




Measuring Systems























Performance overview

		MultiSystem 8050	MultiSystem 5060 Plus	MultiSystem 4010
MultiSystem measuring systems				
Inputs	analog / incl. highspeed	12 / 2	6 / 2	3 / –
	frequency	4	2	1
	a/f switchable	–	–	1
	digital	4	1	1
	CAN	6 / 14 (opt.)	14	5 (opt.)
Outputs	digital	4	1	1
	analog	2	–	–
	relay	–	–	–
Calculated measuring values	number	6 / 14 (opt.)	14	5
	sum / difference	• / •	• / •	• / •
	performance	•	•	•
	dx / dt	•	•	•
	free formula definition	•	•	–
ISDS		•	•	•
Presentation	N° of pres. channels	30	16	12
	graphically	$y = f(t) / y = f(x)$	$y = f(t) / y = f(x)$	$y = f(t) / y = f(x)$
	color	•	•	•
	memory presentation	•	•	•
Memory	scan rate	0.1 ms / 1 ms	0,1 ms	1 ms
	memory size / places	256 MB / 200	2 GB / 200	2 GB / 100
	trigger	•	•	•
	trigger link	•	•	–
	pretrigger	•	•	•
	cyclic recording	•	•	•
Operation	direct	–	–	–
	menu	•	•	•
	touchscreen	•	–	–
	PC operation / online mode	• / •	• / •	• / •
Interfaces	USB	•	•	•
	RS 232	•	•	•
	RS 485	–	–	–
Linearisation		•	•	•
Channel filter	software / hardware filter	• / –	• / •	• / –
Printer		•	•	–
Battery operation		–	•	•
A/D converter		16 bit	13 bit	12 bit

Instrument feature icons

You will find icons at each measuring system in this catalog that shall indicate the most important instrument features. Here are the explanations of the used icons:

	instrument is equipped with at least one analog input channel		instrument has an USB interface
	instrument is equipped with at least one frequency input channel		instrument has an RS 232 interface
	instrument is equipped with at least one switchable input channel for analog or frequency		instrument can read-out, display and record data from a CAN bus
	instrument is equipped with at least one digital input channel		instrument is equipped with HYDROcom 6 – Base version
	instrument is equipped with at least one analog output channel		instrument is equipped with HYDROcom 6 – Full version
	instrument is equipped with at least one digital output channel		instrument is equipped with HYDROlink
	instrument is equipped with the Intelligent Sensor Detection System (automatic programming of sensor parameters and calibration data)		instrument will automatically remind the expiration of a defined calibration interval
	instrument is able to display min and max values		
	display has background illumination		
	instrument can display values graphically (line diagram)		
	instrument can display values numerically		
	instrument has an internal memory		
	instrument is equipped with trigger and/or pretrigger (to start recordings when defined conditions are fulfilled)		

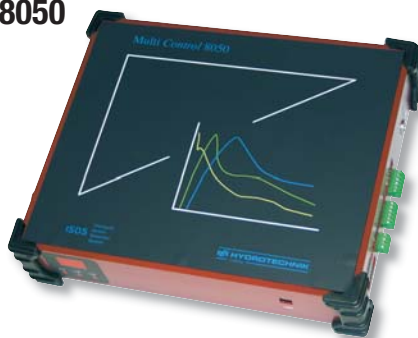
MultiSystem 8050

This measuring system is incomparable: all values are displayed clearly on the large touchscreen, either numerically or as line diagram. This adds to the unique flexibility by the variety of inputs and outputs.



- ✓ **Everything visible:**
up to 30 channels on the TFT monitor simultaneously
- ✓ **Live analysis of measuring data:**
huge graphic display for perfect line diagrams
- ✓ **High end measuring system:**
HighSpeed inputs and various filter functions
- ✓ **Universal use:**
analog and digital inputs and outputs, many interfaces
- ✓ **Outstanding operational concept:**
touchscreen monitor and logical menu structure

MultiControl 8050



If you always have a notebook with you, this version without display will surely meet your needs as a completely equipped measuring box. With identical performance to the MultiSystem 8050 you connect the MultiControl with your PC via USB or Ethernet. The operation is done in an easy and comfortable way with the software package **HYDROlink** that comes free of charge with the instrument.

MultiPanel 8050



The sophisticated measuring electronics of the MultiSystem 8050 is available in a 19" rack casing to equip test benches and measuring laboratories. Either with 8 or 16 displays you have everything visible. The connection to a PC is done with the software package **HYDROlink** that is part of the delivery.

MultiSystem 8050 Technical Data

Inputs / outputs / channels

Analog input channels	8x standard, 2x HighSpeed (for sensors with or without Hydrotechnik ISDS)
Signals	0/4 ... 20 mA • 0 ... 10 V • ± 10 V
A/D converter	16 bit
HighSpeed measuring rate	10,000 values per second
Standard measuring rate	1,000 values per second
Error limits	± 0.1 % FS
Frequency input channels	4x (for sensors with or without Hydrotechnik ISDS)
Signals	0.05 Hz ... 20 kHz (w.o.D.) • 0.05 Hz ... 5 kHz (w.D.)
Measuring rate	1 kHz
Error limits	± 0.2 % mv
Digital inputs	4x, 3.5 ... 30 VDC (1x separated galvanically)
Measuring rate	1,000 values per second
Current measuring input	± 2 A DC
Voltage measuring input	± 48 V DC
A/D converter	12 bit
Digital output	4x NPN transistor output
max. load	≤ 30 VDC / 10 mA
Reaction time	≤ 1 ms
Analog output	2x, 0 ... 20 mA (channel 25) • ± 20 mA (channel 26)
D/A converter	12 bit
Electrical measuring conn.	6-pole jack, compatible to DIN 45 322, IEC 60130-9
Special channels	6x (option 14x)
Calculations	difference, sum, hydraulic power, CAN, ...
Free formula input	yes
CAN measuring rate	100 values per second
CAN protocols	CANopen, SAE J1939, ...
Filter functions	several software filters

Data memory

Type	CF card 256 MB
Measuring series	200
Values per measuring series	6,000,000
Recording rate	0.1 ms ... 999 Min. (settable)
Recording time	1 s ... 999 h (settable)
Trigger	2x (option 6x), linkable (bigger, smaller, rising / falling flange)
Pre trigger	0 / 10 / 20 / ... 100 %

MultiSystem 8050 Technical data

Equipment

Electrical meas. connector	M 16 x 0.75, 6 pole (compatible with DIN 45 322 / IEC 60130-9)
Interfaces	USB 1.1 device • RS 232 • Centronics • CAN • LVDS
Power supply	power pack 24 V DC, 2 A
Sensor power supply	18 VDC, 100 mA
CAN / MX power supply	not possible

Qualities

Casing	steel plates with edge protectors
Dimensions	~ 310 x 254 x 60 mm (L x W x H)
Weight	~ 3,100 g
Protection type	IP 40
Operation temperature	0 ... +40 °C (MS 8050) / 0 ... +60 °C (MC 8050)
Allowed humidity	≤ 80 % r.h. (not condensing)
Storage temperature	-20 ... +60 °C

MultiSystem 8050 Order data

Single unit

Range of delivery	Order number
MultiSystem 8050	3160-00-65.00
MultiControl 8050	3160-00-66.00
MultiPanel 8050 (8 displays)	3165-11-01.00
MultiPanel 8050 (16 displays)	3165-11-02.00
<ul style="list-style-type: none"> • Power pack • USB cord • Data CD • HYDRcom 6 Full, 3 licenses • HYDRlink 	

MultiSystem 8050 Accessories

Power supply

Power pack (table), 110 ... 240 VAC, 47 ... 63 Hz – 24 V DC, 53 W	8812-00-00.27
Car connector cable, 12 ... 24 VDC, length 5.0 m	8824-79-05.00

Cables

Measuring cables are contained in the chapter „Accessories“

CAN connection cable, D-sub plug (9 pole) – M12 x 1 jack (8 pole), 5.0 m	8824-N1-05.00	
CAN connection cable, D-sub plug (9 pole) – open cable ends, 1.5 m	8824-M6-01.50	
HYDROboot connection cable, 1.5 m	8824-F8-01.50	
Patrick connection cable	2.5 m	8824-T3-02.50
D-sub plug (9 pole) – M12 x 1 jack (8 pole)	5.0 m	8824-T3-05.00
Y distributor and separate power supply required (see Patrick accessories)	10.0 m	8824-T3-10.00
Trigger cable, MS/MC 8050 – MS/MC 8050, 0.5 m	8824-F2-00.50	
USB cable, 2.0 m	8824-F4-02.00	

Others

Nylon bag, black	8875-01-06.00
Transportation case, aluminium, red, with bottom compartment	3160-00-65.03
Data CD, software and operation instructions manual	8874-16-00.01
HYDROcom 6, program version Professional, 3 licenses	8874-19-01.01
HYDROcom 6, program version Full, 3 licenses	8874-19-01.02
HYDROlink , 1 license	8874-00-07.01
HYDROgen / HYDROrun , 1 license	8874-01-01.55

Calibration and Service

Calibration, single channels or as measuring chain with sensors (option)	3199-12-00.11
Service package Basic	3199-30-00.04
Service package Plus	3199-30-01.08
Service package Professional	3199-30-02.08