

Liquid turbine Flow meter SI-3125

Description

SI-3125 Liquid turbine flow meter is a new generation turbine flow meter which was designed with advanced flow technologies both home and aboard. The product possesses advantages of simple structure, light in weight, high accuracy, good repeatability, short response time, easy installation, etc. It could be used widely in measurement of closed pipe system for pure liquid that will not react with 1Cr18Ni9Ti, 2Cr13, Al2O3 and hard alloys. Kinematic viscosity of the medium liquid shall be smaller than $5 \times 10^{-6} \text{m}^2/\text{s}$.

Measurement for medium with kinematic viscosity larger than $5 \times 10^{-6} \text{m}^2/\text{s}$ will need calibration with the actual liquid. SI-3125 series could also operate with specific display instruments for flow control, over flow alarm and many other functions.



3125 -N1 series



3125 -N2 series



3125 -E series

Features

- Accuracy: Default type: $\pm 1\%R$, $\pm 0.5\%R$ High accuracy type: $\pm 0.2\%R$
- Good repeatability. Repeatability of the product could reach to 0.05%~0.2% in short term. It is this advantage in repeatability that
- make the product a good choice in trading measurement.
- Pulse frequency output, suitable for total flow measurement and connect to computer. No zero drift and with strong antiinterference performance;
- Could output high frequency signal (3~4kHz) with high resolution;
- Wide range ratio, middle and large diameter could reach to 1:20 and small diameter could reach to 1:10;
- Compact and light structure, easy for installation and maintenance;
- Suitable for high pressure measurement. Since there is no opening on housing of the product, it could be used as a high

- pressure instrument.
- Could operate with multiple sensors. According to requirement of the users, SI-3125 offers options with different special sensors,
- for example low temperature type, dual flow direction type, well type, sandy medium type, etc.;
- Offer insertion type for large diameter measurement. The insertion type possesses advantages of small pressure loss, low cost and easy installation and maintenance (could be taken out of the pipe without shut the system down).

Specification

| Item | Data |
|---------------------------|--|
| Medium | Non-corrosive low velocity liquid without impurity, not suitable for gas/steam |
| Accuracy | Class 1.0, class 0.5 |
| Flange standard | GB/T 9119-2010, DIN, ANSI, JIS |
| Output | Pulse, 4-20mA analog output, RS485 (Modbus-RTU protocol), HART |
| Diameter and installation | Flange connection DN15-DN200 |
| | Screw connection: DN4-DN50 |
| | Loose flange connection: DN4-DN200 |
| Medium temperature | Default type T1: $-20^{\circ}\text{C} \sim +80^{\circ}\text{C}$ (Standard) |
| | High temp. type T2: $-20^{\circ}\text{C} \sim +120^{\circ}\text{C}$ (OEM) |
| | High temp. type T3: $-20^{\circ}\text{C} \sim +150^{\circ}\text{C}$ (OEM) |
| Operation condition | Operating temperature: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$ |
| | Related humidity: 5%~90% |
| | Atmospheric pressure: 86kPa~106kPa |
| Ingress protection | IP65 |
| Explosion proof | ExdIIBT6 (explosion proof type) |

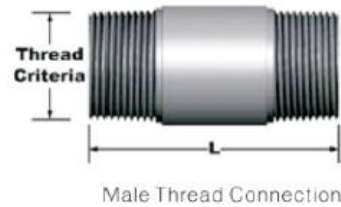
Flow range

| Diameter (mm) | Standard flow range (m3/h) | Extended flow range (m3/h) | Conventional endurance pressure (m3/h) |
|---------------|----------------------------|----------------------------|--|
| 4 | 0.04~0.25 | 0.04~0.4 | 1.6MPa |
| 6 | 0.1~0.6 | 0.06~0.6 | 1.6MPa |
| 10 | 0.2~1.2 | 0.15~1.5 | 1.6MPa |
| 15 | 0.6~6 | 0.4~8 | 1.6MPa |
| 20 | 0.8~8 | 0.45~9 | 1.6MPa |
| 25 | 1~10 | 0.5~10 | 1.6MPa |
| 32 | 1.5~15 | 0.8~15 | 1.6MPa |
| 40 | 2~20 | 1~20 | 1.6MPa |
| 50 | 4~40 | 2~40 | 1.6MPa |
| 65 | 7~70 | 4~70 | 1.6MPa |
| 80 | 10~100 | 7~100 | 1.6MPa |
| 100 | 20~200 | 10~200 | 1.6MPa |

| | | | |
|-----|--------|--------|--------|
| 125 | 25~250 | 13~250 | 1.6MPa |
| 150 | 30~300 | 15~300 | 1.6MPa |
| 200 | 80~800 | 40~800 | 1.6MPa |

Dimension

(1) Thread Connection



| Diameter (mm) | L (mm) | Thread Criteria |
|---------------|--------|-----------------|
| 4 | 270 | G 1/2" |
| 6 | 270 | G 1/2" |
| 10 | 390 | G 1/2" |
| 15 | 75 | G 1" |
| 20 | 80 | G 1" |
| 25 | 100 | G 1-1/4" |
| 32 | 140 | G 2" |
| 40 | 140 | G 2" |
| 50 | 150 | G 2-1/2" |

Notice: Other thread criteria is available on request. (Female/Male thread is Optional for G,NPT,BSP)

(2) Flange Connection



| Diameter | | L | B Flange Diameter | PCD Bolt Circle Diameter | Bolt Hole Quantity |
|----------|------|------|-------------------|--------------------------|--------------------|
| (inch) | (mm) | (mm) | (mm) | (mm) | |
| 1/2" | 15 | 75 | 95 | 60 | 4 |
| 3/4" | 20 | 80 | 105 | 70 | 4 |
| 1" | 25 | 100 | 115 | 79 | 4 |
| 1-1/4" | 32 | 140 | 140 | 89 | 4 |

| | | | | | |
|--------|-----|-----|-----|-----|---|
| 1-1/2" | 40 | 140 | 150 | 99 | 4 |
| 2" | 50 | 150 | 165 | 121 | 4 |
| 2-1/2" | 65 | 170 | 185 | 140 | 4 |
| 3" | 80 | 200 | 200 | 152 | 4 |
| 4" | 100 | 220 | 220 | 191 | 8 |
| 5" | 125 | 250 | 250 | 216 | 8 |
| 6" | 150 | 300 | 285 | 241 | 8 |
| 8" | 200 | 360 | 340 | 298 | 8 |

Notice: Dimensions above is for DIN PN16 Flange

Order Guide

| SI-3125- | DN | XX | Note |
|----------------|-------|---|---|
| | | | DN4~DN200mm |
| Converter Type | N1 | | 24VDC, Pulse output, No display |
| | N2 | | 24VDC, Pulse output, No display, EX |
| | A | | 24VDC, 4-20mA output, No display, EX |
| | E1 | | Battery power supply, No output, Digital display, EX |
| | E2 | | 24VDC, Pulse and 4-20mA output, RS485, Digital display, EX |
| | E2+ B | | 24VDC+battery power supply, Pulse and 4-20mA output, RS485, Digital display, EX |
| | E3 | | 24VDC, Pulse and 0-20mA output, RS485, Digital display, EX |
| | E3+ B | | 24VDC+battery power supply, Pulse and 0-20mA output, RS485, Digital display, EX |
| | E+H | | 24VDC, 4-20mA output, HART, Digital display, EX |
| | G5 | | 220VAC, Pulse and 4-20mA output, RS485, Digital display, EX |
| G6 | | 220VAC, Pulse and 0-20mA output, RS485, Digital display, EX | |
| Accuracy | 10 | | ±1.0%R |
| | 05 | | ±0.5%R |
| Flow Range | S | | Standard Range |
| | E | | Extended Range |

| | | | | | |
|-----------------|-----|--|--|--|--|
| | | | | | |
| Body Material | S4 | | | | SS304 |
| | S6 | | | | SS316 |
| Explosion-Proof | BT | | | | Exd II BT6 |
| | NA | | | | None |
| Connection | THM | | | | External thread, Apply to DN4~DN50mm |
| | THF | | | | Internal thread, Apply to DN4~DN50mm |
| | WAF | | | | Flange clamp |
| | DXX | | | | D16: DIN PN16 Flange; D25: DIN PN25 Flange |
| | AXX | | | | A15: ANSI 150# Flange; A30: ANSI 300# Flange |
| | JXX | | | | J10: JIS 10K Flange; J20: JIS 20K Flange |
| Temperature | T1 | | | | -20~+80℃ |
| | T2 | | | | -20~+120℃ |
| | T3 | | | | -20~+150℃ |

SI-3125 DN50 E2 10 S S4 BT D16 T2

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Diameter: DN50

② E2: 24VDC, Pulse and 4-20mA output, RS485, Digital display, EX

③ 10: 1.0% of rate accuracy

④ S: Standard range 4-40m³/h

⑤ S4: SS304 Body Material

⑥ BT: Exd II BT6

⑦ D16: Flange DIN PN16

⑧ T2: -20~+120℃

