Catalog

SW-11 Magnetic Switch

1 SW-11 introduction

1.1 Brief description

Imported high quality and high-power reed switch as core component, with aluminum-alloy housing. Qualified with SIL2 / SIL3 Functional Safety Assessment, as well as certified for both Intrinsic Safety (Ex ia IIC T6 Ga) and Flameproof Enclosure (Ex d IIC T6 Gb) explosion protection.

1.2 Operating principle

Within the chamber is a magnet float assembly inside. This float rests on the fluid surface and moves up and down with the change of level. When the permanent magnetic steel within the magnetic float moves close to the switch, it stimulates the attached switches, triggering reed switch's status to change, and providing a signal back to the control system to realize the liquid level control.

SW-11 Magnetic switch can be categorized by its output method as SPST type and SPDT type. For the application, SW-11 can be categorized as overflow or dry-run for liquid level alarm and protection.

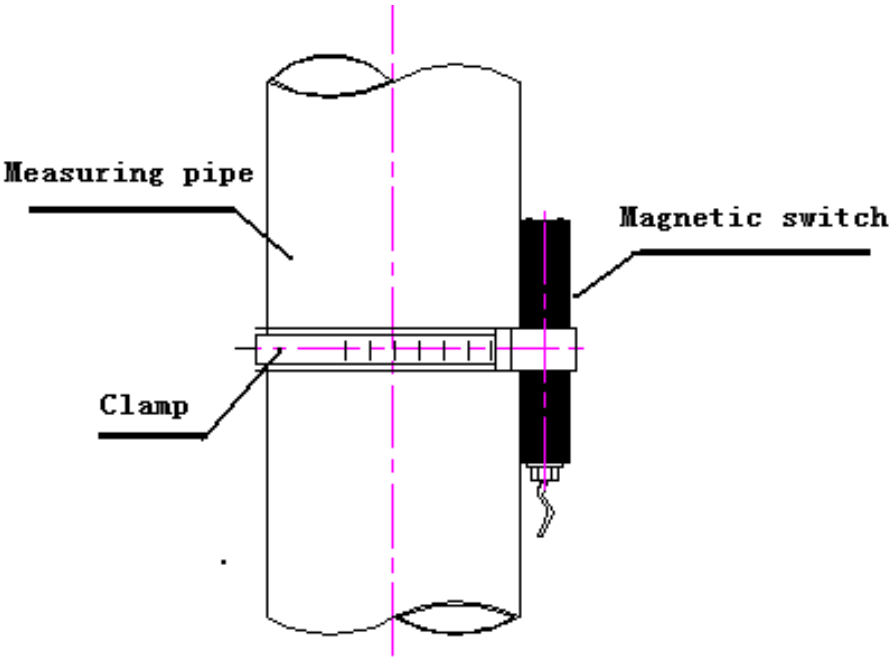

Fig. 1: SW-11 Magnetic Switch installation diagram

深圳计为自动化技术有限公司深圳市龙岗区横岗街道龙岗大道 3162 号宝丽商务 5 楼
电话:+86 755 28407683, 传真: +86 755 89352063, www.jiweimeter.cn

2 SW-11 Characteristics

(1) Imported high quality and high-power reed switch as core component with longer service life.
(2) Electronics housing is made of aluminum alloy and designed with larger internal space for easy wiring.
(3) Chamber is made of 304 stainless steel for strong corrosion resistance.
(4) Qualified with SIL2 / SIL3 Functional Safety Assessment, as well as certified for both Intrinsic Safety (Ex ia IIC T6 Ga) and Flameproof Enclosure (Ex d IIC T6 Gb) explosion protection.
(5) With high Ingress Protection rating IP66/67.

3 SW-11 Technical data

Signal output	Switch signal (lockable)
Contact rating	220V AC，1.0/2.0A
	24V DC，1.5/2.5A
Process temperature	-50～150℃
Ambient temperature	-40～70℃
SIL Qualification	SIL2(HFT≥0)/SIL3(HFT≥1)
Explosion-Proof	Flameproof Enclosure: Ex d IIC T6 Gb
	Intrinsic Safety: Ex ia IIC T6 Ga
Ingress Protection	IP66/IP67
Cable entry	1/2"NPT or M20×1.5

Ex certificate

This instrument fulfills the legal requirements of the applicable Ex guidelines. You can find the Ex conformity declaration in the certification area of “www.jiweimeter.cn”.

Note:

(1) The quantity can be determined on the basis of requirement;
(2) The signal control circuit cannot be directly used in the loaded drive circuit that exceeds rated current;
(3) Can be connected directly with PLC or DCS;
(4) Metal housing and heat insulation are necessary in higher temperature conditions;
(5) Can be ordered separately as accessories, or with Magnetic Level Indicator.

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4 SW-11 Wiring diagram

Please wiring safely according to the following diagrams (Fig. 2).

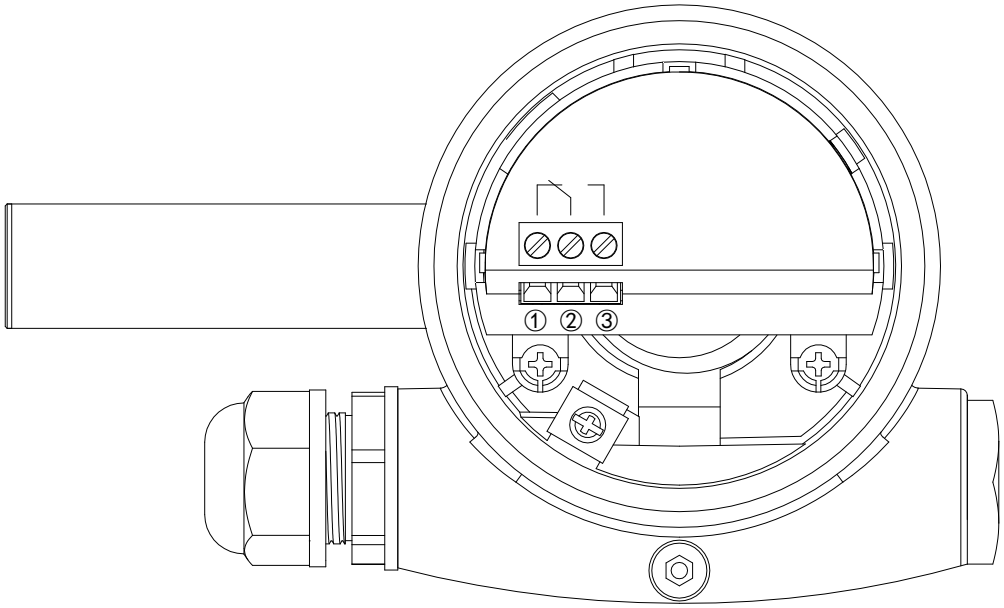
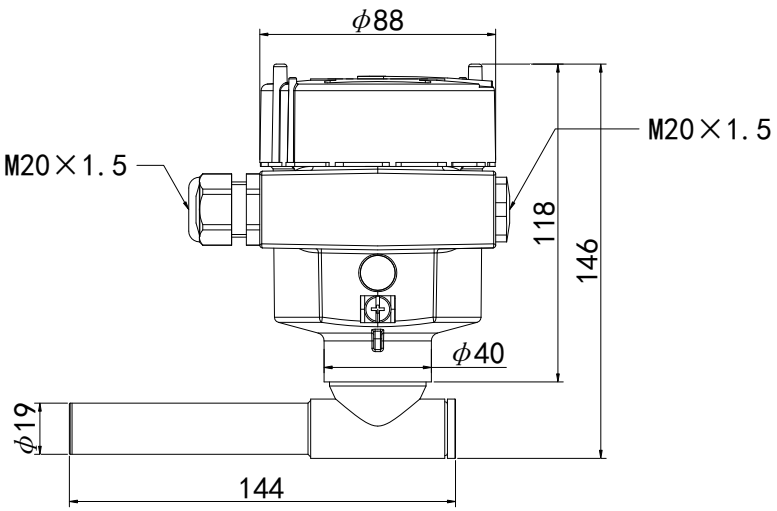


Fig. 2 SW-11 Wiring diagram

① Normally closed ② Common terminal ③ Normally open

5 SW-11 Dimensions



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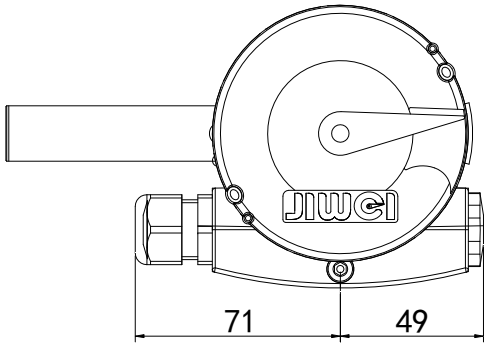

6 Instrument repair

We offer our customers service including technical consulting, user training, on-site installation and commissioning, product replacement and maintenance as well as on-site technical support, etc. Jiwei product quality warranty period is one year, the warranty period for your free maintenance, long-term technical support, if you need advice in use, please call the service hotline：+86-0755-28407683, you can find the relevant services on our website “www.jiweimeter.com”.

7 Storage and transport

7.1 Packaging

Your instrument was protected by packaging during transport.

The packaging of standard instruments consists of environment friendly, recyclable carton cover material .The probe is additionally protected with a cardboard cover. For special version, PE foam or PE foil is also used. Please dispose of the packaging material through specialized recycling companies.

7.2 Transport

Transport must be carried out in due consideration of the notes on the transport packaging. Nonobservance of these instructions can cause damage to the instrument.

The delivery must be checked for completeness and possible transit damage

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immediately at receipt .Ascertained transit damage or concealed defects must be appropriately dealt with.

7.3 Storage

The packages must be stored under the following conditions:

(1) Not in the open

(2) Dry and dust free

(3) Not exposed to corrosive media

(4) Protected against solar radiation

(5) Avoiding mechanical shock and vibration

(6) Storage environment

Relative humidity: 0～95%

Storage temperature: -40～80℃

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SW-21 Compact Magnetic Switch

1 SW-21 introduction

1.1 Brief description

Compact and lightweight are the most prominent features of SW-21 Compact Magnetic Switch (with 35mm in width and 120mm in length). SW-21 has been approved for both Explosion-proof Certifications (Flameproof Enclosure: Ex d IIC T6 Gb and Intrinsic safety: Ex ia IIC T6 Ga). It is designed with quality high power reed switch. Jiwei holds a utility patent (NO. 201821348285.8) on SW-21.

1.2 Operating principle

Same as SW-11 Magnetic Switch, SW-21 Compact Magnetic Switch is also an ideal accessory when combines with Flap-11 Magnetic Level Indicator, so that the Magnetic Level Indicator can realize the remote alarm function. Within the chamber is a magnet float assembly inside. This float rests on the fluid surface and moves up and down with the change of level. When the permanent magnetic steel within the magnetic float moves close to the switch, it stimulates the attached switches, triggering reed switch's status to change, and providing a signal back to the control system to realize the liquid level control.

SW-21 Magnetic switch can be categorized by its output method as SPST type and SPDT type. For the application, SW-11 can be categorized as overflow or dry-run for liquid level alarm and protection.

2 SW-21 Characteristics

(1) Skillful configuration, compact and lightweight with delicate appearance (35mm in width and 120mm in length).
(2) Imported high quality and high-power reed switch as core component with longer service life.
(3) Chamber is made of 304 stainless steel to provide corrosion resistance and durability.
(4) Qualified with SIL2 / SIL3 Functional Safety Assessment, as well as certified for both Intrinsic Safety (Ex ia IIC T6 Ga) and Flameproof Enclosure (Ex d IIC T6 Gb) explosion protection.
(5) With high Ingress Protection rating IP66/67.

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3 SW-21 installation

3.1 installation

Before installation, please reconfirm the instrument model. For the cable outlet direction, SW-21 can be installed in two ways: above and lateral, as shown in Fig. 3.

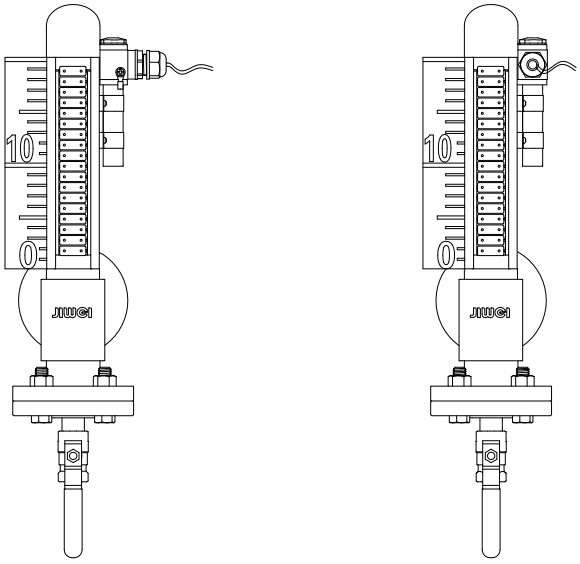

Fig.3 SW-21 Installation

① Above installation ②Lateral installation

3.2 Range of action points

The action points of SW-21 Magnetic Switch are within the range of 20 mm as shown in Fig. 4. If accurate measurement is not required, directly install in the range of 20 mm. On the contrary, if precise measurement is required, please adjust according to the requirements.

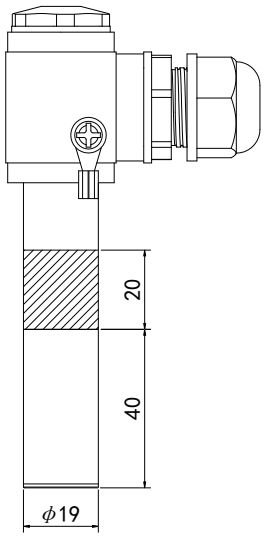

Fig.4 SW-21 Range of action points

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4 SW-21 Wiring diagram

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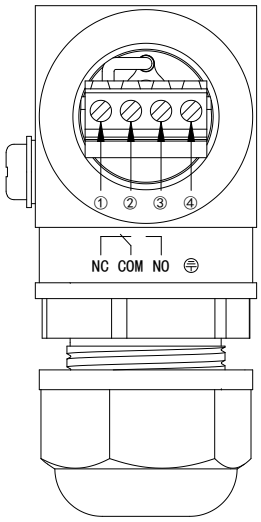

Fig.5 SW-21 Wiring diagram

①Closed ②Common terminal ③Disconnected ④Grounding

5 SW-21 Technical data

Signal output	Switch signal (lockable)
Contact rating	220V AC，1.0/2.0A
	24V DC，1.5/2.5A
Process temperature	-50～150℃
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SIL Qualification	SIL2(HFT≥0)/SIL3(HFT≥1)
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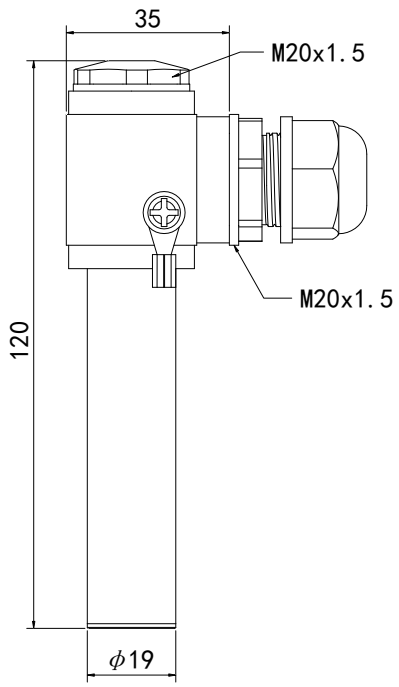
6 SW-11 Dimensions



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(11)Avoiding mechanical shock and vibration

(12) Storage environment

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