, black	3060B-pp-xx[1]-xx[1] 3061B-pp-xx[1]-xx[1] 3065B-pp-xx[1]-xx[1] 1: see below for measuring range codes

Pressure and temperature measurement	Order No
Version A • All components of the single unit (input signal mA) • 2x HySense® PR 100 pressure sensor • 1x HySense® TE 100 temperature sensor • 2x Minimess® direct connector 1620 • 3x measuring cable standard, 5.0 m • Plastic case, black	3060A-ppT-xx[1]-xx[1] 3061A-ppT-xx[1]-xx[1] 3065A-ppT-xx[1]-xx[1] 1: see below for measuring range codes
Version B • All components of the single unit (input signal mA) • 2x HySense® PR 101 pressure sensor • 1x HySense® TE 100 temperature sensor • 3x measuring cable standard, 5.0 m • Plastic case, black	3060B-ppT-xx[1]-xx[1] 3061B-ppT-xx[1]-xx[1] 3065B-ppT-xx[1]-xx[1] 1: see below for measuring range codes

Measuring Sets

3061A-ppTQ

Pressure, temperature and volume flow rate measurement	Order N°
Version A • All components of the single unit (input signal mA) • 2x HySense® PR 100 pressure sensor • 2x Minimess® direct connector 1620 • 1x HySense® TE 100 temperature sensor • 1x HySense® QT 100 volume flow rate sensor • 4x measuring cable standard, 5.0 m • Plastic case, black	3060A- 3061A- 3065A- ppTQ-xx[1]-xx[1]-yy[2] 1: see below for measuring range codes 2: see below for measuring range codes
Version B • All components of the single unit (input signal mA) • 2x HySense® PR 101 pressure sensor • 1x HySense® TE 100 temperature sensor • 1x HySense® QT 100 volume flow rate sensor • 4x measuring cable standard, 5.0 m • Plastic case, black	3060B- 3061B- 3065B- ppTQ-xx[1]-xx[1]-yy[2] 1: see below for measuring range codes 2: see below for measuring range codes

Meas. ranges PR 100 / PR 101	Code	Measuring ranges QT 100	Code
0 ... 600 bar | 0 ... 8,700 psi	18	16 ... 600 l/min | 4.25 ... 158.5 gpm	72
0 ... 400 bar | 0 ... 5,800 psi	15	9 ... 300 l/min | 2.35 ... 79.25 gpm	71
0 ... 200 bar | 0 ... 2,900 psi	10	2 ... 75 l/min | 0.5 ... 19.8 gpm	70
0 ... 60 bar | 0 ... 870 psi	21	1 ... 10 l/min | 0.26 ... 2.6 gpm	01
-1 ... +6 bar | -14 ... +87 psi	32		

Accessories

Measuring cables are contained in the chapter „Accessories"

MultiBox 3065
with battery pack

Car connection cable, 12 VDC, 5.0 m	8824-P5-05.00
Power supply cable 250 V, open cable ends, 5.0 m	8824-P6-05.00
USB data cable, IP 67, USB-A – Mini-USB-B, 2.0 m	8824-P4-02.00
Measuring cable, IP 67, M16 x 0.75, 6 pole, 5.0 m	8824-S9-05.00
Power pack (plug version), IN: 110 ... 240 VAC, 47 ... 63 Hz / OUT: 24 VDC, 625 mA	8812-00-00.35
Transportation case, black, with turbine compartment	3160-00-62.09
Battery pack, ~ 2,000 mAh; IN: 24 VDC, 600 mA / OUT: 14.4 VDC	8873-30-01.00
Data CD, software and operation instructions manual	8874-16-00.01
Calibration, single channels or as measuring chain with sensors (option)	3199-12-00.11
Service package Basic	3199-30-00.02
Service package Plus	3199-30-01.04
Service package Professional	3199-30-02.04