

测量与控制仪表

MEASUREMENT AND CONTROL INSTRUMENTATION

EXPERT IN PIPING SYSTEM

管路系统的专家级工厂



微信公众号二维码



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24h 400-928-1588

华生管道科技有限公司

地址：常州市新北区空港产业园旺贤路9号(213133)
电话：+86 519-85201808 83201080
传真：+86 519-83201088 83201026
邮箱：sales@czhuasheng.com
claire@czhuasheng.com
网址：www.czhuasheng.com

HUASHENG PIPELINE TECHNOLOGY CO., LTD

Add: NO9, Wangxian Road, Konggang Industry Park, Xinbei District, Changzhou, 213133, China
Tel: +86 519-8520180 883201080
Fax: +86 519-83201088 83201026
Email: sales@czhuasheng.com
claire@czhuasheng.com
Web: www.huashengpipe.com

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9988/818/TH INTEGRATED PADDLE-WHEEL FLOWMETER 9988/818/TH一体式转轮流量计



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Professional strength
builds easy life

专业实力构筑轻松生活



测量与控制仪表

MEASUREMENT AND CONTROL INSTRUMENTATION

EXPERT IN PIPING SYSTEM

管路系统的专家级工厂

重信求实 华生企业的灵魂
开拓创新 永恒发展的动力

以质取胜、以质取信，为顾客提供满意的产品和服务。

ABOUT US
关于我们

► 公司简介 / Company Introduction

华生管道科技有限公司始建于 1988 年，坐落于江苏常州高新技术产业开发区，是一家集 UPVC、CPVC、PE、PPH、PVDF、PVDF-HP、PFA、AGR、PVC-UH 等材质的工业给水、环保水处理设备类塑料管道产品研发、制造于一体的管路系统专业生产企业。同时也是测量与控制仪表的专业的生产企业。经过多年的探索与提升，目前华生已成为行业内的领先企业，是江苏省塑料管道系统工程技术中心依托单位，中国塑料加工工业协会塑料管道专业委员会成员单位，中国电子材料行业协会成员单位。

Huasheng Pipeline Technology Co., Ltd. has been in business since 1988. The company is located in Changzhou High-Tech Industrial Development Zone, Jiangsu Province.

Huasheng is a professional pipeline system enterprise who is engaged in researching, developing and manufacturing all kinds of UPVC、CPVC、PE、PPH、PVDF、PVDF-HP、PFA、AGR、PVC-UH piping systems for industrial, water supply and water treatment applications. Moreover, it is also a specialized manufacturer of measurement and control instrumentation.

After years of exploration and improvement, now Huasheng is one of the leading enterprises in the industry. It is the supporting and sponsoring institution of Jiangsu Engineering Research Center for Plastic System, the member of the professional board of China Plastic Processing Industry Association (CPPIA), the member of China Electronics Materials Industry Association (CEMIA).

► 公司实力 / Company Strength

公司占地面积 20 万平方米，拥有固定资产 6 亿元人民币。公司现有员工 400 多人，下设模具事业部、管路系统事业部、精密注塑事业部，原料混配系统 10 套，造粒生产线 12 条，管材挤出生产线 30 条，注塑机 200 多台，大型加工中心等机械加工设备 80 多台，万级洁净厂房超过 7800 平方米，百级洁净厂房 200 平方米，专用于 PVDF、PVDF-HP、仪表的生产和检测。塑料管路年生产能力达 80000 吨。测量与控制仪表年生产能力超过 10000 套。

Huasheng Co., Ltd operates two modern factories of 200,000 square meters with fixed assets of 600 million yuan. The company has more than 400 employees and consists of mold division, piping system division, and precision injection molding division.

Huasheng owns 10 sets of raw material mixing systems, 12 granulation production lines, 30 pipe extrusion production lines, and more than 200 injection molding machines, over 80 sets of mechanical processing equipment such as large-scale machining centers, more than 7,800 m² of class 10,000 (ISO 14644-1 Class 7) cleanroom, and 200 m² of class 100 (ISO 14644-1 Class 5) cleanroom, dedicated to the production and testing of PVDF, PVDF-HP, and instrumentation.

The annual production capacity of plastic piping system is 80,000 tons. The annual production capacity of measuring and control instrumentation exceeds 10,000 sets.

► 资质和荣誉 / Qualifications and Awards

目前公司已经通过 ISO9001、ISO14001、ISO45001 等体系的认证，以及美国卫生基金会国际组织 NSF 认证。公司被认定为江苏省高新技术企业，“华生”商标荣获江苏省著名商标。拥有江苏省高新技术产品 6 项，授权专利 47 项，获得江苏省市场监督管理局颁发的《中华人民共和国特种设备制造许可证（压力管道元件）》和江苏省卫生健康委员会颁发的《涉水产品卫生行政许可批件》。

The company owns ISO9001, ISO14001, ISO45001 and other system certifications, as well as the US national sanitation foundation (NSF) certification. The company has been recognized as a high-tech enterprise of Jiangsu Province and the "Huasheng" trademark has been awarded as a famous Jiangsu trademark by Jiangsu Provincial Government. Huasheng owns 6 high-tech products of Jiangsu Province and 47 authorized patents. In addition, the company has obtained the "Manufacturing License for Special Equipment of the People's Republic of China (Pressure Pipeline Components)" issued by the Jiangsu Provincial Administration for Market Regulation and the "Administrative License for Sanitation of Water-related Products" issued by the Jiangsu Commission of Health (former Jiangsu Provincial Health and Family Planning Commission).

CERTIFICATIONS

资质证书

客户至上，优质高效，绿色环保，顾客满意。



PRODUCT CATEGORY

产品类别

► Pro-Transmitter 9988 超级控制器

Pro-transmitter 9988 Super Controller

Pro-Transmitter 9988 超级控制器
Pro-transmitter 9988 Super Controller



9988 超级控制器
9988 Super Controller

► 818系列转轮流量传感器

818 Series Paddle-wheel Flow Sensor

818系列转轮流量传感器
818 Series Paddle-wheel Flow Sensor



818系列转轮流量传感器
818 Series Paddle-wheel Flow Sensor

► 9988/818/TH一体式转轮流量计

9988/818/TH Integrated Paddle-wheel Flowmeter

9988/818/TH一体式转轮流量计
9988/818/TH Integrated Paddle-wheel Flowmeter



9988/818/TH一体式转轮流量计
9988/818/TH Integrated Paddle-wheel Flowmeter

APPLICATIONS

行业应用



管路系统的专家级工厂 EXPERT IN PIPING SYSTEM



■ 纯水 ■ 海洋馆 ■ 半导体行业





Pro-Transmitter 9988 超级控制器

PRO-TRANSMITTER 9988 SUPER CONTROLLER

Pro-Transmitter 9988 超级控制器

产品介绍:

9988 超级控制器提供单通道输入，它可以接收 RS485 信号，电流信号，频率信号，通过对上述信号的采集，它可以完成包括流量，PH/ORP，电导率，压力，温度，液位，盐度，溶解氧，批处理和其他输出 4-20mA 信号传感器的显示控制。

它具有大尺寸（75x47mm）的背光显示器，通过顶部的棒状图，可以一目了然地观察仪表的动态。

产品特点:

- 1: 精确测量流体多参数指标;
- 2: 输出端支持RS485 MODBUS RTU通讯协议;
- 3: 输出端支持一路4-20mA信号输出;
- 4: 输出端支持两路干触点继电器，快速准确响应
- 5: 输入端支持一路毫安和一路RS485 MODBUS RTU，可以兼容具有毫安电流输出或RS485 MODBUS RTU通讯协议的传感器;
- 6: 电源输入端防反接保护;

产品应用:

- 1: 污水处理
- 2: 纯水制备系统
- 3: 化学品测量
- 4: 冷却塔
- 5: 反渗透系统
- 6: 海洋馆维生系统
- 7: 中央加药系统

Product Description:

9988 super controller provides single-channel input, it can receive RS485 signal, current signal, frequency signal, through the acquisition of the above signals, it can complete the display control of flow, PH/ORP, conductivity, pressure, temperature, liquid level, salinity, dissolved oxygen, batch processing and other output 4-20mA signal sensors. It features a large (75x47mm) backlit display, with a bar graph at the top that allows you to observe the dynamics of the gauges clearly.

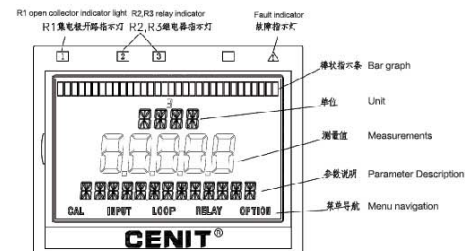
Features:

- 1: Accurate measurement of various parameters of fluids.
- 2: The output supports RS485 MODBUS RTU communication protocol.
- 3: The output supports one way output of 4-20mA signal.
- 4: The output supports two dry contact relays, which can achieve fast and accurate response
- 5: The input supports one way mA signal and one way RS485 MODBUS RTU signal, which can be compatible with sensors with mA current output or RS485 MODBUS RTU communication protocol;
- 6: Power input with anti-reverse protection;

Applications:

- 1: Wastewater treatment
- 2: Pure water preparation system
- 3: Chemical Measurement
- 4: Cooling tower
- 5: Reverse osmosis system
- 6: Aquarium life support system
- 7: Central dosing system

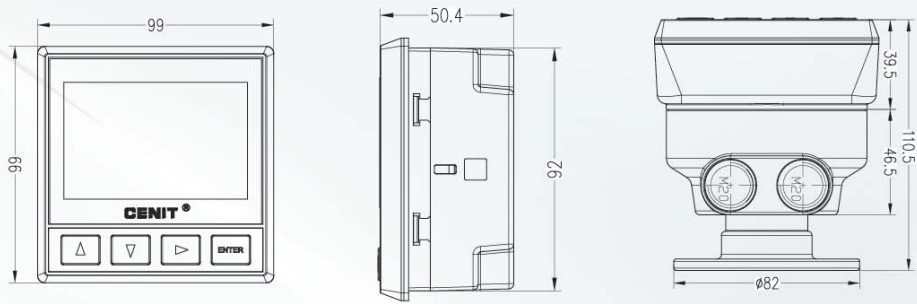
产品描述 / Product Instructions:



产品描述 / Product Description:

通道输入 Channel input		单通道传感器 Single channel sensor	
输入类型 Signal input type	数字信号 Digital signal	RS485 MODBUS RTU 通讯协议信号 RS485 MODBUS RTU communication protocol signal	
	频率信号 Frequency signal	范围, 1-1500Hz Range, 1-1500Hz	
	电流信号 Current signal	范围, 4-20mA Range, 4-20mA	
测量参数 Measurement parameters		流量, PH/ORP, 电导率, 压力, 温度, 液位, 盐度, 溶解氧, 批处理和其他输出 4-20mA 信号的传感器 Flow, PH/ORP, conductivity, pressure, temperature, liquid level, salinity, dissolved oxygen, batch processing and other output 4-20mA signal sensors.	
外壳材料 Shell material		PBT	
视窗 Display Screen		防碎玻璃 Shatterproof glass	
键盘 Keyboard		4 键, 薄膜按键, 注塑橡胶密封 4 keys, membrane keys, injection molded silicone rubber seal	
显示 Display		液晶显示, 自动背光 LCD display, automatic backlight	
刷新率 Refresh rate		1 秒 1 second	
指示 Indication		棒状指示条, 集电极开路输出, 继电器和报警 / 错误指示使用的 LED 指示灯 Bar graph, open collector output, LED indicators for relay and alarm/error indication	
安装 Mounting	柜面安装 Cabinet mounting	开孔尺寸 92x92mm, 仪表外观尺寸 99x99mm Mounting hole opening size 92x92mm, appearance size of the instrument 99x99mm	
	现场安装 On-site mounting	配带对应连接件与传感器结合 Equipped with corresponding connector to combine with sensor	
	墙装安装 Wall mounting	配带对应的安装盒 Equipped with the corresponding installation box	
环境温度 Ambient temperature		-10-70℃	
存储温度 Storage temperature		-15-85℃	
LCD 工作温度 LCD operating temperature		-10-70℃	
防护等级 IP level		柜装版前部 IP65, 现场版整体 IP65 Panel of cabinet-mounted version is IP65, the whole of On-site mounted version is IP65	
端子排 Terminal block		弹片式按压端子 28-12AWG Shrapnel Press Terminal 28-12AWG	
供电电压 Supply voltage		12-24V DC $\pm 10\%$ 稳压 (电源输入端防反接保护) 12-24V DC $\pm 10\%$ voltage regulation (power input with anti-reverse connection protection)	
对传感器供电 Supply voltage of sensor		12-24V DC $\pm 10\%$ 稳压 12-24V DC $\pm 10\%$ voltage regulation	
集电极开路输出 Open collector output		50mA DC	
继电器功率 Relay power		30V DC 1A 两组 30V DC 1A two groups	
最大脉冲速率 Maximum pulse rate		400 脉冲 / 分钟 400 pulses/min	
比例脉冲宽度 Proportional pulse width		0.1-3200S	
脉宽调制 PWM		0.1-320S	
电流输出 Output current		4-20mA, 无源, 全量程可调并可反向输出 4-20mA, passive, full scale adjustable and reverse output	
零点 Zero point		出厂设定 4.0mA, 用户可在 3.8-5.0mA 微调 The factory setting is 4.0mA, and the user can fine-tune it at 3.8-5.0mA	
满点 Full point		出厂设定 20.0mA, 用户可在 19.0-21.0mA 微调 The factory setting is 20.0mA, and the user can fine-tune it at 19.0-21.0mA	
精度 Precision		最大误差 $\pm 32\mu A @ 25^\circ C @ 24V DC$ Maximum error value $\pm 32\mu A @ 25^\circ C @ 24V DC$	
分辨率 Resolution		6 μA	
刷新率 Refresh rate		100mS	
接收传感器的电流端子 Current terminal for receiving sensor		4-20mA, 接收端子不对外提供电压 4-20mA, the receiving terminal does not provide external voltage	

尺寸图 / Dimensions:



订货规格 / Order Specifications:

单通道, 12-24VDC 供电, 支持一路 4-20mA 信号, 一路 485, 两路干触点继电器, 一路集电极开路输出;
Single channel, 12-24VDC power supply, supporting one 4-20mA signal, one 485 signal, two dry contact relays, one collector open output;

序号 SN	订购编号 Order No.	订货型号 Order model	名称 Name	备注 Remark
1	8600010000	9988-275-1	墙装控制器 Wall-mounted controller	流量表墙装版本 Flowmeter wall-mounted version
2	8600020000	9988-275-2	柜装控制器 Cabinet-mounted controller	流量表柜装版本 Flowmeter cabinet-mounted version

可替换附件及配件 / Replaceable Parts and Accessories:

序号 SN	订购编号 Order No.	订货型号 Order model	名称 Name	备注 Remark
1	8600013001	9988-275-01	专用固定支架 Special fixed base	墙装版本专用 Dedicated for wall-mounted version
2	8600013002	9988-275-02	通用连接支架 Universal connection base	墙装/柜装版本通用 Universal for wall/cabinet-mounted versions
3	8600013003	9988-275-03	固定螺母 Fixing nut	六角螺母, SUS304 Hex nuts, SUS304
4	8600013004	9988-275-04	压紧组件 Pressing component	柜装专用压紧组件 内含四个 Pressing component dedicated for cabinet-mounted version, 4 pcs inside
5	8600013005	9988-275-05	接线端子 Terminal	7芯, 内含两个7pin, 2 pcs inside
6	8600013006	9988-275-06	接线端子 Terminal	4芯 4pin
7	8600013007	9988-275-07	接线端子 Terminal	8芯 8pin



818 系列转轮流量传感器

818 SERIES PADDLE-WHEEL FLOW SENSOR

818 系列转轮流量传感器

产品介绍:

818系列转轮流量传感器性能可靠, 可选集成一体式安装。宽流速测量, 传感器本体材质有PPH, PVDF, PFA可选, 可以耐受目前大多数的化学腐蚀。转轮/转轴经久耐用, 经受过长时间的检验。结构简单, 是经济实用的选择。探头信号传输距离最远可到400米。

产品特点:

- 1: 适用于测量纯液体流量;
- 2: 适用流速范围: 0.3-6m/s;
- 3: 适用管路尺寸范围: DN15-DN400 (1/2-16");
- 4: 宽广的耐化学腐蚀材料;
- 5: 转轮/转轴更换快捷, 方便;
- 6: 结构简单, 运动部件少, 使用寿命长;

产品应用:

- 1: 化学品生产过程测量;
- 2: 纯水制备系统;
- 3: 水监测;
- 4: 中央空调冷却循环系统
- 5: 电子光伏清洗系统
- 6: 冶金行业
- 7: 电力, 氯碱行业

产品描述 / Product Instructions:

- | | |
|------------------------|----------------------|
| (1) PPH本体材料 | 最大2bar@90℃; |
| | 最大15bar@20℃; |
| (2) PVDF本体材料 | 最大2bar@100℃; |
| | 最大15bar@20℃; |
| (3) PFA本体材料 | 最大2.2bar@110℃; |
| | 最大16.5bar@20℃; |
| (1) PPH body material | Maximum 2 bar@90℃ |
| | Maximum 15 bar@20℃ |
| (2) PVDF body material | Maximum 2 bar@100℃ |
| | Maximum 15 bar@20℃ |
| (3) PFA body material | Maximum 2.2 bar@110℃ |
| | Maximum 16.5 bar@20℃ |

Product Description:

The 818 series paddle-wheel flow sensor has reliable performance and optional integrated one-piece installation. Wide flow rate measurement, the sensor body material is PPH, PVDF, PFA optional, can withstand most of the current chemical corrosion. Paddle-wheel and shafts are durable and have been tested over a long period of time. The structure is simple, and it is an economical and practical choice. The probe signal transmission distance can be up to 400 meters.

Features:

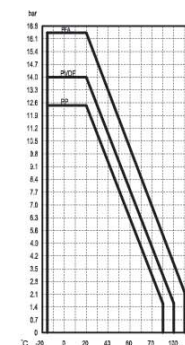
- 1: Suitable for measuring pure liquid flow;
- 2: Applicable flow velocity range: 0.3-6m/s;
- 3: Applicable pipeline size range: DN15-DN400 (1/2-16");
- 4: Materials with broad chemical resistance;
- 5: The paddle-wheel/shaft is replaced quickly and conveniently;
- 6: Simple structure, few moving parts, long service life;

Applications:

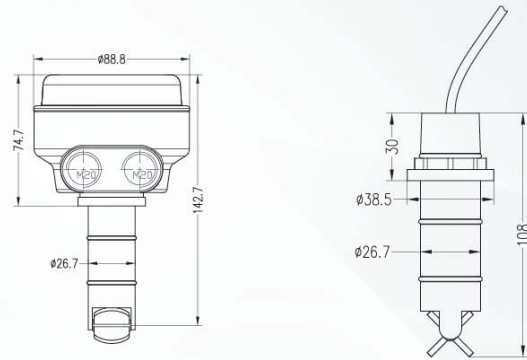
- 1: Measurement of chemical production process;
- 2: Pure water preparation system;
- 3: Water monitoring;
- 4: Central air conditioning cooling cycle system
- 5: Electronic photovoltaic cleaning system
- 6: Metallurgical industry
- 7: Electricity, chlor-alkali industry

压力/温度曲线图

Pressure/Temperature Graph:



尺寸图 / Dimensions:



转轮流量传感器编码规则 / Paddle-wheel Flow Sensor Coding Rules:

序号 SN	系列 Series	形式 Model	本体材质 Body material	转轮材质 Paddle-wheel material	转轴材质 Shaft material	信号类型 Signal type	密封圈材质 Seal ring material	备注 Remark
1	818							系列号 Series No.
2		Y						一体化版本, 含本体, 下黄壳, 须与 9988-275-1 匹配 Integration version, including body, yellow shell, must match 9988-275-1
		F						分体式, 在 Y 上增配保护盖 Split type with additional protective cover on Y model
		E						智能经济款, 仅输出 4-20mA 模拟量, 两线制 Smart and economical model, only output 4-20mA analog quantity, two-wire system
		R						输出 485 信号, 兼三线制输出 Output 485 signal, and three-wire output 4-20mA
3			2					PVDF
			3					PPH
			5					PFA
4				P				PVDF
				H				PPH
				E				PFA
5					P			PVDF
					S			316
					T			钛 Titanium
					H			HC
					V			钽 Tantalum
					G			陶瓷 Ceramics
					E			PFA
6						P		电平脉冲 (PNP 输出) Level pulse (PNP output)
						O		集电极 (NPN 输出) Collector (NPN output)
						N		无需选择, 仅针对形式为 E 的代码 No selection required, only for codes of the form E
7							E	EPDM
							F	FPM
							P	PFA 包覆密封圈 Seal ring wrapped by PFA

选型示例: 818Y3PGOE, 说明: 一体化转轮传感器, 传感器本体材质 PPH, 转轮材质 PVDF, 转轴材质陶瓷, 输出信号集电极开路, 密封圈 EPDM
Selection example: 818Y3PGOE, description: integrated paddle-wheel sensor, sensor body material PPH, paddle-wheel material PVDF, shaft material ceramics, output signal open collector, seal ring EPDM

安装件编码规则 / Mounting Coding Rules:

序号 SN	系列 Series	口径 d Diameter d	本体材质 Body material	密封件 Sealing element	连接方式 Connection method	特殊规格 Special specification	备注 Remark
1	TH						系列号 Series No.
2		**					外径 d Outer diameter d
3			P				PPH
			V				PVDF
			U				PVC-U
			C				PVC-C
4				E			EPDM
				F			FPM
				P			PFA 包覆密封圈 Seal ring wrapped by PFA
5					S		承插式 Socket-fusion type
					Y		对焊式 Butt-fusion type
					F		法兰式 Flanged type
6						X	特殊规格 Special specification

选型示例: THd32PEY, 说明: 三通式安装件, 口径 d32, 外壳 PPH, 密封圈 EPDM, 对焊式

Selection example: THd32PEY, description: Tee style mounting component, diameter d32, PPH shell, EPDM seal ring, butt-fusion type

可替换附件及配件 / Replaceable Parts and Accessories:

序号 SN	订购编号 Order No.	订货型号 Order model	名称 Name	备注 Remark
1	8601013001	818-3001	盖帽 Cover	分体式探头保护盖, 黄色 Separate sensor cover, yellow
2	8601013002	818-3002	连接支架 Connection base	墙装 / 柜装版本通用, 黄色 Universal for wall/cabinet-mounted versions, yellow
3	8601013003	818-3003	螺帽 Nut	内螺纹 Internal thread
4	8601013004	818-3004	固定螺母 Fixing nut	六角螺母, SUS304 Hex nuts, SUS304
5	8601013005	818-3005	密封圈 Seal ring	EPDM, 内含两条 EPDM, 2 pcs inside
6	8601013006	818-3006	密封圈 Seal ring	FPM, 内含两条 FPM, 2 pcs inside
7	8601013007	818-3007	密封圈 Seal ring	PFA 包覆密封圈, 内含两条 Seal ring wrapped by PFA, 2 pcs inside
8	8601013008	818-3008	转轮 Paddle-wheel	PVDF 材质 PVDF material
9	8601013009	818-3009	转轮 Paddle-wheel	PPH 材质 PPH material
10	8601013010	818-3010	转轮 Paddle-wheel	PFA 材质 PFA material
11	8601013011	818-3011	转轴 Shaft	PVDF 材质 PVDF material
12	8601013012	818-3012	转轴 Shaft	316 材质 316ss material
13	8601013013	818-3013	转轴 Shaft	钛材质 Titanium material
14	8601013014	818-3014	转轴 Shaft	HC 材质 HC material
15	8601013015	818-3015	转轴 Shaft	钽材质 Tantalum material
16	8601013016	818-3016	转轴 Shaft	陶瓷材质 Ceramics material
17	8601013017	818-3017	转轴 Shaft	PFA 材质 PFA material
18	8601013018	818-3018	流量探头延长线 Flow sensor extension cable	专用屏蔽线 Dedicated shielded wire

建议: 为保证流量的精准性, 需把转轮与转轴同时更换。

Suggestion: In order to ensure the accuracy of the flow measurement, it is necessary to replace the paddle-wheel and the shaft at the same time.



9988/818/TH 一体式转轮流量计

9988/818/TH INTEGRATED PADDLE-WHEEL FLOWMETER

9988/818/TH 一体式转轮流量计

产品介绍:

由9988/818/TH三个系列自由组合而成，便于现场实现“所见即所得”功能，多种材料的各种组合，适用于绝大多数的纯液体流量的测量工况。出厂前的精确调试，尽最大可能保证流量的精准。现场可用的最简的安装工时和至少的调试时间得到更精准的流量。

产品特点:

- 1: 适用于测量纯液体流量;
- 2: 适用流速范围: 0.3-6m/s;
- 3: 适用管路尺寸范围: DN15-DN400 (1/2-16");
- 4: 宽广的耐化学腐蚀材料;
- 5: 只有转轮/转轴运动部件, 更换步骤简单, 快捷;
- 6: 一体式出货, 节约现场安装/调试时间;
- 7: 出厂前的精确校验, 确保流量的精准;

产品应用:

- 1: 化学品生产过程测量;
- 2: 纯水制备系统;
- 3: 水监测;
- 4: 中央空调冷却循环系统
- 5: 电子光伏清洗系统
- 6: 冶金行业
- 7: 电力, 氯碱行业

产品描述 / Product Instructions:

- | | |
|------------------------|----------------------|
| (1) PPH本体材料 | 最大2bar@90℃; |
| | 最大15bar@20℃; |
| (2) PVDF本体材料 | 最大2bar@100℃; |
| | 最大15bar@20℃; |
| (3) PFA本体材料 | 最大2.2bar@110℃; |
| | 最大16.5bar@20℃; |
| (1) PPH body material | Maximum 2 bar@90℃ |
| | Maximum 15 bar@20℃ |
| (2) PVDF body material | Maximum 2 bar@100℃ |
| | Maximum 15 bar@20℃ |
| (3) PFA body material | Maximum 2.2 bar@110℃ |
| | Maximum 16.5 bar@20℃ |

Product Description:

It is composed of three series 9988/818/TH freely, which is easy to realize the function of "what you see is what you get". Different combinations of various materials are suitable for most measurement conditions of pure liquid flow. Precise debugging before leaving the factory ensures the accuracy of the flow measurement as much as possible. Get more accurate flow measurement with minimal installation man-hours and minimal commissioning time available in the field.

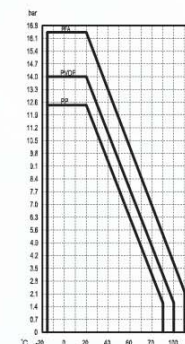
Features:

- 1: Suitable for measuring pure liquid flow;
- 2: Applicable flow velocity range: 0.3-6m/s;
- 3: Applicable pipeline size range: DN15-DN400 (1/2-16");
- 4: Materials with broad chemical resistance;
- 5: Only the paddle-wheel and the shaft are moving parts, and the replacement steps are simple and fast;
- 6: One-piece delivery, saving on-site installation/commissioning time;
- 7: Precise calibration before leaving the factory to ensure accurate flow measurement;

Applications:

- 1: Chemical production process measurement;
- 2: Pure water preparation system;
- 3: Water monitoring;
- 4: Central air conditioning cooling cycle system
- 5: Electronic photovoltaic cleaning system
- 6: Metallurgical industry
- 7: Electricity, chlor-alkali industry

压力/温度曲线图 Pressure/Temperature Graph:

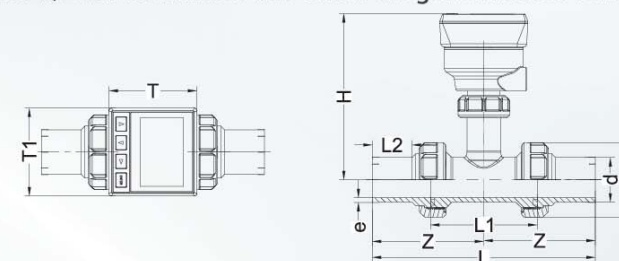


产品描述 / Product Description:

通道输入 Channel input		单通道一体式转轮流量计 Single channel integrated paddle-wheel flowmeter
输入类型 Signal input type	数字信号 Digital signal	RS485 MODBUS RTU通讯协议信号 RS485 MODBUS RTU communication protocol signal
	频率信号 Frequency signal	范围, 1-1500Hz Range, 1-1500Hz
	电流信号 Current signal	范围, 4-20mA Range, 4-20mA
测量参数 Measurement parameters		流量 Flow
外壳材料 Shell material		PBT
视窗 Display Screen		防碎玻璃 Shatterproof glass
键盘 Keyboard		4键, 薄膜按键, 注塑硅胶密封 4 keys, membrane keys, injection molded silicone rubber seal
显示 Display		液晶显示, 自动背光 LCD display, automatic backlight
刷新率 Refresh rate		1秒
指示 Indication		棒状指示条, 集电极开路输出, 继电器和报警/错误指示使用的LED指示灯 Bar graph, open collector output, LED indicators for relay and alarm/error indication
安装 Mounting	柜面安装 Cabinet mounting	开孔尺寸92x92mm, 仪表外观尺寸99x99mm Mounting hole opening size 92x92mm, appearance size of the instrument 99x99mm
	现场安装 On-site mounting	配带对应连接件与传感器结合 Equipped with corresponding connector to combine with sensor
	墙装安装 Wall mounting	配带对应的安装盒 Equipped with the corresponding installation box
环境温度 Ambient temperature		-10-70℃
存储温度 Storage temperature		-15-85℃
LCD 工作温度 LCD operating temperature		-10-70℃
防护等级 IP level		柜装版前部IP65, 现场版整体IP65 Panel of cabinet-mounted version is IP65, the whole of On-site mounted version is IP65
端子排 Terminal block		弹片式按压端子28-12AWG Shrapnel Press Terminal 28-12AWG
供电电压 Supply voltage		12-24V DC $\pm 10\%$ 稳压 (电源输入端防反接保护) 12-24V DC $\pm 10\%$ voltage regulation (power input with anti-reverse connection protection)
对传感器供电 Supply voltage of sensor		12-24V DC $\pm 10\%$ 稳压 12-24V DC $\pm 10\%$ voltage regulation
集电极开路输出 Open collector output		50mA DC
继电器功率 Relay power		30V DC 1A 两组 30V DC 1A two groups
最大脉冲速率 Maximum pulse rate		400脉冲/分钟 400 pulses/min
比例脉冲宽度 Proportional pulse width		0.1-3200S
脉宽调制 PWM		0.1-320S
电流输出 Output current		4-20mA, 无源, 全量程可调并可反向输出 4-20mA, passive, full scale adjustable and reverse output
零点 Zero point		出厂设定4.0mA, 用户可在3.8-5.0mA微调 The factory setting is 4.0mA, and the user can fine-tune it at 3.8-5.0mA
满点 Full point		出厂设定20.0mA, 用户可在19.0-21.0mA微调 The factory setting is 20.0mA, and the user can fine-tune it at 19.0-21.0mA
精度 Precision		最大误差 $\pm 32\mu A @ 25^\circ C @ 24V$ DC Maximum error value $\pm 32\mu A @ 25^\circ C @ 24V$ DC
分辨率 Resolution		6uA
刷新率 Refresh rate		100ms
接收传感器的电流端子 Current terminal for receiving sensor		4-20mA, 接收端子不对外提供电压 4-20mA, the receiving terminal does not provide external voltage

PPH/PVDF对焊活接一体式转轮流量计尺寸图:

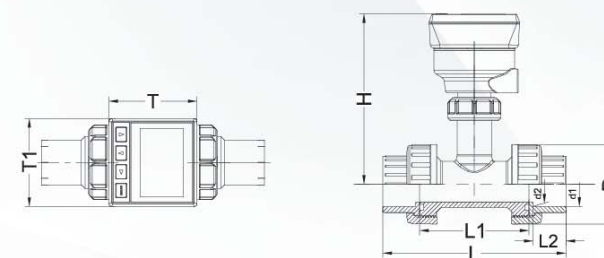
Dimensions of PPH/PVDF Butt-fusion True Union Integrated Paddle-wheel Flowmeter:



规格 Size	外形尺寸 Dimensions (mm)								
	D	d	L	H	e	L1	Z	T	T1
d20	47.5	20.10	196.0	176.0	2.2	90.0	98.0	99.0	99.0
d25	58.0	25.15	212.0	178.0	2.5	100.0	106.0	99.0	99.0
d32	65.0	32.15	230.0	180.0	3.2	110.0	115.0	99.0	99.0
d40	77.0	40.20	236.0	184.0	4.0	110.0	118.0	99.0	99.0
d50	84.0	52.25	251.0	187.0	4.9	120.0	125.5	99.0	99.0
d63	105.0	63.30	266.0	193.0	6.1	130.0	133.0	99.0	99.0

PVC-U/C承插一体式转轮流量计尺寸图:

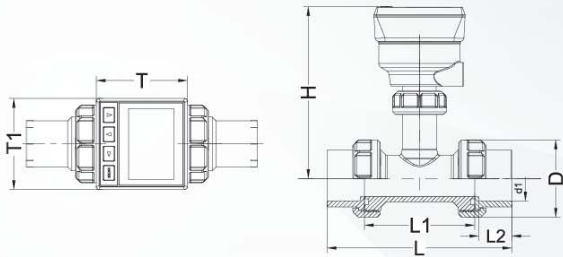
Dimensions of PVC-U/C Socket Ture Union Integrated Paddle-wheel Flowmeter



规格 Size	外形尺寸 Dimensions (mm)								
	D	d1	d2	L	L1	L2	H	T	T1
d20	47.5	20.30	20.0	142.4	90.0	16.5	176.0	99.0	99.0
d25	58.0	25.30	25.0	159.8	100.0	19.0	178.0	99.0	99.0
d32	65.0	32.30	31.9	176.2	110.0	22.5	180.0	99.0	99.0
d40	77.0	40.35	39.9	183.5	110.0	26.5	184.0	99.0	99.0
d50	84.0	50.35	49.9	201.0	120.0	31.5	187.0	99.0	99.0
d63	105.0	63.40	62.9	219.2	130.0	36.7	193.0	99.0	99.0
d75	131.0	75.40	74.9	231.0	130.0	43.7	199.0	99.0	99.0
d90	149.0	90.50	89.9	248.0	130.0	51.2	207.0	99.0	99.0
d110	174.0	110.60	109.9	267.0	130.0	61.2	217.0	99.0	99.0

PPH/PVDF承插焊活接一体式转轮流量计尺寸图:

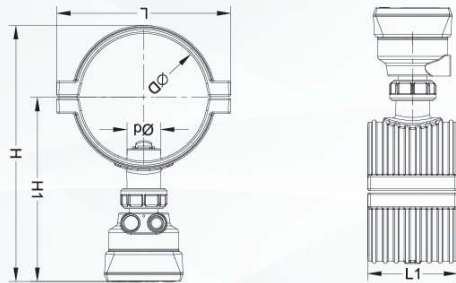
Dimensions of PPH/PVDF Socket-fusion Ture Union Integrated Paddle-wheel Flowmeter:



规格 Size	外形尺寸 Dimensions (mm)							
	D	d1	L	L1	L2	H	T	T1
d20	47.5	20.00	128.0	90.0	16.0	176.0	99.0	99.0
d25	58.0	25.00	142.0	100.0	18.0	178.0	99.0	99.0
d32	65.0	32.00	156.0	110.0	20.0	180.0	99.0	99.0
d40	77.0	40.00	160.0	110.0	22.0	184.0	99.0	99.0
d50	84.0	50.00	176.0	120.0	25.0	187.0	99.0	99.0
d63	105.0	63.00	186.0	130.0	25.0	193.0	99.0	99.0

PPH抱箍一体式转轮流量计尺寸图:

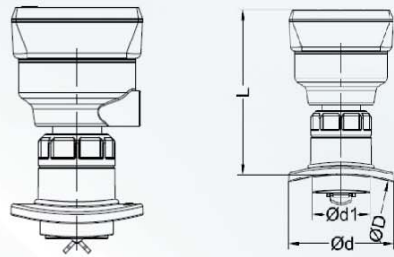
Dimensions PPH Hoop-type Integrated Paddle-wheel Flowmeter:



规格 Size	Dimensions 外形尺寸 mm (inch)					
	D	d	L	L1	H	H1
d160/DN150	161	42	220	114	323	232
d225/DN200	226	42	295	114	387	258.5

PVC-U马鞍一体式转轮流量计尺寸图:

Dimensions of PVC-U Saddle-type Integrated Paddle-wheel Flowmeter:



规格 Size	外形尺寸 Dimensions (mm)			
	D	d	d1	L
d280/DN250	280	100	55	150
d315/DN300	315	100	55	150
d400/DN400	400	100	55	150

可替换附件及配件 / Replaceable Parts and Accessories:

序号 SN	订购编号 Order No.	订货型号 Order model	名称 Name	备注 Remark
1	8600013001	9988-275-01	专用固定支架 Special fixing base	墙装版本专用 Dedicated for wall-mounted version
2	8600013002	9988-275-02	通用连接支架 Universal connection base	墙装 / 柜装版本通用 Universal for wall/cabinet-mounted versions
3	8601013003	818-3003	螺帽 Nut	内螺纹 Internal thread
4	8601013004	818-3004	固定螺母 Fixing nut	六角螺母, SUS304 Hex nuts, SUS304
5	8600013005	9988-275-05	接线端子 Terminal	7 芯, 内含两个 7pin, 2 pcs inside
6	8600013006	9988-275-06	接线端子 Terminal	4 芯 4pin
7	8600013007	9988-275-07	接线端子 Terminal	8 芯 8pin
8	8601013005	818-3005	密封圈 Seal ring	EPDM, 内含两条 EPDM, 2 pcs inside
9	8601013006	818-3006	密封圈 Seal ring	FPM, 内含两条 FPM, 2 pcs inside
10	8601013007	818-3007	密封圈 Seal ring	PFA 包覆密封圈, 内含两条 Seal ring wrapped by PFA, 2 pcs inside
11	8601013008	818-3008	转轮 Paddle-wheel	PVDF 材质 PVDF material
12	8601013009	818-3009	转轮 Paddle-wheel	PPH 材质 PPH material
13	8601013010	818-3010	转轮 Paddle-wheel	PFA 材质 PFA material
14	8601013011	818-3011	转轴 Shaft	PVDF 材质 PVDF material
15	8601013012	818-3012	转轴 Shaft	316 材质 316ss material
16	8601013013	818-3013	转轴 Shaft	钛材质 Titanium material
17	8601013014	818-3014	转轴 Shaft	HC 材质 HC material
18	8601013015	818-3015	转轴 Shaft	钽材质 Tantalum material
19	8601013016	818-3016	转轴 Shaft	陶瓷材质 Ceramics material
20	8601013017	818-3017	转轴 Shaft	PFA 材质 PFA material

建议: 为保证流量的精准性, 要求把转轮与转轴同时更换。

Suggestion: In order to ensure the accuracy of the flow measurement, it is necessary to replace the paddle-wheel and the shaft at the same time.

备注: 未尽型号/特殊规格, 欢迎来电沟通。 Remarks: As for models not listed or special specification models, welcome to enquire.