

# Digital Test & Datalogging Equipment

## MultiSystem 4070

- 5 channels for selectable mA, Voltage & frequency (ISDS or Std)
- 10 channels for difference, sum, hydraulic power, direction or CANbus / J1939 signals
- 4GB storage with 2,000,000 readings per test and space for up to 100 recordings
- Fast USB upload to HYDROcom6 software
- Bright colour screen with graph or text display



The MultiSystem 4070 comes with five channels, 4GB SD card storage, 10 addition CAN or calculation channels with ability to save up to 100 tests, live or recorded data viewable numerically or graphically, making the MultiSystem 4070 an affordable professional datalogger for detailed hydraulic system diagnosis.

**R & D**

**Mobile hydraulics**

**End of Line Testing**

**Plant maintenance**

**Industrial hydraulics**

## DIGITAL TEST & DATALOGGING EQUIPMENT

### MultiSystem 4070

#### Ease of Use

No programming necessary when using Hydrotechnik ISDS (Intelligent Sensor Detection System) sensors, just plug in the sensors - switch on - measure.

#### Flexibility

Five inputs, of which up to four are current/voltage and up to two are frequency inputs with direction detection. Hydrotechnik supplies a wide range of accurate and robust ISDS sensors such as pressure (p), temperature (T), combined pressure/temperature (pT), axial turbine and gear flow meters (Q), RPM sensors (n) & much much more.

Start with a base kit and build up your sensors to meet your exact needs, both now and in the future. Standard industrial sensors are also compatible with the MultiSystem 4070 via the five configurable input channels. Truly universal.

#### Display and Record

10 virtual channels can display the difference between measured values. Measure pressure & flow rate, fluid power (P) in KW can be displayed with an option to record using the CAN input. Min & max values can also be displayed for all channels. Selectable scanning rates enable recording times up to 999 hours.

#### Performance

Connect - display - record - upload - analyse. The MultiHandy 4070 is intuitive, fast, reliable, robust and importantly accurate at  $\pm 0.2\%$  of the full scale reading. Record up to 100 series of data sets with up to 2,000,000 values per set all stored on a 4GB SD card. Sampling rates are user selectable from 1 ms to 999 seconds, providing performance beyond it's size.

#### Recording & Analysis Software

Hydrotechnik have been innovators behind fluid/gas digital test and datalogging equipment and software for many years. The MultiSystem 4070 is supplied with the advanced HYDROcom6 online PC recording & evaluation software. Gain more understanding from your measurements with our analysis software that becomes an essential tool for archiving, performance monitoring & quality control.

#### Back-up and Support

Just as important as great products and service, Hydrotechnik also prides itself on providing quick and effective support to their wide range of global customers. With experts to answer questions quickly, with a huge range of accessories and spares in stock, along with a full UKAS traceable in-house calibration service, Hydrotechnik are the perfect partner.



All Hydrotechnik instruments support ISDS functionality. ISDS is the automatic transmission of parameters and calibration data from Hydrotechnik sensors (with ISDS signal output) to the measuring instrument.



psi      Hz      Nm      gpm       $\Delta p$       mm  
V      rpm      kPa      kN      mbar      ccm      A  
°C      bar      l/min      mV      °F      mm/s



## DIGITAL TEST & DATALOGGING EQUIPMENT

### MultiSystem 4070

# MultiSystem 4070 INSTRUMENT & KITS

## MULTISYSTEM 4070 FIVE CHANNEL MEASURING INSTRUMENT PART NUMBER 3160-00-83.00

- MultiSystem 4070 instrument
- Multi country mains power supply & charger
- CD ROM with HYDROcom6 software and full user manuals
- USB download cable
- Small Carry case with foam inserts for all the above



## MULTISYSTEM 4070 PRESSURE MEASURING KIT PART NUMBER 4070p/p-XX\*-XX\*

- MultiSystem 4070 Instrument & accessories above including large carry case
- 2 x selectable PR100 ISDS pressure sensors (\*see below for ranges & ordering codes)
- 2 x Minimes 1620 female test point to sensor adaptors
- 2 x 5m long measuring cables

Pressure Range	*Replace XX with
0...600 bar (0...8700 psi)	18
0...400 bar (0...5800 psi)	15
0...250 bar (0...3625 psi)	17
0...60 bar (0...870 psi)	21
-1...+6 bar (-14...+87 psi)	32

PR100 ISDS sensors supplied with calibration certificate traceable to national standards

## MULTISYSTEM 4070 PRESSURE, TEMPERATURE & FLOW MEASURING KIT PART NUMBER 4070p/p/T/Q-XX\*-XX\*-YY\*

- MultiSystem 4070 Instrument & accessories above including large carry case
- 2 x selectable PR100 ISDS pressure sensor (\*see above for ranges & ordering codes)
- 1 x QT500 ISDS flow turbine sensor (\*see below for ranges & ordering codes)
- 1 x TE300 ISDS temperature sensor (fits to flow block or via separate p/T test point)
- 2 x Minimes 1620 female test point to sensor adaptors
- 4 x 5m long measuring cables

Flow Range	*Replace YY with
2...75 l/min	70
9...300 l/min	71
16...600 l/min	72

QT500 ISDS sensors supplied with calibration certificate traceable to national standards



Other sensors available from Hydrotechnik UK:



Pressure



Temperature



Infra red RPM



Torque



Tension



Triaxial g force



Turbine flow



Gear flow



Inductive RPM



Displacement



Oil cleanliness

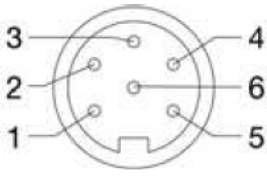


Load

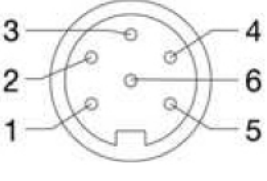
Discover more at [hydrotechnik.co.uk](http://hydrotechnik.co.uk)

### TECHNICAL SPECIFICATIONS

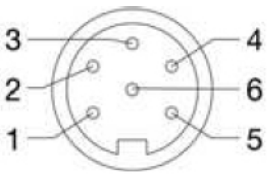
INPUTS	
<b>Channel inputs</b>	3 or 4 analogue mA or V & 1 or 2 frequency pulse
<b>Signal Inputs</b>	0/4...20mA and 0/2...10V, 0.25 Hz - 5 KHz frequency with direction detection PnP (rate or count).
<b>Accuracy</b>	Analogue $\pm 0.2\%$ full scale. Frequency $\pm 0.2\%$ of actual reading
<b>Calculated channels</b>	Ten channels for delta p, difference, sum, hydraulic power or CANbus / J1939 signals with selectable Min & Max values display.

INPUT PINOUTS - CHANNELS 1...3			
<b>M16 6 pin female socket numbered pins</b> 	<b>Designation</b>	<b>Pin</b>	<b>Function</b>
	<b>SIGN_I</b>	1	Analogue signal input 0...20mA or 4...20 mA
	<b>GND</b>	2	Ground
	<b>+Vs</b>	3	Sensor power supply
	<b>Signal_U</b>	4	Analogue signal input 0...10V or 2...10 V
	<b>Shield</b>	5	Screen/shield
	<b>ISDS</b>	6	ISDS sensor detection

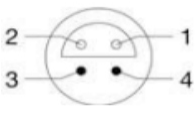
Notes. mA input 50 $\Omega$  / 100nF input impedance. Frequency input 4.7KHz / 100pF input impedance

INPUT PINOUTS - CHANNEL 4			
<b>M16 6 pin female socket numbered pins</b> 	<b>Designation</b>	<b>Pin</b>	<b>Function</b>
	<b>SIGN_I/SIGN_F</b>	1	Analogue signal input 0...20mA or 4...20 mA or Frequency signal input
	<b>GND</b>	2	Ground
	<b>+Vs</b>	3	Sensor power supply
	<b>Signal_DIR</b>	4	Direction detection with the frequency signal
	<b>Shield</b>	5	Screen/shield
	<b>ISDS</b>	6	ISDS sensor detection

Notes. mA input 11K $\Omega$  / 22nF input impedance. Frequency input 4.7KHz / 100pF input impedance

INPUT PINOUTS - CHANNEL 5			
<b>M16 6 pin female socket numbered pins</b> 	<b>Designation</b>	<b>Pin</b>	<b>Function</b>
	<b>SIGN_F</b>	1	Frequency signal input
	<b>GND</b>	2	Ground
	<b>+Vs</b>	3	Sensor power supply
	<b>Signal_DIR</b>	4	Direction detection with the frequency signal
	<b>Shield</b>	5	Screen/shield
	<b>ISDS</b>	6	ISDS sensor detection

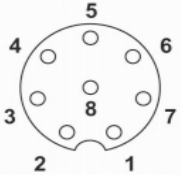
Notes. mA input 4.7 $\Omega$  / 1nF input impedance. Frequency input 4.7KHz / 100pF input impedance


DIGITAL SIGNAL INPUT / OUTPUT			
<b>M16 6 pin female socket numbered pins</b> 	<b>Designation</b>	<b>Pin</b>	<b>Function</b>
	<b>GND</b>	1	Ground digital signal output
	<b>DIO_OUT</b>	2	Digital Signal output
	<b>DIO_IN</b>	3	Digital Signal input
	<b>GND</b>	4	Ground digital signal input

# DIGITAL TEST & DATALOGGING EQUIPMENT

MultiSystem 4070

## TECHNICAL SPECIFICATIONS

INPUT PINOUT SIGNAL CAN/RS232			
<b>M12 x 1 6 pin female socket numbered pins</b> 	<b>Designation</b>	<b>Pin</b>	<b>Function</b>
	<b>GND</b>	1	Ground
	<b>+Vs</b>	2	CAN sensor power supply or MultiXtend
	<b>DTR</b>	3	DTR RS232 signal
	<b>CAN_H</b>	4	High CAN signal
	<b>TXD</b>	5	TXD signal RS232
	<b>RING</b>	6	Pin for bootloader
	<b>CAN_L</b>	7	CAN low signal
	<b>RXD</b>	8	RXD RS232 signal

INPUT PINOUT SIGNAL CAN/RS232			
<b>Power Supply</b>  <b>Plug Jack</b>	<b>Designation</b>	<b>Pin</b>	<b>Function</b>
	<b>PWR +</b>	1	24 VDC power supply
	<b>PWR -</b>	2	Instrument power supply (GND)

DATALOGGING	
<b>Max No. of tests</b>	100
<b>Values per test</b>	up to 2,000,000 readings per test (space for up to 100 tests)
<b>Sampling rate</b>	1 kHz (one sample every 1ms) 13 bit A/D Convertor
<b>SD Card memory</b>	4 GB
<b>Scanning rates</b>	Freely selectable from every 1 millisecond up to every 999 minutes

INSTRUMENT	
<b>Display</b>	3.5" LCD with backlight
<b>PC interface</b>	USB 2.0 UART (Virtual COM interface)
<b>Power supply unit</b>	110/240V 50/60Hz Universal mains 12 to 30V
<b>Battery performance</b>	Ten hours continuous use. (<3 hours to recharge from fully discharged)
<b>Sensor power supply</b>	Nominal 13-18VDC 90mA
<b>Casing/Dimension</b>	Aluminium (L 229mm x W 133mm x D 62mm)
<b>Weight</b>	795g
<b>Protection levels</b>	IP 40. Vibration to IEC 60068-2-64: 1994. Shock to IEC 60068-2-27: 1996-03.
<b>Operating Temp.</b>	-10 to +50°C @ 0 to 80% relative humidity
<b>Storage Temp</b>	-20 to +50°C

## DIGITAL TEST & DATALOGGING EQUIPMENT

### MultiSystem 4070

## THE HYDROTECHNIK HANDHELD DATALOGGING FAMILY

From our entry level 2025 two channel display datalogger - all the way up to our powerful eight channel MultiSystem 5070, no matter the application we have a data logger to suit your requirements.

### MultiHandy 2025

Entry level 2 channel data logger, for general hydraulic diagnosis.

- 3 line backlit LCD display
- Analogue or frequency inputs (ISDS or std.)
- 1 virtual calculation channels (delta p, power etc.)
- Min & Max readings
- 120,000 readings memory
- Storage for 5 test files
- Supplied with HYDROcom6 Basic software



### MultiHandy 3020

Robust 3 channel datalogger for detailed hydraulic diagnosis

- Three channel input
- 2 analogue & 1 frequency channel (ISDS or Std)
- 2 virtual calculation channels (delta, p, power etc.)
- Min & Max readings
- Storage for 14 different test files
- Memory for 1,000,000 (analogue), 330,000 (frequency)
- Fast transmission via USB
- Record from selectable triggered events
- Sunlit viewable backlit LCD screen
- Supplied with HYDROcom6 Advanced software



### MultiSystem 5070

The mobile R&D, service tool, all round instrument of choice for industry professionals.

- 42 channel instrument with bright colour display
- Graph or text display of measurements
- 8 analogue & 2 high speed frequency channels (ISDS or std.)
- Reads most industry sensor outputs for true flexibility
- 32 virtual channels (CANbus signals & calculations)
- Digital I/O for external switching or instrument linking
- Up to 6,000,000 data points per test file
- Record from selectable triggered events
- 4 Gb internal SD card memory
- USB stick upload or download of tests & settings
- Space for 500 test files
- Supplied with HYDROcom 6 Advanced software





## INDUSTRIAL TEST & MEASUREMENT SOLUTIONS

Hydrotechnik UK Ltd is one of the UK's leading test and measurement equipment distributors and manufacturers, servicing a wide range of industries since 1990.

In addition to pressure sensors and instrumentation, Hydrotechnik has a large product portfolio featuring Minimes® test points & adaptors, high pressure microbore hose assemblies and Minimes® test kits for analogue testing, charging, bleeding or sampling of almost any fluid or gas.

We have extensive experience in the design, development, manufacture and commissioning of fluid power test rigs for end of production sign off or component testing. Our test rigs are used in demanding and 'mission critical' applications including defence, manufacturing quality control, plant maintenance and research and development. Users of Hydrotechnik test rigs rigorously test pumps, hydraulic hoses, moulded coolant hoses, pipes, manifolds, tanks, accumulators, valves and many other components to ensure they are fit for purpose.



**Call us on 0800 068 4134 for more information  
and to obtain our other brochures:**

