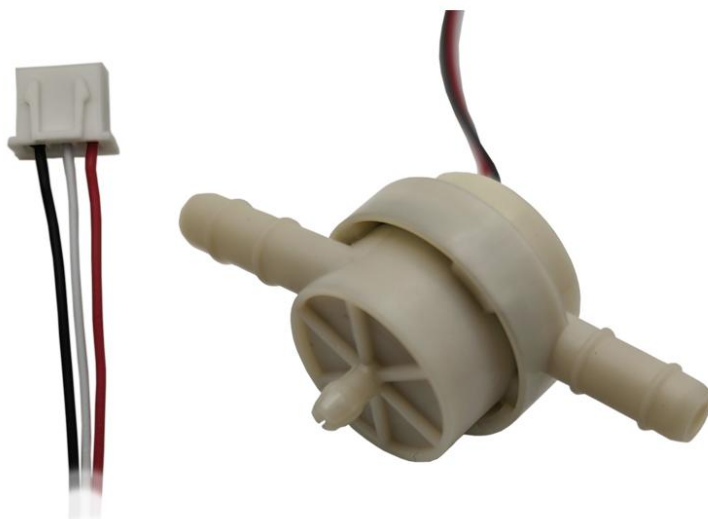


深圳市睿联传感科技有限公司

Shenzhen Realunion Sensor Tech Co.,Ltd.

SPECIFICATION

(产品规格书)



RLL2518H

霍尔微流量计

(Hall Micro Flow Sensor)

版本 Version: V1.0

日期 Date: 2025/12/23

● 修订记录 / Revision History

No.	日期/Date	备注/Remark	修订/Revision
1	20251223	PP Version issue	V0.1
1	20260420	PP Version issue	V1.0

● 霍尔微量计原理 / Principle of Hall Micro Flowmeter

通过检测叶轮转动，通过水流推动带有双极小磁铁的叶轮，由霍尔传感器在磁极为N级或S级时，输出电压进行转换

By detecting the rotation of the impeller, the impeller, which is equipped with bipolar tiny magnets, is driven by the water flow, and the Hall sensor outputs a voltage for conversion when the magnetic poles are at the N or S poles.

● 应用场景 / Application Scenarios

此传感器适用于微小流量的检测，可以检测20ml/min的超小流量

This sensor is suitable for micro-flow detection and can measure ultra-low flow rates as low as 20 mL/min.

1. 咖啡机/ Coffee Machine

在咖啡机的出水口安装霍尔流量计，配合咖啡机内置的配方，当用户在选择口味后，按照配方进行出水量、出糖量、出奶量和出咖啡量进行控制。给用户更好的使用感受和口味选择多样化。

Install a Hall flowmeter at the outlet of the coffee machine, combined with the built-in formula of the coffee machine. When the user selects a flavor, press Control the water output, sugar output, milk output, and coffee output according to the formula. Provide users with a better user experience and experience Diversified taste choices.

2. 果汁机/ Juicer

进行果汁出量的控制

Control the juice output

3. 热水器/ Heater

在用户进行出热水的操作时，检测到出水口有流量变化，此时可以做断电保护

When the user performs hot water operation and detects a change in flow rate at the outlet, power-off protection can be implemented

4. 洗衣机/ Washing Machine

在洗衣机加洗衣液的地方安装，用户使用不同模式，出洗衣液的多少可以调节
Installed at the place where the washing machine is filled with laundry detergent, the amount of laundry detergent can be adjusted by the user using different modes

5. 饮水机/ Water Dispenser

用于控制出水量

Used to control the water output

6. 宠物喂食机/ Pet Feeding Machine

可以定量进行宠物补水的控制

Can quantitatively control pet hydration

7. . . . 需要计算流量或流速的产品

Products that require flow or velocity calculation

● 产品优点 / Advantage

1. 传感器可检测微小流量，其可以在20ml/分钟的流量下进行检测。

The sensor can detect small flow rates and is capable of measuring flow at 20 ml/min.

2. 安装方便，可以直接替代传统流量传感器

Easy to install, can directly replace traditional flow sensors

3. 使用便捷，传感器的宽电压范围无需进行电压的转换

Easy to use, the wide voltage range of the sensor does not require voltage conversion

4. 精度高

High precision

5. 可以监控不透明液体

Can monitor opaque liquids

● 选型表 / Selection Table

孔径	型号
0.8mm	RLL2518H-08
1.0MM	RLL2518H-10
1.2MM	RLL2518H-12
1.5MM	RLL2518H-15
1.8MM	RLL2518H-18
3.0MM	RLL2518H-30

命名规则:

公司简称	产品类型, L代表流量计	结构件外径	结构高度	检测类型 G:光电 H: 霍尔	-	管径mm
RL	L	25	13	H	—	08 10 12 15 18 30

● 流量特性 / flow Specification (Ta=25°C)

管径 Nozzle	每升脉冲数 Pulses/Litre	每克脉冲数 g/pulse	每分钟最小流量 ML/min.flow	每分钟最大流量 max.flowML/min	压力损失 /Pressureloss
0.8mm	12597	0.0095	30ML	80ML	0.15
1.0mm	9653	0.1036	50ML	150ML	0.14
1.2mm	8198	0.1219	80ML	300ML	0.14
1.5mm	6236	0.1603	150ML	600ML	0.13
1.8mm	4905	0.023	200ML	1200ML	0.13
3.0mm	2692	0.3714	1000ML	3000ML	0.1

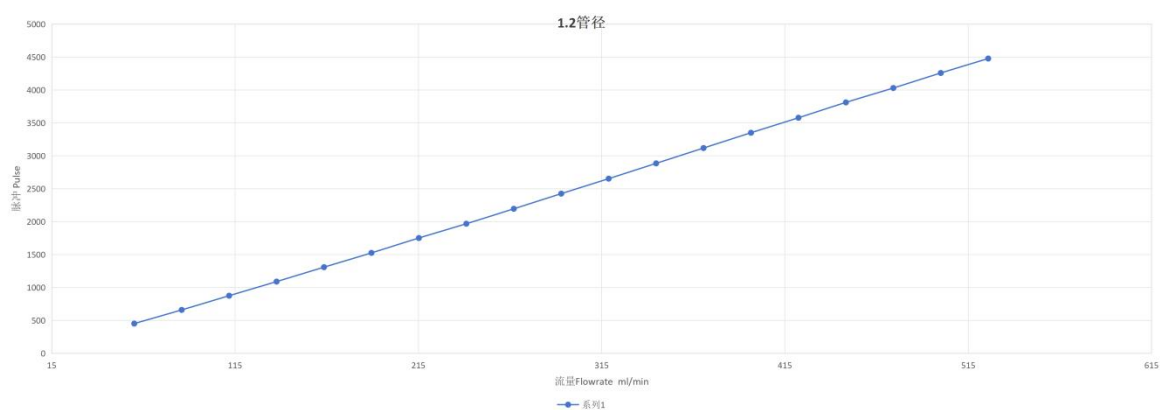
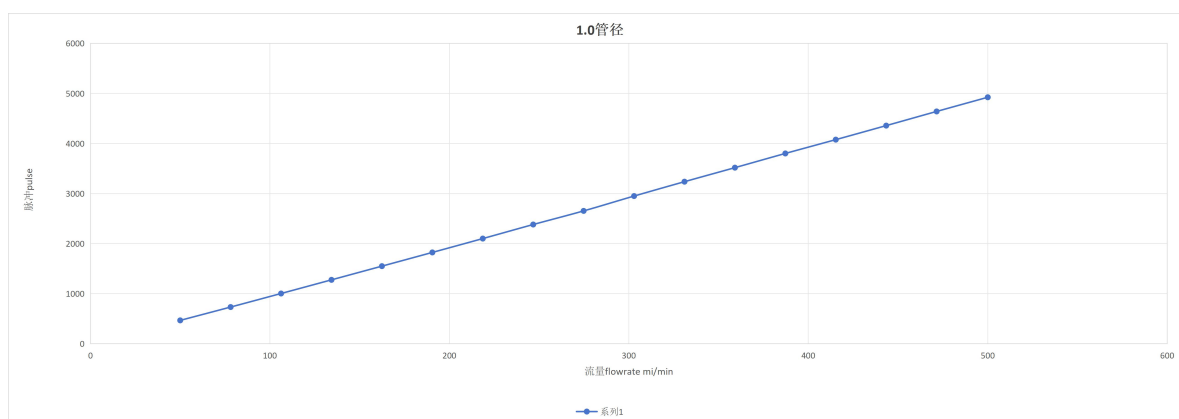
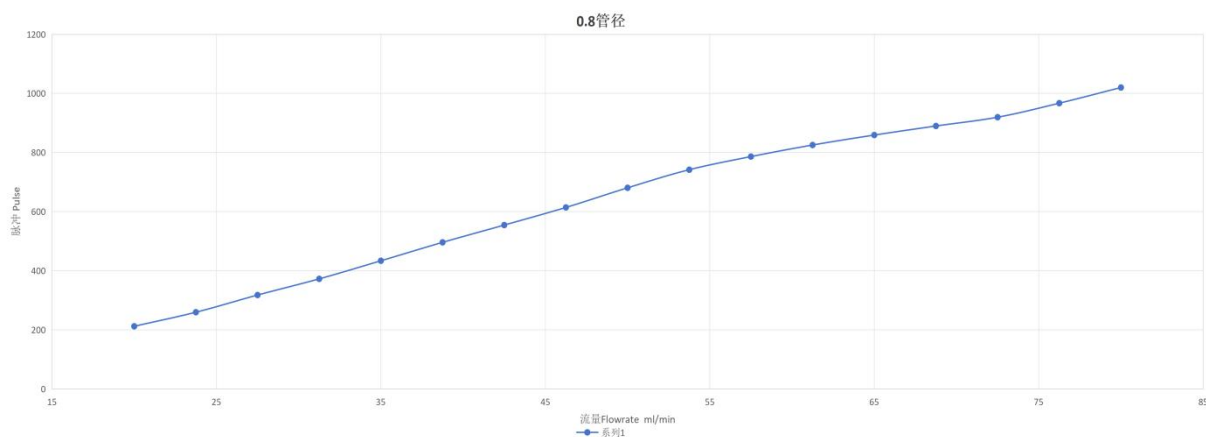
管径X

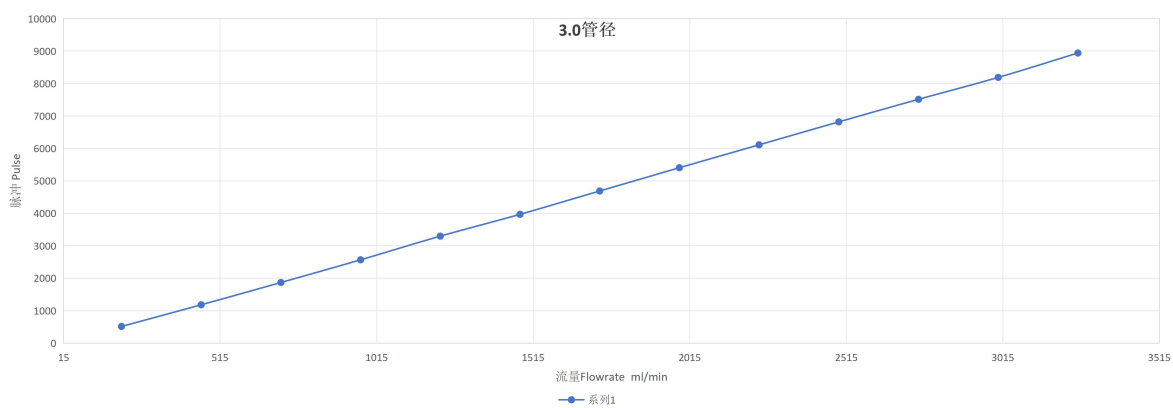
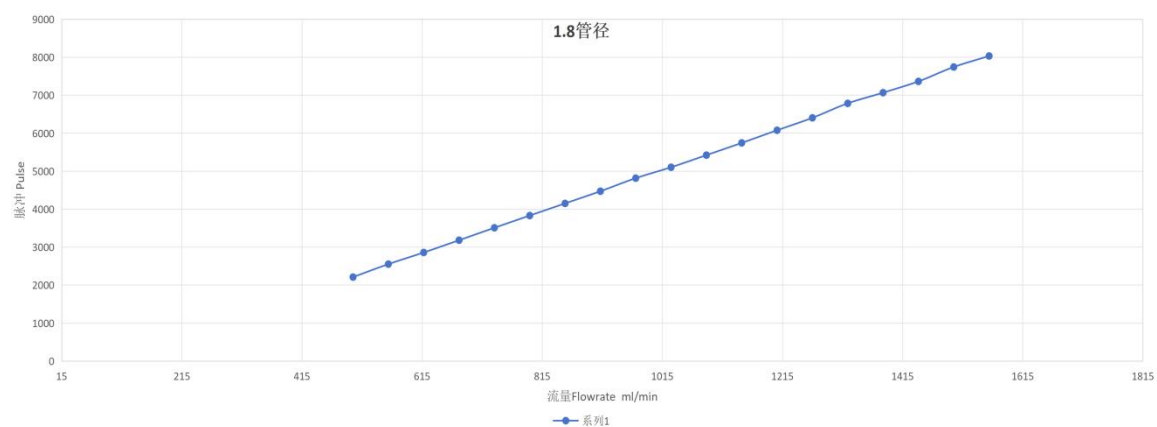
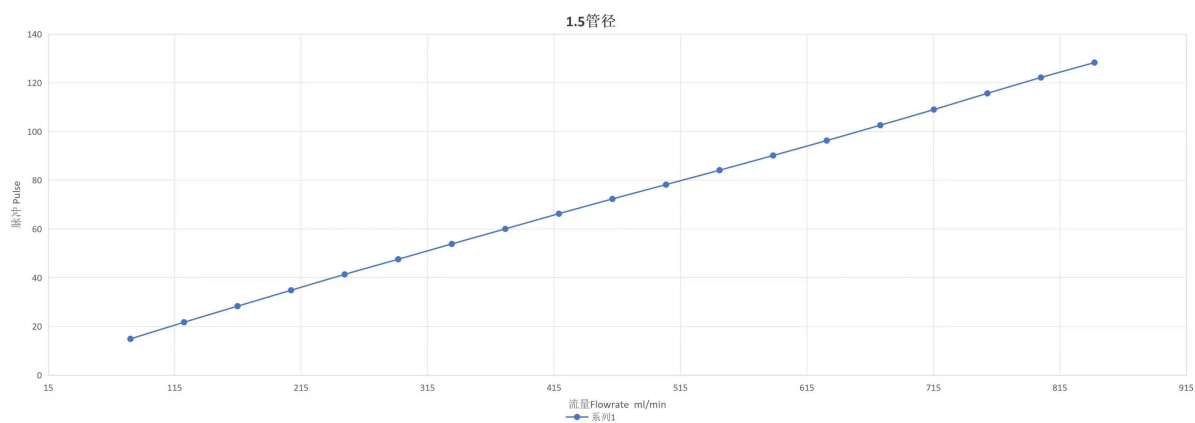
流速 L/min	0.2	0.4	0.5	0.6	0.7	0.8	0.9	1.0	2.0	3.0
脉冲频率 (Hz)	33.9	64.1	82.4	98.1	112.0	125.0	142.5	158.7	321.5	454.5
Pulse/L (±3%)	10274	10066	9967	9836	9706	9677	9554	9434	—	—
g/Pulse (±3%)	0.0973	0.0993	0.1001	0.1017	0.1030	0.1033	0.1047	0.1060	—	—

管径Y

流速 L/min	0.2	0.4	0.5	0.6	0.7	0.8	0.9	1.0	2.0	3.0
脉冲频率 (Hz)	33.9	64.1	82.4	98.1	112.0	125.0	142.5	158.7	321.5	454.5
Pulse/L (±3%)	10274	10066	9967	9836	9706	9677	9554	9434	—	—
g/Pulse (±3%)	0.0973	0.0993	0.1001	0.1017	0.1030	0.1033	0.1047	0.1060	—	—

脉冲与流量线性表

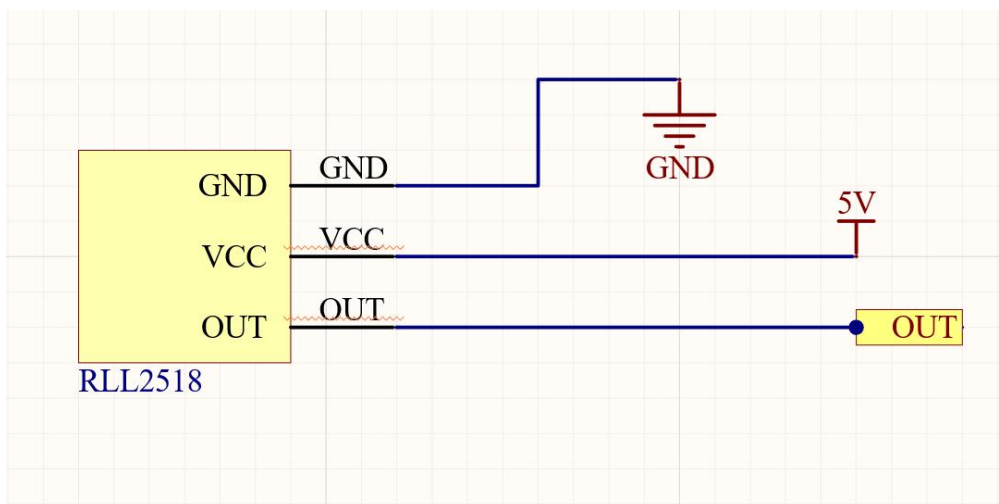




● 电气参数特性 / Electrical Specification (Ta=25°C)

参数//Parameter	符号/Symbol	典型值/Min	单位/units
工作电压/Supply Voltage	Vs	5-24	V
输出电压/Output Voltage	VOUT	5	V
输出电流/Output Current	OUT	10	mA
待机电流/Standby Current	Is	8	mA
工作温度/Operating Temperature	Topr	0 ~ +65	°C
存储温度/Storage Temperature	Tstg	-10 ~ +70	°C
工作寿命/Working Life	Life	50000	H
耐压力/Pressure resistant		0.1	MPa

● 推荐应用电路 / Recommended Application Circuit



● 注意事项 / Precautions

1. 正确接线，否则会烧坏流量计
Correct wiring, will it burn out the flowmeter
2. 不可在脉冲式水流中使用
Cannot be used in pulsed water flow
3. 输出脉冲信号，不可接负载
Output pulse signal, do not connect to load

● 尺寸和推荐安装 / Outline Drawing and Recommended Installatio

