

# MultiBox 3060 / 3061 / 3065

|                               |                   |
|-------------------------------|-------------------|
| <b>Channels</b>               | 6                 |
| <b>Analog sensors</b>         | 4 <sup>1</sup>    |
| <b>Frequency sensors</b>      | 1 <sup>1</sup>    |
| <b>Measuring value memory</b> | 2 GB <sup>2</sup> |

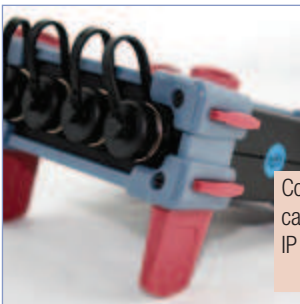
- 1: the total of four sensors can be connected  
2: no memory in MultiBox 3060

## Data logger and measuring device in one

No matter whether as measuring box at a PC or as an independent data logger: highest flexibility and perfect environmental protection qualify the MultiBox as universal solution for many measuring problems.



### Well protected



Consequently robust: stable metal casing, exquisite edge protectors and IP 54 protection against humidity.

### Universal use



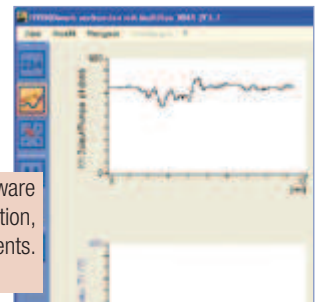
Three device versions for different requirements. Mobile or stationary, as measuring box or as data logger.

### Independent data logger



The optional battery pack allows the use during test drives with rough environmental conditions.

### Easy operation



**HYDROwork** is the intuitive software for the PC. For configuration, download and online measurements.

## Technical data

### Measuring and special channels

|                                     |   |
|-------------------------------------|---|
| Analog channels standard signals    | 3 (with Hydrotechnik ISDS)  |
| signals                             | 0/4 ... 20 mA, 0 ... 10 V   |
| A/D converter                       | 12 bit  |
| measuring rate                      | 1 kHz   |
| error limit                         | ± 0.1% FS   |
| electrical connection               | 6-pole jack, compatible to DIN 45 322, IEC 60130-9                              |
| Measuring channels analog/frequency | 1 (switchable, with Hydrotechnik ISDS and direction detection)                  |
| signals                             | 0/4 ... 20 mA, 0 ... 10 V / 1 Hz ... 5 kHz (w.o.d.d.), 1 Hz ... 10 kHz (w.d.d.) |
| A/D converter                       | 12 bit  |
| measuring rate                      | 1 kHz   |
| error limit                         | ± 0.2% of measured value  |
| electrical connection               | 6-pole jack, compatible to DIN 45 322, IEC 60130-9                              |
| Special channels                    | 2   |
| calculations                        | difference, sum, hydraulic power  |

### Measured value memory

|                                  |                                    |
|----------------------------------|------------------------------------|
| Type                             | SD card 2 GB (MB 3061 / 3065)      |
| Max. number of measuring series  | 200                                |
| Max. number of values per series | 115 million                        |
| Recording rate                   | 1 ms ... 1 Min (in steps)          |
| Individual scan rate             | channel-related, settable in steps |
| Recording time                   | 1 s ... 48 h (in steps)            |
| Number of triggers               | 1 ... 4, linkable                  |
| Pretrigger                       | 0 / 10 / 20 ... 100%               |

### Equipment

|                                    |  |
|------------------------------------|--|
| Interface                          | USB 2.0/FS device  |
| Power supply                       | 5 VDC, via USB   |
| ... optional (only MB 3061 / 3065) | 9 ... 30 VDC, from external power pack                   |
| Power consumption                  | < 500 mA (MB 3060) / < 600 mA (MB 3061 / 3065)           |
| Sensor power supply                | 12 VDC   |
| Sensor power consumption           | max. 100 mA (sum)  |
| Protection type                    | IP 54 (MB 3060 / 3061) / IP 40 (MB 3065)                 |
| Temperature range                  | -30 ... +50 °C (MB 3060 / 3061) / 0 ... +50 °C (MB 3065) |
| Dimensions                         | 120 x 124 x 52 mm  |

## MultiBox 3060 / 3061 / 3065



### One for each demand

#### MultiBox 3060

the measuring box with four channels; power supply from Computer via USB

#### MultiBox 3061

the data logger with internal memory; power supply via USB, or from optional BatteryPack or power pack

#### MultiBox 3065

the flexible with internal memory and Ethernet interface; can be used as measuring box or data logger, too

### Range of delivery and Ordner numbers

#### Instruments and Measuring sets

|                | Power pack with adaptors | USB cable 2.0 m | Data CD | Minimess® T620 direct connector | Pressure sensor PR 100 | Pressure sensor with direct connector PR 101 | Temperature sensor TE 100 | Measuring turbine QT 100 | Measuring cable, 5.0 m | Transport case, plastic |  |
|----------------|--------------------------|-----------------|---------|---------------------------------|------------------------|--|---------------------------|--------------------------|------------------------|-------------------------|--|
| MultiBox 3060  | -                        | •               | •       | -                               | -                      | -  | -                         | -                        | -                      | -                       | 3160-00-00.85 / .95 <sup>3</sup>                             |
| MeasSet A pp   | -                        | •               | •       | 2x                              | 2x                     | -  | -                         | -                        | 2x                     | •                       | 3060A-pp-xx <sup>1</sup> -xx <sup>1</sup>                    |
| MeasSet B pp   | -                        | •               | •       | -                               | -                      | 2x   | -                         | -                        | 2x                     | •                       | 3060B-pp-xx <sup>1</sup> -xx <sup>1</sup>                    |
| MeasSet A ppT  | -                        | •               | •       | 2x                              | 2x                     | -  | •                         | -                        | 3x                     | •                       | 3060A-ppT-xx <sup>1</sup> -xx <sup>1</sup>                   |
| MeasSet B ppT  | -                        | •               | •       | -                               | -                      | 2x   | •                         | -                        | 3x                     | •                       | 3060B-ppT-xx <sup>1</sup> -xx <sup>1</sup>                   |
| MeasSet A ppTQ | -                        | •               | •       | 2x                              | 2x                     | -  | •                         | •                        | 4x                     | •                       | 3060A-ppTQ-xx <sup>1</sup> -xx <sup>1</sup> -yy <sup>2</sup> |
| MeasSet B ppTQ | -                        | •               | •       | -                               | -                      | 2x   | •                         | •                        | 4x                     | •                       | 3060B-ppTQ-xx <sup>1</sup> -xx <sup>1</sup> -yy <sup>2</sup> |
| MultiBox 3061  | -                        | •               | •       | -                               | -                      | -  | -                         | -                        | -                      | -                       | 3160-00-00.86 / .96 <sup>3</sup>                             |
| MeasSet A pp   | •                        | •               | •       | 2x                              | 2x                     | -  | -                         | -                        | 2x                     | •                       | 3061A-pp-xx <sup>1</sup> -xx <sup>1</sup>                    |
| MeasSet B pp   | •                        | •               | •       | -                               | -                      | 2x   | -                         | -                        | 2x                     | •                       | 3061B-pp-xx <sup>1</sup> -xx <sup>1</sup>                    |
| MeasSet A ppT  | •                        | •               | •       | 2x                              | 2x                     | -  | •                         | -                        | 3x                     | •                       | 3061A-ppT-xx <sup>1</sup> -xx <sup>1</sup>                   |
| MeasSet B ppT  | •                        | •               | •       | -                               | -                      | 2x   | •                         | -                        | 3x                     | •                       | 3061B-ppT-xx <sup>1</sup> -xx <sup>1</sup>                   |
| MeasSet A ppTQ | •                        | •               | •       | 2x                              | 2x                     | -  | •                         | •                        | 4x                     | •                       | 3061A-ppTQ-xx <sup>1</sup> -xx <sup>1</sup> -yy <sup>2</sup> |
| MeasSet B ppTQ | •                        | •               | •       | -                               | -                      | 2x   | •                         | •                        | 4x                     | •                       | 3061B-ppTQ-xx <sup>1</sup> -xx <sup>1</sup> -yy <sup>2</sup> |
| MultiBox 3065  | -                        | •               | •       | -                               | -                      | -  | -                         | -                        | -                      | -                       | 3160-00-00.87 / .97 <sup>3</sup>                             |
| MeasSet A pp   | •                        | •               | •       | 2x                              | 2x                     | -  | -                         | -                        | 2x                     | •                       | 3065A-pp-xx <sup>1</sup> -xx <sup>1</sup>                    |
| MeasSet B pp   | •                        | •               | •       | -                               | -                      | 2x   | -                         | -                        | 2x                     | •                       | 3065B-pp-xx <sup>1</sup> -xx <sup>1</sup>                    |
| MeasSet A ppT  | •                        | •               | •       | 2x                              | 2x                     | -  | •                         | -                        | 3x                     | •                       | 3065A-ppT-xx <sup>1</sup> -xx <sup>1</sup>                   |
| MeasSet B ppT  | •                        | •               | •       | -                               | -                      | 2x   | •                         | -                        | 3x                     | •                       | 3065B-ppT-xx <sup>1</sup> -xx <sup>1</sup>                   |
| MeasSet A ppTQ | •                        | •               | •       | 2x                              | 2x                     | -  | •                         | •                        | 4x                     | •                       | 3065A-ppTQ-xx <sup>1</sup> -xx <sup>1</sup> -yy <sup>2</sup> |
| MeasSet B ppTQ | •                        | •               | •       | -                               | -                      | 2x   | •                         | •                        | 4x                     | •                       | 3065B-ppTQ-xx <sup>1</sup> -xx <sup>1</sup> -yy <sup>2</sup> |

- xx is measuring range code, see order data pressure sensor HySense® PR 100
- yy is measuring range code, see order data volume flow rate sensor HySense® QT 100
- .8x for input signal mA, .9x for input signal V

# MultiBox 3060 / 3061 / 3065

## More usability

### PC software

| Task                                  | Recom. software  | Delivery         | TKZ           |
|---------------------------------------|------------------|------------------|---------------|
| Firmware update                       | <b>HYDROboot</b> | yes              | 8874-14-11.01 |
| Instrument remote configuration       | <b>HYDROwork</b> | yes              | 8874-14-17.01 |
| Instrument remote operation           |                  |                  |               |
| Execute online measurements           |                  |                  |               |
| Download measurement data             | <b>HYDROcom</b>  | yes <sup>1</sup> | 8874-13-01.02 |
| Evaluate and present measurement data |                  |                  |               |
| Program measurement procedures        | –                | no               | –             |
| Execute measurement procedures        | –                | no               | –             |

1: **HYDROcom** Base

### Accessories

|                   |  |               |
|-------------------|--|---------------|
| Power pack        | 110 ... 240 VAC, 47 ... 63 Hz – 24 VDC/625 mA  | 8812-00-00.35 |
| Car power supply  | 12 ... 24 VDC; cable length 5.0 m              | 8824-P5-05.00 |
| Power supply cord | open cable ends; cable length 5.0 m            | 8824-P6-05.00 |
| BatteryPack       | IN 24 VDC / 600 mA; OUT 14.4 VDC; ~ 2 Ah       | 8873-30-01.00 |
| USB cable         | USB-A / Mini-USB-B; IP 67; 2.0 m               | 8824-P4-02.00 |
| Transport case    | Plastic, black, with box for measuring turbine | 3160-00-62.09 |
| Calibration       | single or meas. chain; calibration per channel | 3199-12-00.11 |
| Service package   | Basic  | 3199-30-00.02 |
|                   | Plus   | 3199-30-01.04 |
|                   | Professional                                   | 3199-30-02.04 |

Additional accessories (cables, Minimesse<sup>®</sup> products, a.s.o.) in the section „Accessories“

## BatteryPack

The BatteryPack makes your MultiBox an independent data logger. Simply attach, connect and the programmed recordings will be executed automatically.

## HYDROwork

**HYDROwork** is the operation software for all MultiBox measuring devices. It has been developed for easy operation and low training effort and is nearly self-explaining.

Configure the measuring box or the data logger, display the measuring data in live mode or execute recordings. Everything done with a few mouse clicks.

