

	MultiSystem 5070 • 仪表具有8个测量通道、数字输入和输出以及32个用于移动应用的特殊通道（用于计算和CAN） • 信号输入针对0/4...20 mA, 0/2...10 V, 1...5 V, 0.5 ... 4.5V, $\pm 10V$ • 具有方向检测的用于频率和脉冲（计数器）的信号输入, 0.25Hz ... 20kHz • AD转换器: 13位 • 内存（microSD卡）可进行500次测量 • USB设备、USB主机、RS232接口、2个CAN接口，每次测量最多记录6百万个数值 • 多样化通道扩展 • Instrument with 8 measuring channels, digital input and output and 32 special channels (for calculation and CAN) for mobile application • Signal input for 0/4...20 mA, 0/2...10 V, 1...5 V, 0.5 ... 4.5V, $\pm 10V$ • Signal input for frequency and impulses (counter) with direction detection, 0.25Hz ... 20kHz • AD-converter: 13 Bit • Memory (microSD-card) for 500 measurements • Max. 6 Mio. values per measurement USB device, USB-Host, RS232 interface, 2x CAN interface • Various options for channel extensions
---	---

描述 Description	MultiSystem 5070 非常适合移动使用，且具有彩色的 5” 大尺寸、可在日光条件下操作的显示屏。 使用新的结构化图形用户界面，可以更加轻松地操作仪表。 该器件还具有一些新的可用功能，如可自由选择收藏主菜单和屏幕截图功能。 通过使用锂离子蓄电池，可以使用一整个工作日。 电池快速充电功能，充电时间小于 2 小时。 包括模拟、频率、计数器和触发信号的各种连通性。 仪表另一个优点是具有两个独立的 CAN 接口。 它可以让用户有机会使用多达 32 个 CAN 信号。 The MultiSystem 5070 is ideal for mobile usage and has a big 5” colored, daylight workable display. Operation with the instrument is much easier in fact of using a new structured and graphical user interface. Freely selectable main menu favorites and the screenshot function are some new features of the usability for the device. By using a lithium ion accumulator, it is possible to use the device a whole working day. The quick battery charging function enables You to reload the device efficiently within less than 2 hours. Various connectivity for analog-, frequency-, counter- and trigger-signals are included. An additional advantage of the actual device are two separate CAN-interfaces. It gives the user the opportunity to use up to 32 CAN signals.
----------------------------------	---

指定用途

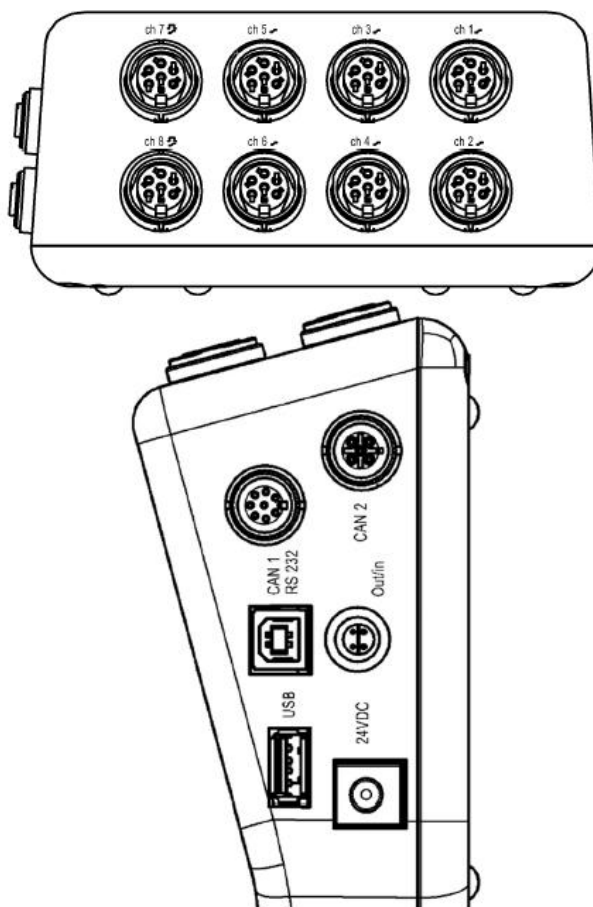
Designated use

分析、采集、输出和存储来自模拟和数字传感器的测量值。

Analysis, acquisition, output and storage of measured values from analogue and digital sensors.

电气连接

Electrical connections



引脚分配

Pin assignments

标签

Label

编号

No

功能

Function

圆形连接器M16x0.75，带螺钉锁定，布局06-a，6极，内螺纹IEC / DIN EN 61076-2-106

Circular connectors M16 x 0.75 with screw-locking, Layout 06-a, 6 poles, female IEC / DIN EN 61076-2-106

4...20mA，双线/two-wire

引脚1，引脚3/Pin1, Pin3

0/4...20mA，三线/three-wire

引脚1，引脚2，引脚3/Pin1, Pin2, Pin3

0/2...10V, 1...5V, 0.5...4.5V, $\pm 10V$

引脚4，引脚2，引脚3/Pin4, Pin2, Pin3

M16 6p f

信号/Signal

1

模拟信号输入20mA

Analog Signal input 20mA

GND

2

接地

Ground

+Ub

3

传感器电源

Sensor power supply

信号/Signal

4

模拟信号输入10V

Analog Signal input 10V

SHLD

5

防护

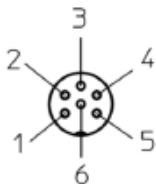
Shield

ISDS

6

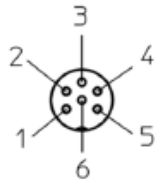
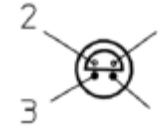
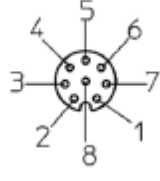
传感器检测

Sensor detection



信号输入 1-8

Signal input 1-8

引脚分配 Pin assignments	标签 Label	编号 No	功能	Function
圆形连接器M16x0.75, 带螺钉锁定, 布局06-a, 6极, 内螺纹IEC / DIN EN 61076-2-106 Circular connectors M16 x 0.75 with screw-locking, Layout 06-a, 6 poles, female IEC / DIN EN 61076-2-106				
M16 6p f  信号输入 7-8 Signal input 7-8	f-信号/f-Signal	1	频率/模拟信号	Frequency / analog signal
	GND	2	接地	Ground
	+Ub	3	传感器电源	Sensor power supply
	f-信号2/f-Signal2	4	频率信号2 (方向) 模拟	Frequency signal 2 (direction) Analog
	SHLD	5	防护	Shield
	ISDS	6	传感器检测	Sensor detection
Lemo 系列 1S, 4 极, 参考 304, 插头/Lemo Series 1S, 4 poles, reference 304, plug				
Lemo 1S 4p  数字 信号输入/输出 Digital signal input/output	GND	1	接地数字信号输出	Ground digital signal output
	DIO OUT	2	信号数字信号输出	Signal digital signal output
	DIO IN	3	信号数字信号输入	Signal digital signal input
	GND	4	接地数字信号输入	Ground digital signal input
圆形连接器M12 x 1, 带螺钉锁定, A-编码, 8极, 内螺纹IEC / DIN EN 61076-2-101 Circular connectors M12 x 1 with screw-locking, A-coding, 8 poles, female IEC / DIN EN 61076-2-101				
M12 A 8p f  信号输入/ Signal input CAN 1 / RS232	CAN GND	1	CAN接地	CAN Ground
	CAN V+	2	CAN传感器电源或 MultiXtend	CAN sensor power supply or MultiXtend
	DTR	3	RS232信号DTR	RS232 signal DTR
	CAN H	4	CAN高	CAN High
	TXD	5	RS232信号TXD	RS232 signal TXD
	RING	6	引导程序的引脚	Pin for bootloader
	CAN L	7	CAN 低	CAN Low
	RXD	8	RS232-信号 RXD	RS232-Signal RXD

引脚分配 Pin assignments	标签 Label	编号 No	功能	Function
圆形连接器M12 x 1, 带螺钉锁定, A-编码, 5极, 内螺纹IEC / DIN EN 61076-2-101 Circular connectors M12 x 1 with screw-locking, A-coding, 5 poles, female IEC / DIN EN 61076-2-101				
 信号输入 CAN 2/ Signal input CAN 2	CAN SHLD	1	防护	Shield
	CAN V+	2	CAN传感器电源或 MultiXtend	CAN sensor power supply or MultiXtend
	CAN GND	3	CAN接地	CAN Ground
	CAN H	4	CAN高	CAN High
	CAN L	5	CAN低	CAN Low
电源/ Power supply  插塞/jack plug	PWR+	1	仪表电源24VDC (+)	Instrument power supply 24VDC (+)
	PWR-	2	仪表电源Masse (GND)	Instrument power supply Masse (GND)

电气特性 Electrical characteristics	参考条件/Reference conditions: 环境温度 Ta = 25° C/environmental temperature Ta = 77° F				
参数 Parameter	最小值 Min	典型值 Typ.	最大值 Max	单位 Units	备注 Remarks
输入信号电流/ Input signal current	0		20	mA	
输入阻抗电流/ Input impedance current		113Ω /35nF 113Ω /100nF			信道/信道1-6 channel / channel 7-8
误差限制20mA信号输入 Error limit 20mA signal input			±0.1	% FS ¹	
输入信号电压/ Input signal voltage	-10		10	V	
输入阻抗电压/ Input impedance voltage		8.8kΩ /35nF 8.8kΩ /100nF			信道/channel 1-6 信道/channel 7-8
误差限制10V信号输入/ Error limit 10V signal input			±0.1	% FS	
输入信号频率/ Input signal frequency	0.25		20000	Hz	方向检测45° 至135° , 5V TTL Direction detection 45° to 135° with 5V TTL
输入阻抗f-信号/ input impedance f-signal	100kΩ /33nF				
误差限制f-信号/ Error limit f-signal			±0.02	% MV ¹	

¹全刻度 / 全 scale
测量值/measured value

电气特性 Electrical characteristics		参考条件/Reference conditions: 环境温度 Ta = 25° C/environmental temperature Ta = 77° F			
参数 Parameter	最小值 Min	典型值 Typ.	最大值 Max	单位 Units	备注 Remarks
信号数字输入（高）/ Signal digital input (high)	2		30	VDC	
温度误差/ Temperature error			±0.005	%/° C	仅用于模拟输入 Only for analog input
电源传感器/ power supply sensor	14.4		15.1	VDC	电流限制为 200mA Current limit 200mA
电源Can/MultiXtend Power supply Can / MultiXtend	14.6		15	VDC	800mA

绝对最大额定值 Absolute maximum rating	最小值 Min	最大值 Max	单位 Units	条件 Condition
电源电压/ Supply voltage	11	26	VDC	电流限制为2A Current limit 2A
储存温度/ Storage temperature	-20 -4	50 122	° C ° F	
工作温度/ Operating temperature	-10 14	50 122	° C ° F	
充电温度/ Charging temperature	10 50	40 104	° C ° F	
相对湿度/ Relative humidity	0	80	%r.F./r.H.	不冷凝/not condensing

机械特性 Mechanical characteristics	
套管/套管	PC+ABS+20GF塑料/plastic
IP 防护等级/IP protection class	IP40
尺寸/Dimension	270 x 140 x 69 mm
重量/Weight	1.072 kg

技术特点 Technical characteristics		
参数 Parameter	值 Value	注: Note
数字信号IN/ Number signal IN	8	6 x AD 2 x 可切换/switchable
扫描速率信号IN/ Scanning rate signal IN	0.1 ms	
数字低通滤波器/ Digital low pass filter	5 kHz, 50 kHz	

技术特点 Technical characteristics		
参数 Parameter	值 Value	注: Note
数字信号IN/ Number signal IN	1	电气隔离/ electrical isolated
扫描速率信号IN/ Scanning rate signal IN	1ms	
数字数字OUT/ Number digital OUT	1	最大负载 / max. loadUb / 10mA
响应时间数字OUT/ Response time digital OUT	≤ 1 ms	
数字CAN输入/ Number CAN input	32	CAN, CANopen, SAE J1939
显示器/Display	5"彩色TFT 5 "Colour TFT	分辨率/resolution QVGA (320 x 240)
存储介质/ Storage medium	4 GB	microSD-卡/microSD-card
数字测量/ Number measurements	500	
电池/ Battery	锂离子 7.2V / 5.8Ah	
平均充电时间/ Average charging time	< 2 h	77° F时, 达到90%的充电状态 at 77° F to 90% state of charge
电池供电运行时间/ Battery powered operation time	10 h	8 个传感器, 12mA 负载 8 sensors with 12mA load
电池类型 Cell type	Panasonic NCR18650A / 2S2P	
最佳存储条件 Optimal storage conditions	20...60% 20° C / 68° F, 15%...65% r.F(r.H)	充电状态/charging state 气候条件/climatic cond.
不使用时推荐的充电次数 /Recommended charge cyle when not in use	6 个月/6 month	
备用电池/ backup battery	CR2032	

软件兼容性 Software compatibility	
微软 Windows	- Windows 7¹ - Windows 8.1 - Windows 10
Hydrotechnik	- HYDROcenter - HYDROlink 6 - HYDROcom 6

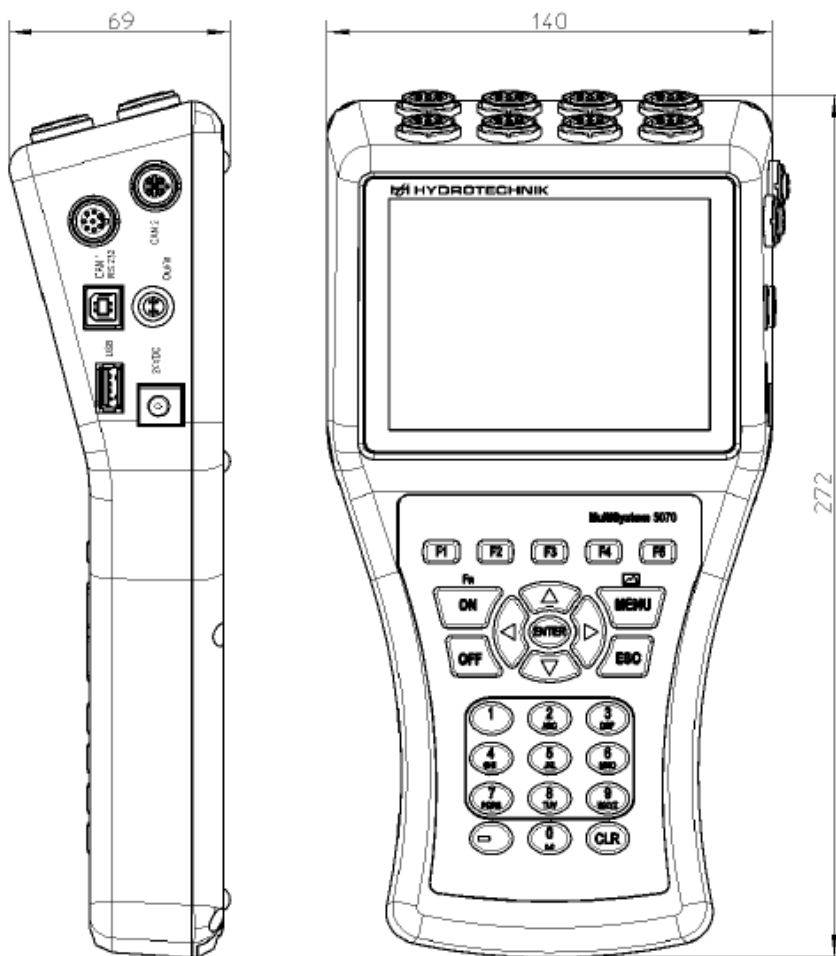
¹需要在我们的主页www.hydrotechnik.com上提供的驱动
Requires driver provided on our homepage www.hydrotechnik.com

注/Note

- 该锂离子电池组根据《国际测试和标准手册》，第3部分，第38.3小节的测试要求进行了测试。电池组属于9类危险品，可根据特殊规定188（ADR、RID、AND、IMDG）和包装指令965/968，第2部分或第1B部分（IATA）进行运输。
 - 运输测量设备时，请遵守您所在国家/地区适用的危险品运输规定；否则，请在不安装电池的情况下装运。
- This Li-ion battery pack was tested according to the test requirements of the “UN-Manual of Tests and Criteria”, Part 3, subsection 38.3. The battery pack is classified as a class 9 dangerous good and may be transported according to the special provision 188 (ADR, RID, AND, IMDG) and the packing instructions 965/968, part 2, or part 1B (IATA).
 - When shipping the measuring device, please observe the applicable dangerous goods transport regulations for your country; otherwise, ship the unit without battery.

装配图纸

Assembly drawing



铭牌 Type plate	
------------------	--

欧洲一致性 European Conformity		
电磁兼容/ electromagnetic compatibility	指令2014/30/EU	Directive 2014/30/EU
有害物质指令限制/ Restriction of Hazardous Substances Directive	指令2011/65/EU	Directive 2011/65/EU

订购信息/ Order information	产品/Product	版本/Version	部件编号/Part-No.
	MultiSystem 5070	标准	3160-A0-82.00

包装/Packaging	MultiSystem 5070装箱提供。外部电源和USB电缆构成交付的一部分。	MultiSystem 5070 is delivered in a case. External Power supply and USB cable are part of delivery.
--------------	--	--

配件和备件 Accessories and spare parts		
订单号/ order number	产品	Product
8812-02-00.02	供电装置	Power supply unit
8812-20-12.03	带欧盟插头的主连接器	Main connector with EU plug
8812-20-12.04	带英式插头的主连接器	Main connector with UK plug
8812-20-12.05	带美国/日本插头的主连接器	Main connector with USA / Japan plug
8812-20-12.06	带澳大利亚插头的主连接器	Main connector with Australia plug
8854-30-03.30	橡胶保护套	Rubber protection cover

处置信息 Disposal information		
	本产品不得作为生活垃圾处理。 有关处理的更多信息,请访问我们的 网站 www.hydrotechnik.com	This product is not to be disposed of in the household waste. Further information for disposal can to be found on our website www.hydrotechnik.com
责任范围 Limitation of Liability	技术进步和持续改进意义上的产品 和文档变更可能随时发生,恕不另行 通知。因此,规格可能与本技术数据 表修订版中的规格有所不同。对可能 存在的印刷错误不承担任何责任。如 有任何疑义,请以德语版本为准。	Changes of products and documentation in the sense of technical progress and continuous improvement may occur at any time without prior notification. Hence specifications may than differ from those given in this revision of the technical data sheet. There is no liability for possible misprints. The German language version is valid in any case of doubt.