3D Show room

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INGYU 星宇

E/P Control Components

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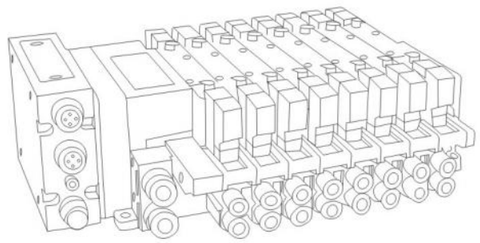
# E/P CONTROL
## COMPONENTS



# PRODUCT CATALOGUE

XINGYU ELECTRON

**PREMIER QUALITY**
**GLOBAL REPUTATION**



## VT Series Manifold

- The air circuit layout is simple and intuitive, reducing the wiring space
- More reliable air circuit structure design
- Less installation space and convenient installation
- Various types of solenoid valves can be installed optionally

## VT340-VT540

### Features

1. The air circuit layout is simple and intuitive, reducing thewiring space
2. More reliable air circuit structure design
3. Less installation space and convenient installation
4. Various types of solenoid valves can be installed optionally
5. Centralized air supply and exhaust
6. Modular design, any number of valve combinations

### Specification

| Model No. | VT540 | VT340 |
|---|---|---|
| Working ambient temperature | -5℃~50℃ ( Not frozen ) | |
| Working Pressure | 1.5-7bar 5/2(NC) /2-7bar 5/3(NC) | |
| Working medium | Compressed Air (Filtered by 40μm filter screen) | |
| Rated voltage | DC24V±10% | |
| Solenoid valve Type | 5/2(NC) 5/3(NC) | |
| Reted Power | 1W/1.8W(0.5W) | |
| Number of combinations | 2~24 | |
| Manifold material | PA6+50GF | |
| Valve material | Aluminium | |
| IP Class | IP40 | |

### Ordering Code

**Valley Island Ordering Code**

VT 540 – 08 G1 S2 K6 – T – A 4 B 4 – PNT

1 2 3 4 5 6 7 8 7 8 9

**1**. Product Series

| Code | Description |
|---|---|
| 340 | 3 Series |
| 540 | 5 Series |

**2**. Number of Stations
Code: 02~24
Number of stations: 2~24
(Limited to a maximum total of 24 solenoid valves)

**3**. Intake interface

| Code | Description |
|---|---|
| G1 | Both sides G1/4 female thread (only for multi-pin top-entry type) |
| 08 | Left side No. 8 fitting + right side G1/4 female thread |
| 28 | Both sides No. 8 fittings |
| 38 | Left side No. 8 fitting + right side plug |
| 48 | Right side No. 8 fitting + left side plug |
| 10 | Left side No.10 fitting + right side G1/4 female thread (5 Series only) |
| 20 | Both sides No. 10 fittings (5 Series only) |
| 30 | Left side No.10 fitting + right side plug (5 Series only) |
| 40 | Right side No. 10 fitting + left side plug (5 Series only) |

**4**. Code Description

| Code | Description |
|---|---|
| S2 | Silencers on both sides |
| S3 | Left-side silencer + right-side plug |
| S4 | Right-side silencer + left-side plug |
| 28 | No. 8 fittings on both sides |
| 38 | Left-side No. 8 fitting + right-side plug |
| 48 | Right-side No. 8 fitting + left-side plug |
| 20 | No. 10 fittings on both sides (5 Series only) |
| 30 | Left-side No. 10 fitting + right-side plug (5 Series only) |
| 40 | Right-side No. 10 fitting + left-side plug (5 Series only) |

**5**. Working Port

| Code | Description |
|---|---|
| K4 | No. 4 push-in fitting |
| K6 | No. 6 push-in fitting |

**6**. Working Port Direction

| Code | Description |
|---|---|
| None | Side exhaust |
| T | Top exhaust |

**7**. Valve Type

| Code | Description |
|---|---|
| A | 5/2 Single Coil |
| B | 5/2 Double Coil |
| C | 5/3 Double Coil, Center Closed Type |
| D | 5/3 Double Coil, Center Exhaust Type |
| E | 5/3 Double Coil, Center Pressure Type |
| GB | Blanking Plate |
| AS | 5/2 Single Solenoid Control (Low Power) |
| BS | 5/2 Double Solenoid Control (Low Power) |
| CS | 5/3 Center Closed Type (Low Power) |
| DS | 5/3 Center Exhaust Type (Low Power) |
| ES | 5/3 Center Pressure Type (Low Power) |

**8**. Number of Valves
Code: 2~24
Number of valves: 2~24(Total number of solenoid valves in the complete valve manifold≤24)

**9**. Communication Protocol

| Code | Description |
|---|---|
| None | Multi-pin top exit |
| LS | Multi-pin left-side exit |
| PNT | PROFINET protocol |
| ECT | EtherCAT protocol |
| IO | IO-Link protocol, top exit |
| LIO | IO-Link protocol, left-side exit |

## Ordering Code

**Valve + Manifold Ordering Code**

VT540 – K6 – A
(1) (2) (3)

**1**. Valve Series

| Code | Description |
|---|---|
| VT540 | 5 Series |
| VT340 | 3 Series |

**2**. Working Port

| Code | Description |
|---|---|
| K4 | No. 4 push-in fitting |
| K6 | No. 6 push-in fitting |

**Valve Ordering Code**

VT540 – A
(1) (3)

**3**. Valve Type

| | |
|---|---|
| A | 5/2 Single Coil |
| B | 5/2 Double Coil |
| C | 5/3 Double coil center close type |
| D | 5/3 Double coil center exhaust type |
| E | 5/3 Double coil center pressure type |
| GB | Blanking plate |

**Wiring Cable Ordering Code**

XY – VT – M12 – 020
(1) (2)

**1**. Cable Type

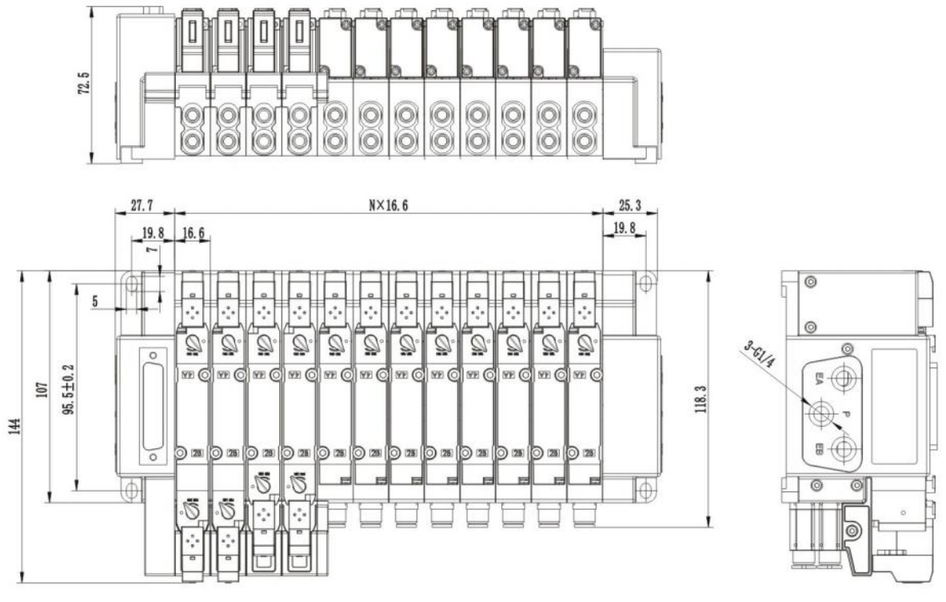
| Code | Description |
|---|---|
| M12 | 5-pin female connector cable (multi-pin power supply) |
| M12RJ45 | M12 female connector + RJ45 plug (multi-pin PLC communication) |
| M12M12 | M12 female + M12 male connector (mu/ti-pin power communication) |
| DSUB25 | 25-pin D-SUB female connector cable (mu/ti-pin cable) |

**2**. Cable Length

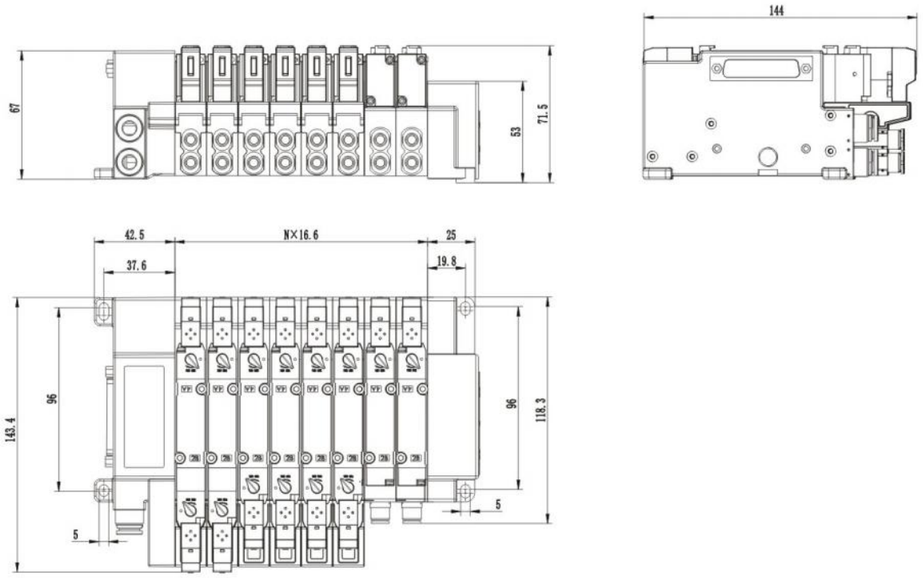
| Code | Description |
|---|---|
| 020 | 2 meters |
| XXX | Custom length, please contact us |

## Dimension Drawing

VT540 Graphy **Multi-pin Top Exit**

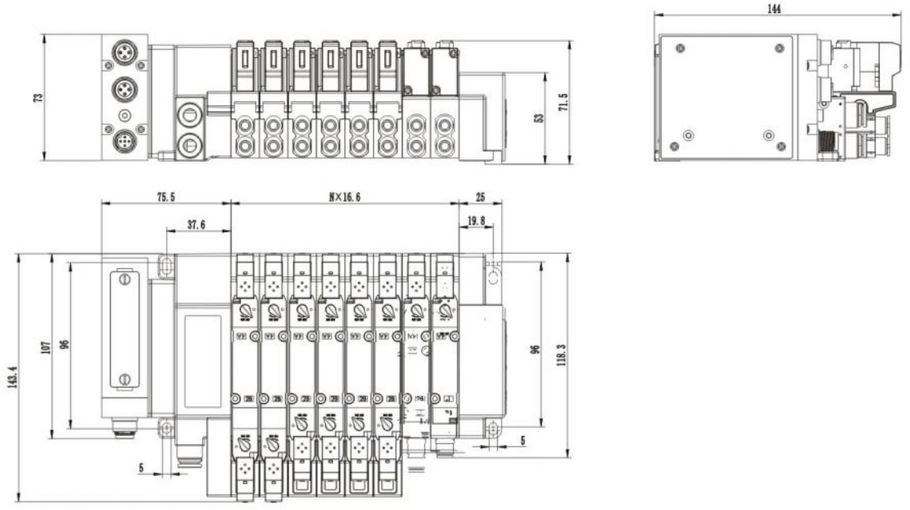



VT540 Graphy **Multi-pin Left-side Exit**

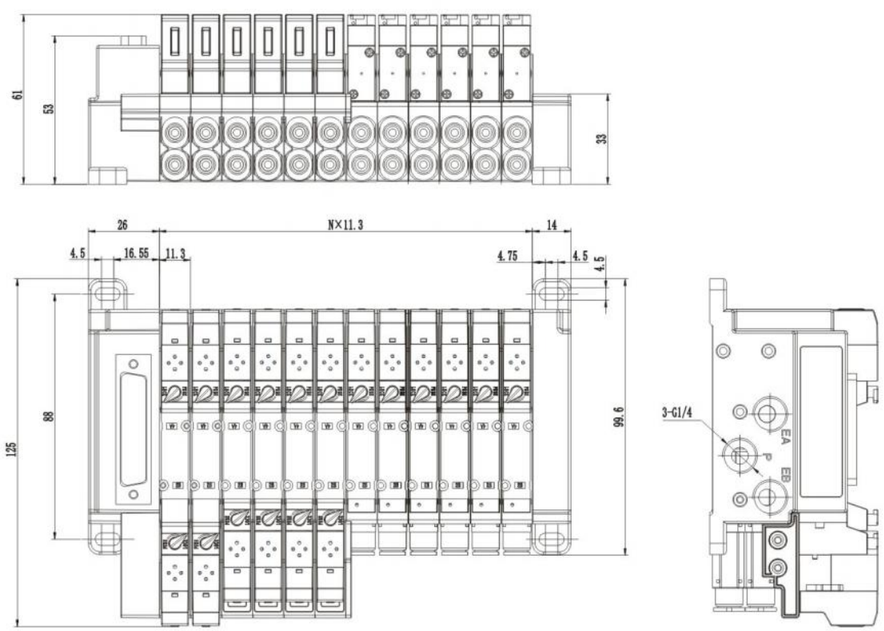


## Dimension Drawing

VT540 Graphy **Bus-Type**

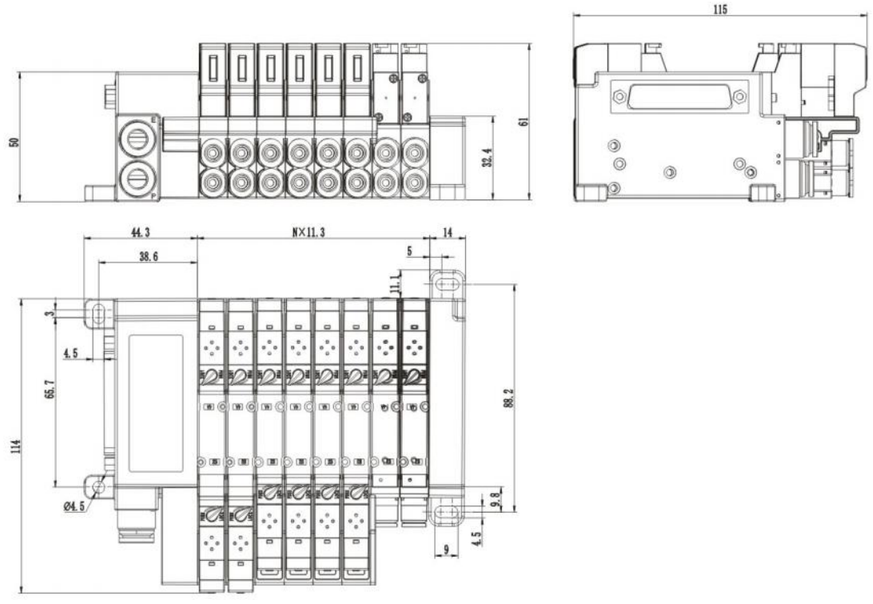



VT340 Graphy **Multi-pin Top Exit**

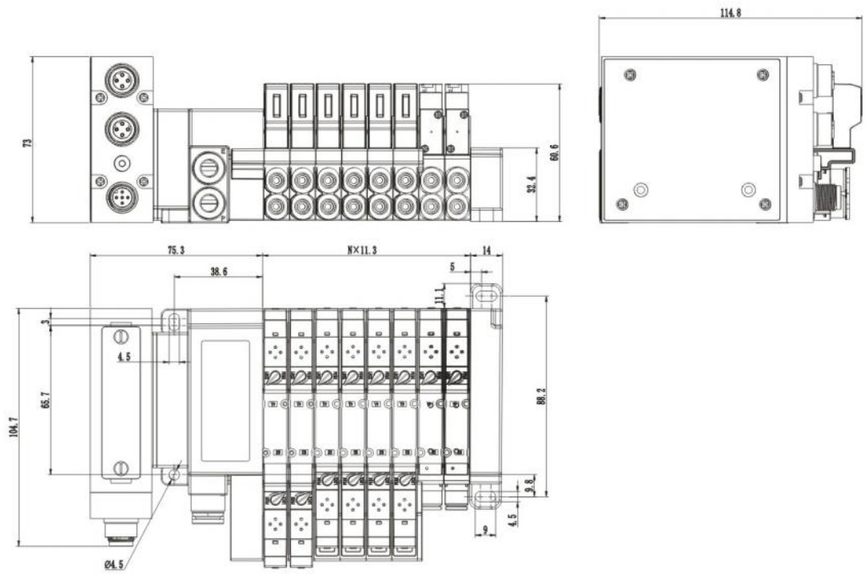



## Dimension Drawing

VT340 Graphy **Multi-pin Left-side Exit**

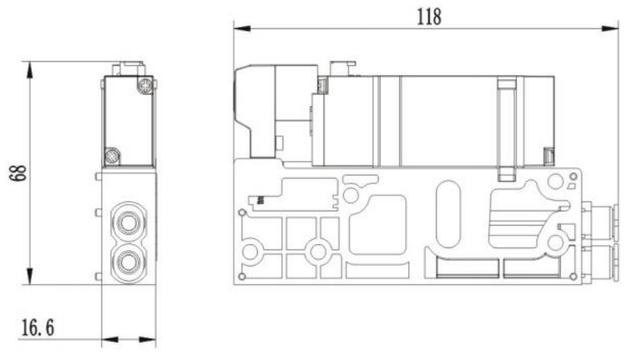



VT340 Graphy **Bus-Type**

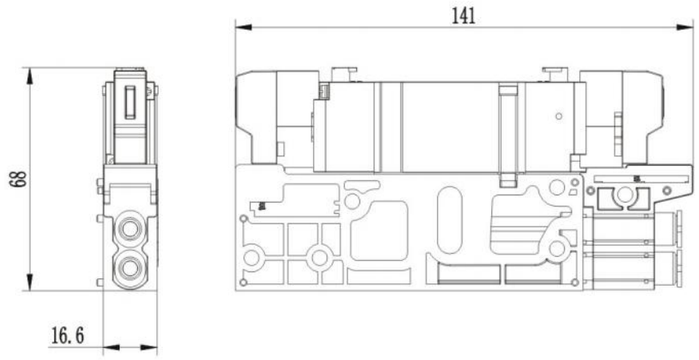


## VT540 Outline Drawing - Single Valve

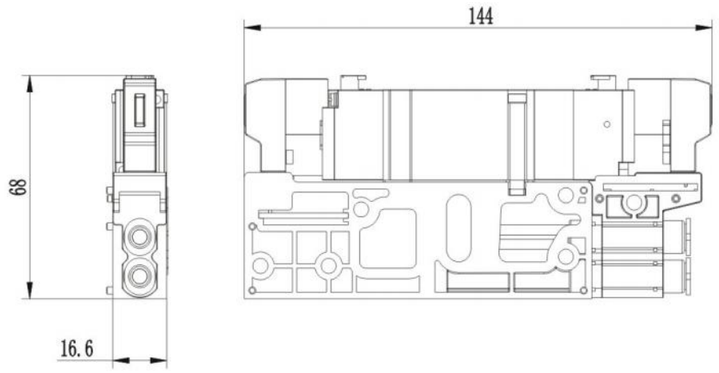
### 1. VT540-K6/K4-A




### 2. VT540-K6/K4-B

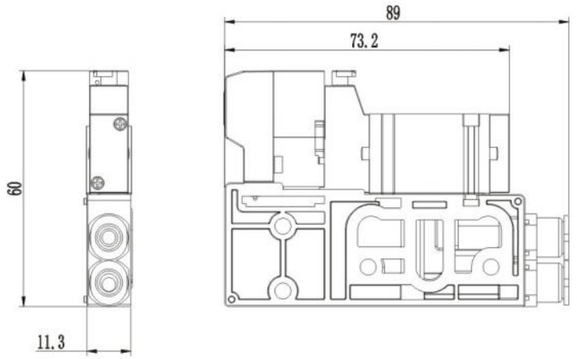



### 3. VT540-K6/K4-C/D/E

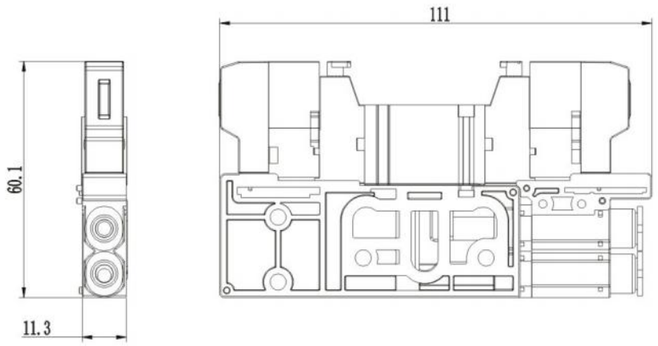



## VT340 Outline Drawing - Single Valve

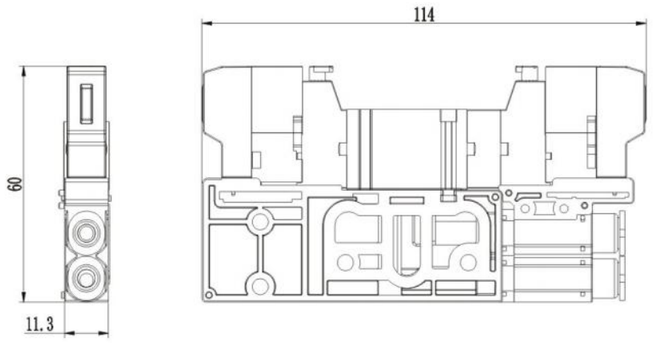
### 1. VT340-K6/K4-A




### 2. VT340-K6/K4-B

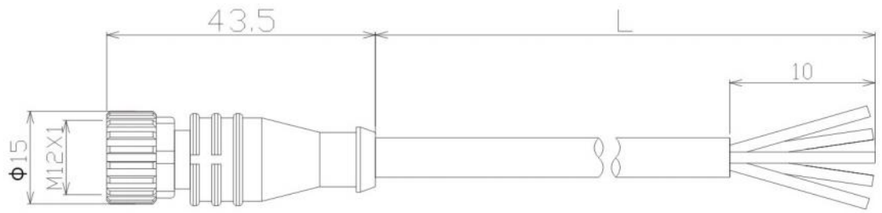



### 3. VT340-K6/K4-C/D/E

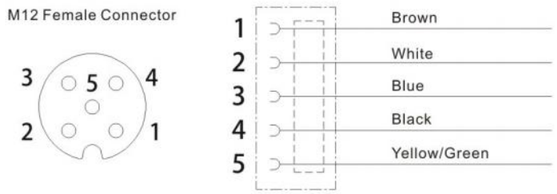


## VT Series Outline Drawing - Wiring

**Bus-Type Power Cable: XY-VT-M12-020**

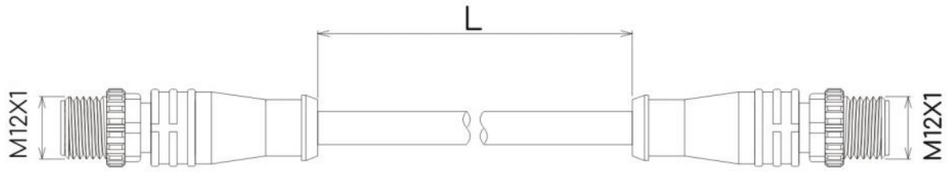



Schematic diagram

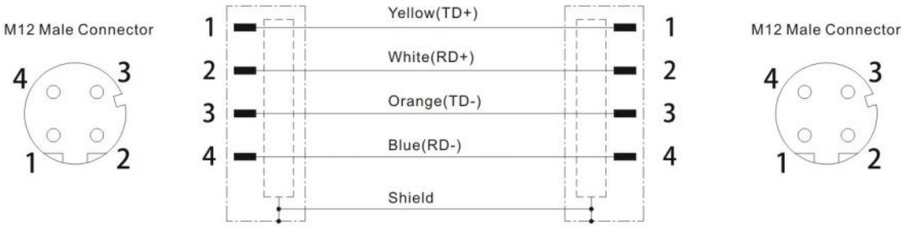



## VT Series Outline Drawing - Wiring

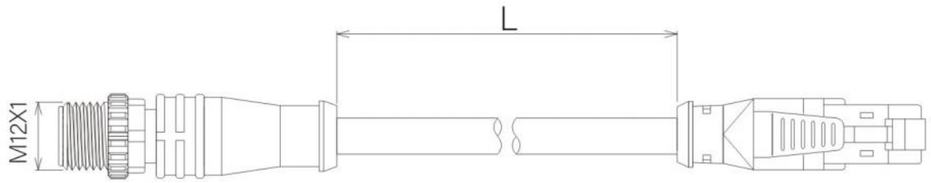
**Bus-Type Serial Communication Cable: XY-VT-M12M12-020**



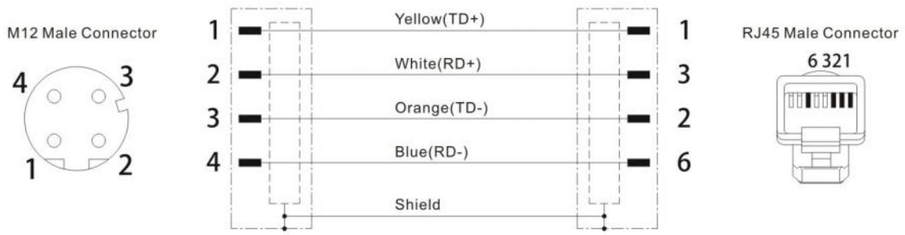

Schematic diagram



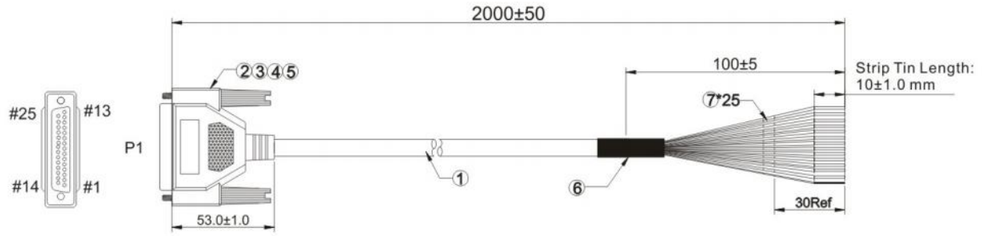

**Bus-Type PLC Communication Cable: XY-VT-M12RJ45-020**




Schematic diagram




**Multi-pin Power Cable: XY-VT-DSUB25-020**




Schematic diagram

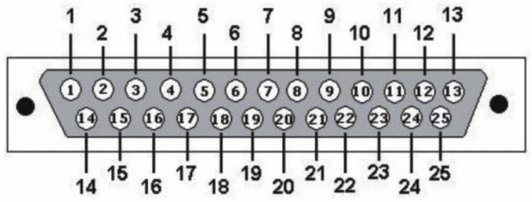
| P1 | Wiring Diagram | Wire Color Code |
|---|---|---|
| 1 | 1 | Black |
| 2 | 2 | Black / White |
| 3 | 3 | Brown |
| 4 | 4 | Brown / White |
| 5 | 5 | Red |
| 6 | 6 | Red / White |
| 7 | 7 | Red / Black |
| 8 | 8 | Orange |
| 9 | 9 | Orange / White |
| 10 | 10 | Orange / Black |

| P1 | Wiring Diagram | Wire Color Code |
|---|---|---|
| 11 | 11 | Yellow |
| 12 | 12 | Yellow/ Black |
| 13 | 13 | Green |
| 14 | 14 | Green / White |
| 15 | 15 | Green / Black |
| 16 | 16 | Blue |
| 17 | 17 | Blue / White |
| 18 | 18 | Purple |
| 19 | 19 | Purple / White |
| 20 | 20 | Gray |

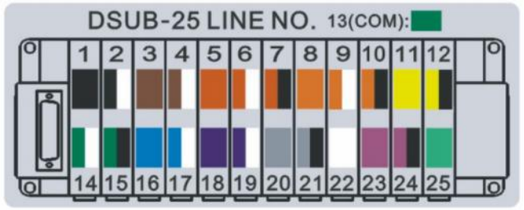
| P1 | Wiring Diagram | Wire Color Code |
|---|---|---|
| 21 | 21 | Gray / Black |
| 22 | 22 | White |
| 23 | 23 | Pink |
| 24 | 24 | Pink/ Black |
| 25 | 25 | Light Green |
| S | | Earth / Ground Wire |

## Wiring Instructions

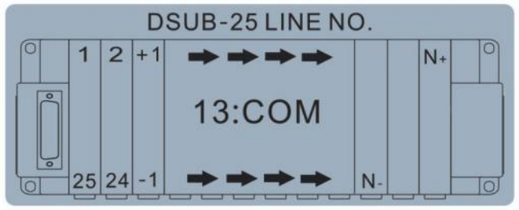
### Multi-pin Wiring Instructions




DSUB-25 Pinout Diagram




Wiring Reference Diagram (Pins 2-12)

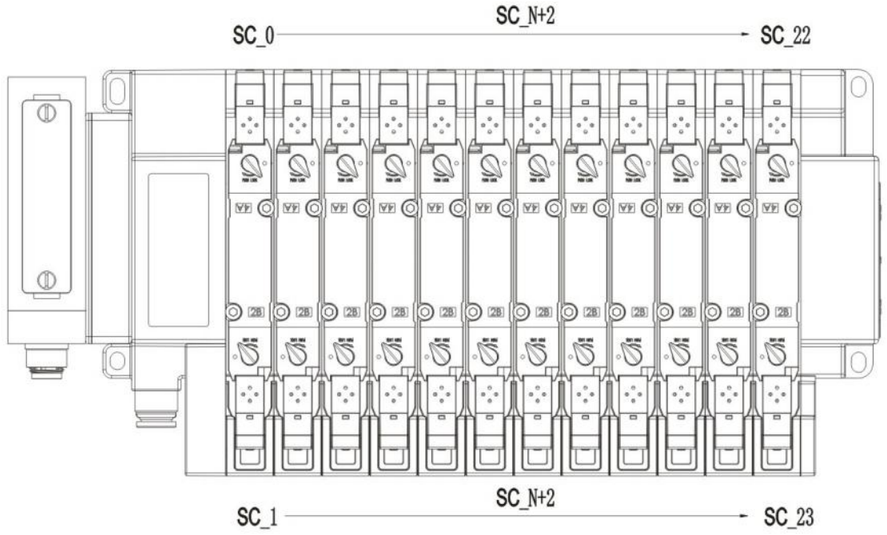



Wiring Reference Diagram (Pins 13-24)

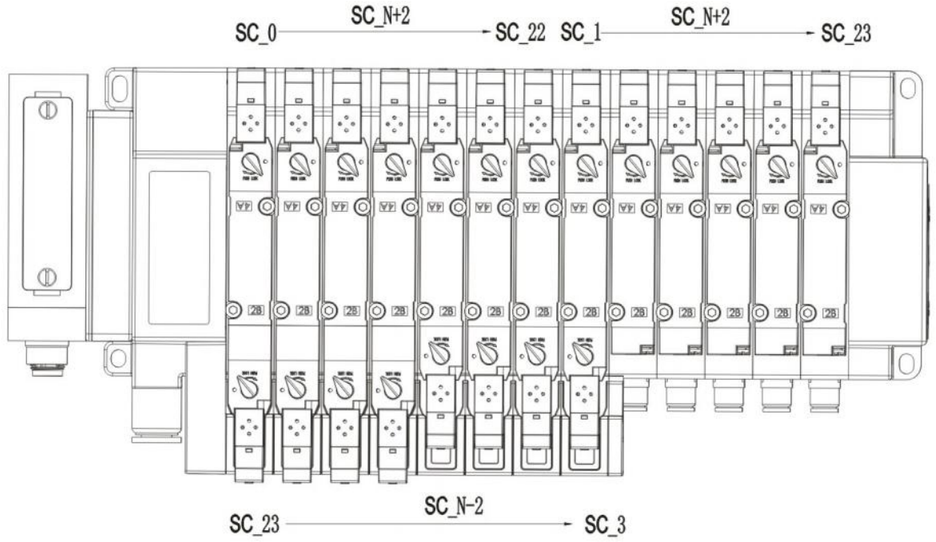
| Wire No. | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Color | Black | Black / White | Brown | Brown / White | Red | Red / White | Red / Black | Orange | Orange / White | Orange / Black | Yellow | Yellow / Black |
| Wire No. | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| Color | Green / White | Green / Black | Blue | Blue / White | Purple | Purple / White | Gray | Gray/ Black | White | Pink | Pink/ Black | Light Green |
| COM: 13 | Color: Green | | | | | | | | | | | |

Notes:
1. Products wired from 2-12:
 • For single-solenoid control, terminals 1-12 correspond to the control wires of the valves atthe respective positions.
 • For double-solenoid control, terminals 14-25 correspond to the control wires of the valvesat the respective positions.
2. Products wired from 13-24:
 • For single-solenoid control, the control terminals for the valves at the respective positionsare P1 to P25 (depending on the number of single-solenoid positions).
 • For double-solenoid control, the control terminals for the valves at the respectivepositions are P25 to P14 (depending on the number of double-solenoid positions).
3. Terminal P13 is the common (COM) terminal.

## Bus-Type Output List & Valve Position Mapping Diagram

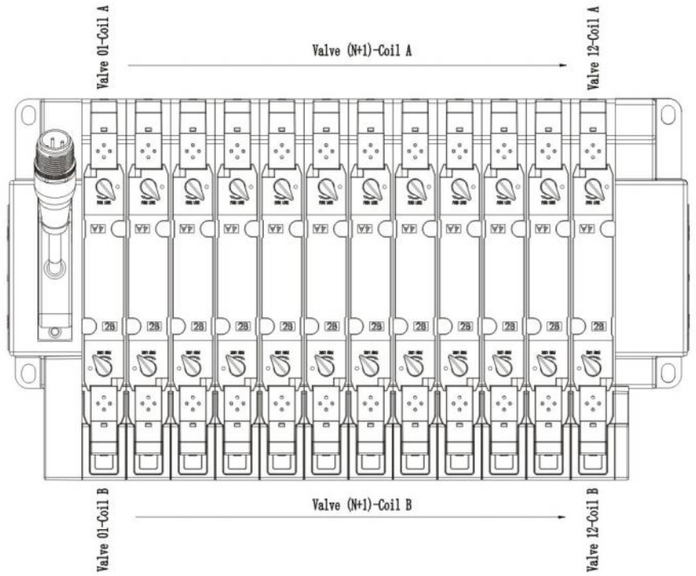



When Total Number of Stations≤12

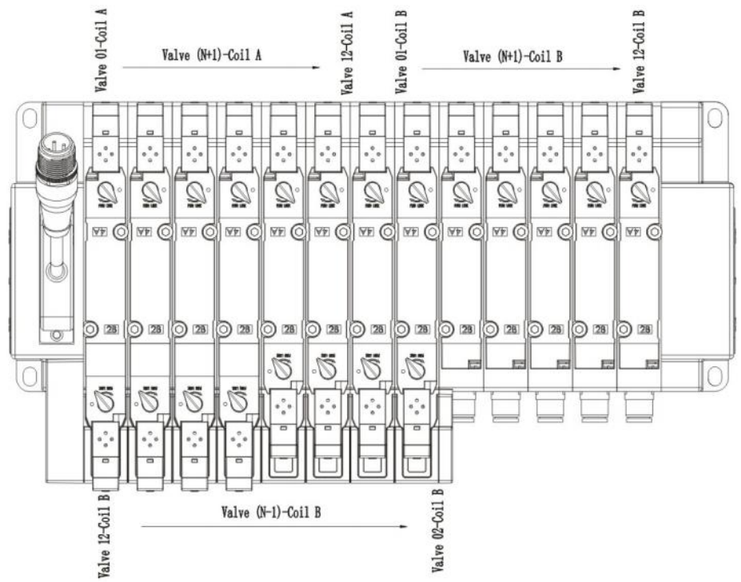



When Total Number of Stations 13~24

## Iolink Valve Corresponding Position Diagram



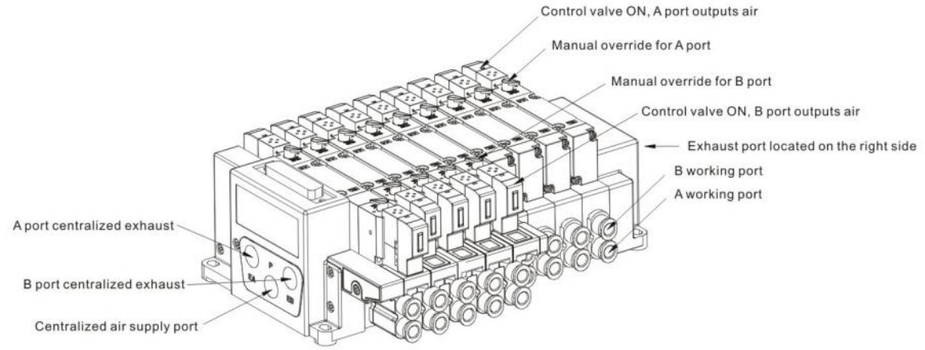

When Total Number of Stations≤12



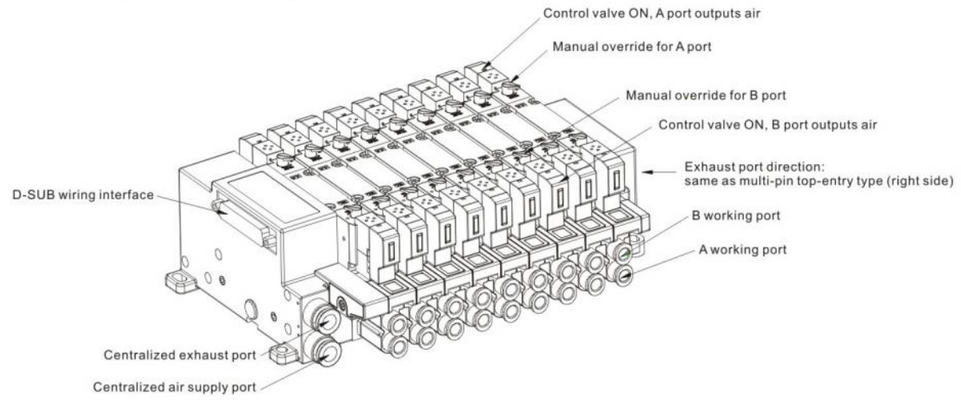

When Total Number of Stations 13~24

## Function Description

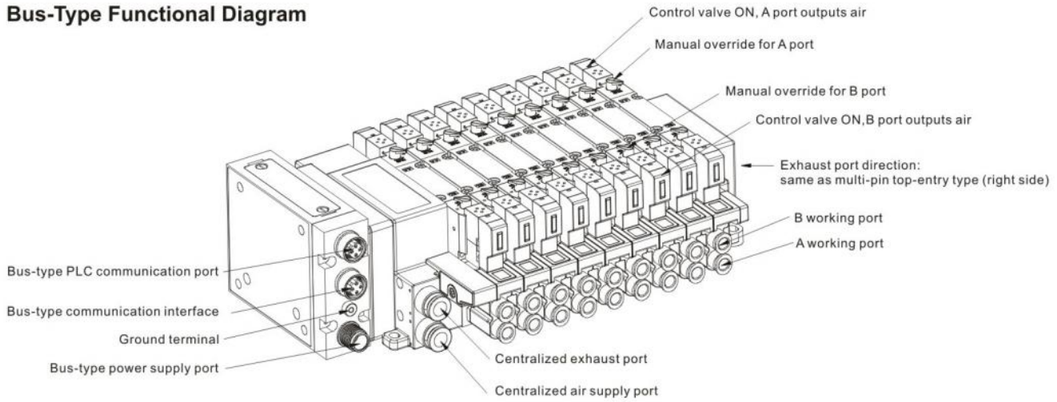
### Multi-pin Top-Entry Functional Diagram




### Multi-pin Left-Entry Functional Diagram

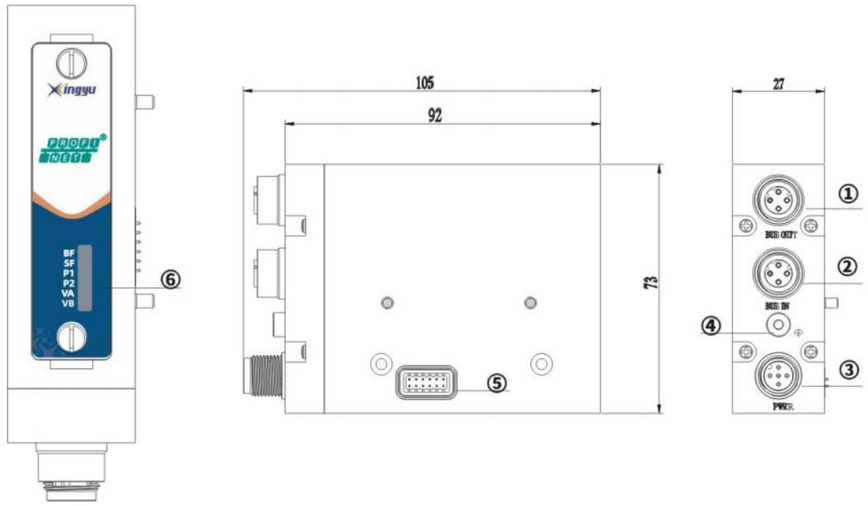



### Bus-Type Functional Diagram



## Valve Manifold Bus Module

PROFINET Module Outline & Interfaces

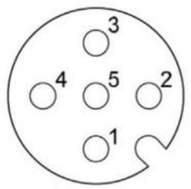



| No. | Definition | Description |
|---|---|---|
| 1 | P1 | Interface 1 PORT OUT, M12 Female, 4-pin, D-coded |
| 2 | P2 | Interface 2 PORT IN, M12 Female, 4-pin, D-coded |
| 3 | Current | Input Power, M12 Male, 5-pin, A-coded |
| 4 | Ground Connection | Ground Terminal |
| 5 | Output | 12PIN |
| 6 | Indicator Light | Status Display |

### P1\P2: M12 4PIN socket, D-coded


| No. | Definition | Description |
|---|---|---|
| 1 | TD+ | Transmit Data + |
| 2 | RD+ | Receive Data + |
| 3 | TD- | Transmit Data - |
| 4 | RD- | Receive Data - |

### PWR: M12 5PIN plug, A-coded




| No. | Definition | Description |
|---|---|---|
| 1 | V1 24V | +24V for solenoid valve |
| 2 | V1 0V | 0V for solenoid valve |
| 3 | V2 24V | +24V for V2 unit operation |
| 4 | V2 0V | 0V for V2 unit operation |
| 5 | FE | Function Ground Connection |

## PROFINET Module Functional Features

| | |
|---|---|
| Project Specification | Profinet |
| Control Power Supply | DC24V ±10% |
| Output Power Supply | DC24V ±10% |
| Internal Friction Current | Less than 100 mA |
| Output Points | 24 Points |
| Output Load | Single Valve 24V 1W Output, 24 Valves Maximum Output Current 1.5A |
| Output Polarity | PNP,-COM |
| Version | Version 2.4, Conformance Class CC-C |
| Addressing mode | DCP |
| Voltage Monitoring | Supported |
| | Supported |
| IRT (Isochronous Real Time) | Available |
| MRP (Media Redundancy Protocol) | Available |
| Diagnostics | Available |
| Communication Rate | 100M bps |
| Communication Port | Use M12( Meet Profinet Specification) |
| Communication Connection Type | Daisy Chain |
| Set File | GCD File |
| Authentication | EN 61000-6-4:2007+A1:2011,EN IEC 61000-6-2:2019 |
| EMI | CLASS A |
| Power Interruptions | More than 10ms |
| Withstand Voltage | GB/T24344, 500 VAC for one minute |
| Insulation Resistance | GBT24343, 500VDC Voltage, Insulation at least 10 MΩ |
| Vibration Measurement | 5G, 10~150Hz, Continuous Vibration test for 2 hours |
| Working Temperature | -5~50℃ |
| Working Humidity | 35-85%RH |

## PROFINET Module Indicator LED Description

| No. | Definition | Indicator | Description |
|---|---|---|---|
| 1 | BF | Light Off | PROFINET software is not initialized |
| | | Red Light Normally On | Equipment Offline |
| | | Red Light Single Flash | Hardware Configuration and Parameterization are not reasonable |
| | | Red Light Flash Three Times | IOPS = BAD (PLC Stop) |
| | | Green Light Normally On | Communication is Normal |
| 2 | SF | Light Off | The device was not initialized |
| | | Red Light Normally On | Hardware Failure |
| | | Red Light Flash Slowly | Open circuit Fault |
| | | Red Light Flash Swiftly | Short Circuit Fault |
| | | Red Light Double Flash | Error , Internal Communication |
| | | Red Light Flash Three Times | A Fatal Error |
| | | Green Light Normally On | Module is Normal |
| 3 | P1 | Light Off | Link Lost Connection |
| | | Yellow Light On Green Light Flashes | Link Communication Activation |
| | | Yellow Light On / Green Light ON | Link Communication Establishment |
| 4 | P2 | Light Off | Link Lost Connection |
| | | Yellow Light On / Green Light Flashes | Link Communication Activation |
| | | Yellow Light On / Green Light ON | Link Communication Establishment |
| 5 | VA | Green Light Normally On | Manifold Power Supply , Normal |
| | | Red Light Flashes | Manifold Power Supply , Under voltage |
| | | Red Light Normally On | Manifold Power Supply, Over voltage |
| 6 | VB | Green Light Normally On | System Power Supply , Normal |
| | | Red Light Flashes | System Power Supply , Under voltage |
| | | Red Light Normally On | System Power Supply, Over voltage |

## Input and Output Data List

### 4.1 Input list

| | bit7 | bit6 | bit5 | bit4 | bit3 | bit2 | bit1 | bit0 |
|---|---|---|---|---|---|---|---|---|
| BYTE0 | | OC | SC | COR | UV_V2 | OV_V2 | UV_V1 | OV_V1 |
| BYTE1 | SC_7 | SC_6 | SC_5 | SC_4 | SC_3 | SC_2 | SC_1 | SC_0 |
| BYTE2 | SC_15 | SC_14 | SC_13 | SC_12 | SC_11 | SC_10 | SC_9 | SC_8 |
| BYTE3 | SC_23 | SC_22 | SC_21 | SC_20 | SC_19 | SC_18 | SC_17 | SC_16 |
| BYTE4 | OC_7 | OC_6 | OC_5 | OC_4 | OC_3 | OC_2 | OC_1 | OC_0 |
| BYTE5 | OC_15 | OC_14 | OC_13 | OC_12 | OC_11 | OC_10 | OC_9 | OC_8 |
| BYTE6 | OC_23 | OC_22 | OC_21 | OC_20 | OC_19 | OC_18 | OC_17 | OC_16 |
| BYTE7 | COUNT_7 | COUNT_6 | COUNT_5 | COUNT_4 | COUNT_3 | COUNT_2 | COUNT_1 | COUNT_0 |
| BYTE8 | COUNT_15 | COUNT_14 | COUNT_13 | COUNT_12 | COUNT_11 | COUNT_10 | COUNT_9 | COUNT_8 |
| BYTE9 | COUNT_23 | COUNT_22 | COUNT_21 | COUNT_20 | COUNT_19 | COUNT_18 | COUNT_17 | COUNT_16 |

**BYTE0:**

| Indicator | Description | |
|---|---|---|
| bit7 | Reserve | |
| bit6 | 1 Open Circuit Detected 0 No Open Circuit Detected | |
| bit5 | 1 Short Circuit Detected 0 No Short Circuit Detected | |
| bit5 | 1 The switch count has reached the upper threshold 0 The switch count donot reach the upper threshold | |
| bit3:bit2 | 0:0 | Electronics power supply Normal |
| | 0:1 | Electronics power supply Over Voltage |
| | 1:0 | Electronics power supply Under Voltage |
| bit1:bit0 | 0:0 | Valves power supply Normal |
| | 0:1 | Valves power supply Over Voltage |
| | 1:0 | Valves power supply Under Voltage |

**BYTE1：BYTE3**

Sc-0 corresponds to the short circuit of channel 0, SC-23 corresponds to the short circuit of channel 23, and so on to know the short circuit of each channel.
Bit value: 1 Short circuit, 0 indicates no short circuit.

**BYTE4：BYTE6**

0C-0 corresponds to the open status of channel 0, OC-23 corresponds to the open status of channel 23, and so on to know the open status of each channel.
The Bit value is 1 Open circuit, and 0 indicates no open circuit.

**BYTE7：BYTE9**

Count-0 indicates the open status of channel 0, count-23 indicates the open status of channel 23, and so on to know the open status of each channel.
The Bit value is 1 Open circuit, and 0 indicates no open circuit.

### 4.2 Output List

| | bit7 | bit6 | bit5 | bit4 | bit3 | bit2 | bit1 | bit0 |
|---|---|---|---|---|---|---|---|---|
| BYTE0 | SC_7 | SC_6 | SC_5 | SC_4 | SC_3 | SC_2 | SC_1 | SC_0 |
| BYTE1 | SC_15 | SC_14 | SC_13 | SC_12 | SC_11 | SC_10 | SC_9 | SC_8 |
| BYTE2 | SC_23 | SC_22 | SC_21 | SC_20 | SC_19 | SC_18 | SC_17 | SC_16 |

O_0~O_23: O_0 indicates Channel 0, O_23 indicates Channel 23, and so on to know the location of other channels.

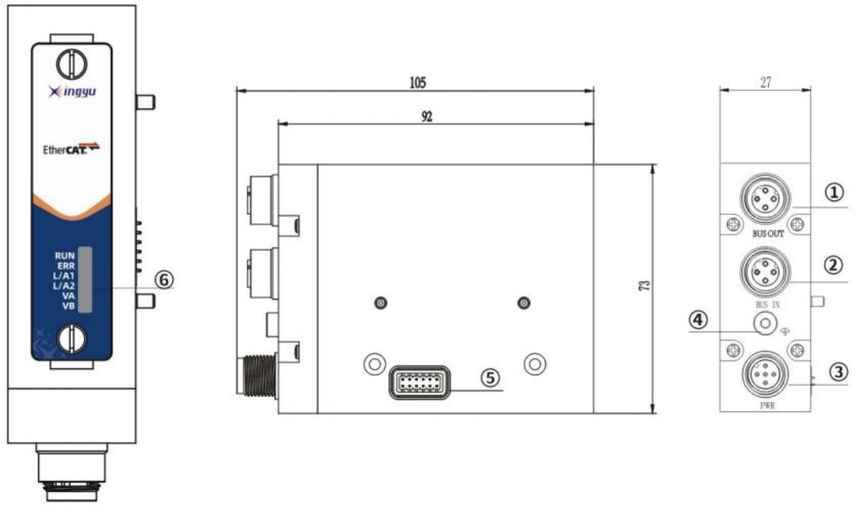
### 4.3 Error Code

| Error Code (Hexadecimal) | Error Description | LED State |
|---|---|---|
| 0x00 | 0x00, Normal | "SF" LED, Green Light Normally On |
| 0x01 | Manifold , Coil Short circuit | "SF" LED, Red Light Flashes |
| 0x06 | Manifold, Coil Open Circuit | "SF" LED, Red Light Flashes |
| 0x07 | N/A | |
| 0x100 | The power supply to the module is under voltage | "V2" LED, Red Light Flashes |
| 0x101 | The power supply to the module is over voltage | "V2" LED, Red Light Normally On |
| 0x102 | The power supply to the manifold is under voltage | "V1" LED, Red Light Flashes |
| 0x103 | The power supply to the manifold is over voltage | "V1" LED, Red Light Normally On |

Profinet Module
Environment Configuation
Scan for configuration video

## Valve Manifold Bus Module

EtherCAT Module Outline & Interfaces

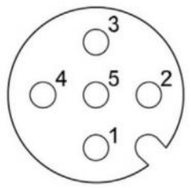



| No. | Definition | Description |
|---|---|---|
| 1 | P1 | Interface 1 PORT OUT, M12 Female, 4-pin, D-coded |
| 2 | P2 | Interface 2 PORT IN, M12 Female, 4-pin, D-coded |
| 3 | Current | Input Power, M12 Male, 5-pin, A-coded |
| 4 | Ground Connection | Ground Terminal |
| 5 | Output | 12PIN |
| 6 | Indicator Light | Status Display |

### P1\P2: M12 4PIN socket, D-coded


| No. | Definition | Description |
|---|---|---|
| 1 | TD+ | Transmit Data + |
| 2 | RD+ | Receive Data + |
| 3 | TD- | Transmit Data - |
| 4 | RD- | Receive Data - |

### PWR: M12 5PIN plug, A-coded




| No. | Definition | Description |
|---|---|---|
| 1 | V1 24V | +24V for solenoid valve |
| 2 | V1 0V | 0V for solenoid valve |
| 3 | V2 24V | +24V for V2 unit operation |
| 4 | V2 0V | 0V for V2 unit operation |
| 5 | FE | Function Ground Connection |

## EtherCAT Module Functional Features

| | |
|---|---|
| Project Specification | Ethercat |
| Control Power Supply | DC24V ±10% |
| Output Power Supply | DC24V ±10% |
| Internal Friction Current | Less than 100 mA |
| Output Points | 24 Points |
| Output Load | Single Valve 24V 1W Output, 24 Valves Maximum Output Current 1.5A |
| Output Polarity | PNP,-COM |
| Version | Test Record V1.2.8 |
| EtherCAT Mode | Direct Mode |
| Address Setting | Automatic |
| DC Mode | Supported, Distributed Clocks |
| Voltage Monitoring | Supported |
| Reverse Polarity & Overvoltage Protection | Supported |
| Diagnostics | Open circuit, short circuit, and switch count diagnostics |
| Communication Rate | 100M bps |
| Communication Port | Use M12( Meet EthernetCAT Specification) |
| Communication Connection Type | Daisy Chain |
| Set File | XML File |
| Authentication | EN 61000-6-4:2007+A1:2011,EN IEC 61000-6-2:2019 |
| EMI | CLASS A |
| Power Interruptions | More than 10ms |
| Withstand Voltage | GB/T24344, 500 VAC for one minute |
| Insulation Resistance | GBT24343, 500VDC Voltage, Insulation at least 10 MΩ |
| Vibration Measurement | 5G, 10~150Hz, Continuous Vibration test for 2 hours |
| Working Temperature | -10~50℃ |
| Working Humidity | 35-85%RH |

## EtherCAT Module Indicator LED Description

| No. | Definition | Indicator | Description |
|---|---|---|---|
| 1 | RUN | Green Light Out | The device is in INIT state |
| | | Green Light Flashes | The device is in SAFEOP state |
| | | Green Light Single Flash | The device is in PREOP state |
| | | Green Light Normally On | The device is in OP state |
| 2 | ERR | Red Light Out | Configuration Error |
| | | Red Light Flashes | No Error |
| | | Red Light Single Flash | Local Equipment Error |
| | | Red Light Double Flash | The watchdog is out of time |
| 3 | L/A1 | Light Out | Connection not established |
| | | Green Light On | Connection Established , No Communication |
| | | Green Light Flashes | Connection Established , Has Communication |
| 4 | L/A2 | Light Out | Connection Established , No Communication |
| | | Green Light On | Connection not established |
| | | Green Light Flashes | Connection Established , Has Communication |
| 5 | VA | Green Light On | Manifold Power Supply , Normal |
| | | Red Light Flashes | Manifold Power Supply , Under voltage |
| | | Red Light On | Manifold Power Supply, Over voltage |
| 6 | VB | Green Light On | System Power Supply , Normal |
| | | Red Light Flashes | System Power Supply , Under voltage |
| | | Red Light On | System Power Supply, Over voltage |

## Input and Output Data List

### 4.1 Input list

| | bit7 | bit6 | bit5 | bit4 | bit3 | bit2 | bit1 | bit0 |
|---|---|---|---|---|---|---|---|---|
| BYTE0 | | OC | SC | COR | UV_V2 | OV_V2 | UV_V1 | OV_V1 |
| BYTE1 | SC_7 | SC_6 | SC_5 | SC_4 | SC_3 | SC_2 | SC_1 | SC_0 |
| BYTE2 | SC_15 | SC_14 | SC_13 | SC_12 | SC_11 | SC_10 | SC_9 | SC_8 |
| BYTE3 | SC_23 | SC_22 | SC_21 | SC_20 | SC_19 | SC_18 | SC_17 | SC_16 |
| BYTE4 | OC_7 | OC_6 | OC_5 | OC_4 | OC_3 | OC_2 | OC_1 | OC_0 |
| BYTE5 | OC_15 | OC_14 | OC_13 | OC_12 | OC_11 | OC_10 | OC_9 | OC_8 |
| BYTE6 | OC_23 | OC_22 | OC_21 | OC_20 | OC_19 | OC_18 | OC_17 | OC_16 |
| BYTE7 | COUNT_7 | COUNT_6 | COUNT_5 | COUNT_4 | COUNT_3 | COUNT_2 | COUNT_1 | COUNT_0 |
| BYTE8 | COUNT_15 | COUNT_14 | COUNT_13 | COUNT_12 | COUNT_11 | COUNT_10 | COUNT_9 | COUNT_8 |
| BYTE9 | COUNT_23 | COUNT_22 | COUNT_21 | COUNT_20 | COUNT_19 | COUNT_18 | COUNT_17 | COUNT_16 |



BYTE0:

| Indicator | Description | |
|---|---|---|
| bit7 | Reserve | |
| bit6 | 1 Open Circuit Detected 0 No Open Circuit Detected | |
| bit5 | 1 Short Circuit Detected 0 No Short Circuit Detected | |
| bit4 | 1 The switch count has reached the upper threshold 0 The switch count donot reach the upper threshold | |
| bit3:bit2 | 0:0 | Electronics power supply Normal |
| | 0:1 | Electronics power supply Over Voltage |
| | 1:0 | Electronics power supply Under Voltage |
| bit1:bit0 | 0:0 | Valves power supply Normal |
| | 0:1 | Valves power supply Over Voltage |
| | 1:0 | Valves power supply Under Voltage |

**BYTE1：BYTE3**

Sc-0 corresponds to the short circuit of channel 0, SC-23 corresponds to the short circuit of channel 23, and so on to know the short circuit of each channel.
Bit value: 1 Short circuit, 0 indicates no short circuit.

**BYTE4：BYTE6**

0C-0 corresponds to the open status of channel 0, OC-23 corresponds to the open status of channel 23, and so on to know the open status of each channel.
The Bit value is 1 Open circuit, and 0 indicates no open circuit.

**BYTE7：BYTE9**

Count-0 indicates the open status of channel 0, count-23 indicates the open status of channel 23, and so on to know the open status of each channel.
The Bit value is 1 Open circuit, and 0 indicates no open circuit.

### 4.2 Output List

| | bit7 | bit6 | bit5 | bit4 | bit3 | bit2 | bit1 | bit0 |
|---|---|---|---|---|---|---|---|---|
| BYTE0 | SC_7 | SC_6 | SC_5 | SC_4 | SC_3 | SC_2 | SC_1 | SC_0 |
| BYTE1 | SC_15 | SC_14 | SC_13 | SC_12 | SC_11 | SC_10 | SC_9 | SC_8 |
| BYTE2 | SC_23 | SC_22 | SC_21 | SC_20 | SC_19 | SC_18 | SC_17 | SC_16 |

O_0~O_23: O_0 indicates Channel 0, O_23 indicates Channel 23, and so on to know the location of other channels.

Ethercat Module
Environment Configuation

Scan for configuration video

# Manifold Adapters

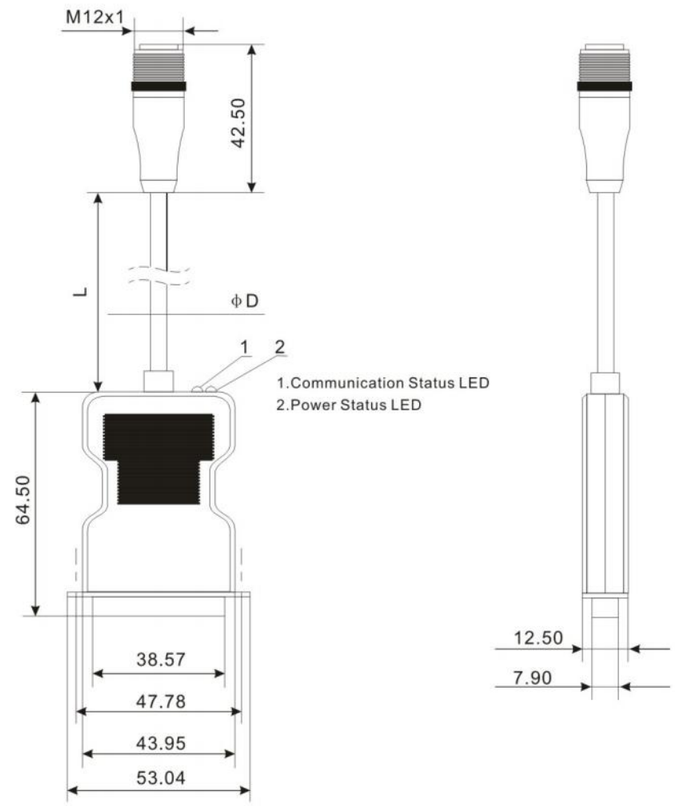
## Features

The Valve Manifold Adapter VTA-H24-COM13 is an IO-Link device for installed on DB25-connected valve manifold. It is a signal conversion module that converts the DB25 connection into an IO-Link connection. It adopts a 3-wire connection with an IO-Link Type- A port, and supports the drive of 24 solenoid valves, with a total drive current of no more than 1.6A, and a maximum of 500mA for a single circuit. The adapter is powered from the IO-Link master. Applicable to valve terminals with 13-pin DB25 connector as the common end.

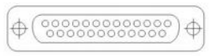
## Specification

| | |
|---|---|
| Model No. | VTA-H24-COM13 |
| IO-Link version | V1.1.3 |
| Rate | COM2(38.4k) |
| Min. cycle time | 3.5ms |
| Process data | 4 bytes |
| Display/Running | Green LED |
| Configurable Inputs & Outputs | NO |
| Working Voltage | DC18~30V |
| Total current (actuator) | 1.6A |
| Quiescent current | 30mA |
| Typical Working Voltage | DC24V |
| Actuator connection port | DB25 |
| Sensor connection port | M12x1 |
| Wire | 0.6m*0.34mm² |
| Shell material | PA |
| Sheath material | PUR |
| Protection class | IP40 |
| Operating temperature | -10~55℃ |
| Storage temperature | -25~70℃ |
| Mechanical dimensions | 62mm*52mm*12mm |

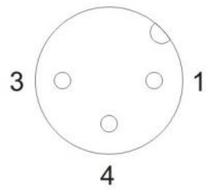
## Dimension Graphy




## Connection Method



PIN 1-2, 14-25:Output
PIN 13:0V




IO-Link Interface:
PIN1:24V(Controller +Valve)
PIN 3:0V
PIN 4: IO-Link

## VT15 Manifold

### Features

1. The air circuit layout is simple and intuitive, reducing the wiring space
2. More reliable air circuit structure design
3. Less installation space and convenient installation
4. Centralized air supply and exhaust
5. Modular design, any number of valve combinations

### Install And Operation

1. First connect air source to P port (Φ8 quick connector),and adjust the pressure to 7 bar.
2. Checking the V port (working port) of each solenoid working or not (NC type solenoid no out of air with no power condition)
3. Press the manual device to check the solenoid working position ( when press the manual device, NC type solenoid has air on working port)
4. Then connect the V port of each solenoid valve to the pneumatic actuator with an air pipe, and adjust it
5. Insert wire then through PLC to control the solenoids on manifold
6. Final step is put the manifold on the equipment fixed with screw

### Specification

| | |
|---|---|
| Model No. | VT15 |
| Working Ambient Temperature | -5℃~-50℃(Not frozen) |
| Max Pressure | 1.2bar |
| Working Pressure | 0.15~0.7bar |
| Working Medium | Compressed Air (filtered by 40μm filter screen) |
| Size | Width 74mm,height 67mm,length 183mm(18valves) |
| Rated Voltage | DC12/24V±10% |
| Bus Interface | DB-37 pin |
| Input Port | ϕ8 Quick connector |
| Exhaust Port | G1/8 Silencer |
| Working Port | ϕ6/ ϕ4 Quick connector |
| Solenoid Valve Type | 3/2 (NC) |
| Reted Power | 2.5W |
| Response Time | Open:9ms; Close :10ms |
| Valve Orifice | 1.4mm |
| Number Of Combinations | 2~18 |
| Manifold Material | PA6+50GF |
| Ip Class | IP40 |

### Ordering Code

VT15 – 08 K8 K6 – A 4 B 4

(1) (2) (3) (4) (5) (6) (5) (6)

**1.** Model Series
VT15

**2.** Combination
2-18

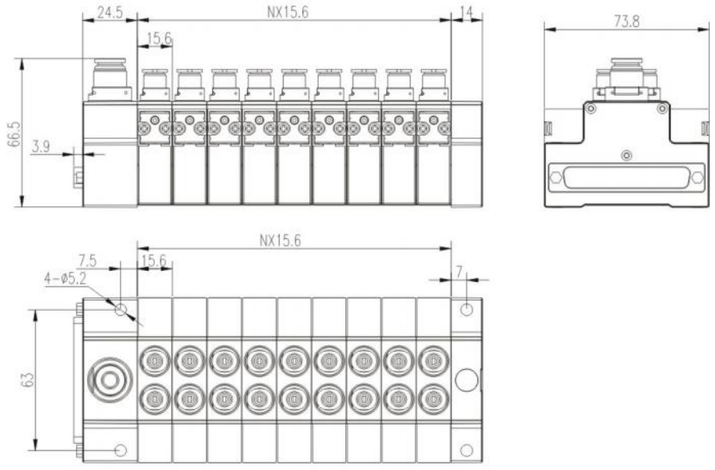
**3.** Input Port
K8: Φ8 Quick Connector

**4.** Working Port
K4: Φ4 Quick connector
K6: Φ6 Quick connector

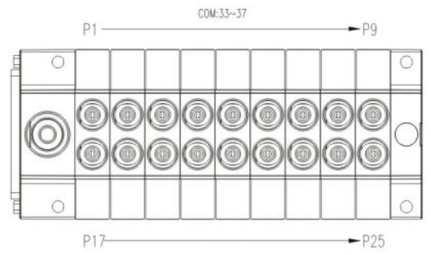
**5.** Valve Type
A: NC 3/2
B: NO 3/2

**6.** Valve Quantity
2-18

### Dimension Drawing




### Wiring Diagram



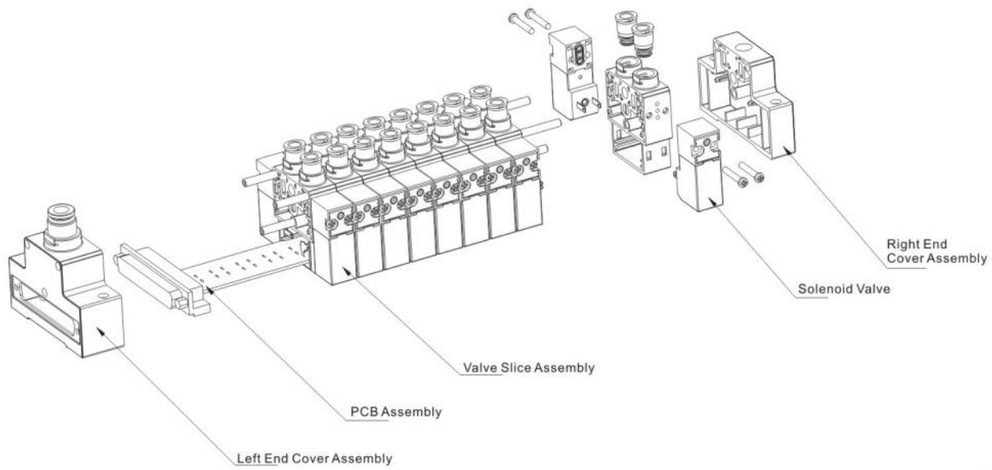

| P1 | Color |
|---|---|
| 1 | Black |
| 2 | Brown |
| 3 | Red |
| 4 | Orange |
| 5 | Yellow |
| 6 | Green |
| 7 | Blue |
| 8 | Purple |
| 9 | Gray |
| 10 | White |

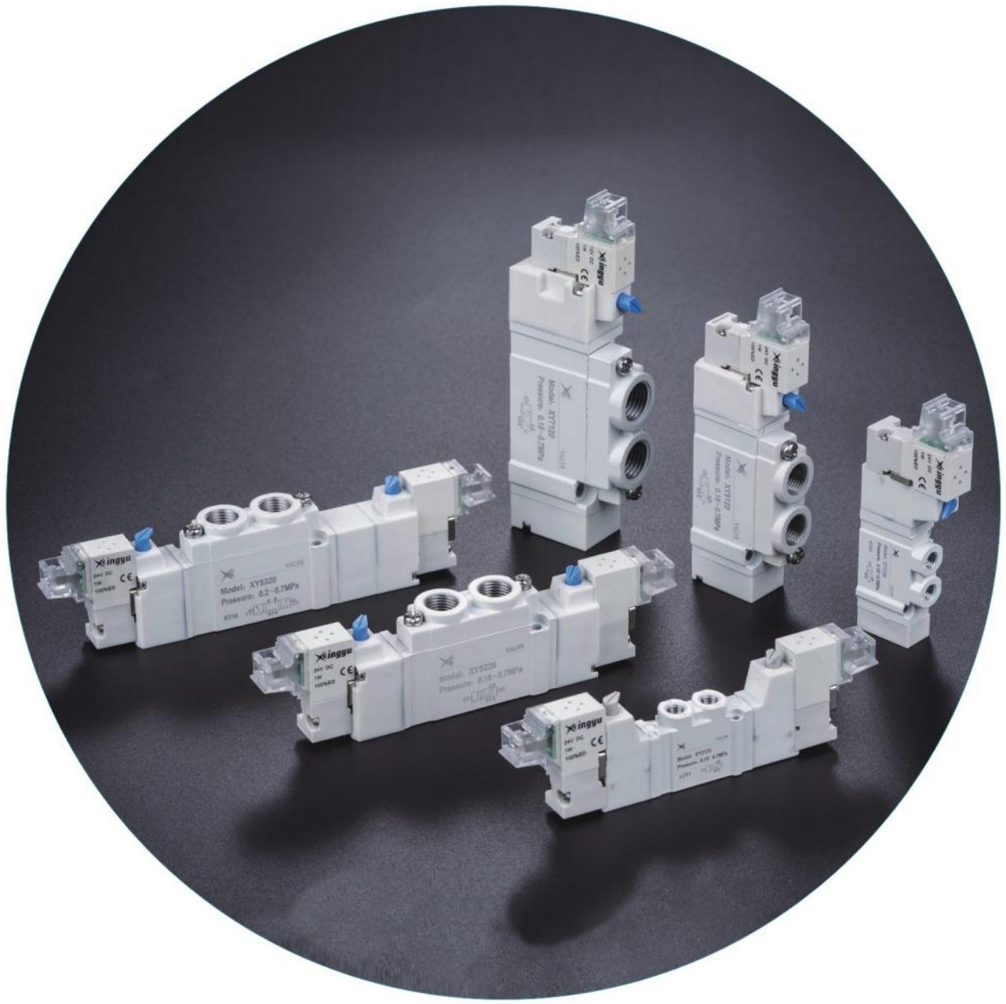
| P1 | Color |
|---|---|
| 11 | Pink |
| 12 | Light Green |
| 13 | Black / White |
| 14 | Brown / White |
| 15 | Red / White |
| 16 | Orange / White |
| 17 | Green / White |
| 18 | Blue / White |
| 19 | Purple / White |
| 20 | Red / Black |

| P1 | Color |
|---|---|
| 21 | Orange / Black |
| 22 | Yellow / Black |
| 23 | Green / Black |
| 24 | Gray / Black |
| 25 | Pink / Black |
| 26 | Pink / Red |
| 27 | Pink / Blue |
| 28 | Pink / Green |
| 29 | Light Blue |
| 30 | Light Blue / Black |

| P1 | Color |
|---|---|
| 31 | Light Blue / Red |
| 32 | Light Blue / Blue |
| 33 | Light Blue / Green |
| 34 | Gray / Red |
| 35 | Gray / Green |
| 36 | Purple / Black |
| 37 | Blue / Black |
| S | Ground Wire |
| | |
| | |

### Exploded-views





## XY Directional Valve Series

- Pilot structure, reliable quality
- High frequency and saving energy, 1W Rated power
- Space-saving, integrated installation possible
- High-speed and stable responsiveness

# XY Directional Valve Series

XINGYU ELECTRON

### XY3000 Series

### XY5000 Series

### XY7000 Series

## SPECIFICATION

| | | | | |
|---|---|---|---|---|
| Product series | | XY series 5-way solenoid valve | | |
| Model No. | | XY3000 / XY5000 / XY7000 | | |
| Product specifications | | 3000 Series | 5000 Series | 7000 Series |
| Operating pressure range (MPa) | 5/2 | 0.15-0.7 | | |
| | 5/3 | 0.2-0.7 | | |
| Working Medium | | Compressed Air (filtered by 40μm filter screen) | | |
| Operating Temperature | | -5~50℃ (not frozen) | | |
| Port Size | | Inlet=Outlet=Exhaust= M5 | Inlet=Outlet=Exhaust= 1/8 | Inlet=Outlett= 1/4 |
| | | | | Exhaust= 1/8 |
| Control Method | | Internal pilot | | |
| Pilot Exhaust Method | | External centralized exhaust | | |
| Max. Operating Frequency | 2 positions single electronic control | 10 | 5 | 5 |
| | 2 positions double electronic control | 10 | 5 | 5 |
| | 3 positions | 3 | 3 | 3 |
| Manual Operation Mode | | Manual press-down slew-lock type | | |
| Connection Method | | Wire / Vertical / Parallel / Vertical Parallel | | |
| Coil Rated Voltage | | DC 12/24 | | |
| Voltage Range | | Rated Voltage ± 10% | | |
| Power Consumption | Standard | 1W | | |
| | With Power-saving Circuit | Starting power 1.8W / Maintenance power 0.5W | | |
| Overcharge protection circuit | | Optional | | |
| Indicator Light | | Yes, with LED | | |
| Insulation Class | | F | | |

## Ordering Code

XY-3 ① 1 ② 20 ③ A ④ – □ ⑤ – B ⑥ L ⑦ □ ⑧ – 300 ⑨ – 2T ⑩ □ ⑪

**1**. Model Series
3: XY3000
5: XY5000
7: XY7000

**2**. Switching Mode
1: 5/2 Single Coil
4: 5/3 Double coil center exhaust type
2: 5/2 Double Coil
5: 5/3 Double coil center pressure type
3: 5/3 Double coil center close type

**3**. Connection Method
20 Thread Type
40 Namur Type

**4**. Manual Operation
A: Press the lock button then turn

**5**. Thread type
Blank: G
R: RC
N: NPT

**6**. Voltage Type
B: DC24V
D: DC12V

**7**. Wire Lead Type
L: Vertical
M: Parallel
N: Vertical Parallel
E: Lead-wire type

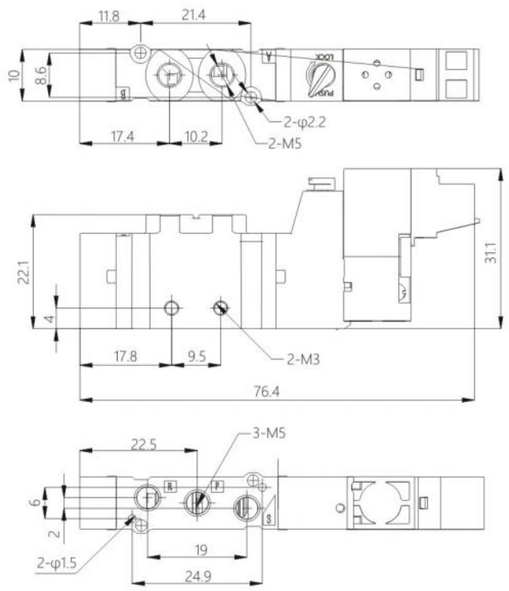
**8**. Indicator light, surge, voltage protection circuit
Blank: With indicator light, no surge and voltage protection
R: With indicator light, surge and voltage protection

**9**. Wire Length
300mm
Customized

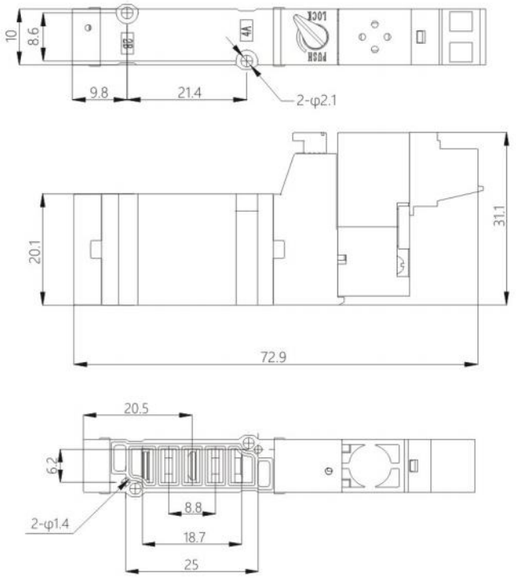
**10**. Valve quantity
1T: one valve manifold
2T: two valves manifold
.....
20T: twenty valves manifold

**11**. Manifold thread type
Blank: G
R: RC
N: NPT

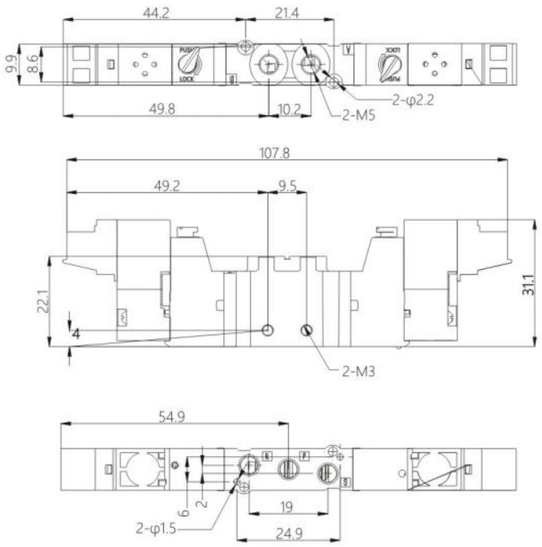
### XY3120 2 positions single coil thread type



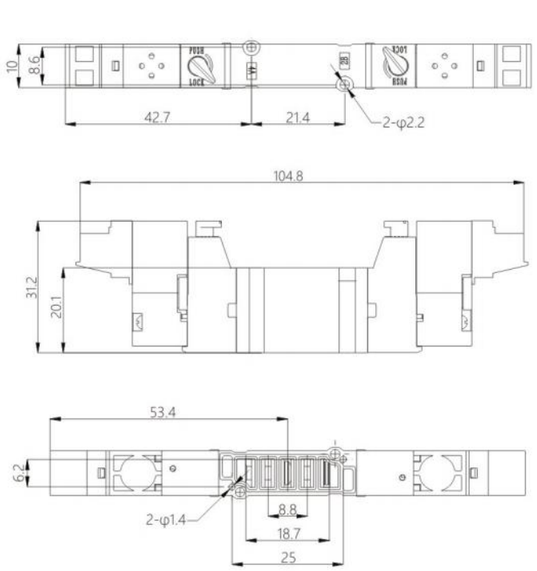

### XY3140 2 positions single coil namur type



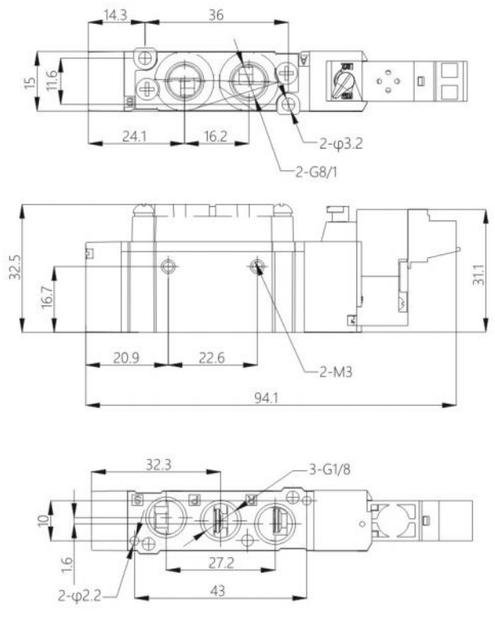
### XY3220 2 positions double coil thread type



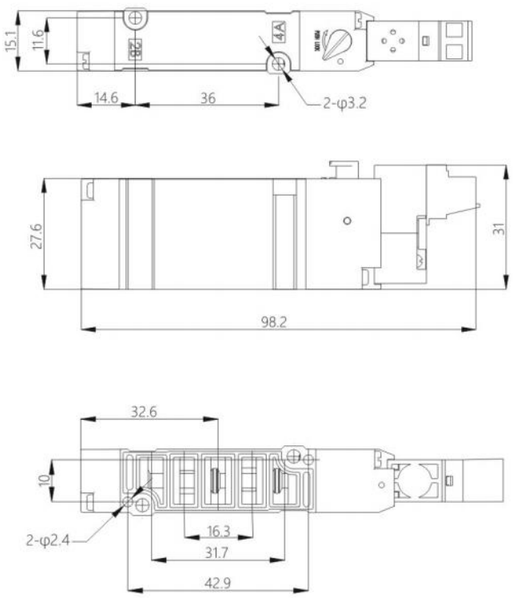

### XY3240 2 positions double coil namur type




### XY5120 2 positions single coil thread type

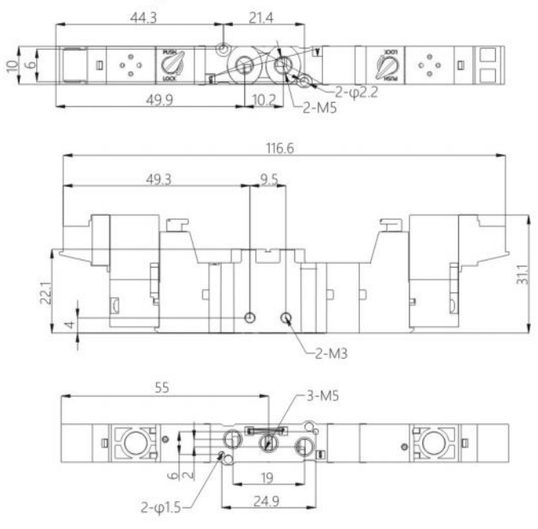



### XY5140 2 positions single coil namur type



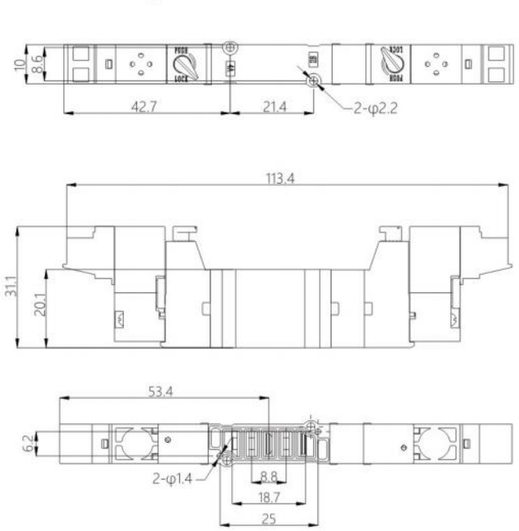

### 3 positions center close type, center exhaust type,center pressure type

**Thread Type XY3 3/4/5 20**

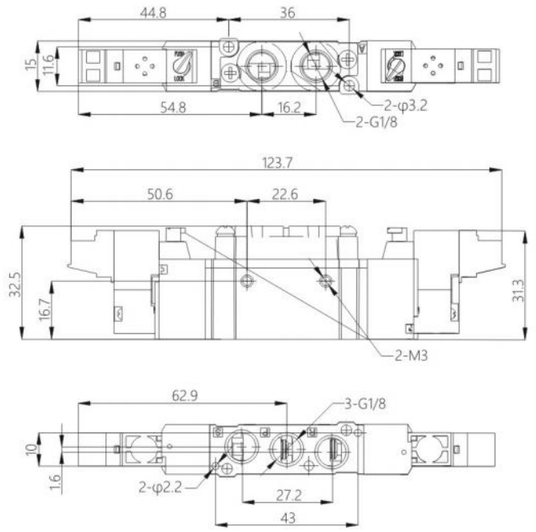



### 3 positions center close type, center exhaust type,center pressure type

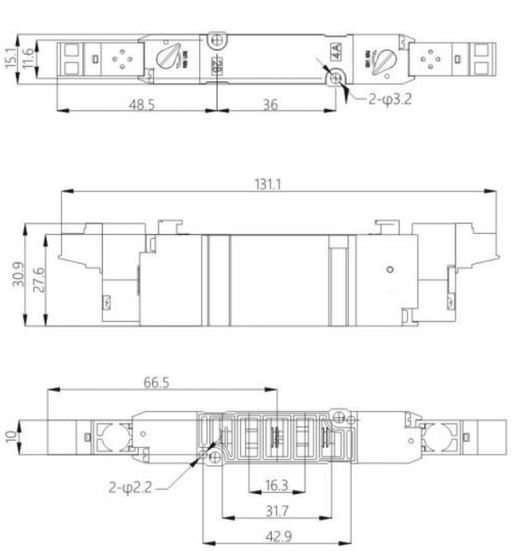
**Namur Type XY3 3/4/5 40**




### XY5220 2 positions double coil thread type

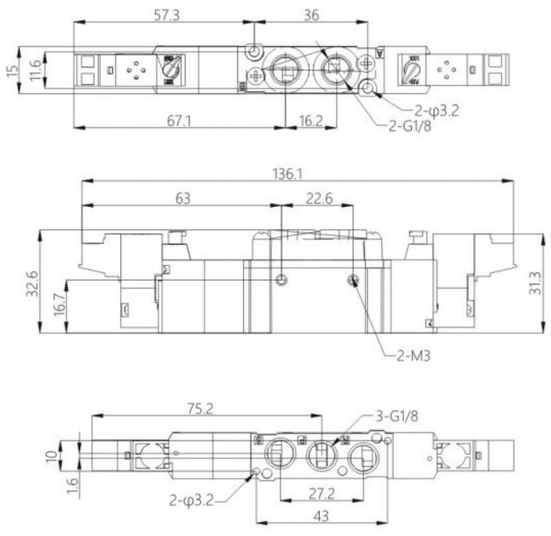



### XY5240 2 positions double coil namur type



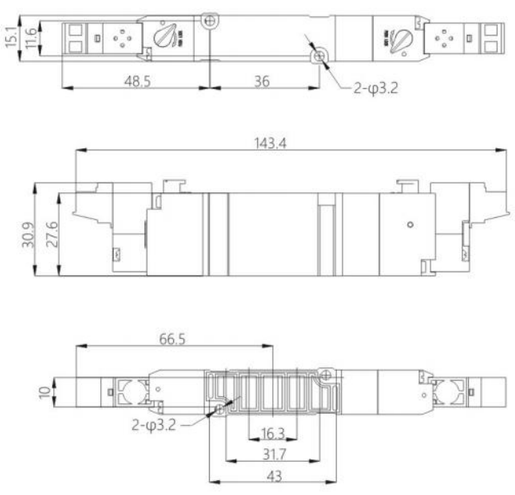
### 3 positions center close type, center exhaust type,center pressure type

Thread Type XY5 3 4 2 0 5

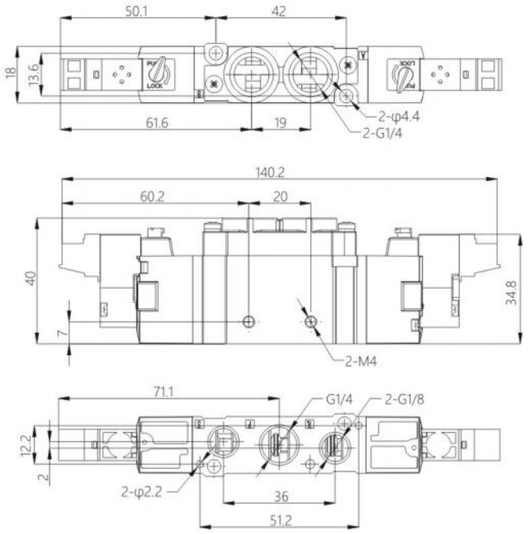



### 3 positions center close type, center exhaust type,center pressure type

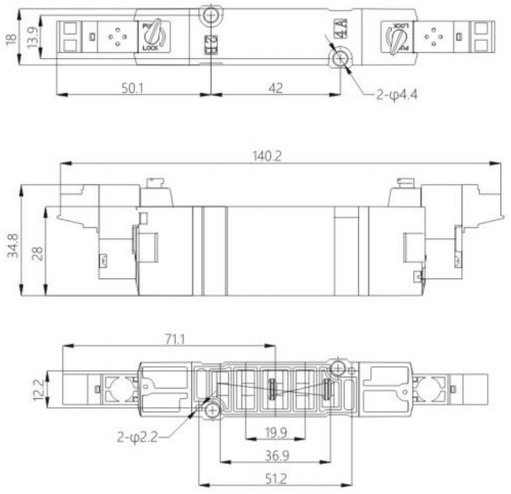
Namur Type XY5 3 4 4 0 5



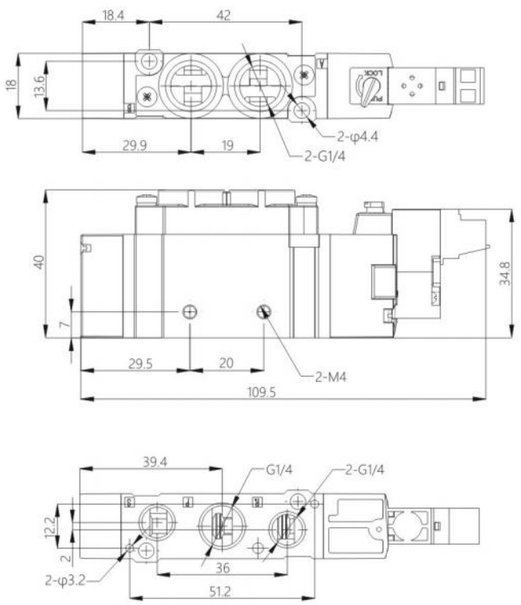

### XY7220 2 positions double coil thread type



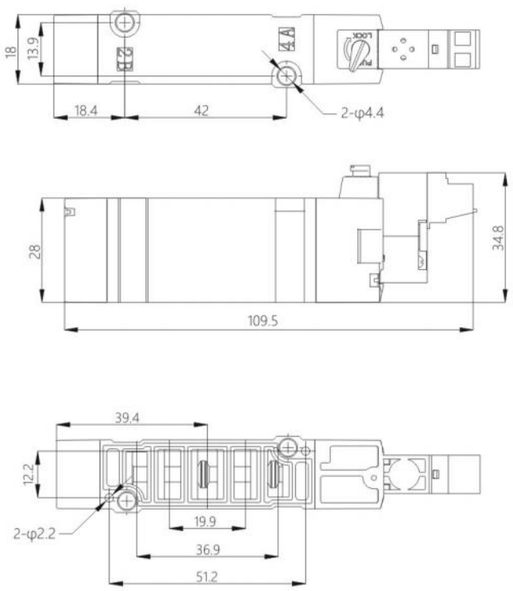

### XY7240 2 positions double coil namur type




### XY7120 2 positions single coil thread type

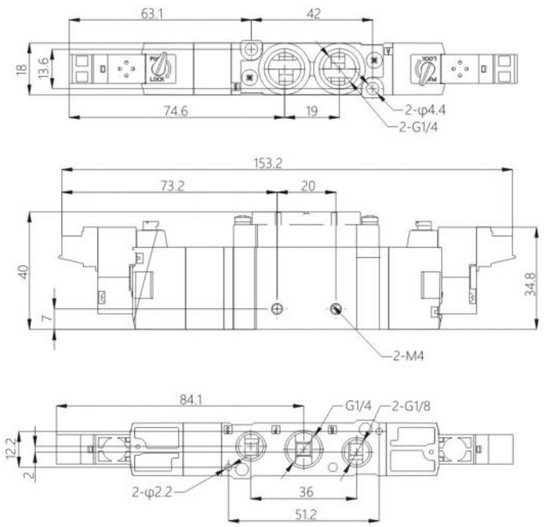



### XY7140 2 positions single coil namur type



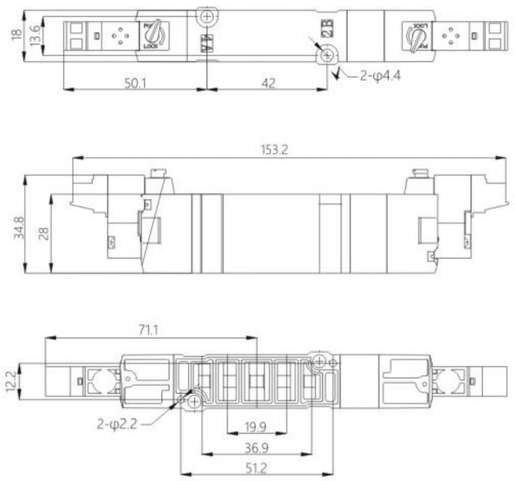

### 3 positions center close type, center exhaust type,center pressure type

Thread Type XY7 3 4 2 0 5

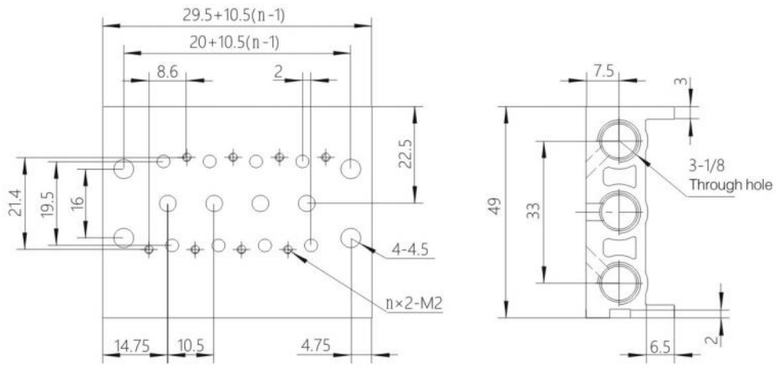



### 3 positions center close type, center exhaust type,center pressure type

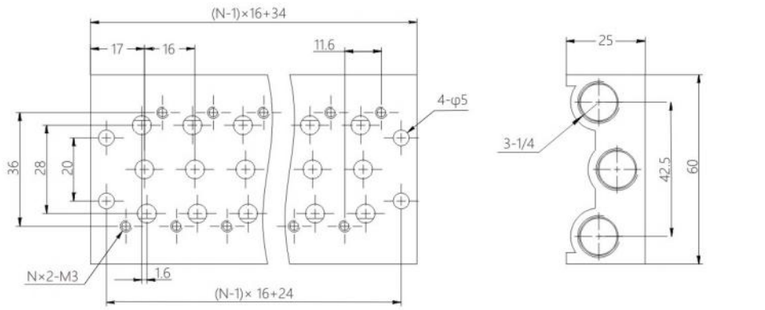
Namur Type XY7 3 4 4 0 5



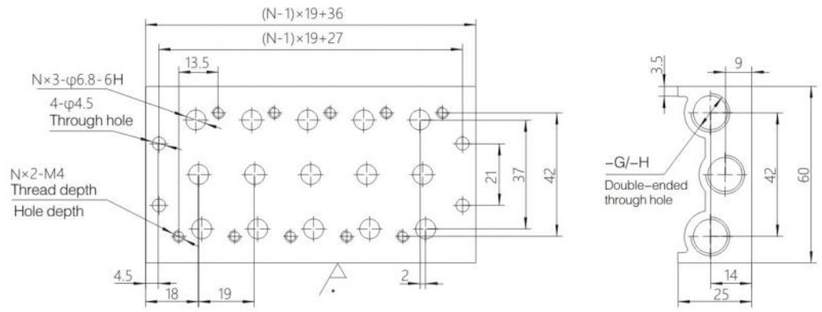
## XY3000 Manifold



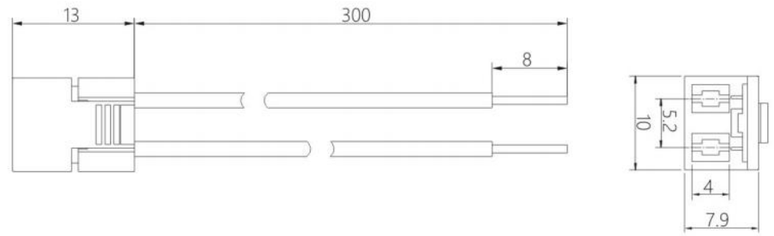

## XY5000 Manifold



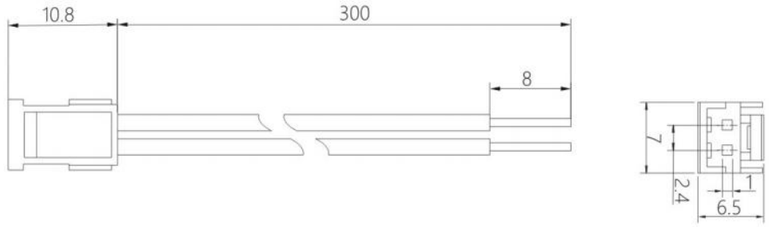

## XY7000 Manifold




## Vertical Parallel Connectors




## Vertical/parallel Connectors




## Micro Valve

- No need lubrication, long working life
- Small size, easy to install, low power
- Multiple combination to choose
- Suitable for PLC control

# XY-10 Series


## Ordering Code

XY-10 **AX** – **1** **B** **L** □ □ □ – **300**

1 2 3 4 5 6 7 8

**1**. Model Series

AX Port: 0.5mm Power: 1W
AH Port: 0.7mm Power: 1.2W
AD Port: 0.7mm Power: 1.8W/0.5W
* AR Port: 1mm Power: 3.2W/0.5W

**2**. Working Type
1:3/2 NC
2:2/2 NC

**3**. Voltage
B:DC24V
D:DC12V

**4**. Connection Type

E: Lead-wire type



L: Vertical type



M: Parallel type

N: Vertical parallel universal

T: Threaded type

**5**. Indicator light, surge voltage protection circuit
Blank: With indicator light and no surge voltage protection circuit
R: With indicator light and surge voltage protection circuit

**6**. Exhaust Type
Blank : Exhaust Directly
N: Indirect Exhaust

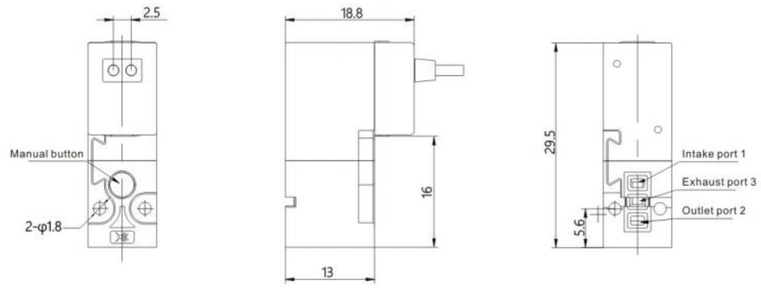
**7**. Manual Lever Mode
Blank: With Manual Lever
1: Without Manual Lever

**8**. Wire Length
300mm
Customized

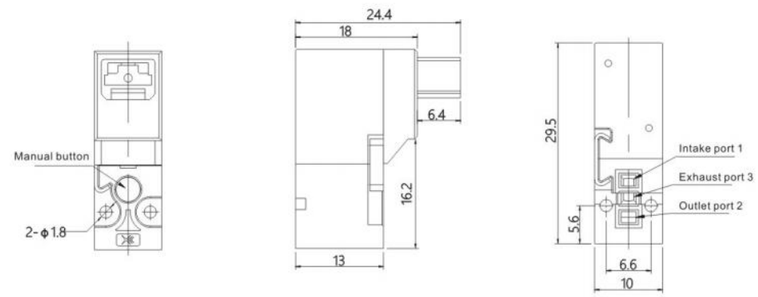
## Specification

| Model No. | XY-10AH | | XY-10AX | | XY-10AD | | *XY-10AR | |
|---|---|---|---|---|---|---|---|---|
| Working pressure(MPa) | 0-0.7 | | 0-0.7 | | 0-0.7 | | 0-0.7 | |
| Port size(mm) | 0.7 | | 0.5 | | 0.7 | | 1.0 | |
| Working medium | Compressed air(filtered by 40μm filter screen) | | | | | | | |
| Ambient temp and medium temp(℃) | -5~50(Unfrozen) | | | | | | | |
| Response time(ms) | ON: 6 | OFF: 5 | ON: 7 | OFF: 6 | ON: 7 | OFF: 6 | ON: 6 | OFF: 5 |
| Max.operating frequency(Hz) | 35 | | 20 | | 35 | | 50 | |
| Flow(L/min) | 20 | | 10 | | 20 | | 30 | |
| Wire lead type | Vertical type, parallel type, vertical-parallel universal type, Lead-wire type, threaded type | | | | | | | |
| Coil rated power(V) | DC12/DC24 | | | | | | | |
| Allowable voltage | Rated power ±10% | | | | | | | |
| Power(W) | 1.2 | | 1 | | 1.8/0.5 | | 3.2/0.5 | |
| Coil temperature rise(℃) | 50%ED: 25 | | 50%ED: 25 | | 50%ED: 20 | | 50%ED: 20 | |
| | 100%ED: 55 | | 100%ED: 50 | | 100%ED: 15 | | 100%ED: 15 | |
| Action mode | Direct action | | | | | | | |
| Overcurrent protection circuit | Optional | | | | | | | |
| Indicator light | Yes, using LED display | | | | | | | |
| Manual operation mode | Optional | | | | | | | |
| Temperature resistance grade | H Class | | | | | | | |
| Protection grade | IP40 | | | | | | | |
| Insulation voltage | 1000VAC | | | | | | | |
| Insulation resistance | ≥ 5MΩ | | | | | | | |

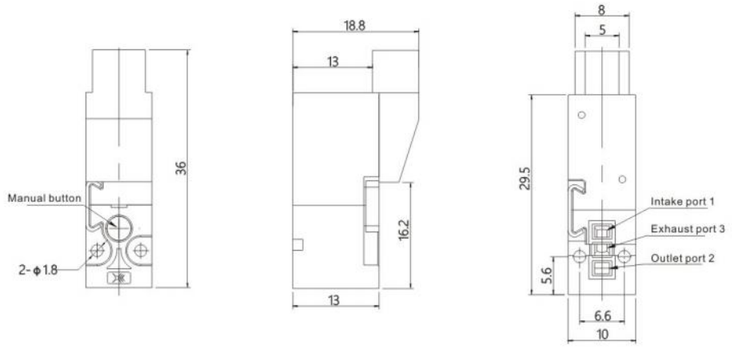
## Lead-wire type XY-10A



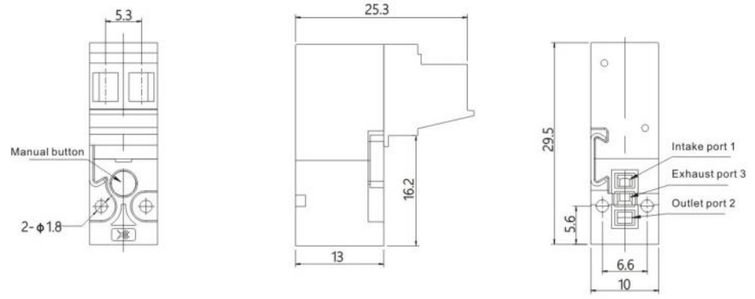

## Vertical type XY-10A



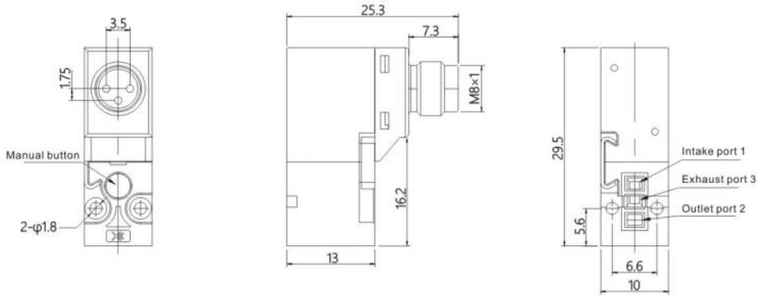
## Parallel type XY-10A



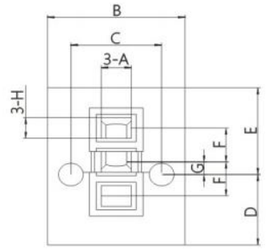

## Vertical-parallel universal type XY-10A




## Threaded type XY-10A

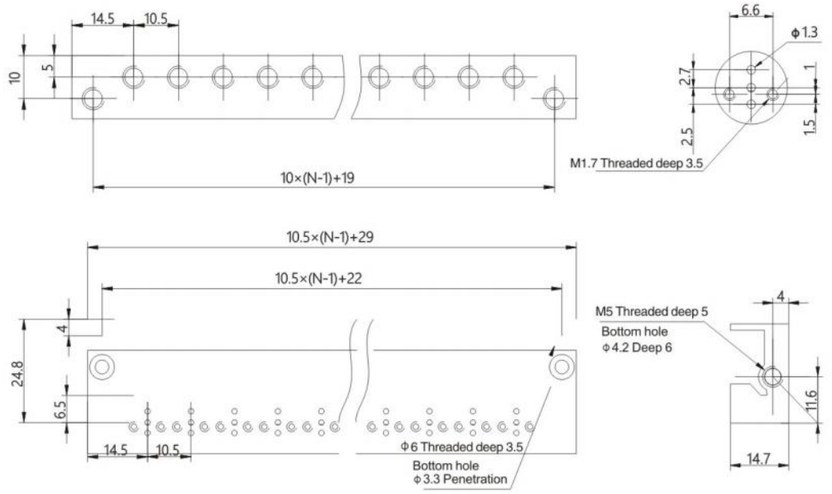



## Seal Area Mounting Dimensions

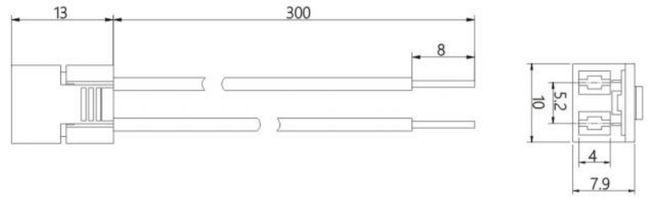



| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| 2.2 | 10 | 6.6 | 5.6 | 6.9 | 2.7 | 1.6 |

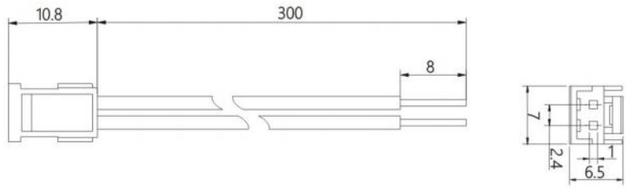
## XY-10A Manifold




## Vertical Parallel Connectors




## Vertical/parallel Connectors



## XY-10A Manifold

### Specification

| | |
|---|---|
| Working Medium | Compressed Air (filtered by 40μm filter screen) |
| Working Temp. | -5℃~50℃ (Unfrozen) |
| Working Pressure | 0~0.7MPa |
| Voltage | DC12V、DC24V |
| Connection Size | Φ4/Φ6 |

### Features

1. The number of connections is optional to meet various application scenarios.
2. The product adopts special seals with good sealing performance.
3. Centralized gas supply, simplified gas circuit, space saving and cost saving.
4. Unified air inlet and exhaust and unified wiring are convenient for installation and commissioning.

### Installation and Use

1. It is recommended that the user assign a dedicated person to be responsible for use and maintenance.
2. Please pay attention to the direction of medium flow during installation.
3. After installation, the medium must be introduced and tested several times to confirm normal operation before putting it into use.
4. Please pay attention to dust prevention. When not in use, dust plugs should be installed on the inlet and outlet.
5. If not used for an extended period, store in a relatively dry place.

### Ordering Code

XY-10 **AX** – **1** **B** **L** □ □ □ – **300** – **2T**

(1) (2) (3) (4) (5) (6) (7) (8) (9)

**1.** Model Series

AX Port: 0.5mm Power: 1W
AH Port: 0.7mm Power: 1.2W
AD Port: 1mm Power: 1.8W/0.5W
* AR Port: 1mm Power: 3.2W/0.5W

**2.** Working Type
1:3/2 NC
2:2/2 NC

**3.** Coil voltage
B:DC24V
D:DC12V

**4.** Connection Type

E: Lead-wire type

L: Vertical type

M: Parallel type

N: Vertical parallel universal

T: Threaded type

**5.** Indicator light, surge voltage protection circuit
Blank: With indicator light and no surge voltage protection circuit
R: With indicator light and surge voltage protection circuit

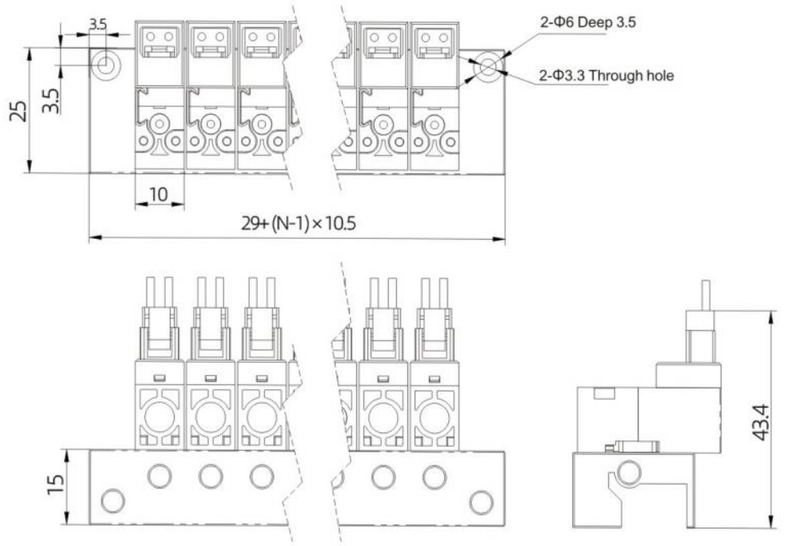
**6.** Exhaust Type
Blank : Exhaust Directly
N: Indirect Exhaust

**7.** Manual Lever Mode
Blank: With Manual Lever
1: Without Manual Lever

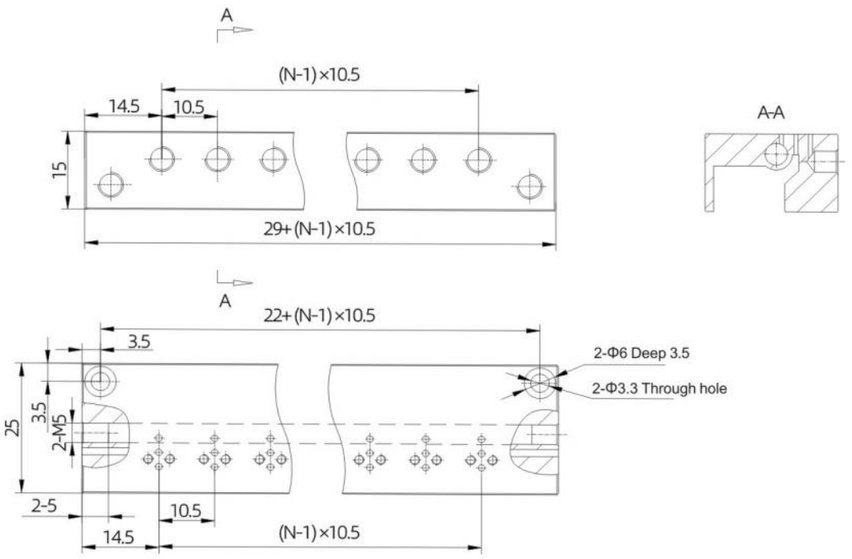
**8.** Wire Length
300mm
Customized

**9.** Valve quantity
1T: One valve manifold
.....
20T: Twenty valves manifold

### XY-10A Manifold Valve appearance drawing




### XY-10A Manifold appearance drawing



# XY-015


## Features

1. Small size and convenient installation.
2. Energy saving, high frequency, sustainable work,ED100%.
3. Large flow and wide application industry.
4. Fast response time and multiple uses.
5. Various power connection modes.
6. Low starting voltage, suitable for use under harsh Conditions.
7. Long life, more lasting.

## Installation and Use

1. Before install, PIs be noted the service conditions of the valve, such as working pressure range and power supply conditions (AC and DC voltage).
2. Before install, conduct ventilation and power on test on the test bench to check whether the reversing performance is normal.
3. Before install, the rust, dust and other dirt in the pipeline shall be completely removed.
4. When installing the solenoid valve, pay attention to the installation position and the indicated air flow direction, and do not connect it wrongly. A water separation air filter, a pressure reducing valve and an oil mist lubricator must be installed upstream of the valve air source port to ensure that the supply valve has a certain pressure of dry, clean and lubricated air.

## Ordering Code

| XY-015 | S | 1 | A | L | □ | T | □ | – | 300 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | 9 |

**1**. Model Series

**2**. Pressure range
S: 0-7 bar port size: φ1.4mm
T: 0-10bar bar port size: φ1.2mm

**3**. Product type
1:3/2 NC 2:3/2 NO

**4**. Coil voltage Notice①
A: AC220V
B: DC24V
C: AC110V
D: DC12V

①: The pin type and wire type do not include AC220V and AC110V specifications

**5**. Connection Type

E: Lead-wire type

L: Vertical type

M: Parallel type

N: Vertical parallel universal

Q: Pin type

**6**. Indicator light, surge voltage protection circuit
Blank: With indicator light and no surge voltage protection circuit
R: With indicator light and surge voltage protection circuit

**7**. Vent direction
T : Vent and pin direction are the same
F: Vent and pin direction are opposite

**8**. Manual Lever Mode
Blank: Without Manual Lever
1: With Manual Lever

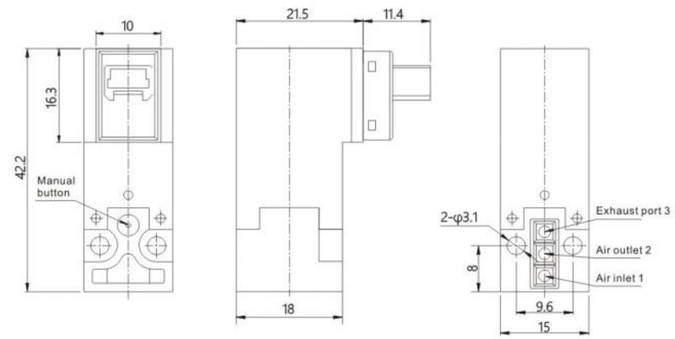
**9**. Wire Length
300mm
Customized



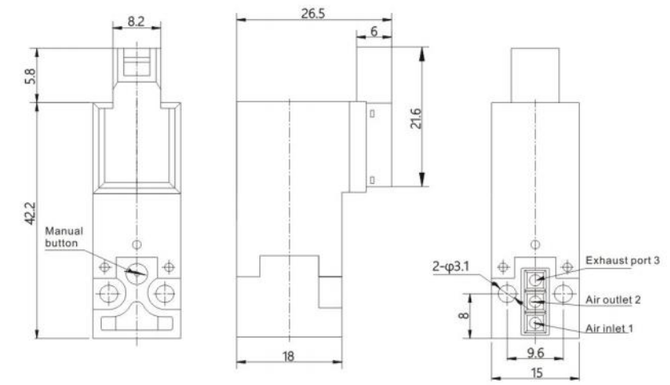
## Specification

| Model NO. | | XY-015 | |
|---|---|---|---|
| Port size(mm) | | 1.2 | 1.4 |
| Operating pressure range(MPa) | | 0-0.7 | 0-1.0 |
| Sonic conductance C value $m^3/(s \cdot Pa)$ (ANR) | | $0.16X10^{-8}$ | $0.17X10^{-8}$ |
| Working medium | | -5~50(Unfrozen) | |
| Ambient temp and medium temp℃ | | Compressed air(filtered by 40μm filter screen) | |
| Response time(ms) | | ON < 10; OFF < 10 | |
| Action mode | | Direct action | |
| Max.operating frequency(Hz) | | 30 | |
| Manual operation mode | | Non-locking push type | |
| Connection type | | Vertical type, parallel type, vertical-parallel universal type, Lead-wire type, pin type | |
| Rated power (V) | DC | DC12/24V | |
| | AC | AC110/220 | |
| Allowable voltage | | DC±10% AC±15% | |
| Power(W) | | 2.5 | |
| Indicator light | | Yes, using LED display | |
| Temperature resistance grade | | F | |
| Protection grad | | IP40 | |

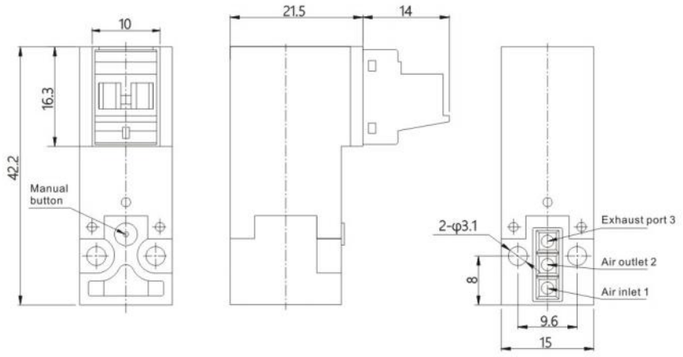
## Vertical type XY-015



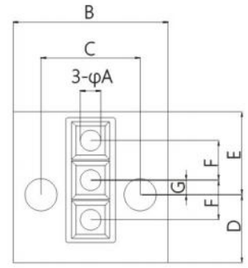

## Parallel type XY-015



## Vertical-parallel universal type XY-015

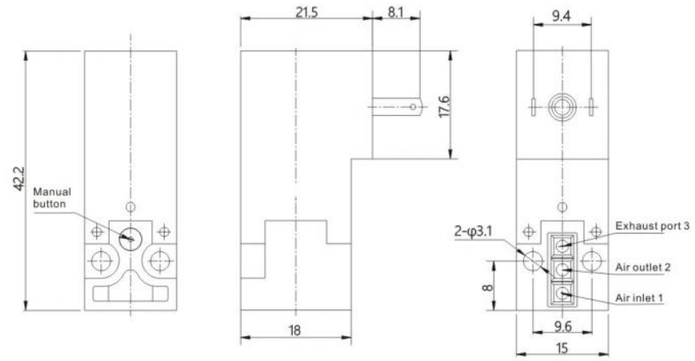



## Sealing area installation dimensions

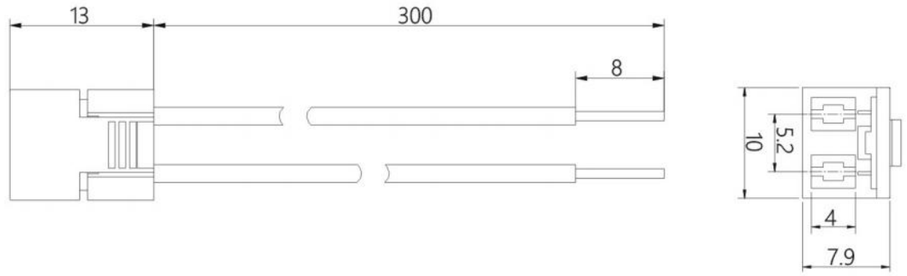



| A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|
| 2 | 15 | 9.6 | 6.5 | 8 | 3.8 | 1.4 |

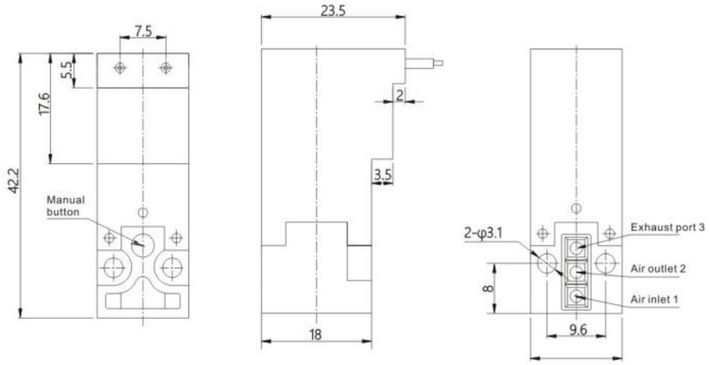
## Pin type XY-015



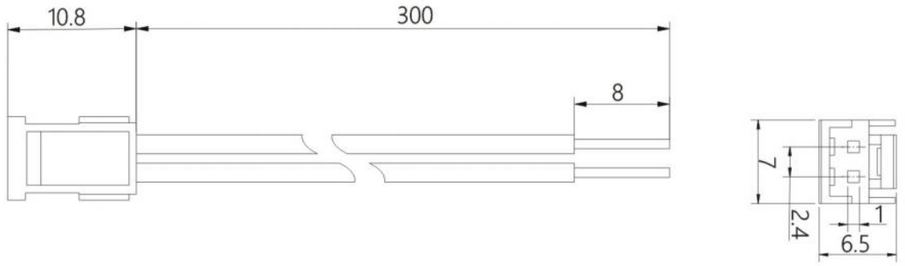

## Vertical/parallel universal connector




## Lead-wire type XY-015




## Vertical/parallel connector



## XY-015 Manifold

### Specification

| | |
|---|---|
| Working Medium | Compressed Air (filtered by 40μm filter screen) |
| Working Temp. | -5℃~50℃ (Unfrozen) |
| Working Pressure | 0~0.7MPa |
| Voltage | DC12V、DC24V、AC110V、AC220V |
| Connection Size | Φ4/Φ6 |

### Features

1. The number of connections is optional to meet various application scenarios.
2. The product adopts special seals with good sealing performance.
3. Centralized gas supply, simplified gas circuit, space saving and cost saving.
4. Unified air inlet and exhaust and unified wiring are convenient for installation and commissioning.

### Installation and Use

1. It is recommended that the user assign a dedicated person to be responsible for use and maintenance.
2. Please pay attention to the direction of media flow during installation.
3. After installation, the medium must be introduced and tested several times to confirm normal operation before putting it into use.
4. Please pay attention to dust prevention. When not in use, dust plugs should be installed on the inlet and outlet.
5. If not used for an extended period, store in a dry place.

### Ordering Code

XY-015 S 1 A L □ □ T – 300 2T

1 2 3 4 5 6 7 8 9 10

**1.** Model Series

**2.** Pressure range
S: 0-7 bar port size: φ1.4mm
T: 0-10bar bar port size: φ1.2mm

**3.** Product type
1:3/2 NC 2:3/2 NO

**4.** Coil voltage
A : AC220V
B : DC24V
C: AC110V
D : DC12V

**5.** Connection Type

E: Lead-wire type

L: Vertical type

M: Parallel type

N: Vertical parallel universal

Q: Pin type

**6.** Indicator light, surge voltage protection circuit
Blank: With indicator light and no surge voltage protection circuit
R: With indicator light and surge voltage protection circuit

**7.** Vent direction
T : Vent and pin direction are the same
F: Vent and pin direction are opposite

**8.** Manual Lever Mode
Blank: Without Manual Lever
1: With Manual Lever

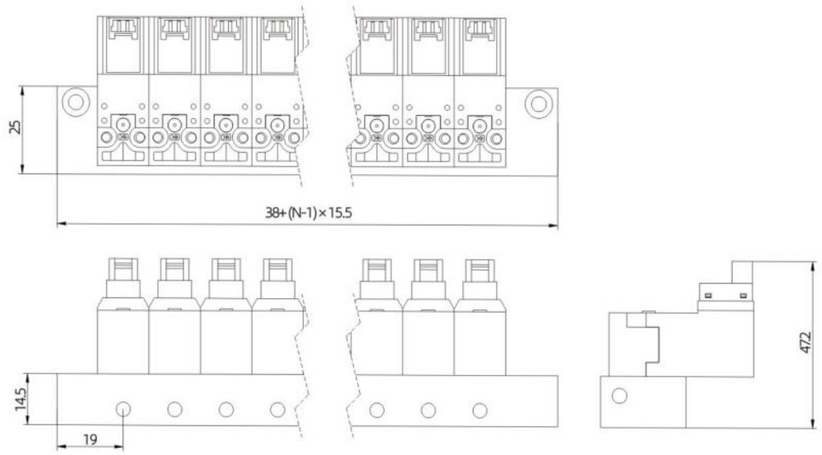
**9.** Wire Length
300mm
Customized

**10.** Valve quantity
1T: One valve manifold
.....
20T: Twenty valves manifold

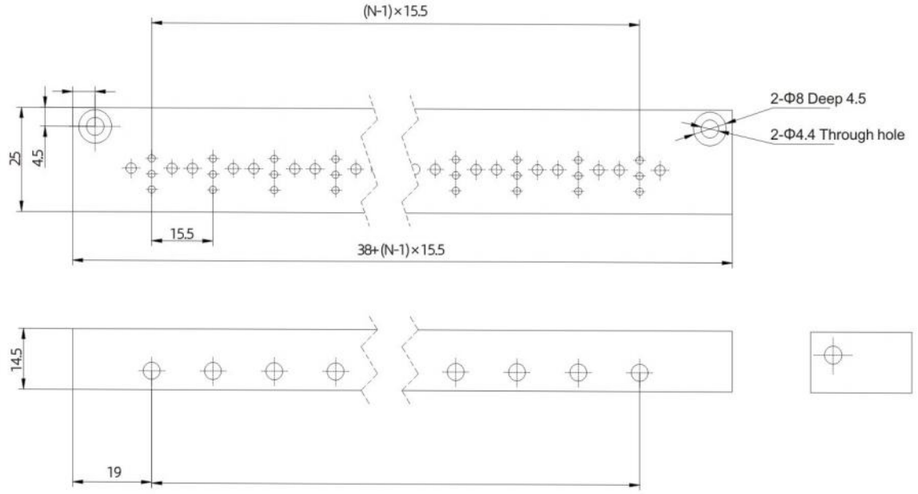




### XY-15 Manifold Valve appearance drawing




### XY-15A Manifold appearance drawing




# Two Position Three way High Frequency Solenoid Valve

- Large flow and high working frequency,High working pressure, wide use, no need for oil lubrication
- Low power consumption, energy conservation and environmental protection,Sustainable work ED100%
- It is designed with manual button device, which can be debugged and used
- Lead type power connection is adopted, which is convenient for power connection and saves installation space
- Sliding column structure, good sealing and sensitive response
- The inner hole is processed by special process, with small friction resistance, low starting pressure and long service life

# 3PA

## Features

1. Large flow and high working frequency, High working pressure, wide use, no need for oil lubrication
2. Can be used under low vacuum conditions
3. Low power consumption, energy conservation and environmental protection, Sustainable work ED100%
4. It is designed with manual button device, which can be debugged and used
5. Lead type power connection is adopted, which is convenient for power connection and saves installation space
6. Sliding column structure, good sealing and sensitive response
7. The inner hole is processed by special process, with small friction resistance, low starting pressure and long service life

## INSTALL AND OPERATION

1. Check all parts in fine conditions before operation carefully
2. Pay much attention to the medium flow direction, which must be filtered by 40 μm element, and exact matched piping threads
3. Pay attention the installation specifications comply with technical requirements(such as,for voltage/frequency/ pressure/ ambient temp. range...)and keep a balanced mounting
4. Do not use in heavy vibration conditions and take frostproof measures in low temperature as well.
5. Before piping connection,keep coiling sealant tape not exceed to the threads top and prevent chips/dust/other debris from into valve body as well.

## Specification

| Product modle | 3PA119 | 3PA219 |
|---|---|---|
| Valve Body | Aluminium | |
| Connection | Thread(M5) | Thread(G1/8") |
| Port Size | Input=Output=Exhaust =M5 | Input=Output=Exhaust =G1/8" |
| Working Medium | Compressed Air (filtered by 40μm filter screen)Low vacuum | |
| Working Type | Direct Action | |
| Medium Temp.(℃) | 5℃~50℃ | |
| Power connection | Leading Wire Type | |
| Power | 2.5W | |
| Voltage | DC24V | |
| Working Pressure | -1~6ar | -1~7bar |
| Max.Pressure | 1.0MPa | |
| Lubrication | No oil | |
| Ambient Temp.(℃) | -5℃ ~50℃ (Not frozen) | |
| Use environment | Do not use in corrosive gas environment | |
| Protection Class | IP65 | |
| Response Time | ≤ 20ms | |
| Applicable cylinder | Φ16-Φ40 | |

Note: the response time is the value tested under the condition of providing pressure of 5bar and no oil supply.

## Ordering Code

3PA - 119 - 06 - 1 - B - YL - □ - 1

1. Product model

2. Product Series
   1: 119
   2: 219

4. Manual Lever Mode
   1: With Manual Lever
   2: Without Manual Lever

3. Connection Port
   M5:M5119 Series
   06:1/8"219 Series

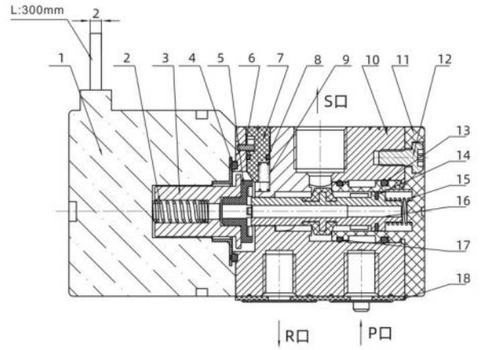
5. Voltage
   B:DC24V
   D:DC12V

6. Connection Type
   YL:Leading Wire type

7. Thread Type
   Blank:G
   N:NPT

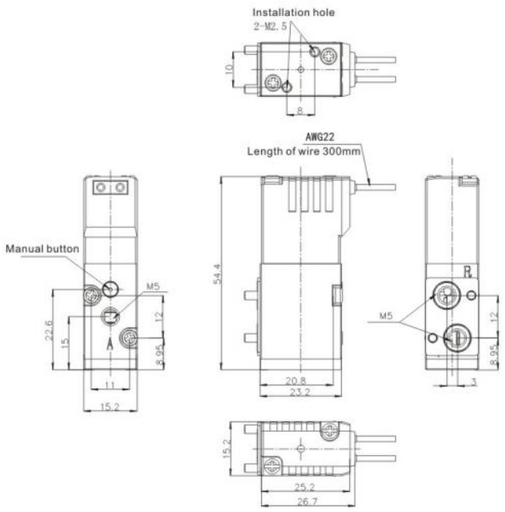
8. Accessories
   1: With rubber mounting plate
   2: Without rubber mounting plate

## 3PA Profile

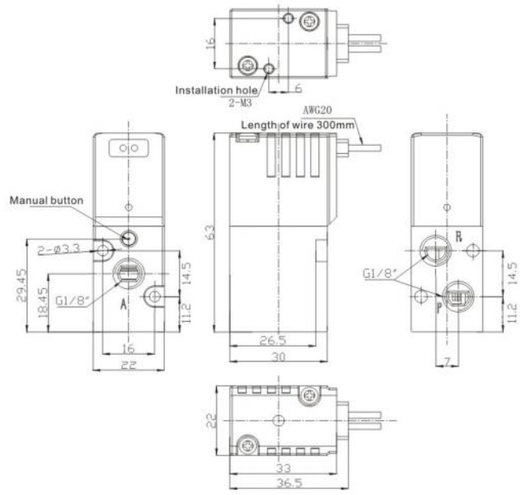



| No. | Description | Material | No. | Description | Material |
|---|---|---|---|---|---|
| 1 | Solenoid Coil | Resin | 10 | Valve Body | Aluminum |
| 2 | Spring | S.S | 11 | Back cover | Resin |
| 3 | Plunger | Electromagnetic stainless steel | 12 | Screw | S.S |
| 4 | O -ring | NBR | 13 | O -ring | NBR |
| 5 | Base | POM | 14 | O -ring | NBR |
| 6 | Fixing pin | S.S | 15 | Spring | S.S |
| 7 | Manual Lever | POM | 16 | Piston rod | Aluminum |
| 8 | O -ring | NBR | 17 | O -ring | NBR |
| 9 | Spring | S.S | 18 | SEAL | NBR |

## 3PA119Drawing




## 3PA219 Drawing



## 4V Series Valve

- Sliding column structure,
- Good sealing and sensitive response
- With Manual Lever ,easy to install and test
- Variety of standard voltages are available valve group can be integrated with the base to save installation space

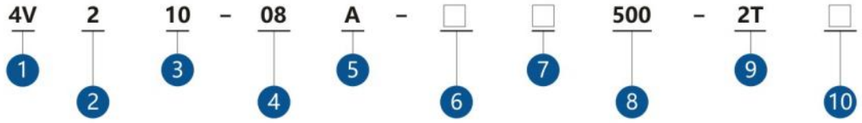
## 4V100

## 4V200

## 4V400

## 4V300

## ORDERING CODE




**1**. Specification
4V : 5/2(5/3) Solenoid Valve
3V : 3/2 Solenoid Valve

**2**. Series
1 : 100 Series
2 : 200 Series
3 : 300 Series
4 : 400 Series

**3**. Coil & Position
10 : Single Coil Double Position
20 : Double Coil Double Position
30C : Double Coil Three Position Center Close type
30E : Double Coil Three Position Center Exhaust type
30P : Double Coil Three Position Center Pressure type

**4**. Pipe Size
M5 : M5 100 Series
06 : 1/8" 100/200 Series
08 : 1/4" 200/300 Series
10 : 3/8" 300/400 Series
15 : 1/2" 400 Series

**5**. Voltage
A : AC220V
B : DC24V
C : AC110V
D : DC12V
E : AC24V

**6**. Wire connection
No symbol : Standard terminal type
W : Lead Type
F : Explosion-proof type

**7**. Thread type
Blank: G
R: RC
N: NPT

**8**. Wire Length
500mm
Customized

**9**. Valve quantity
1T: one valve manifold
.....
20T: twenty valves manifold

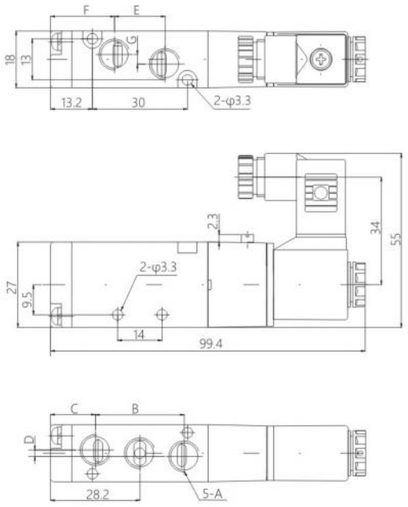
**10**. Manifold thread type
Blank: G
R: RC
N: NPT

## Specification

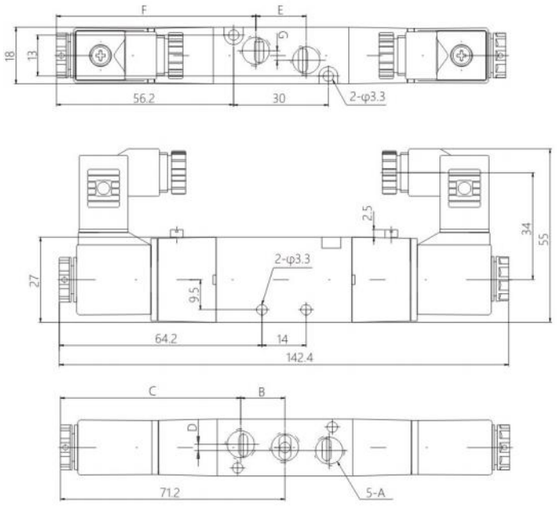
| 4V 5 Port Valve Specification | | | | | |
|---|---|---|---|---|---|
| Item No. | | 4V100-M5/06 | 4V200-06/08 | 4V300-08/10 | 4V400-10/15 |
| Working Pressure MPa | | 0.15 -0.8 | | | |
| Working Medium | | Compressed Air (filtered by 40μm filter screen) | | | |
| Ambient Temp. ℃ | | Regular type :-5 to 50℃(but not frozen) High-temperature version :-5 to 150℃(but not frozen) | | | |
| Connection Port | | M5:Input=Output=Exhaust=M5 | 06:Input=Output=Exhaust=1/8" | 08:Input=Output=Exhaust=1/4" | 10:Input=Output=Exhaust=3/8" |
| | | 06:Input=Output=Exhaust=1/8" | 08:Input=Output=1/4,Exhaust=1/8" | 10:Input=Output=3/8,Exhaust=1/4" | 15:Input=Output=Exhaust=1/2" |
| Working Type | | Pilot type | | | |
| Max. Pressure MPa | | 1.2 | | | |
| Max. Frequency Hz | Two Position Five Way | 5 | 5 | 4 | 3 |
| | Three Position Five Way | 3 | | | |
| Effective Cross-Sectional Area mm² | Two Position Five Way | M5:5.5 / 06:12 | 06:14 / 08:16 | 08:25 / 10:30 | 10:42 / 15:50 |
| | Three Position Five Way | M5:5 / 06:9 | 12 | 18 | 42 |
| Terminal | | Standard terminal type / Lead type / Explosion-proof type | | | |
| Coil Rated Voltage V | DC | 12 / 24 | | | |
| | AC | 24 / 110 / 220 | | | |
| Voltage Tolerance | | DC ± 10% AC± 15% | | | |
| Power Consumption | Coil/ Voltage | DC12V / DC24V | AC24V | AC110V | AC220V |
| | 100 Coil | 2.8W/VA | 5.0W/VA | | |
| | 200 Coil | 3.0W/VA | 5.5W/VA | | |
| Protection Class | | IP65 | | | |

| 3V 3 Port Valve Specification | | | | | |
|---|---|---|---|---|---|
| Item No. | | 3V100-M5/06 | 3V200-06/08 | 3V300 -08/10 | 3V400-10/15 |
| Working Pressure MPa | | 0.15 -0.8 | | | |
| Working Medium | | Compressed Air (filtered by 40μm filter screen) | | | |
| Ambient Temp. ℃ | | Regular type :-5 to 50℃(but not frozen) High-temperature version :-5 to 150℃(but not frozen) | | | |
| Connection Port | | M5:Input=Output=Exhaust=M5 | 06:Input=Output=Exhaust=1/8" | 08:Input=Output=Exhaust=1/4" | 10:Input=Output=Exhaust=3/8" |
| | | 06:Input=Output=Exhaust=1/8" | 08:Input=Output=Exhaust=1/4" | 10:Input=Output=Exhaust=3/8" | 15:Input=Output=Exhaust=1/2" |
| Working Type | | Pilot type | | | |
| Max. Pressure MPa | | 1.2 | | | |
| Max. Frequency Hz | | 5 | 5 | 5 | 3 |
| Effective Cross-Sectional Area mm² | | M5:5 / 06:12 | 06:14 / 08:16 | 08:25 / 10:30 | 10:42 / 15:50 |
| Terminal | | Standard terminal type / Lead type / Explosion-proof type | | | |
| Coil Rated Voltage V | DC | 12 / 24 | | | |
| | AC | 24 / 110 / 220 | | | |
| Voltage Tolerance | | DC ± 10% AC± 15% | | | |
| Power Consumption | Coil/ Voltage | DC12V / DC24V | AC24V | AC110V | AC220V |
| | 100 Coil | 2.8W/VA | 5.0W/VA | | |
| | 200 Coil | 3.0W/VA | 5.5W/VA | | |
| Protection Class | | IP65 | | | |

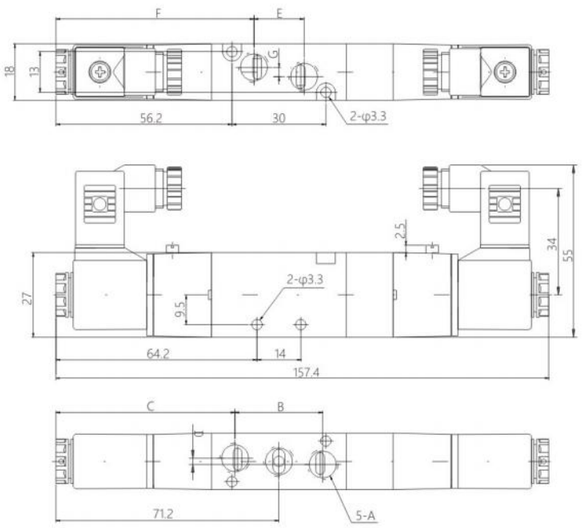
## Plug-in type




| Model | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4V110-M5 | M5×0.8 | 27 | 14.7 | 0 | 14 | 21.2 | 0 |
| 4V110-06 | G1/8 | 28 | 14.2 | 1 | 16 | 20.2 | 3 |

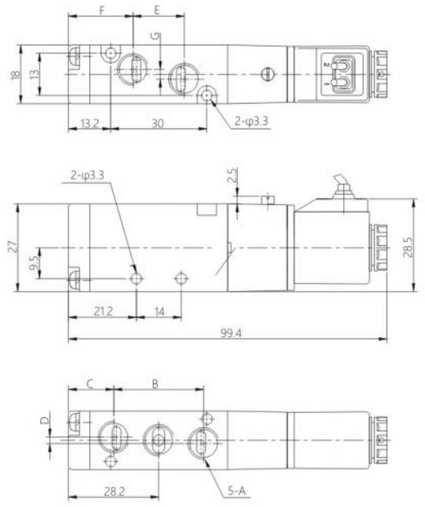



| Model | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4V120-M5 | M5×0.8 | 27 | 57.7 | 0 | 14 | 64.3 | 0 |
| 4V120-06 | G1/8 | 28 | 57.2 | 1 | 16 | 63.2 | 3 |

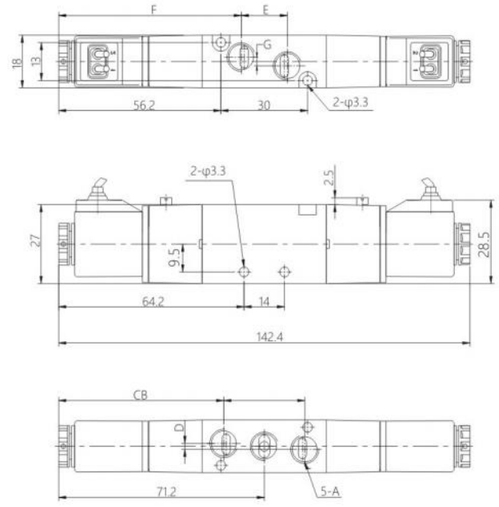



| Model | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4V130-M5 | M5×0.8 | 27 | 57.7 | 0 | 14 | 64.3 | 0 |
| 4V130-06 | G1/8 | 28 | 57.2 | 1 | 16 | 63.2 | 3 |

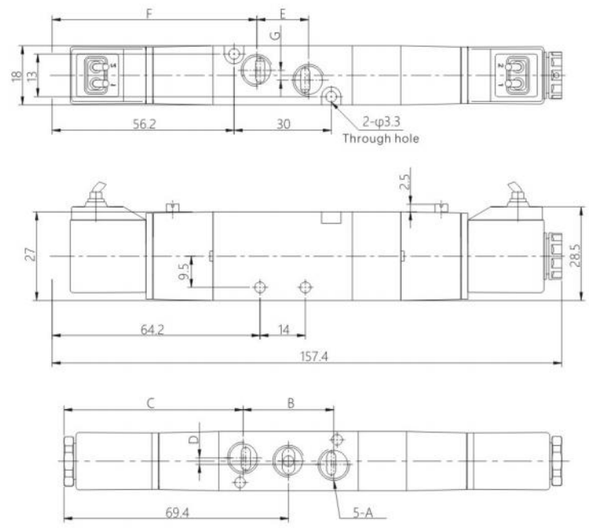
## Lead-wire type




| Model | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4V110-M5 | M5×0.8 | 27 | 14.7 | 0 | 14 | 21.2 | 0 |
| 4V110-06 | G1/8 | 28 | 14.2 | 1 | 16 | 20.2 | 3 |

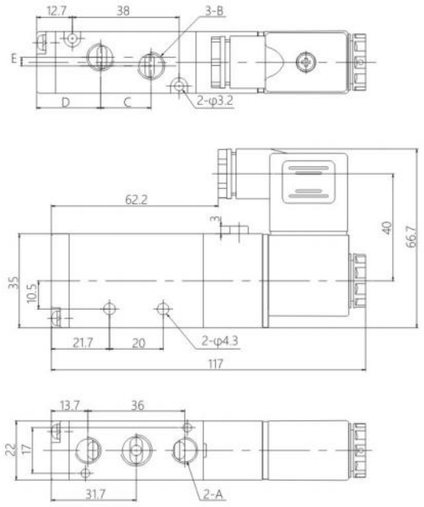


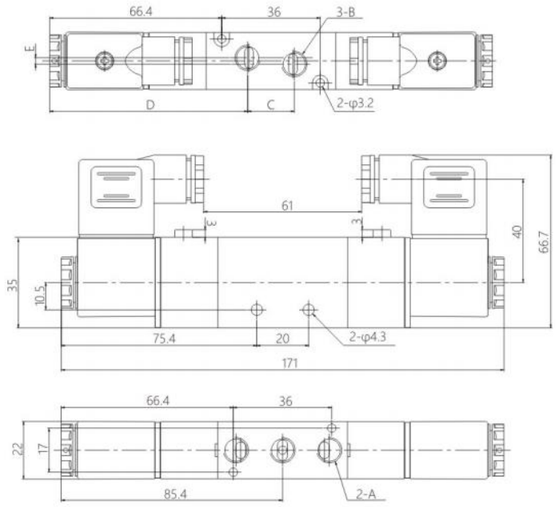

| Model | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4V120-M5 | M5×0.8 | 27 | 57.7 | 0 | 14 | 64.3 | 0 |
| 4V120-06 | G1/8 | 28 | 57.2 | 1 | 16 | 63.2 | 3 |




| Model | A | B | C | D | E | F | G |
|---|---|---|---|---|---|---|---|
| 4V130-M5 | M5×0.8 | 27 | 57.7 | 0 | 14 | 64.3 | 0 |
| 4V130-06 | G1/8 | 28 | 57.2 | 1 | 16 | 63.2 | 3 |

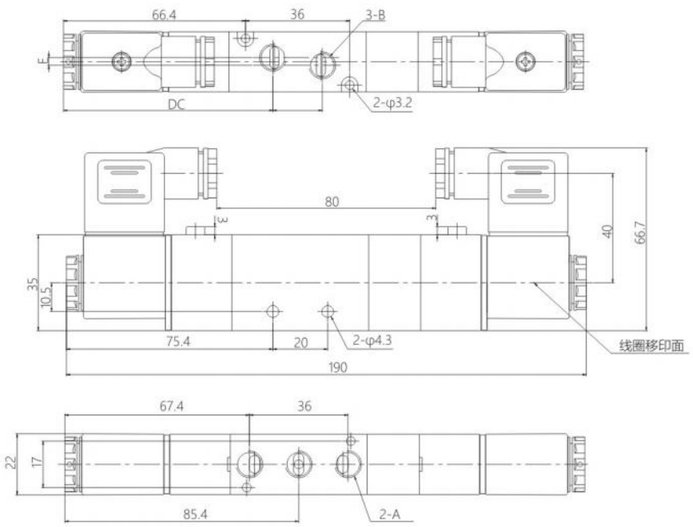
## Plug-in type




| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V210-06 | G1/8 | G1/8 | 18 | 22.7 | 0 |
| 4V210-08 | G1/8 | G1/4 | 21 | 21.2 | 3 |

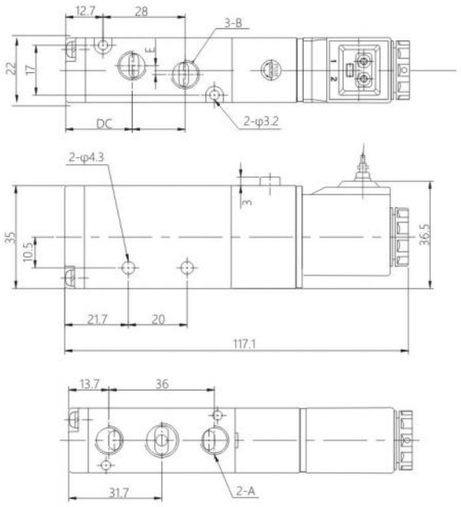
| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V220-06 | G1/8 | G1/8 | 18 | 76.4 | 0 |
| 4V220-08 | G1/8 | G1/4 | 21 | 74.9 | 3 |

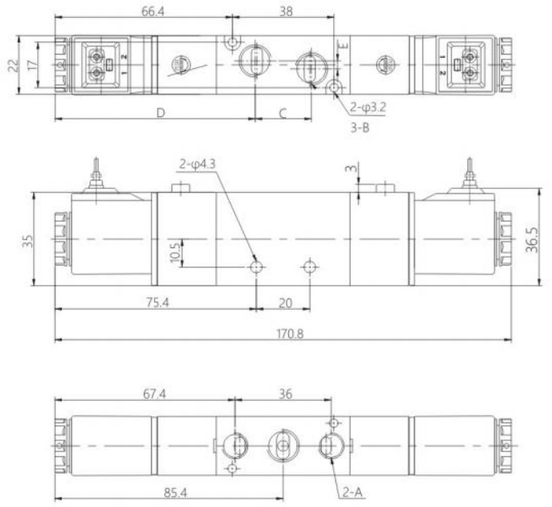



| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V230-06 | G1/8 | G1/8 | 18 | 76.4 | 0 |
| 4V230-08 | G1/8 | G1/4 | 21 | 74.9 | 3 |



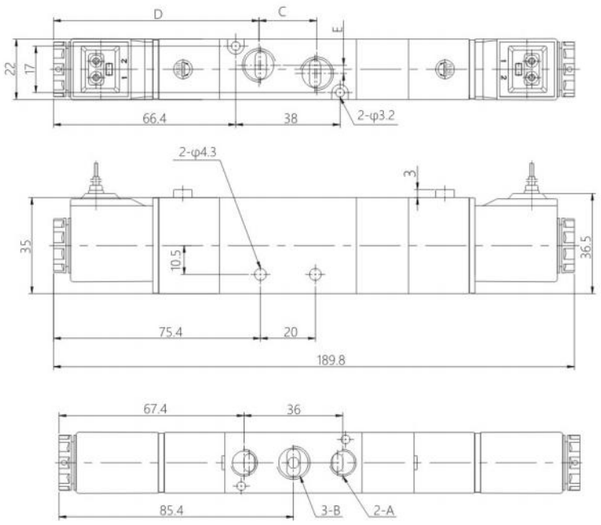
## Lead-wire type



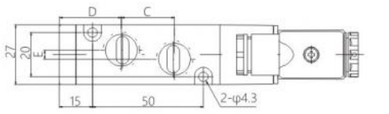

| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V210-06 | G1/8 | G1/8 | 18 | 22.7 | 0 |
| 4V210-08 | G1/8 | G1/4 | 21 | 21.2 | 3 |

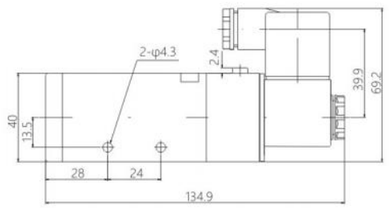
| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V220-06 | G1/8 | G1/8 | 18 | 76.4 | 0 |
| 4V220-08 | G1/8 | G1/4 | 21 | 74.9 | 3 |

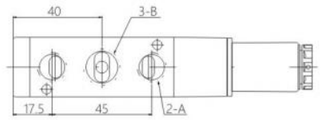



| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V230-06 | G1/8 | G1/8 | 18 | 76.4 | 0 |
| 4V230-08 | G1/8 | G1/4 | 21 | 74.9 | 3 |

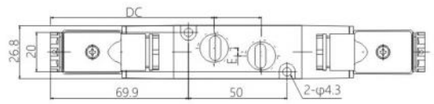
## Plug-in type

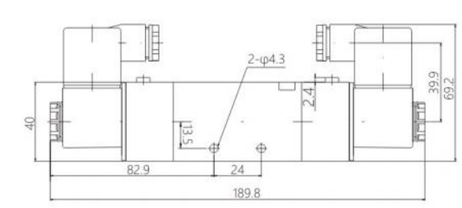


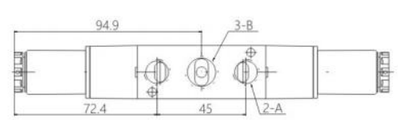



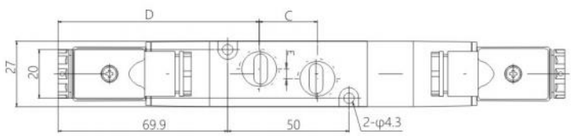

| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V310-08 | G1/4 | G1/4 | 22 | 29 | 0 |
| 4V310-10 | G1/4 | G3/8 | 24 | 28 | 4 |

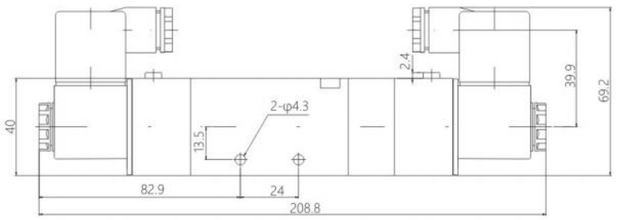


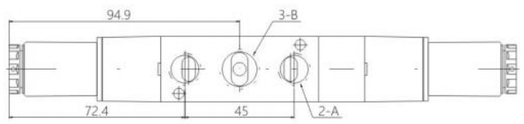




| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V320-08 | G1/4 | G1/4 | 22 | 83.9 | 0 |
| 4V320-10 | G1/4 | G3/8 | 24 | 82.9 | 4 |

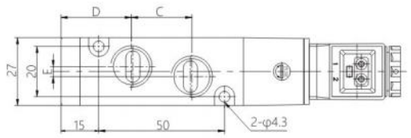


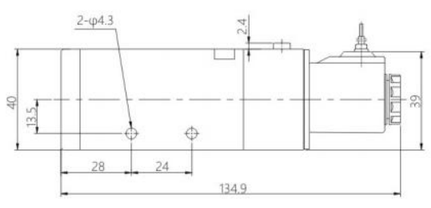



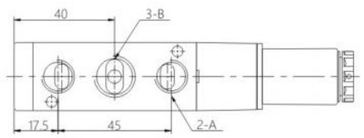




| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V330-08 | G1/4 | G1/4 | 22 | 83.9 | 0 |
| 4V330-10 | G1/4 | G3/8 | 24 | 82.9 | 4 |

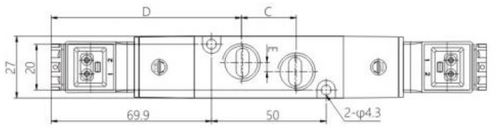
## Lead-wire type

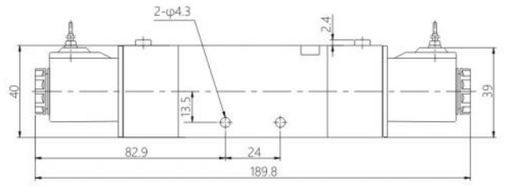


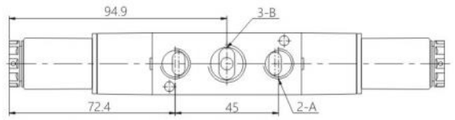



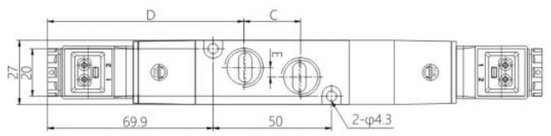

| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V310-08 | G1/4 | G1/4 | 22 | 29 | 0 |
| 4V310-10 | G1/4 | G3/8 | 24 | 28 | 4 |

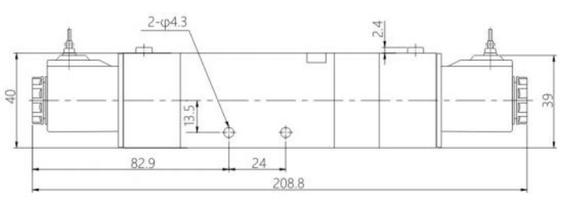


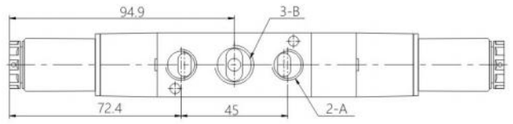




| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V320-08 | G1/4 | G1/4 | 22 | 83.9 | 0 |
| 4V320-10 | G1/4 | G3/8 | 24 | 82.9 | 4 |

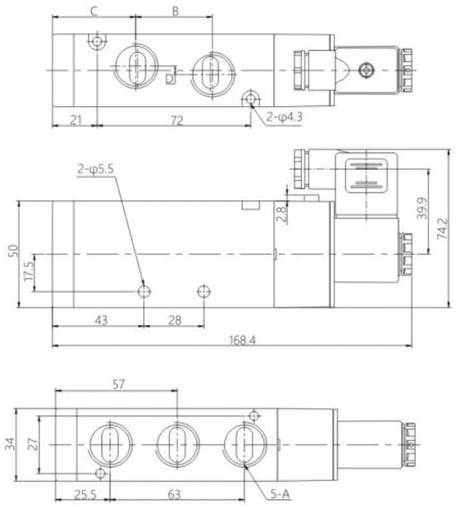


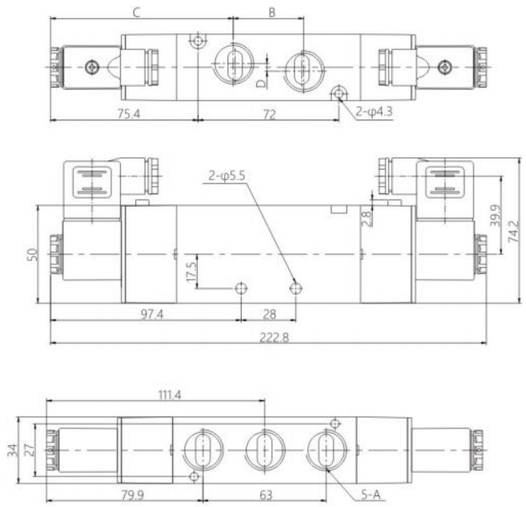




| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 4V330-08 | G1/4 | G1/4 | 22 | 83.9 | 0 |
| 4V330-10 | G1/4 | G3/8 | 24 | 82.9 | 4 |

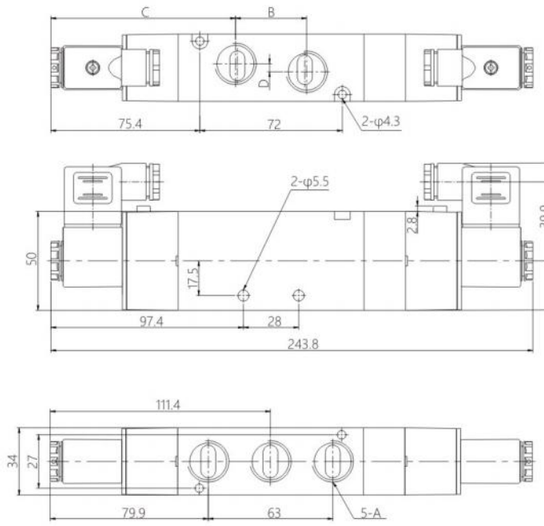
## Plug-in type




| Model | A | B | C | D |
|---|---|---|---|---|
| 4V410-15 | G1/2 | 36 | 39 | 4 |

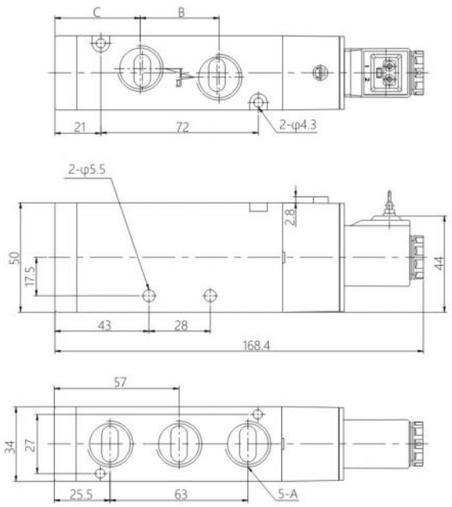



| Model | A | B | C | D |
|---|---|---|---|---|
| 4V410-15 | G1/2 | 36 | 93.4 | 4 |

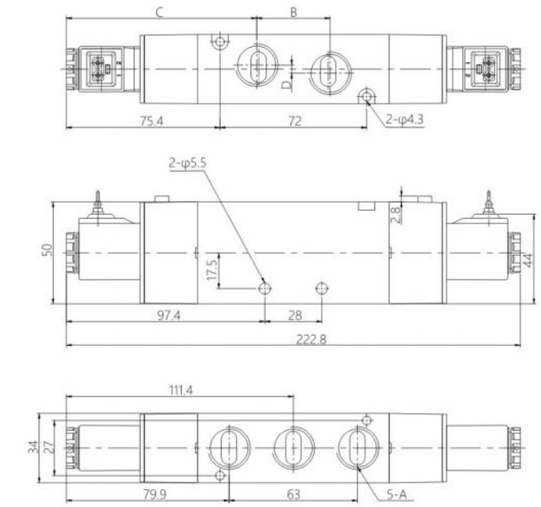



| Model | A | B | C | D |
|---|---|---|---|---|
| 4V410-15 | G1/2 | 36 | 93.4 | 4 |

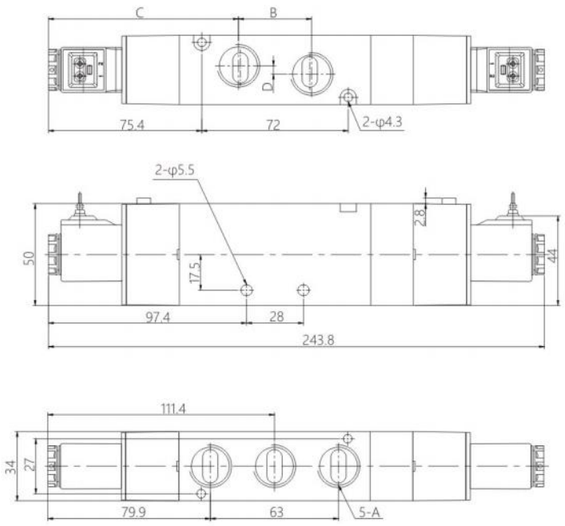
## Lead-wire type




| Model | A | B | C | D |
|---|---|---|---|---|
| 4V410-15 | G1/2 | 36 | 39 | 4 |

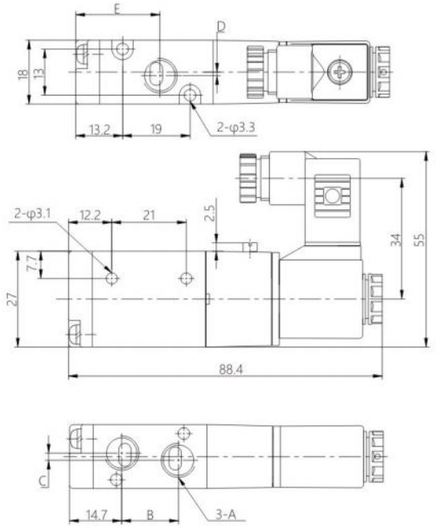



| Model | A | B | C | D |
|---|---|---|---|---|
| 4V410-15 | G1/2 | 36 | 93.4 | 4 |



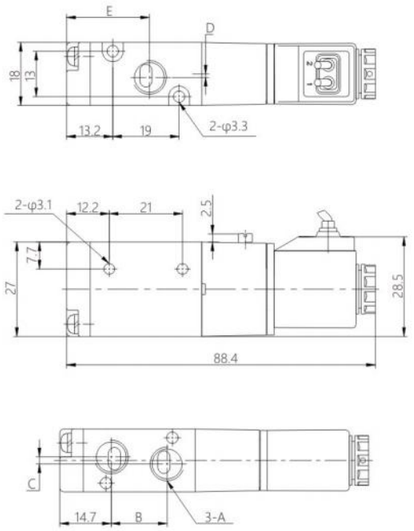

| Model | A | B | C | D |
|---|---|---|---|---|
| 4V410-15 | G1/2 | 36 | 93.4 | 4 |

## Plug-in type



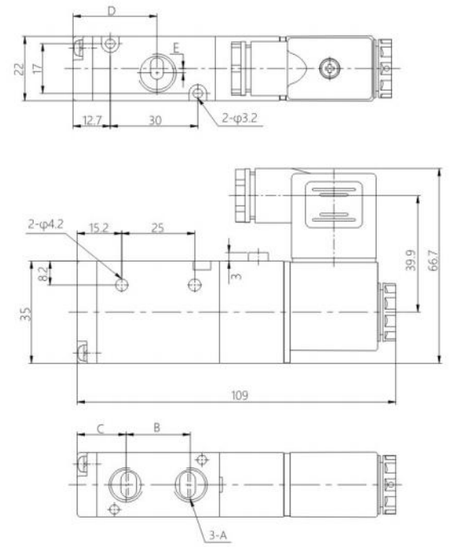

| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 3V110-M5 | M5x0.8 | 14.2 | 0 | 0 | 22.7 |
| 3V110-06 | G1/8 | 16 | 2 | 1 | 23.7 |

## Lead-wire type



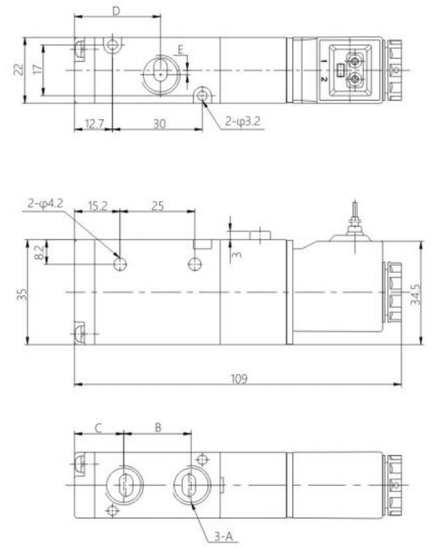

| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 3V110-M5 | M5x0.8 | 14.2 | 0 | 0 | 22.7 |
| 3V110-06 | G1/8 | 16 | 2 | 1 | 23.7 |

## Plug-in type

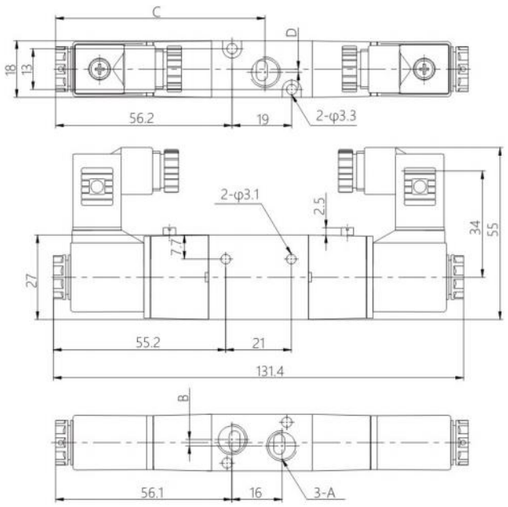



| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 3V210-06 | G1/8 | 22 | 16.7 | 27.7 | 0 |
| 3V210-08 | G1/4 | 22.5 | 16.5 | 28.7 | 1.5 |

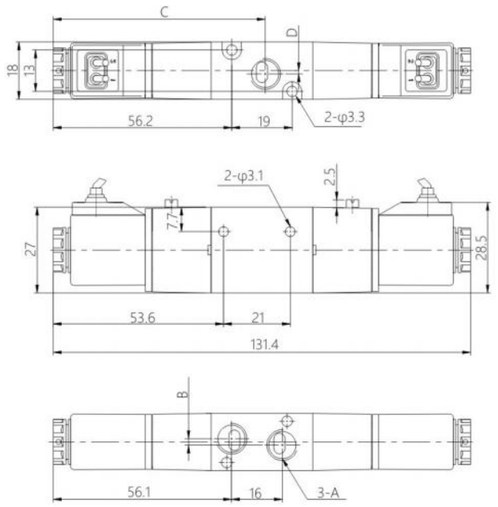
## Lead-wire type



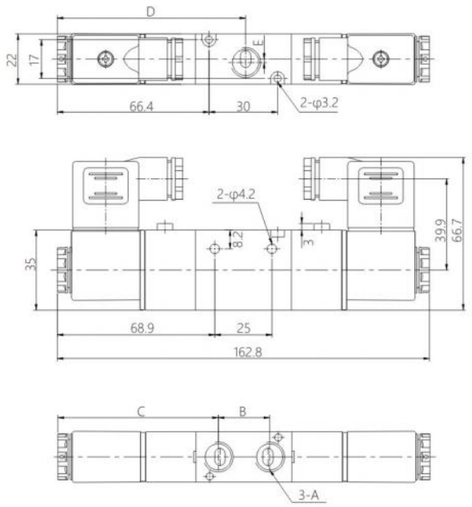

| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 3V210-06 | G1/8 | 22 | 16.7 | 27.7 | 0 |
| 3V210-08 | G1/4 | 22.5 | 16.5 | 28.7 | 1.5 |



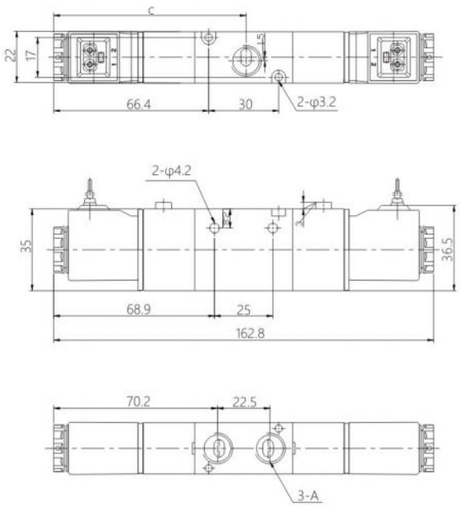

| Model | A | B | C | D |
|---|---|---|---|---|
| 3V120-M5 | M5x0.8 | 0 | 66.7 | 0 |
| 3V120-06 | G1/8 | 2 | 65.7 | 1 |




| Model | A | B | C | D |
|---|---|---|---|---|
| 3V120-M5 | M5x0.8 | 0 | 66.7 | 0 |
| 3V120-06 | G1/8 | 2 | 65.7 | 1 |

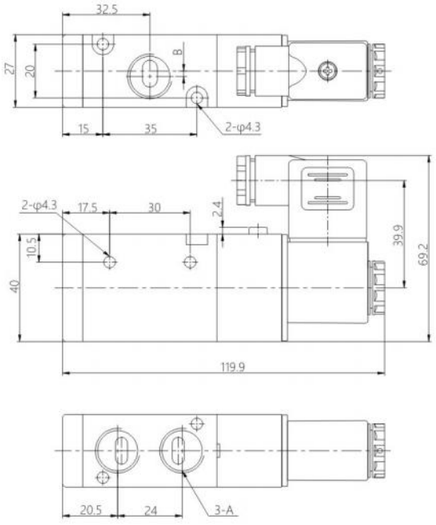



| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 3V220-06 | G1/8 | 22 | 70.4 | 81.4 | 0 |
| 3V220-08 | G1/4 | 22.5 | 72.4 | 82.4 | 1.5 |



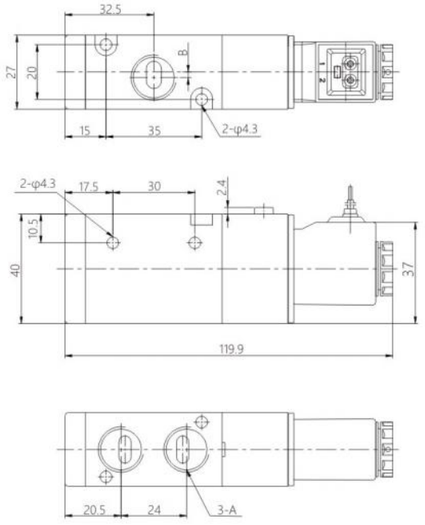

| Model | A | B | C | D | E |
|---|---|---|---|---|---|
| 3V220-06 | G1/8 | 22 | 70.4 | 81.4 | 0 |
| 3V220-08 | G1/4 | 22.5 | 70.2 | 82.4 | 1.5 |

## Plug-in type

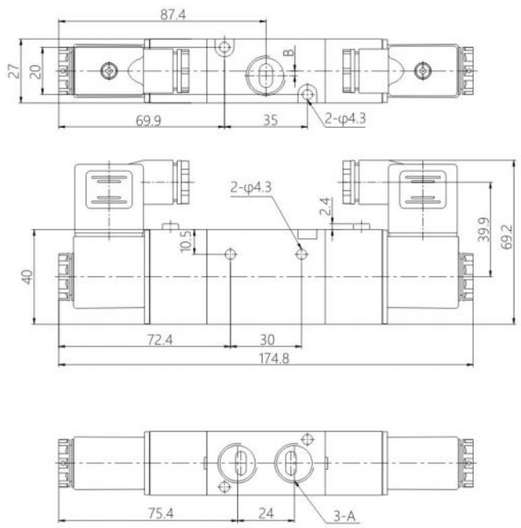



| Model | A | B |
|---|---|---|
| 3V310-08 | G1/4 | 0 |
| 3V310-10 | G3/8 | 2 |

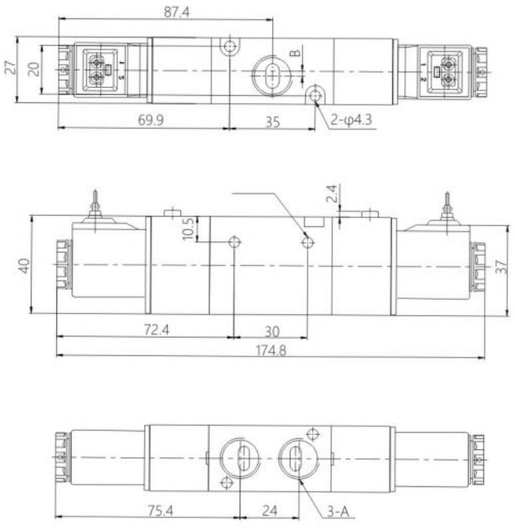
## Lead-wire type




| Model | A | B |
|---|---|---|
| 3V310-08 | G1/4 | 0 |
| 3V310-10 | G3/8 | 2 |

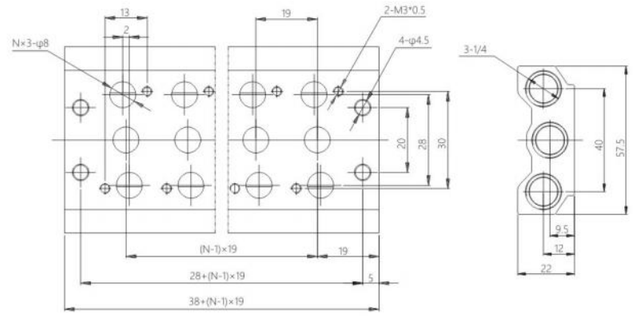



| Model | A | B |
|---|---|---|
| 3V310-08 | G1/4 | 0 |
| 3V310-10 | G3/8 | 2 |

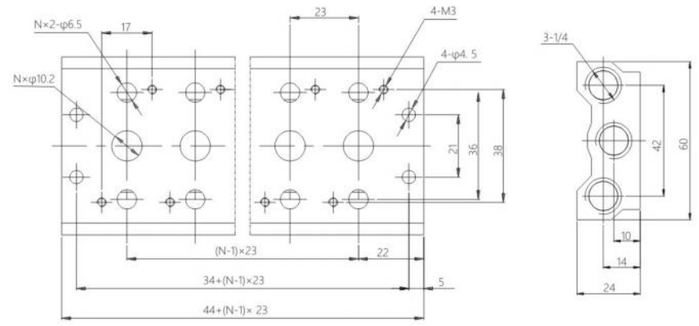



| Model | A | B |
|---|---|---|
| 3V310-08 | G1/4 | 0 |
| 3V310-10 | G3/8 | 2 |

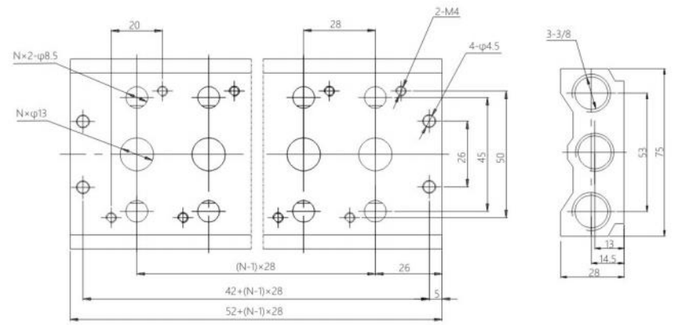
## 4V100 Series Manifold



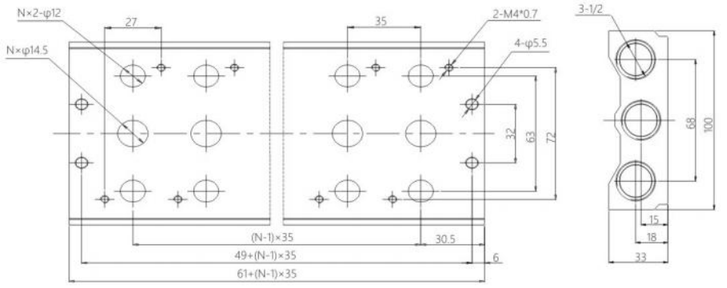

## 4V200 Series Manifold




## 4V300 Series Manifold




## 4V400 Series Manifold



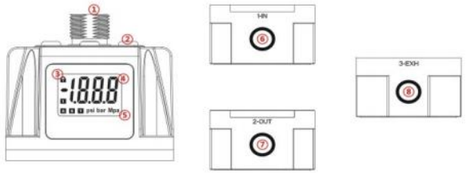
# EPV SERIES Proportional Pressure Regulator

- ±0.2% control accuracy
- Max 3000L/min large flow output
- Real-time display of actual output pressure
- 1bar/5bar/9bar multi-range selection
- IP65 level,suitable for various working conditions

XINGYU
Electro-pneumatic control components

## EPV

### Technical Information



| No | Name | No | Name |
|---|---|---|---|
| ① | M12 aviation plug | ⑤ | Unit display |
| ② | Water-proof key | ⑥ | Air supply port |
| ③ | Locking key | ⑦ | Air out port |
| ④ | Main display sectiohn | ⑧ | Air EXH port |

### Specification

| | | | | |
|---|---|---|---|---|
| Model | | EPV1-1 | EPV1-3 | EPV1-5 |
| | | EPV2-1 | EPV2-3 | EPV2-5 |
| | | EPV3-1 | EPV3-3 | EPV3-5 |
| Min.supply Pressure | | Set pressure + 0.1MPa | | |
| Max.supply Pressure | | 0.2MPa | 1.0MPa | |
| Set Pressure Range | | 0.005~0.1MPa | 0.005~0.5MPa | 0.005~0.9MPa |
| Power Supply | Voltage | DC : 24V±10% | | |
| | Current | DC : 24V 0.12A or less | | |
| Input Signal | Current Type | DC4~20mA, DC0~20mA | | |
| | Voltage Type | DC0~5V, DC0~10V | | |
| | Digital Signal | RS485-MODUS | | |
| Input Impedance | Current Type | 250Ω or less | | |
| | Voltage Type | Approx6.5KΩ | | |
| Output Signal | Analog Output | DC1-5V (load impedance : over 1KΩ)<br>DC4-20mA (Load impedance : below 250Ω)<br>Output precision within range of 1% F.S. | | |
| | Switch Output | NPN-OC output type:30mA<br>PNP-OC output type:30mA | | |
| Nonlinear | | ±1%F.S. | | |
| Hysteresis | | 0.5%F.S. | | |
| Repeatability | | ±0.5%F.S. | | |
| Temperature Characteristic | | ±0.12%F.S./℃ less than | | |
| Display | Precision | ±2%F.S. | | |
| | Division | 1000 division | | |
| Ambient Temperature | | 0~50℃ | | |
| Protection Class | | IP65 | | |
| 浪涌等级（电源） | | IEC 61000-4-5<br>(1000V) | | |

### Ordering Code

EPV2 – 5 0 3 1 □ 2 – L □

1. Model
   EPV1
   EPV2
   EPV3

2. Range
   1: 0.1MPa
   3: 0.5MPa
   5: 0.9MPa

3. Voltage
   0: DC 24V

4. Input
   0: Current DC 4-20mA
   1: Current DC 0-20mA
   2: Voltage DC 0-5V
   3: Voltage DC 0-10V

5. Output
   1: Analog DC 1-5V
   2: Switch NPN output
   3: Switch PNP output
   4: Analog: DC4-20mA

   MD: RS485 communication
   40: 4 preset inputs
   80: 8 preset inputs

6. Connection thread
   BLANK : Rc
   N : NPT
   F : G

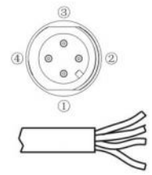
7. Size
   1: 1/4" (1,2 type)
   2: 3/8" (2,3 type)
   3: 1/2" (3 type)

8. Cable connector
   S: Straight 3m
   L: Right angle 3m
   N: no cable

9. Bracket
   Blank: no bracket
   B: flat bracket
   C: L type bracket

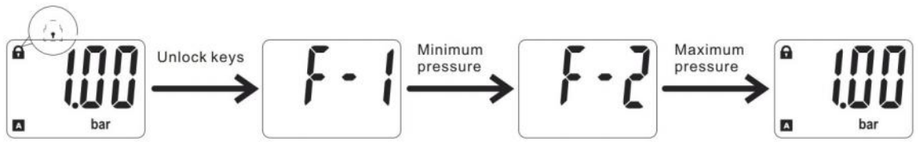
EXH Port Size: EPV1: 1/8
EPV2: 1/4
EPV3: 1/2

### Wiring Method

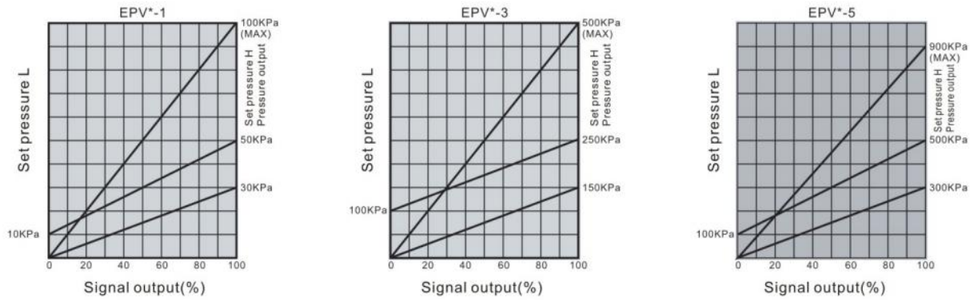


① Brown: Power supply+
② White: Input signal
③ Blue: 0V
④ Black: Output signal

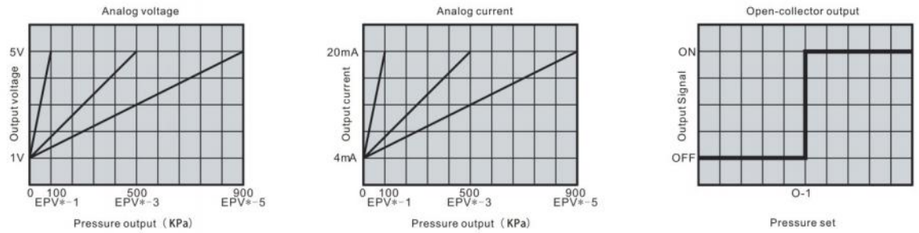
### Setting Method



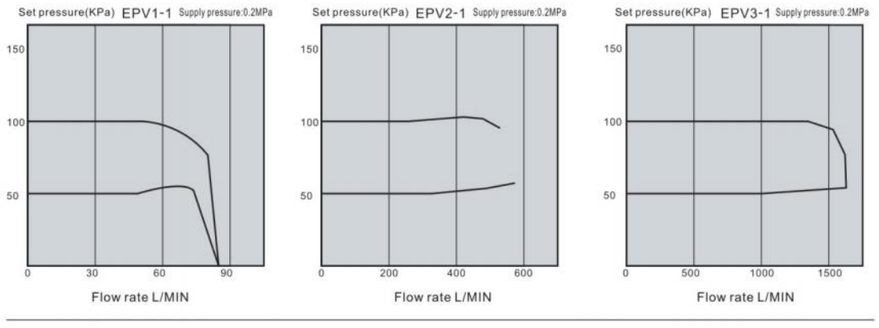

### Pressure Output Signal Input

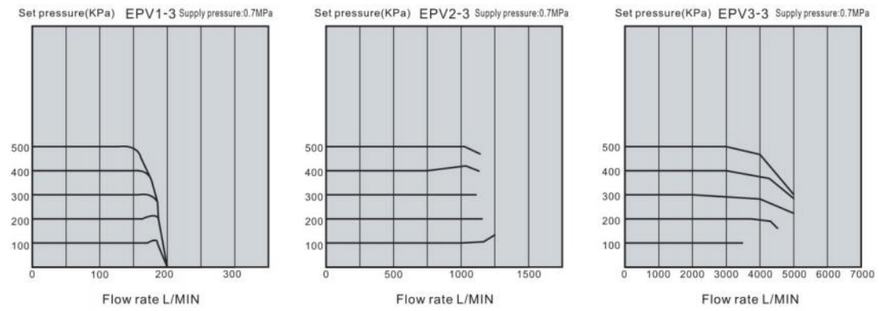


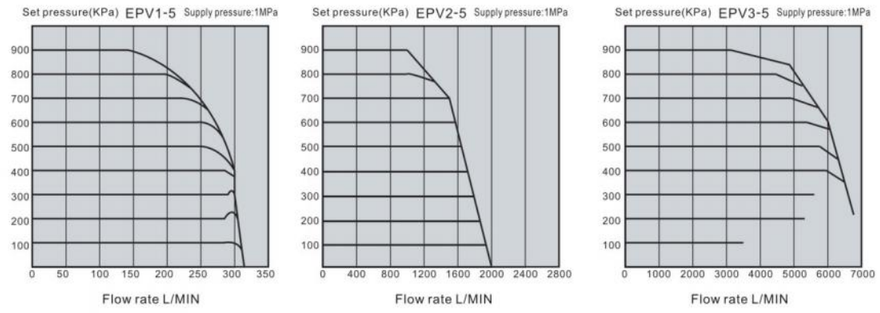
## Pressure Output Signal Output



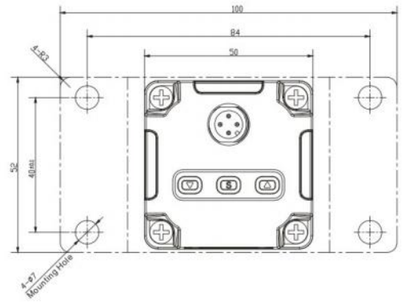

## Flow Characteristics

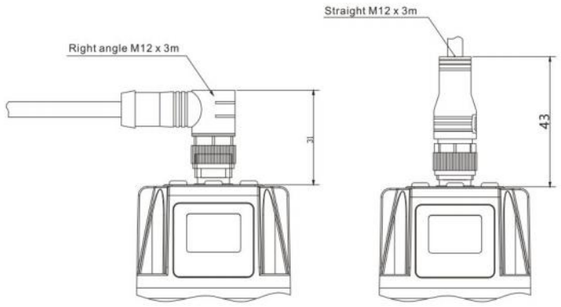


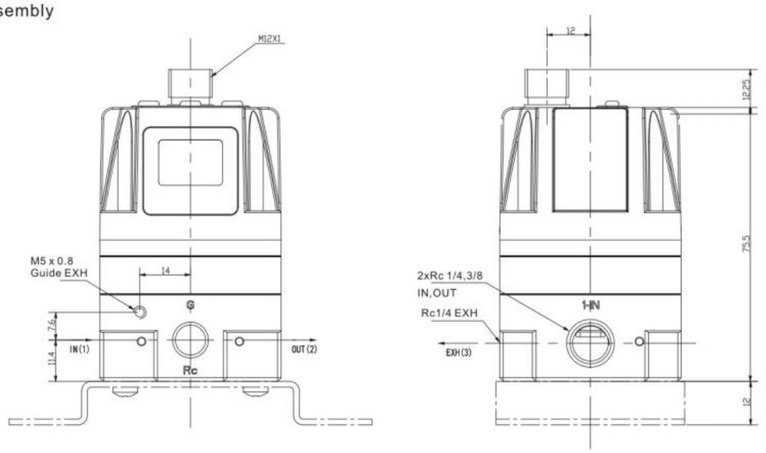




## EPV1 Dimension (mm)

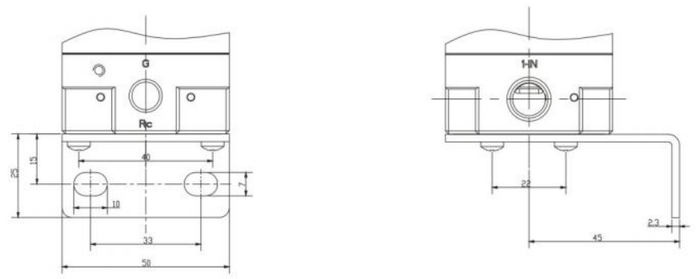


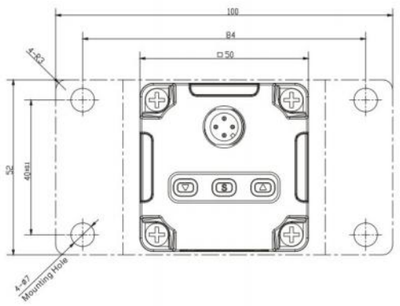

Flat Bracket assembly

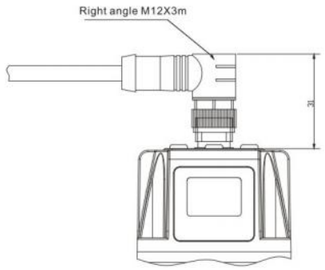


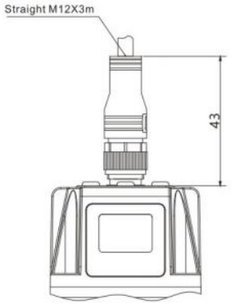

L Bracket assembly



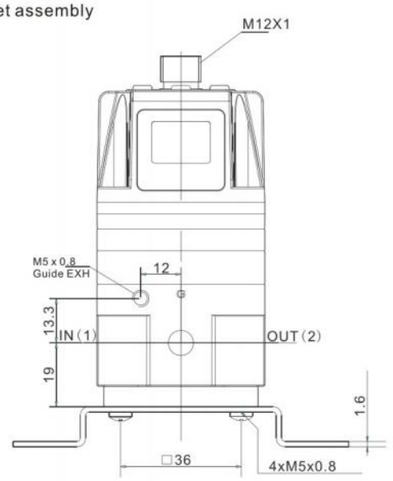
## EPV2 Dimension (mm)

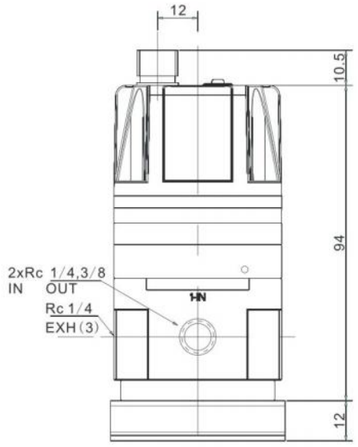


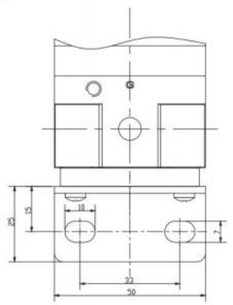



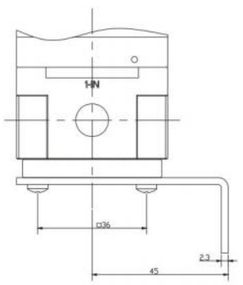

Flat Bracket assembly



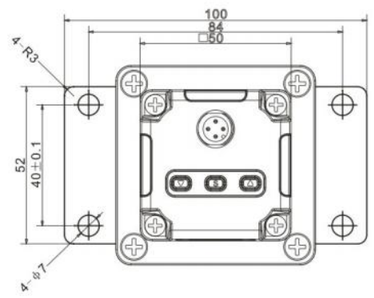



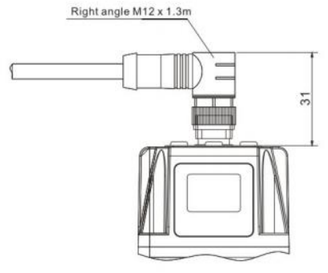

L Bracket assembly

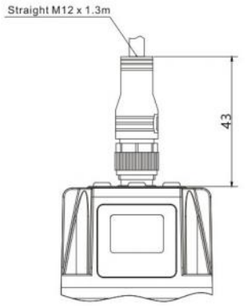


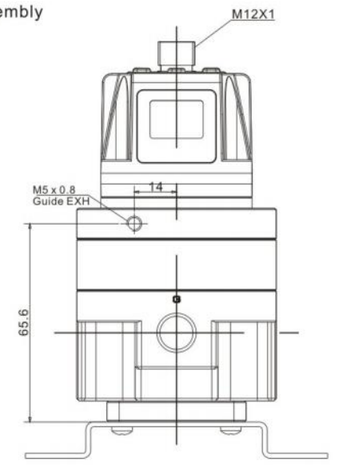

## EPV3 Dimension (mm)

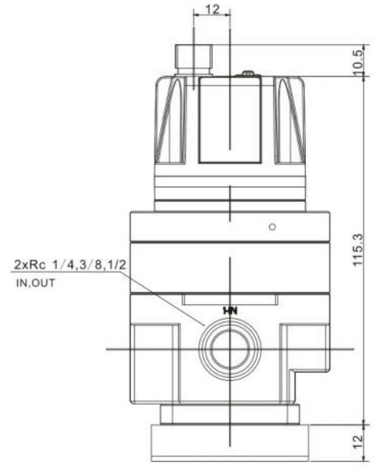


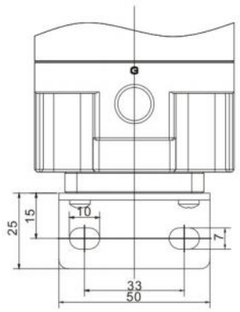



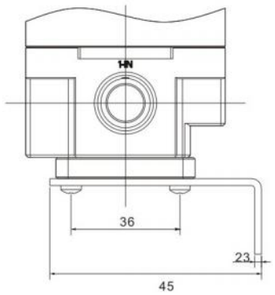

Flat Bracket assembly




L Bracket assembly



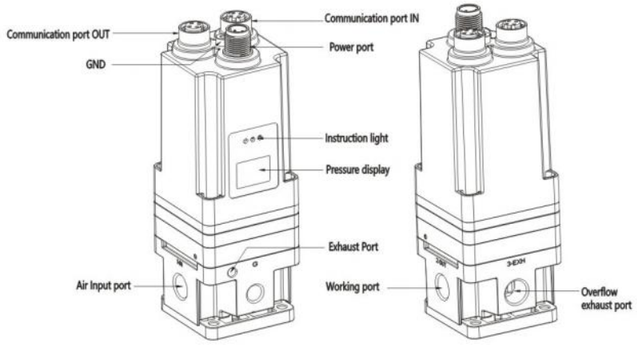




# EPV PROFINET TYPE

- Profinet digital communication with strong anti-interference performance
- Maximum flow rate up to3000 L/min
- Valves can be networked with each other to enable long-distance transmission
- Real-time pressure valve displayed on LCD screen

## EPV2-50PN

### Function of the parts




### Specification

| | | | | |
|---|---|---|---|---|
| Model | | EPV1-1 | EPV1-3 | EPV1-5 |
| | | EPV2-1 | EPV2-3 | EPV2-5 |
| | | EPV3-1 | EPV3-3 | EPV3-5 |
| Fluid | | Compressed Air、$O_2$、$N_2$ | | |
| Max. supply pressure | | Set pressure-1.2MPa | | |
| Min. supply pressure | | +0.1MPa | | |
| Max. supply pressure | | 0.2MPa | 1MPa | |
| Set pressure range | | 0.005 ~ 0.1MPa | 0.005 ~ 0.5MPa | 0.005 ~ 0.9MPa |
| Power supply | Voltage | DC24V±10% | | |
| | Current | ≤ 0.12A | | |
| Communication type | | Profinet | | |
| Power port | | M12 5 PIN | | |
| Communication port IN | | M12 4 PIN | | |
| Communication port OUT | | M12 4 PIN | | |
| Linearity | | ±1%F.S. | | |
| Hysteresis | | 0.5%F.S. | | |
| Repeatability | | ±0.5%F.S. | | |
| Sensitivity | | 0.2%F.S. | | |
| Output pressure display | Accuracy | ±2%F.S. | | |
| | Display resolution | 1000 Counts | | |
| Ambient and fluid temperatures | | 0 ~ 50℃(No condensation) | | |
| Protection | | IP65 | | |

### Ordering Code

EPV 2 – 5 0 PN □ 2 – □ □

1 2 3 4 5 6 7 8

**1.** Model
EPV1
EPV2
EPV3

**2.** Range
1: 0.1MPa
3: 0.5MPa
5: 0.9MPa

**3.** Voltage
0: DC 24V

**4.** Communication mode
PN: Profinet

**5.** Thread type
Blank: Rc
F: G
N: NPT

**6.** Port size
1: 1/8"(EPV1)
2: 1/4"(EPV1、EPV2)
3: 3/8"(EPV2、EPV3)
4: 1/2"(EPV3)

**7.** Cable connector
S: Straight 2m
L: Right angle 2m
N: No cable

**8.** Bracket
B: Flat bracket
C: L type bracket
Blank: no bracket

### Communication cables code

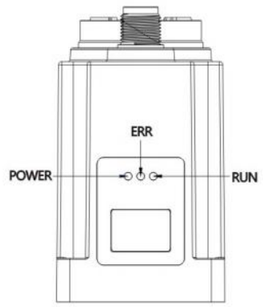
XY – VT – M12 – 020

1 2

**1.** Cable Model
M12: Power cable
M12RJ45: M12 To RJ45 (PLC)
MT2MT2: M12 To M12 (Chain communication)

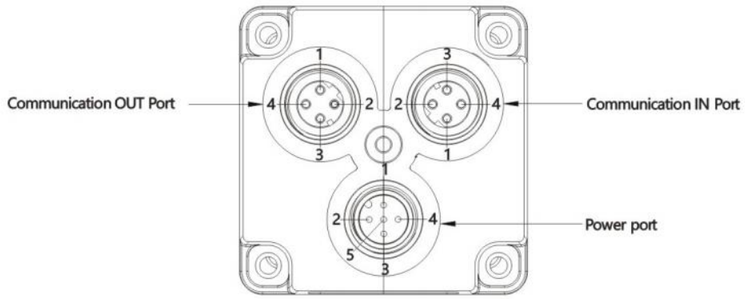
**2.** Cable length
020: 2 meters
XXX: Customized

### Meaning of light



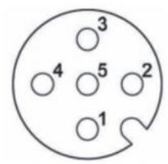

| Code | PWR | RUN | ERR |
|---|---|---|---|
| Light On | ON | PN ON | PN OFF |
| Light Off | Off | — | — |
| Blink | — | — | PN<br>Not connect |

## Electrical Interface Definition




Communication port A/B: M12 4PIN socket,D-coded

| No. | Meaning | Description |
|---|---|---|
| 1 | TD+ | TransmitData+ |
| 2 | RD+ | ReceiveData+ |
| 3 | TD- | TransmitData- |
| 4 | RD- | ReceiveData- |

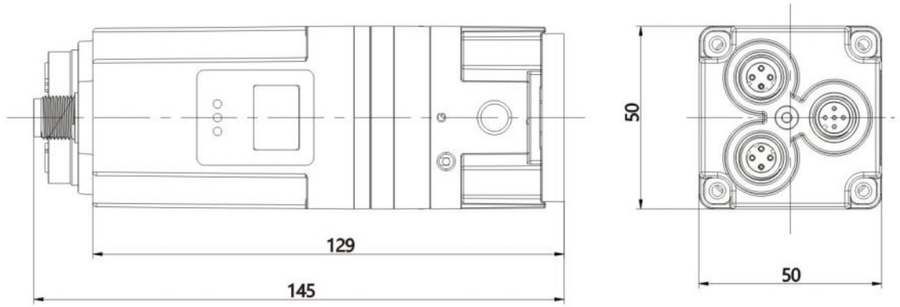


Power port: M12 5PIN plug, A-coded

| No. | Meaning | Description |
|---|---|---|
| 1 | V124V | +24Vforsolenoidvalve |
| 2 | V10V | 0Vforsolenoidvalve |
| 3 | V224V | +24VforV2unitoperation |
| 4 | V20V | 0VforV2unitoperation |
| 5 | FE | Ground |

## Dimension Drawing

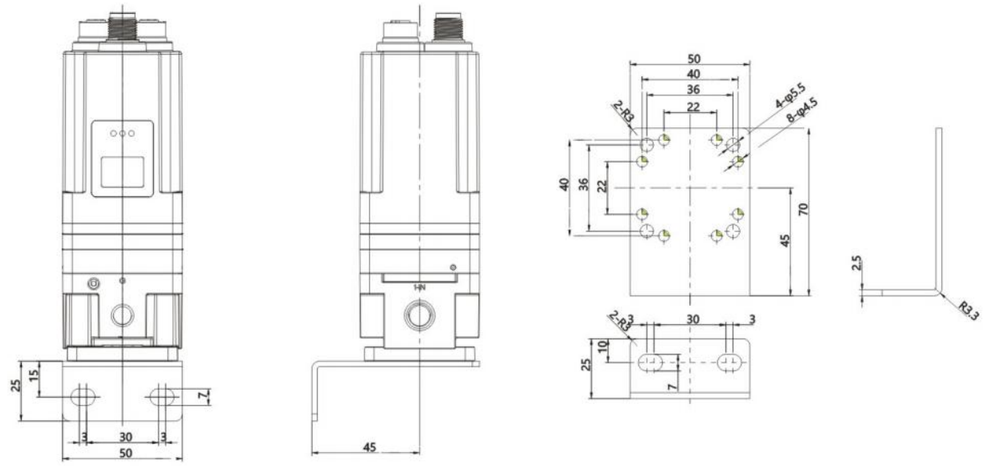
Dimension size



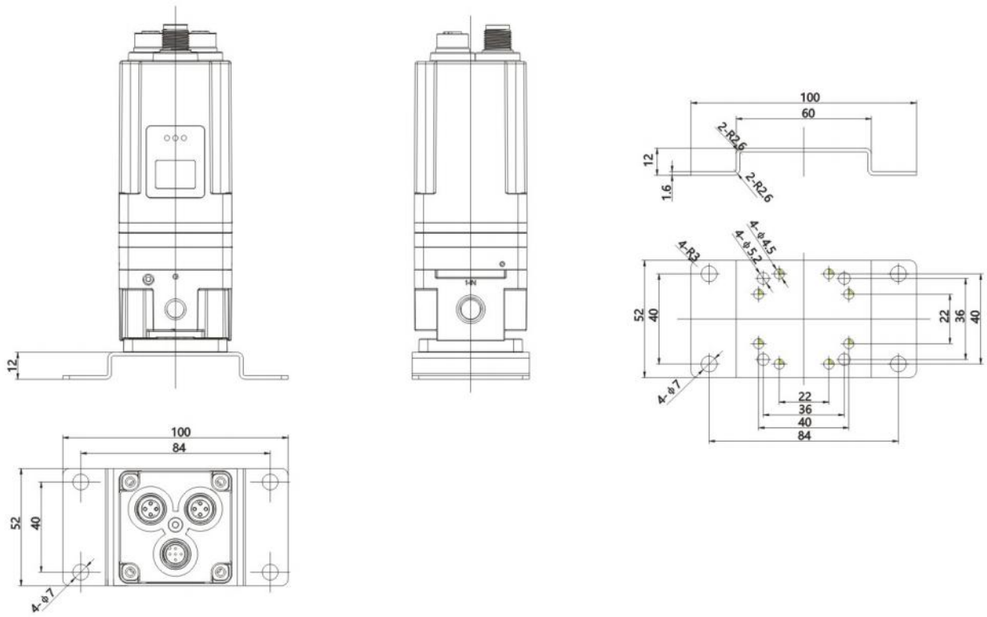

## Dimension Drawing

Bracket dimension

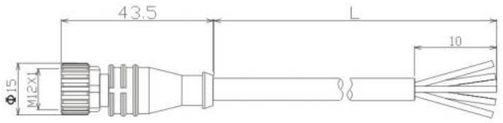
L type Flat bracket



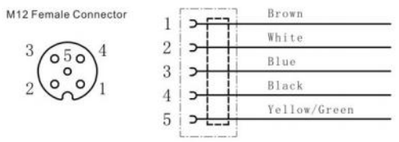

B type flat bracket

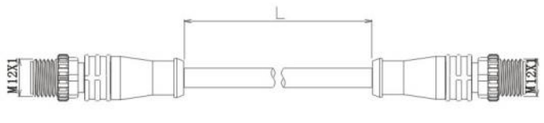


## Wire Dimension Drawing

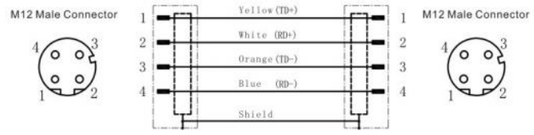


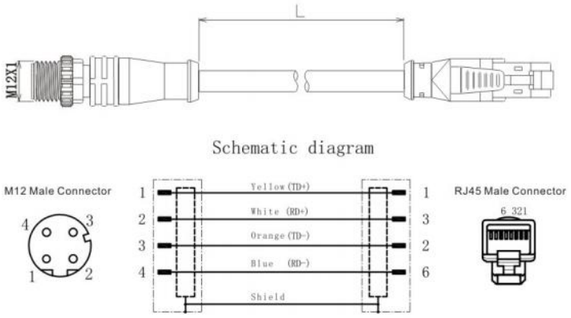

Schematic diagram



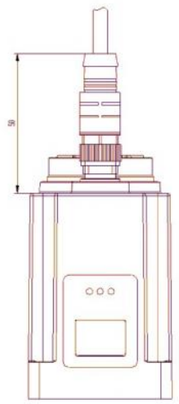

Schematic diagram



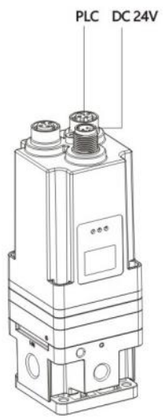

Schematic diagram



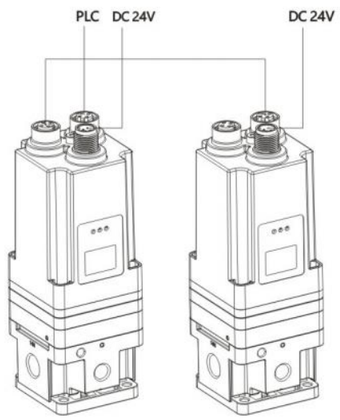




## Product Connection Guidelines

Single



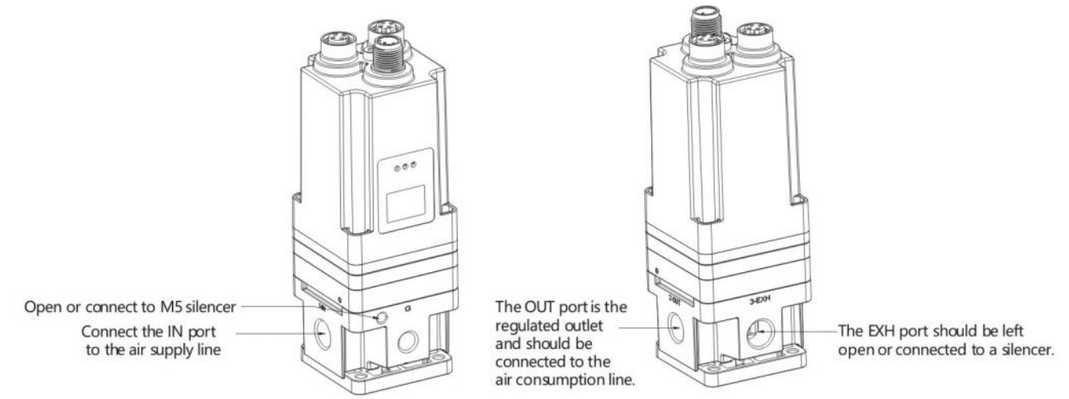

Multiple Series Connection




Single unit usage requires: 1- power cable 1-PLC communication cable
When multiple units are connected in series: Power cable per unit: 1 PCS PLC communication cable per unit: 1 PCS
Network communication cable: (N-1) PCS
For 24V power wiring: Brown and blue wires connect to 24V+; Black and white wires connect to 24V



## Product Connection Guidelines




### ①When tightening the piping, please hold the internal threaded side firmly and apply the recommended torque

Insufficient tightening torque may result in loosening or poorsealing, while excessive torque may cause thread damage.In addition, if the internal threaded side is not heldduring tightening, excessive force may be directlyapplied to the piping bracket or other components, potentially leading to damage.

Recommended tightening torque (N·m)

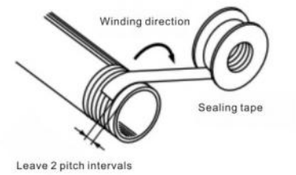
| Thread | 1/8 | 1/4 | 3/8 | 1/2 |
|---|---|---|---|---|
| Torque | 3~5 | 8~12 | 15~20 | 20~25 |

### ①Pre-installation Processing

Before piping, please thoroughly blow out or wash the pipes to removecutting debris, cutting oil, and other impurities inside the pipes. If cutting seal materials, debris, or other foreign substances enter the interior of this product, the solenoid valve may produce a squeaking noise or the output pressure may not be properly maintained.

### ②Sealing Tape Wrapping Method

For piping and fittings connected by threaded joints, please be careful to prevent cutting debris or fragments of sealing tape from entering the interior of the solenoid valve. In addition, when using sealing tape, leave 1.5 to 2 thread pitches exposed on the threaded section.

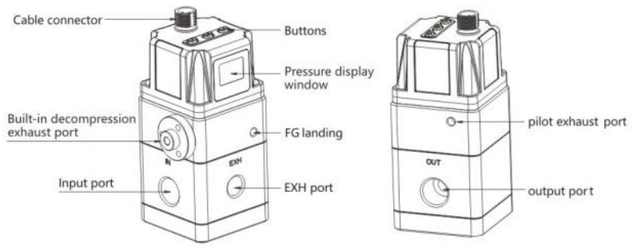


# EPVX2 High Pressure Proportional Valve

- Pressure control accuracy: 0.3% F.S., with real-time pressure LCD display
- Pressure resistance up to 5 MPa, adjustable pressure range 0.01 MPa ~ 3 MPa
- Multiple input and output signal options available
- Valve body precisely machined by high-precision CNC equipment
- IP65 protection rating, suitable for various operating conditions

# EPVX2

## Function of the parts




F.G.(landing)

Please use the thread on the front of the main body to connect the F.G. terminal for grounding. Otherwise, the action may be abnormal due to noise interference.

## Specification

| Model | | EPVX2 |
|---|---|---|
| Min. supply pressure | | 0.5MPa, or+0.2MPa above set pressure |
| Max. supply pressure | | 5MPa |
| Setting pressure range | | 0.01~3.0MPa |
| Power | Voltage | DC24V±10% |
| | Current | Static≤0.1A； max.≤0.3A |
| Input Signal | Voltage type | DC0 ~ 5V，DC0 ~ 10V |
| | Current type | DC4 ~ 20mA，DC0 ~ 20mA |
| Input Impedance | Voltage type | 6.6kΩ以下 |
| | Current type | 250Ω(at room temperature) |
| Output Signal | Analoge output | DC 1~5V(load impedance1kΩ or more) |
| | | DC 4~20mA(load impedance250Ω or less) |
| | Switching output | NPN-OC output:30mA |
| | | PNP-OCoutput:30mA |
| Linearity | | ±1%FS or less |
| Hysteresis accuracy | | 1%FS or less |
| Repeatability | | ±1%FS or less |
| Temperature behaviour | | ±1%FS or less |
| Pressure accurary | | ±2%FS or less |
| Unit | | MPa； bar； psi |
| Working medium | | Air、$O_2$、$N_2$、Ar |
| Ambient and Fluid temp. | | 0~50℃ |
| Weight | | 590g |

## Ordering Code

EPVX2 – 3 0 3 1 – □ 3 – L □

1 2 3 4 5 6 7 8 9

**1.** Model

**2.** Range
3: 0.01~3MPa

**3.** Voltage
0: DC 24V

**4.** Input signal
0: Current DC 4-20mA
1: Current DC 0-20mA
2: Voltage DC 0-5V
3: Voltage DC 0-10V

**5.** Output signal
1: AnalogeDC 1-5V
2: NPN
3: PNP
4: Analoge DC 4-20mA

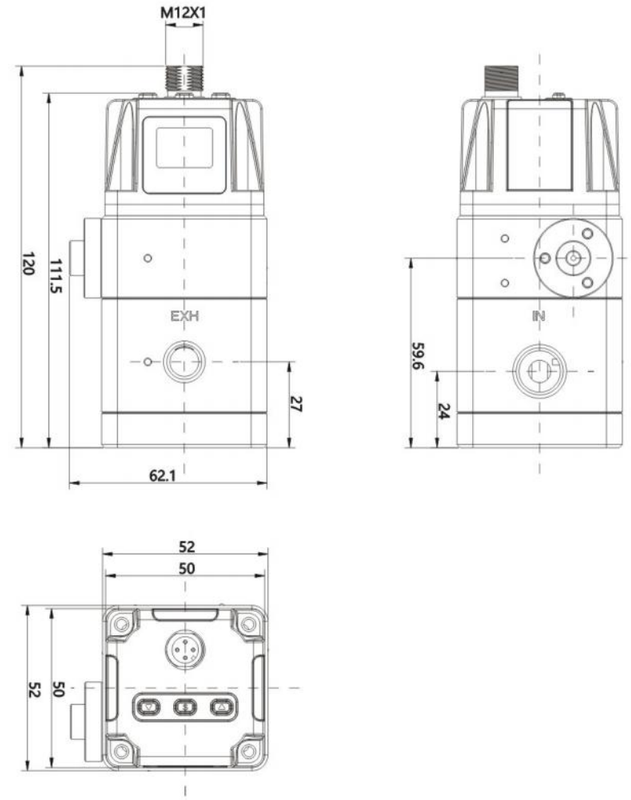
**6.** Thread type
Blank: Rc
F: G
N: NPT

**7.** Port size
3: 3/8"

**8.** Cable
S: Straight 3m
L: Right angle 3m
Blank: No cable

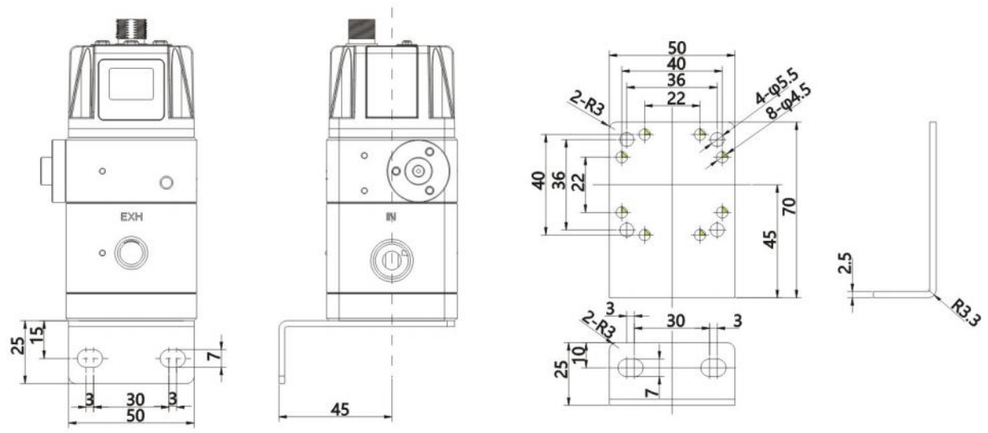
**9.** Bracket type
B: Flat bracket
C: L bracket
Blank: No bracket

## Dimension Drawing

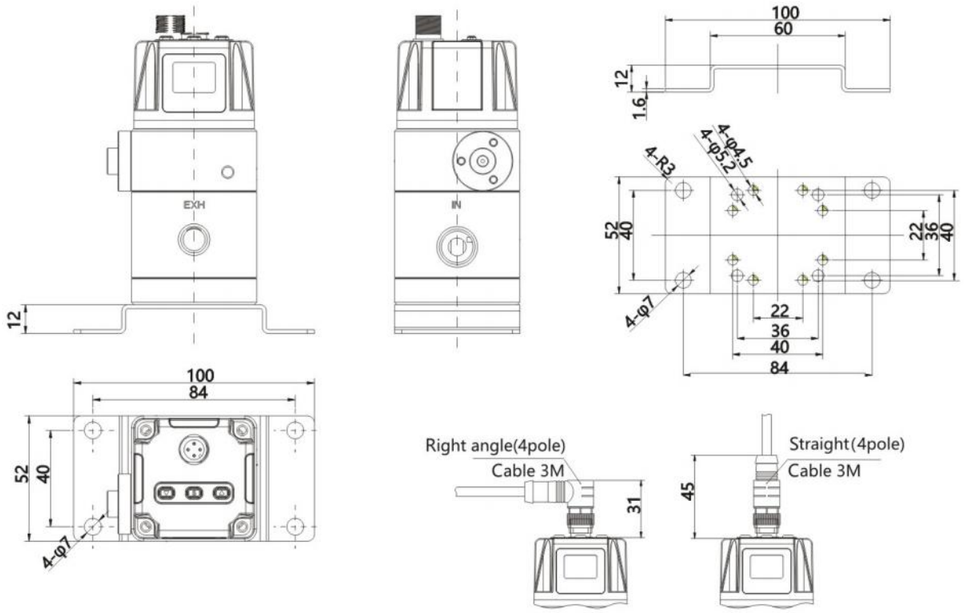


## Dimension Drawing

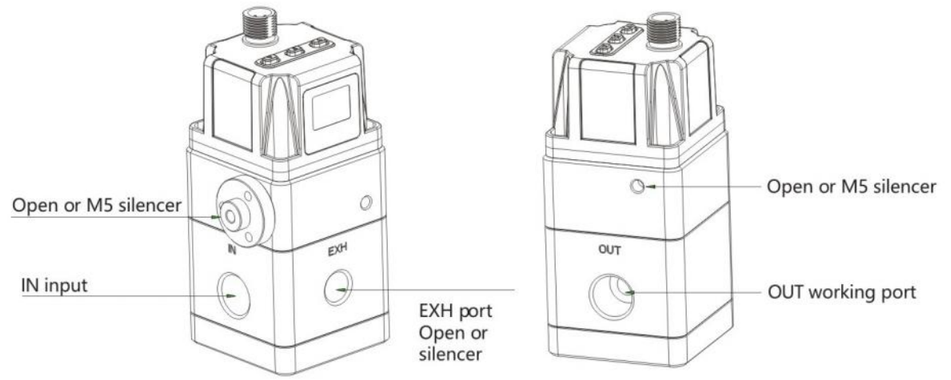
L type bracket




B type flat bracket




## Description of product Using

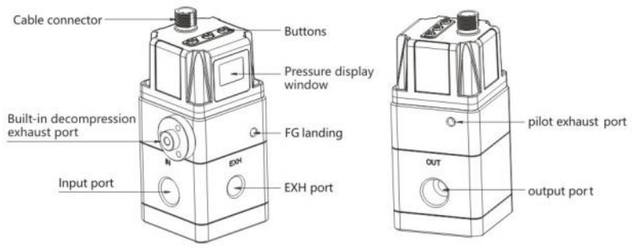



# EPVH2 High-Pressure Proportional Valve

- Suitable for closed-loop pressure control
- +1% F.S. pressure control accuracy
- Stepless regulation below 2 MPa
- Response speed s300 ms during full-range pressure increase/decrease
- Maximum flow rate up to 3000 L/min
- IP65 protection, suitable for various applications

# EPVH2

## Function of the parts




F.G.(landing)

Please use the thread on the front of the main body to connect the F.G. terminal for grounding. Otherwise, the action may be abnormal due to noise interference.

## Specification

| Model | | EPVH2 |
|---|---|---|
| Min. supply pressure | | 0.5MPa, or+0.2MPa above set pressure |
| Max. supply pressure | | 3MPa |
| Setting pressure range | | 0.2~2.0MPa |
| Power | Voltage | DC24V±10% |
| | Current | Static≤0.1A； max.≤0.3A |
| Input Signal | Voltage type | DC0 ~ 5V，DC0 ~ 10V |
| | Current type | DC4 ~ 20mA，DC0 ~ 20mA |
| Input Impedance | Voltage type | 6.6kΩ 以下 |
| | Current type | 250Ω(at room temperature) |
| Output Signal | Analoge output | DC 1~5V(load impedance1kΩ or more) |
| | | DC 4~20mA(load impedance250Ω or less) |
| | Switching output | NPN-OC output:30mA |
| | | PNP-OCoutput:30mA |
| Linearity | | ±1%FS or less |
| Hysteresis accuracy | | 1%FS or less |
| Repeatability | | ±1%FS or less |
| Temperature behaviour | | ±1%FS or less |
| Pressure accurary | | ±2%FS or less |
| Unit | | MPa； bar； psi |
| Working medium | | Air、$O_2$、$N_2$、Ar |
| Ambient and Fluid temp. | | 0~50℃ |
| Weight | | 590g |

## Ordering Code

EPVH2 – 2 0 3 1 □ 3 – L □

1 2 3 4 5 6 7 8 9

**1.** Model

**2.** Range
3: 0.01~3MPa

**3.** Voltage
0: DC 24V

**4.** Input signal
0: Current DC 4-20mA
1: Current DC 0-20mA
2: Voltage DC 0-5V
3: Voltage DC 0-10V

**5.** Output signal
1: Analoge DC 1-5V
2: NPN
3: PNP
4: Analoge DC 4-20mA

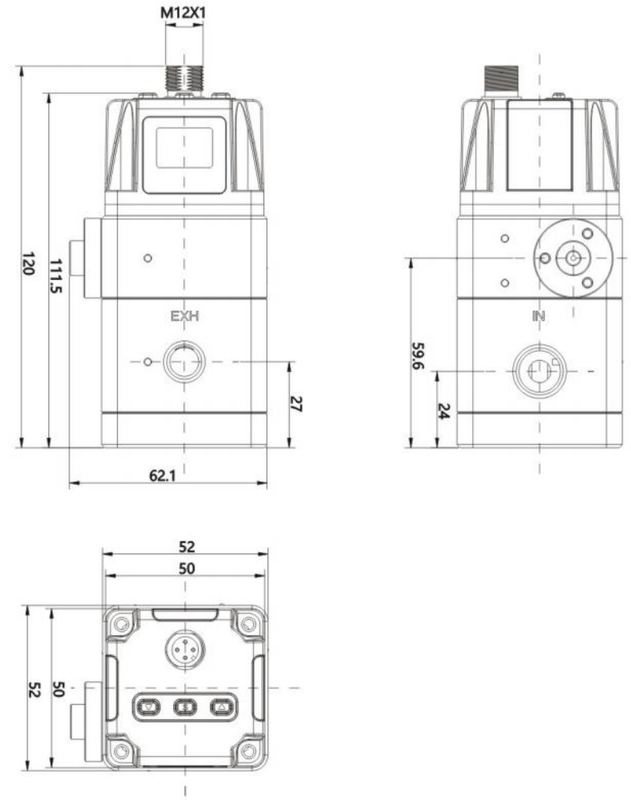
**6.** Thread type
Blank: Rc
N: NPT
F: G

**7.** Port size
2: 1/4"
3: 3/8"

**8.** Cable
Blank: No cable
S: Straight 3m
L: Right angle 3m

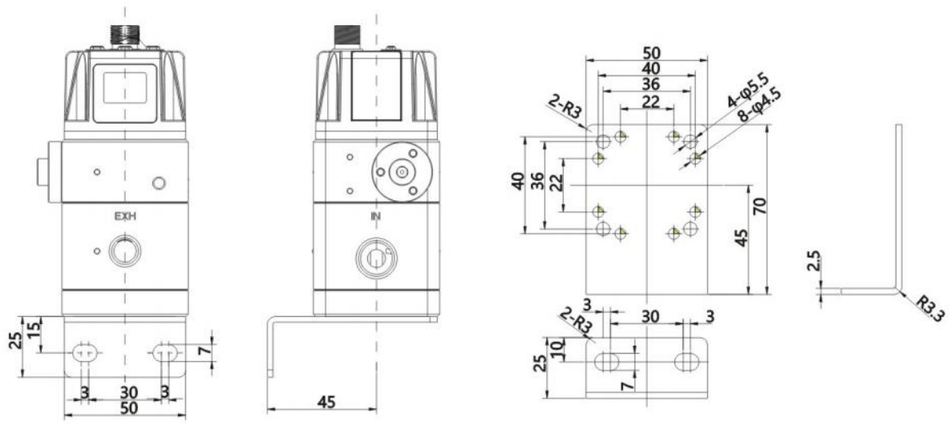
**9.** Bracket type
Blank: No bracket
B: Flat bracket
C: L bracket

## Dimension Drawing

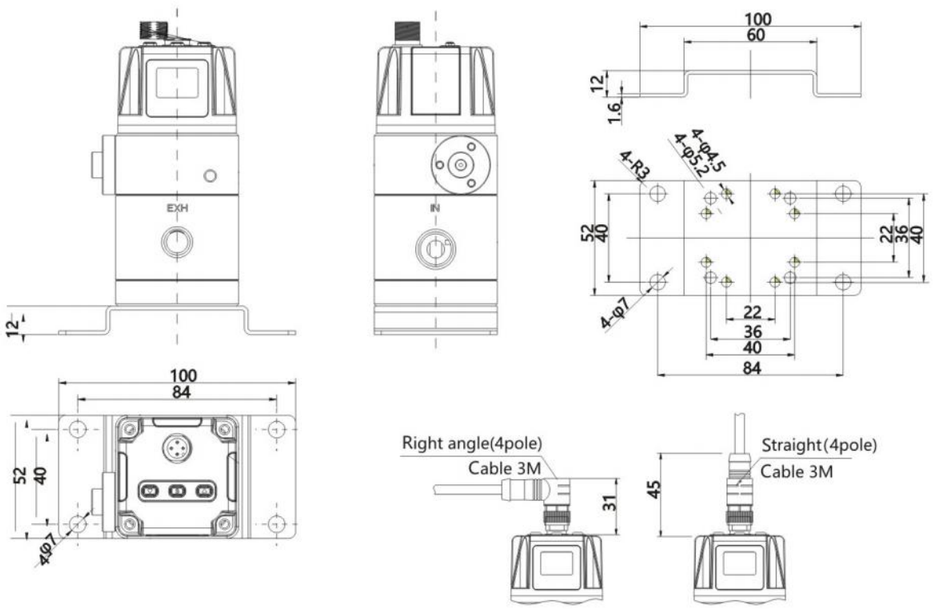


## Dimension Drawing

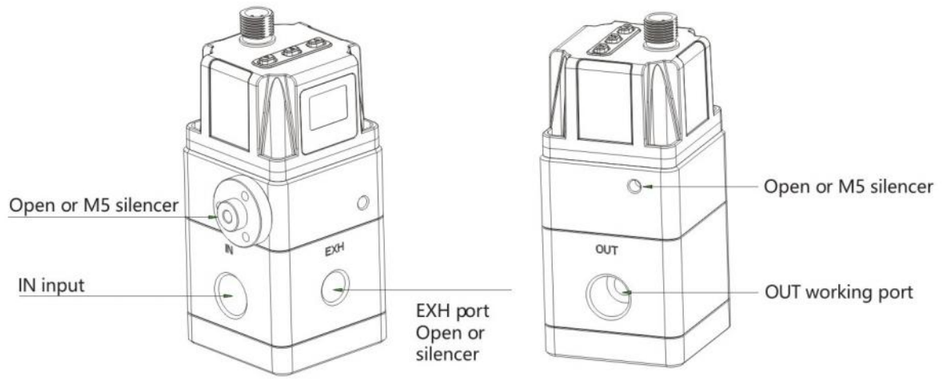
L type bracket




B type flat bracket




## Description of product Using



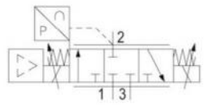
# HEPV SERIES HIGH-PRESSURE E/P REGULATOR

- Compressed air, oxygen and inert gas can be switched at will.
- High precision, quick response, stepless pressure control.
- IP65 level, applied to various working conditions
- 3000L/min large flow output.
- Poppet valve structure, good sealing, maximum support for 30bar air pressure input and 28bar air pressure output.

# HEPV

## Technical Information

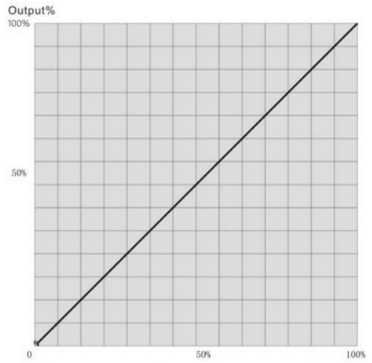
1. Signal/power separation design
2. M12 standard interface
3. 1kPa resolution
4. Fast and stable




## Specification

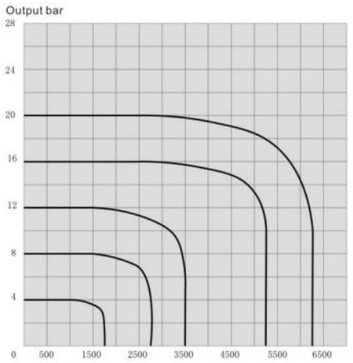
| | |
|---|---|
| Version | Poppet valve |
| Mounting orientation | a = 0 … 90° ±β= 0 … 90° |
| Working pressure max | 30 bar |
| Working pressure min | 0.5 bar + required secondary pressure |
| Ambient temperature min./max. | 5 … 50℃ |
| Medium | Compressed air |
| Max. particle size | 50 um |
| Oil content of compressed air | 0 … 1 mg/m$^3$ |
| Precision | 0.1 % F.S. |
| Division | 1 kPa |
| Nominal flow Qn | 1300 l/min *Input 7bar,output 6bar |
| Control | Analog |
| Input Voltage | DC 24V |
| Voltage tolerance DC | -20% / +30% |
| Permissible ripple | 5% |
| Max. power consumption | 1400 mA |
| Protection class | IP65 |

## Characteristic Curve




*Minimum regulated pressure 3kPa
linear 0.1%
Repeatability<01%,
Hysteresis<0.1%

Signal Input%




Under the influence of large flow,
the pressure cannot be maintained stable

Flow Nl/min

## Ordering Code

HEPV **7** – **2** **8** **3** **1** **3**

1. High-pressure E/P Regulator

2. 7: 7# Poppet valve
   8: Poppet valve

3. Setting Pressure

4. Input Signal
   0: 4...20mA
   3: 0...10V

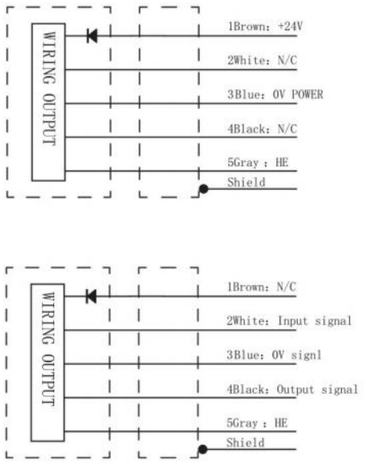
5. Output Signal
   1: 1...5V
   4: 4...20mA

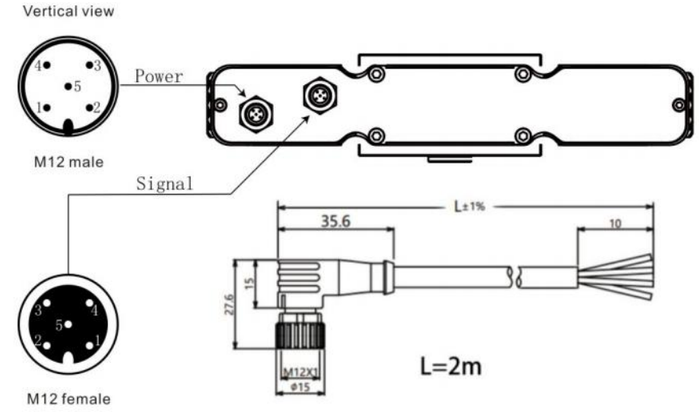
6. Ancillary
   3: R3/8
   4: R1/2
   F3: G3/8
   F4: G1/2
   N3: NPT3/8
   N4: NPT1/2
   X: Non

## Example

| Ording code | Ancillary | Setting pressure | Input signl | Output signl |
|---|---|---|---|---|
| HEPV7-2831-3 | R3/8 | 0…28 bar | 0…10 V | 1…5 V |
| HEPV7-2804-F4 | G1/2 | 0…28 bar | 4…20 mA | 4…20 mA |

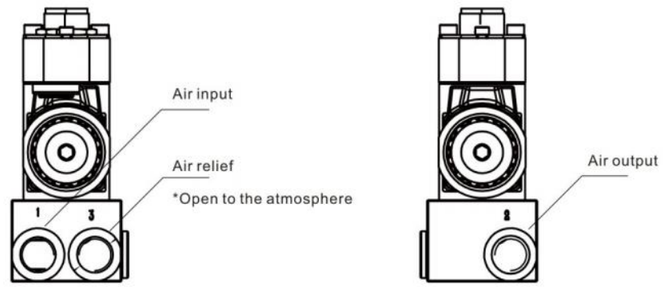
## Circuit diagram



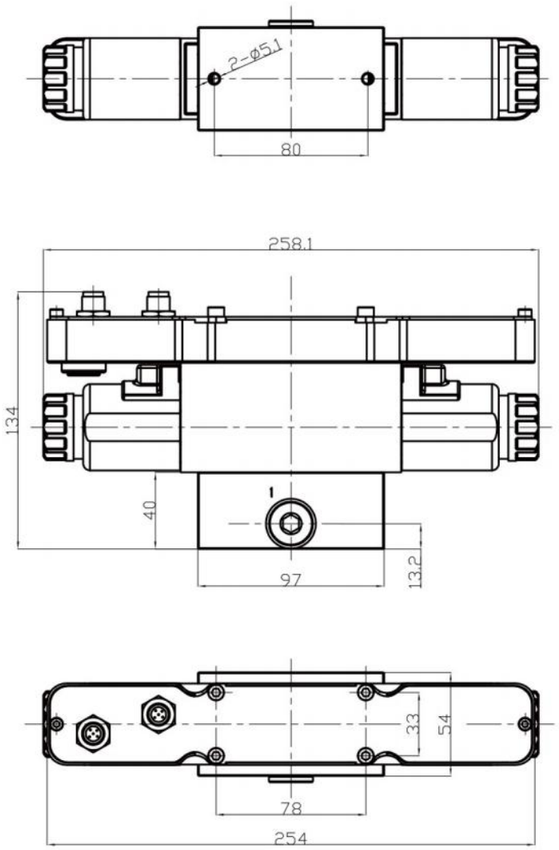




| Jacket material | jiacket color | Wire cable | Cable jacket |
|---|---|---|---|
| PVC | Black | 22AWG | 6.25+0.15mm |

## AIR CONNECTION DIAGRAM




## MOUNTING DIMENSIONS (mm)




# DFS1 Smart Digital Flow Meter

- Digital display of flow rate for clear flow visualization
- 3-color, 3-screen display for excellent visibility
- Rotatable display position, suitable for different installation orientations
- Flow ranges available: 500 L, 1000 L, 2000 L
- Multiple output signal options available
- Rich internal parameter settings to meet diverse application requirements

# DFS1

## Ordering Code

DFS1 – 501 – R 04 – A □ – M □

1 2 3 4 5 6 7 8

**1**. Model

**2**. Rated Flow Range
501: 5~500L/min
102: 10~1000L/min
202: 20~2000L/min

**3**. Thread type
R: Rc
N: NPT
F: G

**4**. Port Size
04: 1/2"(Flolw Range: 501,102)
06: 3/4"(Flow Range: 202)

**5**. Output Type
A: 2*NPN(PNP available)
B: 2*PNP(NPN available)
C: 1*NPN(PNP available) + 1*1-5V or 0-10V
D: 1*NPN(PNP available) + 1*4-20mA
E: 1*PNP(NPN available) + 1*1-5V or 0-10V
F: 1*PNP(NPN available) + 1*4-20mA

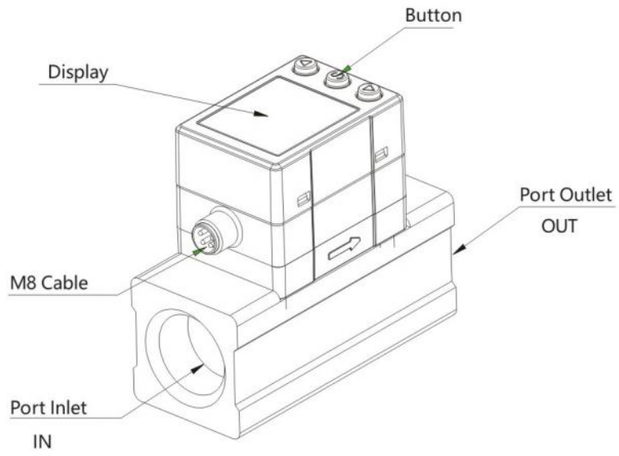
**6**. Lead wire
Nil: With M8 cable (3m)
N: None

**7**. Unit
Nil: Unit selection function
M: SI unit only

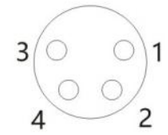
**8**. Bracket option
Nil: None
R: With bracket

Individual wire order code:DFS1-M8-030
① (Remark:Length customizable)

## Berif function introduction

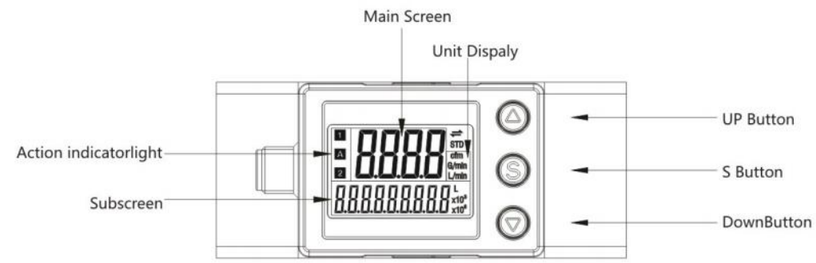



M8 cable pin meaning




| | |
|---|---|
| 1 | DC(+) |
| 2 | OUT2/ Anglog output |
| 3 | DC(-) |
| 4 | OUT1 |

## Introduction of Dispaly Screen




| Name | Function |
|---|---|
| Main screen | Displaying flow rate value, setting mode status, alarm codes, etc. |
| Sub screen | Display cumulative value, set value, peak/valley values, and line name in measurement mode. |
| Unit display | Displaying current unit |
| Indicator LED | LED ON when switch output is ON (OUT1/OUT2: Orange) |
| UP botton | Function Select Key (Setting Mode) |
| S botton | Enter/Confirm Key (Setting Mode) |
| Down botton | Function Select Key (Setting Mode) |

## Specification

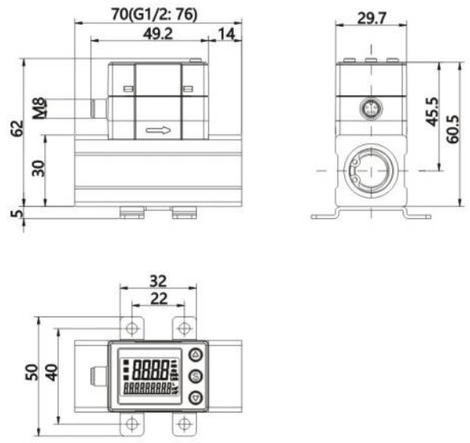
| Model | | | DFS1-501 | DFS1-102 | DFS1-202 |
|---|---|---|---|---|---|
| Fluid | Applicable fluid | | Dry air | | |
| | Fluid Temperature Range | | 0~50℃ | | |
| Flow | Detection method | | Thermal type | | |
| | Rated flow range | | 5 ~ 500L/min | 10 ~ 1000L/min | 20 ~ 2000L/min |
| | Set point range | Instantaneous flow | 5 ~ 525L/min | 10 ~ 1050L/min | 20 ~ 2100L/min |
| | | Accumulated flow | 0 ~ 999，999，999L | | |
| | Smallest settable increment | Instantaneous flow | 1L/min | | |
| | | Accumulated flow | 1L | | |
| | Accumulated volume per pulse Pulse width=50 ms | | 1L/Pulse | 10L/Pulse | |
| | Accumulated value hold function | | Intervals of 2 or 5 minutes can be selected | | |
| Pressure | Rated pressure range | | 0 ~ 0.8MPa | | |
| | Proof pressure | | 1.2MPa | | |
| | Pressure lose | | Refer to the "Pressure Loss" graph | | |
| | Pressure characteristics | | ±5%F.S.(25℃ standard)F.S. (0～0.8MPa、0.6MPa standard) | | |
| Electrical | Power supply voltage | | DC12 ~ 24V±10% | | |
| | Current consumption | | 55 mA or less | | |
| | Protection | | Polarity protection | | |
| Accuracy | Display accuracy | | ±3%F.S. | | |
| | Analog output accuracy | | ±3%F.S. | | |
| | Repeatability | | ±1%F.S.(±2%F.S. when the response time is set to 0.05s) | | |
| | Temperature characterisitcs | | ±5%F.S.(0～50℃、25℃ standard) | | |
| Switch Output | Output type | | Select from NPN or PNP open collector output | | |
| | Output mode | | Select from Hysteresis, Window comparator, Accumulated output, Accumulated pulse output, Error output, or Switch output OFF modes. | | |
| | Switch operation | | Select from Normal or Reversed output | | |
| | Max. load current | | 80mA | | |
| | Max. applied voltage | | 28V (NPN output) | | |
| | Internal voltage drop | | 1.5V or less (at load current of 80 mA) | | |
| | Digital filter | | Select from 0.05s / 0.1s / 0.5s / 1.0s / 2.0s / 5.0s | | |
| | Delay time | | Variable from 0 to 60 s/ 0.01 s increments | | |
| | Hysteresis | | Variable from 0 | | |
| | Protection | | Short circuit protection | | |

## Specification

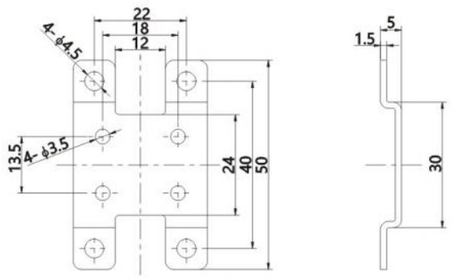
| Model | | | DFS1-501 | DFS1-102 | DFS1-202 |
|---|---|---|---|---|---|
| Anglog Output | Output type | | Voltage output: 1 to 5V (0 to 10 V can be selected, only when the power supply is 24VDC) Current output: 4 to 20 mA | | |
| | Impedance | Voltage output | Output impedance: Approx. 1KΩ | | |
| | | Current output | Max. load impedance: 600Ù at power supply voltage of 24V, 300Ù at power supply voltage of 12V | | |
| | Response time | | Linked to the set value of the digital filter | | |
| | Reference condition | | Select from standard condition (STD) or normal condition (NOR). | | |
| Display | Unit | Instantaneous flow | L/min、G/min、cfm | | |
| | | Accumulated flow | L | | |
| | Display range | Instantaneous flow | -25 ~ 525L/min (Dispaly [0] when value is within the -4 to 4L/min range) | -50 ~ 1050L/min (Dispaly [0] when value is within the -9 to 9L/min range) | -100 ~ 2100L/min (Dispaly [0] when value is within the -19 to 19L/min range) |
| | | Accumulated flow | 0 ~ 999，999，999L | | |
| | Min.display unit | Instantaneous flow | 1L/min | | |
| | | Accumulated flow | 1L | | |
| | Display type | | LCD | | |
| | Display | | LCD, 3-screen display (Main screen / Sub screen)<br>Main Screen：Red/Green Sub screen：White<br>Main screen: 4 digits, 7 segments, Sub screen: 9 digits, 7 segments | | |
| | Indicator Led | | LED ON when switch output is ON (OUT1/OUT2: Orange) | | |
| Environmental resistance | Enclosure | | IP65 | | |
| | Withstand voltage | | AC 250V for 1 min between external terminals and housing | | |
| | Insulation resistance | | 2MΩ or more(50VDC via megohmmeter)between external terminals and housing | | |
| | Operating temperature range | | Operating: 0 to 50℃, Stored: -10 to 60℃ (No condensation or freezing) | | |
| | Operating humidity range | | 35～85%R.H. (No condensaion or freezing) | | |
| Standards | | | CE(EMC instruction、RoHS instruction) | | |
| Piping specification | | | Rc1/2、NPT1/2、G1/2 | Rc3/4、NPT3/4、G3/4 | |
| Main material of parts in contact with fluid | | | SUS304、PPS、Aluminum alloy、EPDM、Si、Au、FR4 | | |
| Weight | Sensor | | 165g | 240g | |
| | Lead wire | | 100g | | |
| | Bracket | | 15g | 22g | |

## Dimension Drawing

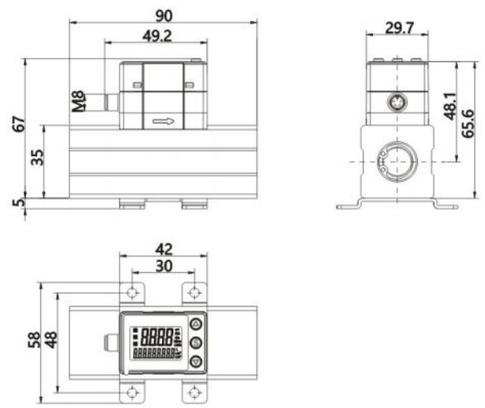
DFS1-501,DFS1-102 Dimensions



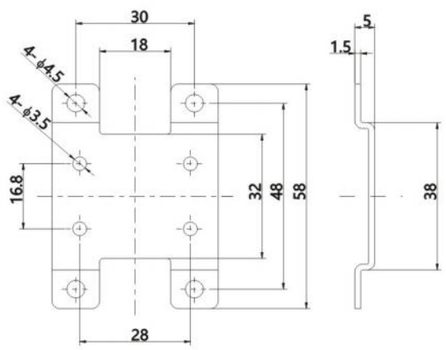

DFS1-501,DFS1-102 Bracket Dimensions



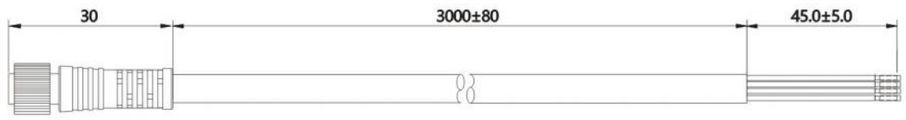

DFS1-202 Dimensions




DFS1-202 Bracket Dimensions




Wire dimension

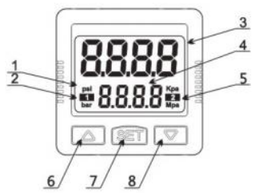


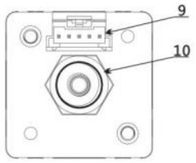
## DPS Series Digital pressure switch

- LCD displays output status in real time
- Three switching modes
- Multiple electrical signal output combinations to choose from
- Dual-row LCD display for set values
- Suitable for various environments (IP65, corrosion-resistant)

# DPS–2 Series

## Panel



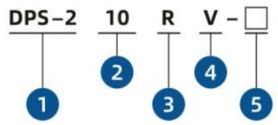




| No | Name |
|---|---|
| 1 | Pressure Unit |
| 2 | Ouput 1 Indicator |
| 3 | Main Display Section |
| 4 | Sub-display Section |
| 5 | Ouput 2 Indicator |
| 6 | Up Button |
| 7 | Setting Button |
| 8 | Down Button |
| 9 | Electric Interface |
| 10 | Pressure Port |

## Specification

| Model | | DPS-201(Compound) | DPS-202(Negative pressure) | DPS-210(Positive) |
|---|---|---|---|---|
| Pressure measure | Range Of Measure | -100kPa~100kPa | -100kPa~0kPa | -0.100MPa~1.000MPa |
| | Setting Range | -100kPa~100kPa | -100kPa~0kPa | 0.000MPa~1.000MPa |
| | Withstand Pressure | 500kPa | 500kPa | 1.500MPa |
| | Pressure Type | Non-flammable ,Non-corrosive gas, Gauge pressure measurement | | |
| | Measure Accuracy | ⩽±2%F.S.(Ambient temperature 25°c) | | |
| | Temperature Error | ⩽±3%F.S. ( Temperature range 0~ 50°c) | | |
| | Measure Pattern | Hysteresis model | | |
| | | Compare mode of upper and lower bounds | | |
| Port size | | External R1/8、NPT1/8、G1/8 option , internal thread M5 | | |
| Display | Brief Description | Double LCD display | | |
| | Status Display | 4-digital measurement value ,unit display,output status display | | |
| | Display Model | Adjustable backlight ,4 groups of dispaly models | | |
| Input Power | Voltage Range | 24VDC ±10% | | |
| | Power Comsuption | 40mA MAX( Non-load ) | | |
| Output Signal | Transistor Output | NPN open-collector oupt<br>Output current :80mA MAX<br>Voltage drop : ⩽1V | PNP open-collector oupt<br>Output current :80mA MAX<br>Voltage drop : ⩽1V | |
| | Analog Output | Voltage output<br>Signal ampliude:1~5V<br>Load resistance >1kΩ | Current output<br>Signal ampliude:4~20mA<br>Load resistance<400kΩ | |
| | Response Time | Adjustable : 2.5ms、 20ms、100ms、 500ms、1000ms、 2000ms | | |
| | Short-circuit Protecdtion | Yes | | |
| Environmetal Resistance | Ip Class | IP40 | | |
| | Ambient Temperature | Operating temperature 0~50°c ,storage temperature -20~60°c | | |
| | Ambient Humidity | Operating humidity 35~ 80%RH | | |
| | Insulation Voltage | 1000VAC 1min | | |
| | Insulation Resistance | ⩾50mΩ(500VDC) | | |
| | Shock | Max100m/s²,3time seach in 6 directions of x,y,z | | |
| | Vibration | 10~150HZ, 1.5 mm full amplitude, 2 hours each direction of x,y,z | | |

## Ordering Code




**1.** DPS-2 Series

**2.** Range
01: -100~100kpa
02: -100~0kpa
10: -100~1000kpa

**3.** Port
R: R1/8(M5 female thread)
N: NPT1/8 (M5 female thread)
G: G1/8 (M5 female thread)
C4: 4 Size 4 push-in fitting (Straight)
C6: 6 Size 4 push-in fitting (Straight)
L4: 4 Size 4 push-in fitting (Elbow)
L6: 6 Size 4 push-in fitting (Elbow)

**4.** Output
N: NPNx2
P: PNPx2
A: NPN+Analog 4~20mA
V: NPN+Analog 1~5V
B: PNP+Analog 4~20mA
W: PNP+Analog 1~5V
NV: 2 PNP+Analog 1~5V
PV: 2 PNP+Analog 1~5V

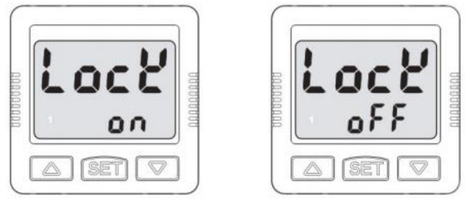
**5.** Mounting
M : Panel
N : Panel+shield
Z : L bracket
S : S bracket

## Quick Setting

● **Zero point setting**

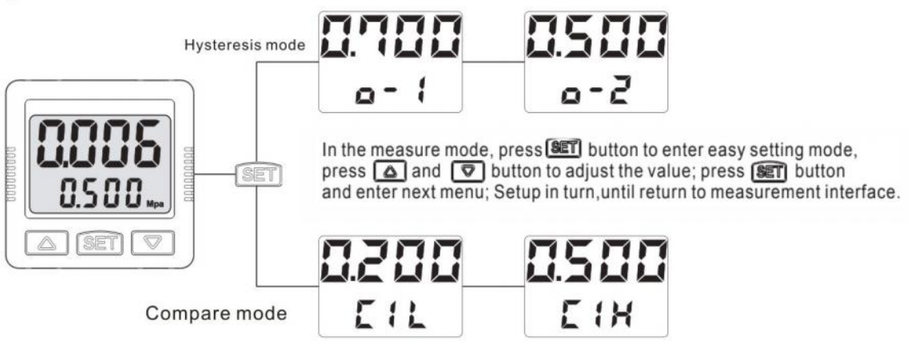

In the measuremode,press+ ▲ ▼
button at the same time,untildisplay"0",release the button;
PS:resetrange:+/-10%F.S.

● **key lock and unlock**



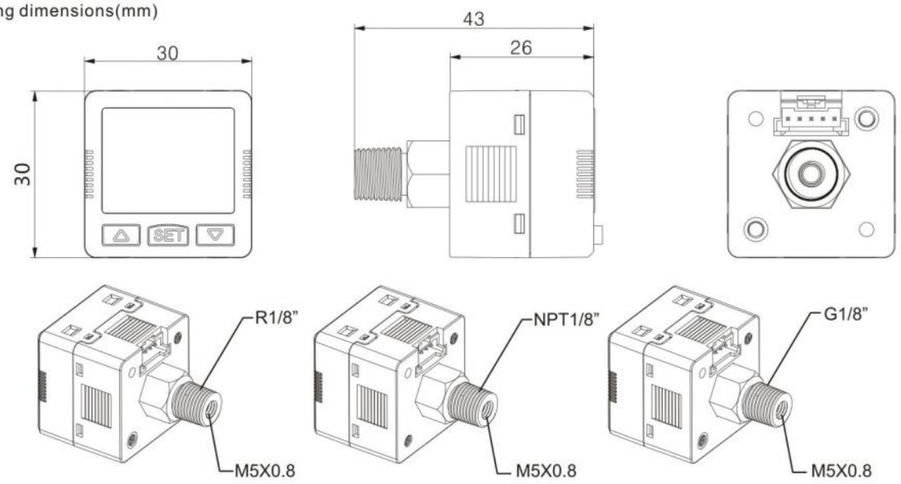

Lock: in the measure mode, press
▲ + SET + ▼ button at the same time until
"LOCK ON" shown,release the buttons;
Unlock: in the measure mode, press
▲ + SET + ▼ button at the same time unitl
"LOCK OFF" shown,release the buttons.

● **Easy setup**



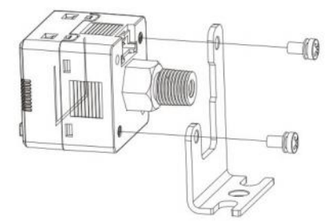
## Mounting Dimensions(mm)

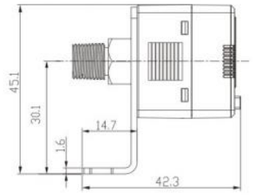
Mounting dimensions(mm)

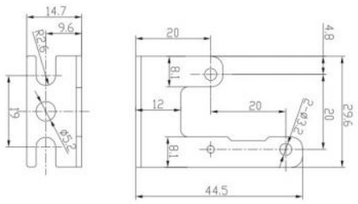



Mounting Bracket

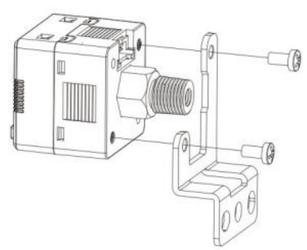
L bracket

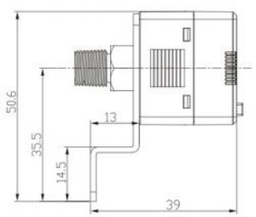


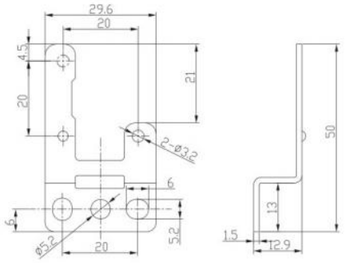


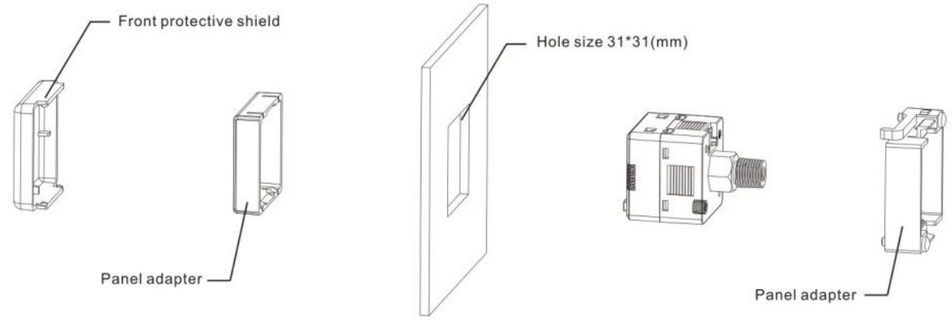

S bracket



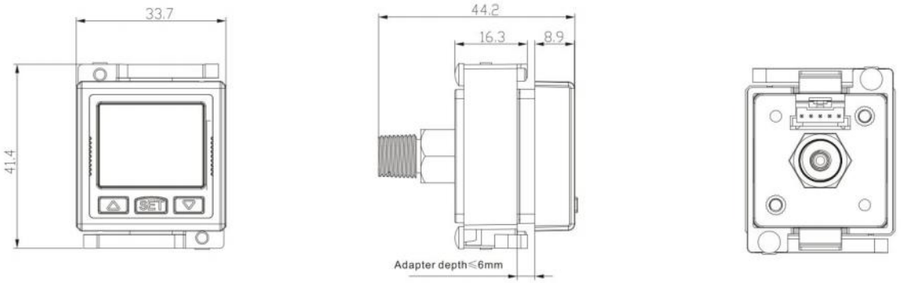


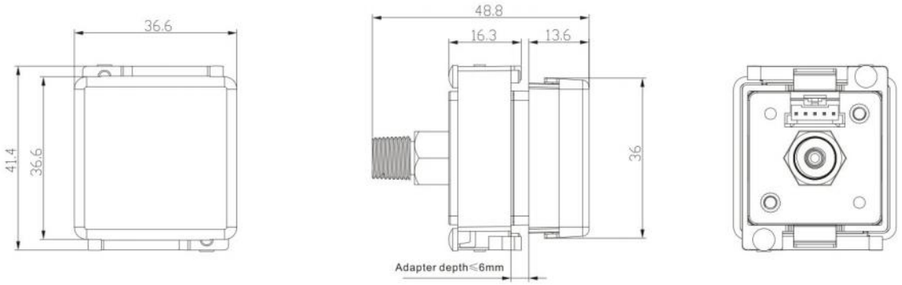

Panel bracket



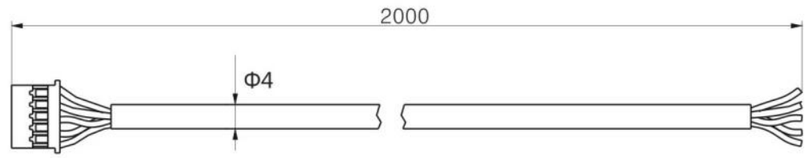

Panel mount



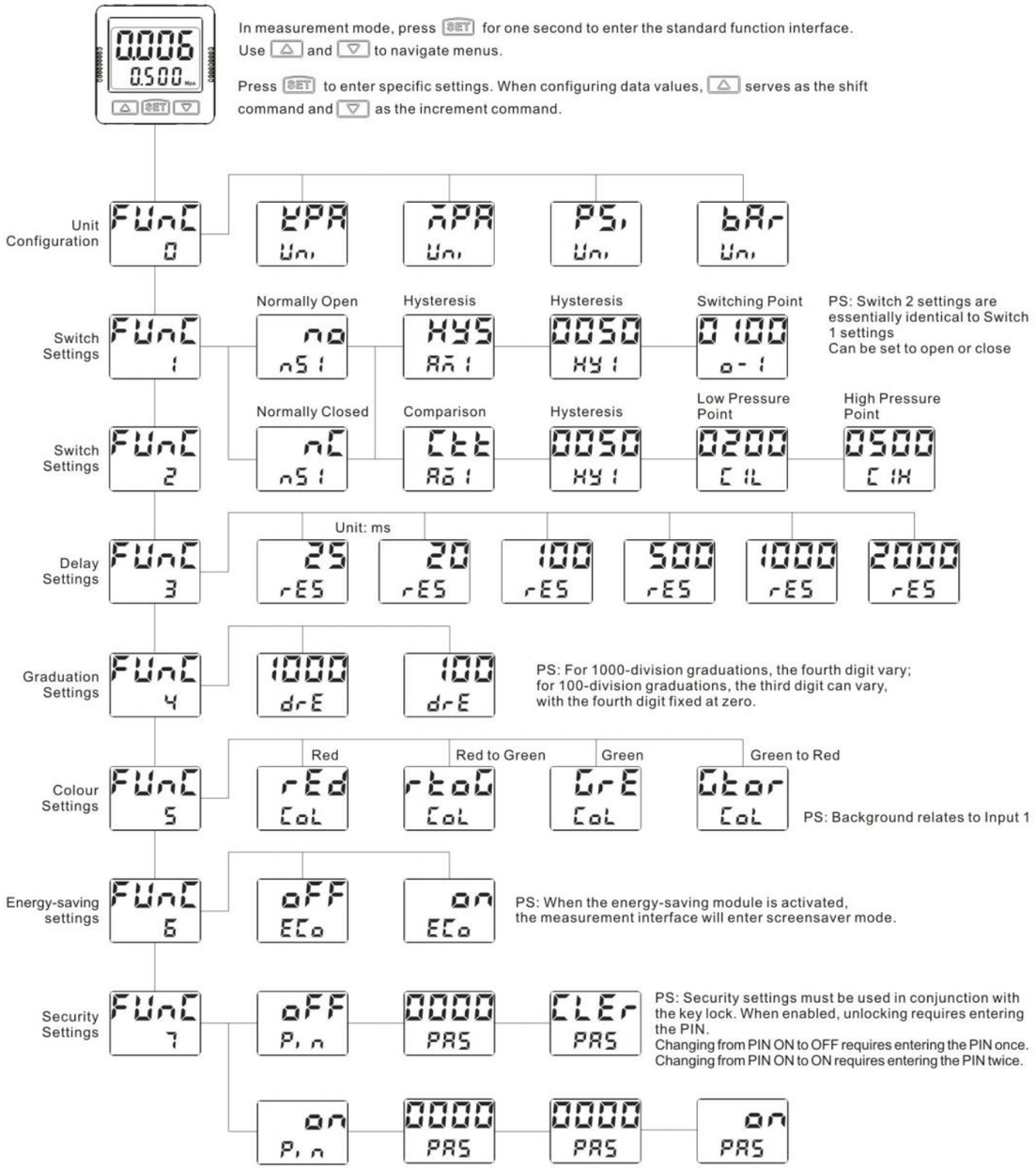

Add dust cover installation



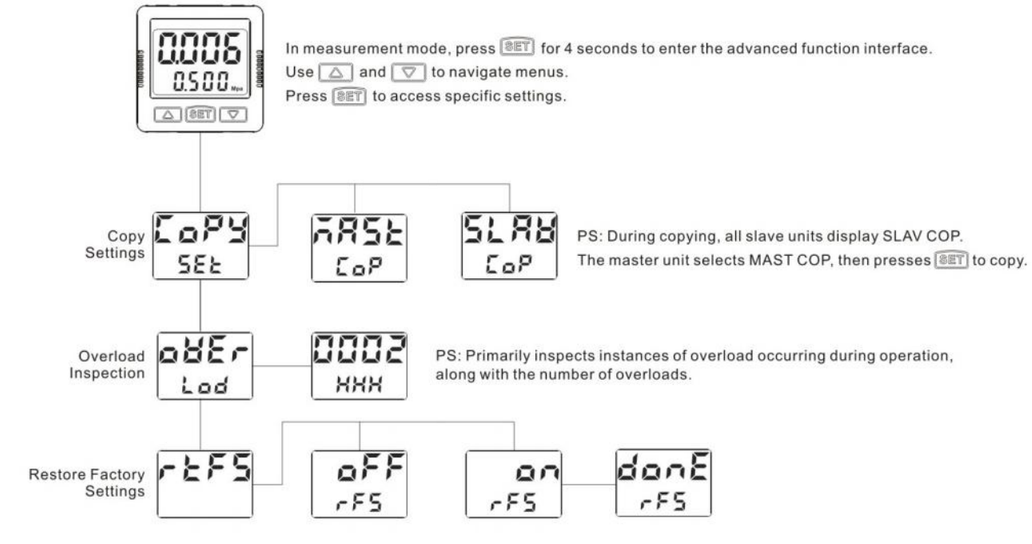

Wire dimension



## Operating Instructions (Standard Function Interface)




## Operating Instructions (Standard Function Interface)

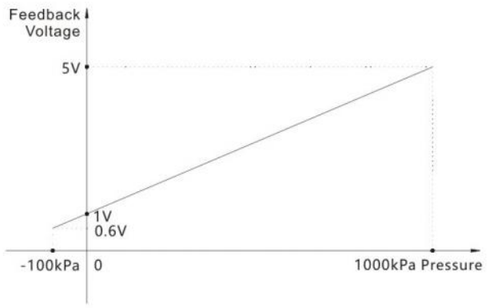



## Error Code Description

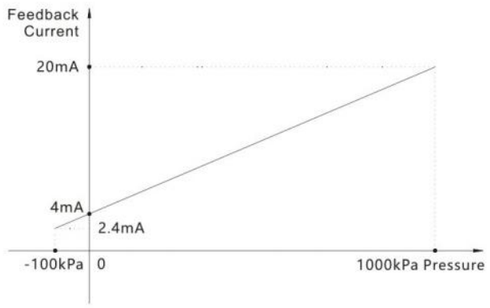
| Error Prompt | Cause | Resolution |
|---|---|---|
| Err1 | Zeroing range exceeded | Zeroing range restricted to 10% F.S. Do not set beyond this value. |
| Err2 | Switch output current is excessive | Please inspect the output connection cables for issues such as short circuits or excessive load. |
| Err4 | Incorrect pressure setting logic | Hysteresis mode: HY S value < O-1 Comparison mode: HY S value < C1L < C1H |
| Err5 | Abnormal stored data | Chip malfunction – repair required |
| Err6 | Incorrect password entered | Please input the correct password |
| Err7 | Communication error during copying | Data verification error - please copy again |
| XXXXX | Pressure exceeds measurement range | Please reduce the air supply pressure to within the specified range |

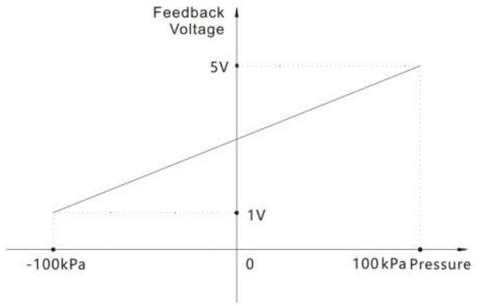
## Pressure-Electrical Signal Feedback Curve Diagram

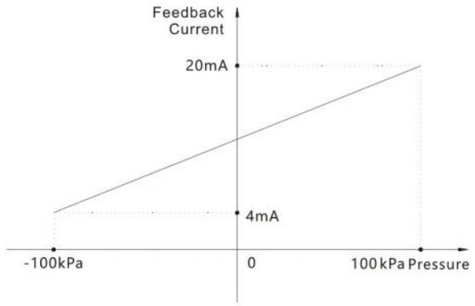
### Feedback Voltage

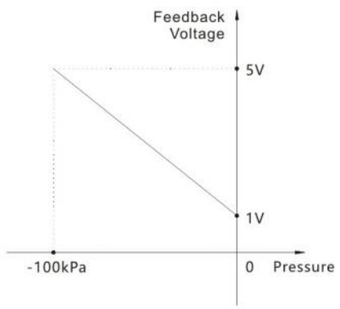


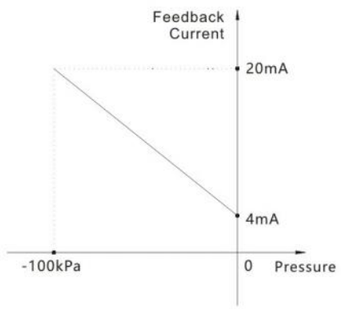

### Feedback Current



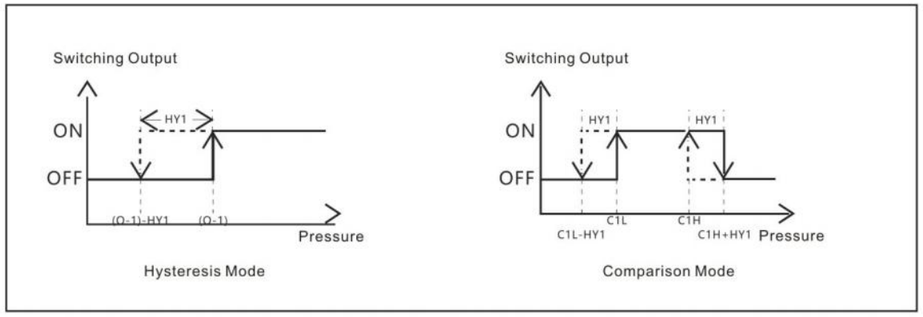




## Output Function Diagram for Each Mode in Normally Open State



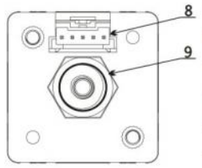

| From \ To | Pa | kPa | MPa | kgf/cm² | mmHg | psi | bar | inHg |
|---|---|---|---|---|---|---|---|---|
| 1Pa | 1 | 0.001 | 0.000001 | | | | | |
| 1kPa | 1000 | 1 | 0.001 | 0.010197 | 7.500616 | 0.145038 | 0.01 | 0.2953 |
| 1MPa | 1000000 | 1000 | 1 | 10.197 | 7500.616 | 145.038 | 10 | 295.2998 |
| 1kgf/cm² | 98066.5 | 98.0665 | 0.098066 | 1 | 735.559 | 14.2233 | 0.980665 | 28.95979 |
| 1mmHg | 133.32 | 0.13332 | 0.000133 | 0.001359 | 1 | 0.019336 | 0.001333 | 0.03937 |
| 1psi | 6895 | 6.985 | 0.006895 | 0.07031 | 51.7157 | 1 | 0.06895 | 2.036074 |
| 1bar | 100000 | 100 | 0.1 | 1.01972 | 750.062 | 14.5038 | 1 | 29.52998 |
| 1inHg | 3386.388 | 3.386388 | 0.003386 | 0.034530 | 25.4 | 0.491141 | 0.033863 | 1 |

### Precautions

1. This product is intended solely for measuring gas pressure; the medium must not contain corrosive or flammable gases.
2. The operating environment avoid high temperatures and humidity.
3. When installing or removing this product, ensure the pressure source is shut off and the output cable is disconnected from the controller to safeguard both the product and personnel. Secure the pressure connection using a hex key; do not rotate the main body directly.
4. During installation, connect using components matching the pressure port dimensions and verify proper sealing to prevent measurement errors or gas leakage.
5. Before powering on, confirm correct wiring connections. Avoid excessive voltage input to prevent product damage.

# DPS–3 Series

## Panel


| 序号 | 名称 |
|---|---|
| 1 | Locking indicator |
| 2 | Ouput indicator |
| 3 | Pressure unit |
| 4 | Main display section |
| 5 | Up button |
| 6 | Setting button |
| 7 | Down button |
| 8 | Electric interface |
| 9 | Pressure port |

## Specification

| Model | | DPS-301(Compound) | DPS-310(Positive) |
|---|---|---|---|
| Pressure measure | Range Of Measure | -100kPa~100kPa | -0.100MPa~1.000MPa |
| | Setting Range | -100kPa~100kPa | 0.000MPa~1.000MPa |
| | Withstand Pressure | 500kPa | 1.500MPa |
| | Pressure Type | Non-flammable ,Non-positive gas, Gauge pressure measurement | |
| | Measure Accuracy | ≤ ±2%f.s.(ambient temperature 25°c) | |
| | Temperature Error | ≤ ±3%f.s. ( t emperature range 0~ 50°c ) | |
| | Measure Pattern | Hysteresis mode | |
| | | Single point mode | |
| | | Window mode | |
| Port size | | External R1/8、NPT1/8、G1/8 option , internal thread M5 | |
| Display | Status Display | LCD display,4-digital measurement value ,unit display ,output status display | |
| | Display Model | Adjustable backlight ,4 groups of dispaly models | |
| Input Power | Voltage Range | 24VDC ±10% | |
| | Power Comsuption | 40ma max( non-load ) | |
| Output Signal | Transistor Output | NPN open-collector oupt<br>Output current :80ma max<br>Voltage drop : ≤ 1v | PNP open-collector oupt<br>Output current :80ma max<br>Voltage drop : ≤ 1v |
| | Response Time | Adjustable : 2.5ms、 20ms、100ms、 500ms、1000ms、 2000ms | |
| | Short-circuit Protecdtion | Yes | |
| Environmetal Resistance | Ip Class | IP40 | |
| | Ambient Temperature | Operating temperature 0~50°c ,storage temperature -20~60°c | |
| | Ambient Humidity | Operating humidity 35~ 80%rh | |
| | Insulation Voltage | 1000vac 1min | |
| | Insulation Resistance | ≥ 50mΩ(500vdc) | |
| | Shock | Max100m/s²,3time seach in 6 directions of x,y,z | |
| | Vibration | 10~150HZ, 1.5 mm full amplitude, 2 hours each direction of x,y,z | |

## Ordering Code

DPS–3 10 R X – □

1. DPS-3 Series

2. Range
   10:-100~1000kPa
   01:-100~100kPa

3. Port
   M: M5 Female thread
   R: R1/8(M5 female thread)
   N: NPT1/8 (M5 female thread)
   G: G1/8 (M5 female thread)
   C4: 4 Size 4 push-in fitting (Straight)
   C6: 6 Size 4 push-in fitting (Straight)
   L4: 4 Size 4 push-in fitting (Elbow)
   L6: 6 Size 4 push-in fitting (Elbow)

4. Output
   X:NPN+PNP
   Explanation 1: Product single-channel setting,
   Optional NPN or PNP output channel , the black wire is
   NPN and the white wire is PNP

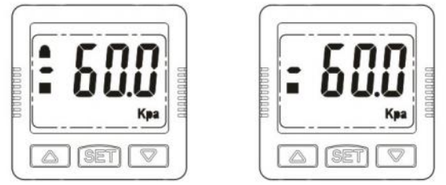
5. Mounting
   M : Panel
   N : Panel+shield
   Z : L bracket
   S : S bracket

## Quick Setting

● **Zero point setting**

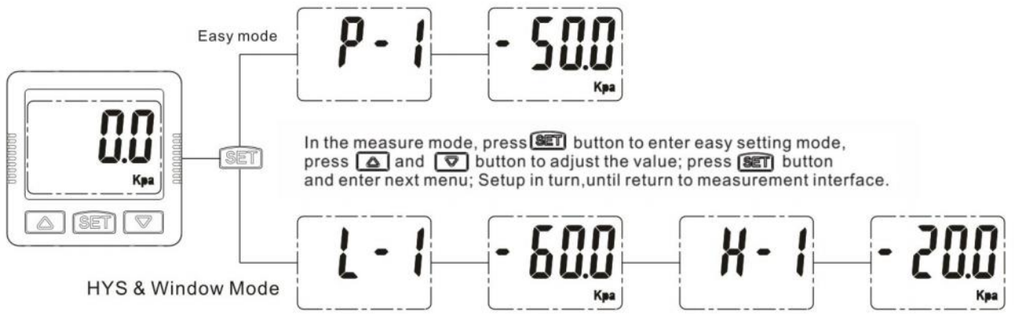

In the measure mode,press [△]+[▽] button at the same time, until display"0", release the button;
PS: reset range:+/-10%F.S.

● **key lock and unlock**



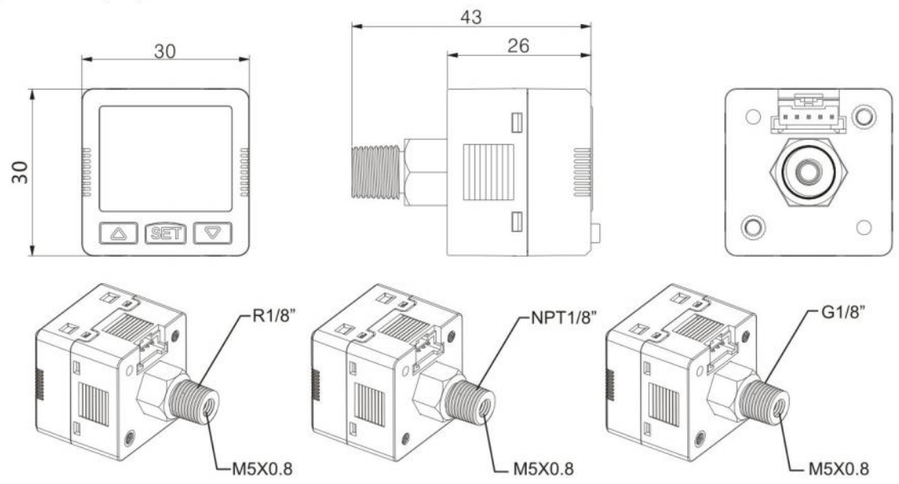

Lock: in the measure mode, press [△]+[SET]+[▽] button at the same time until "LOCK ON" shown,release the buttons;
Unlock: in the measure mode, press [△]+[SET]+[▽] button at the same time unitl "LOCK OFF" shown,release the buttons.

● **Easy setup**



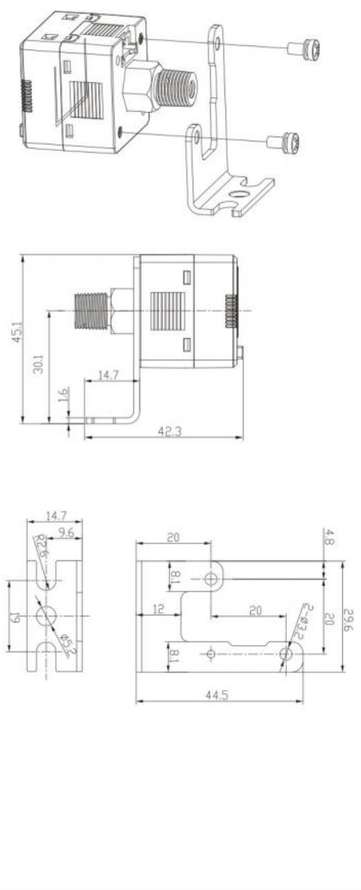
## MOUNTING DIMENSIONS(mm)

Mounting dimensions(mm)

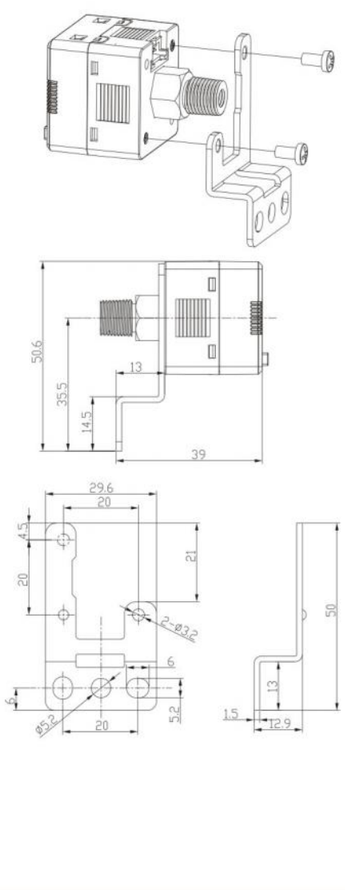



Mounting Bracket

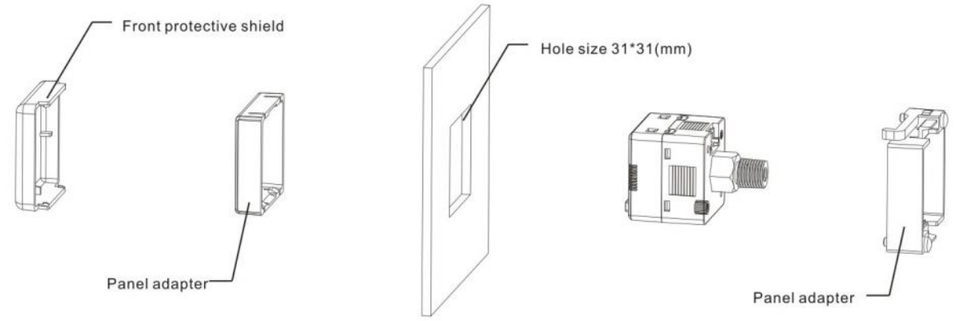
L bracket



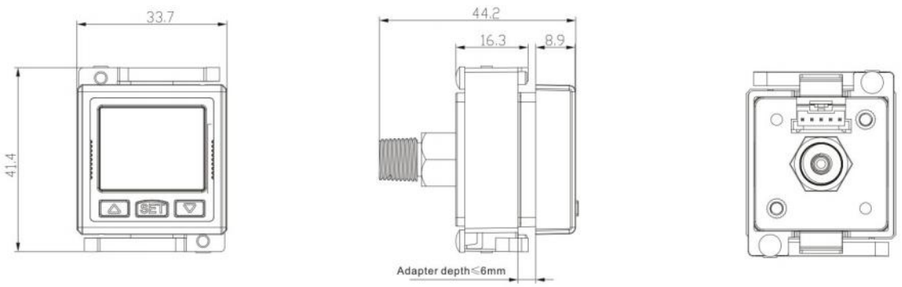

S bracket



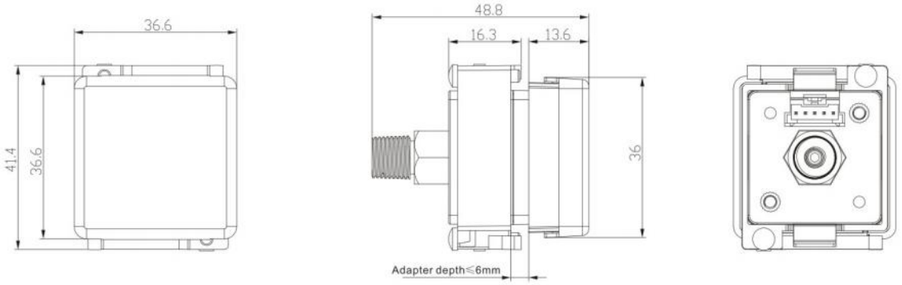

Panel bracket



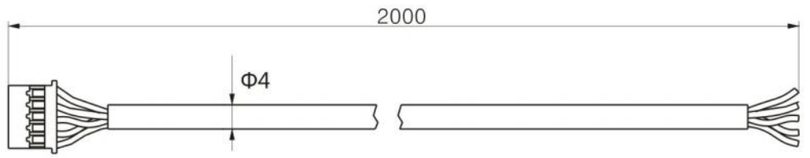

Panel mount




Add dust cover installation



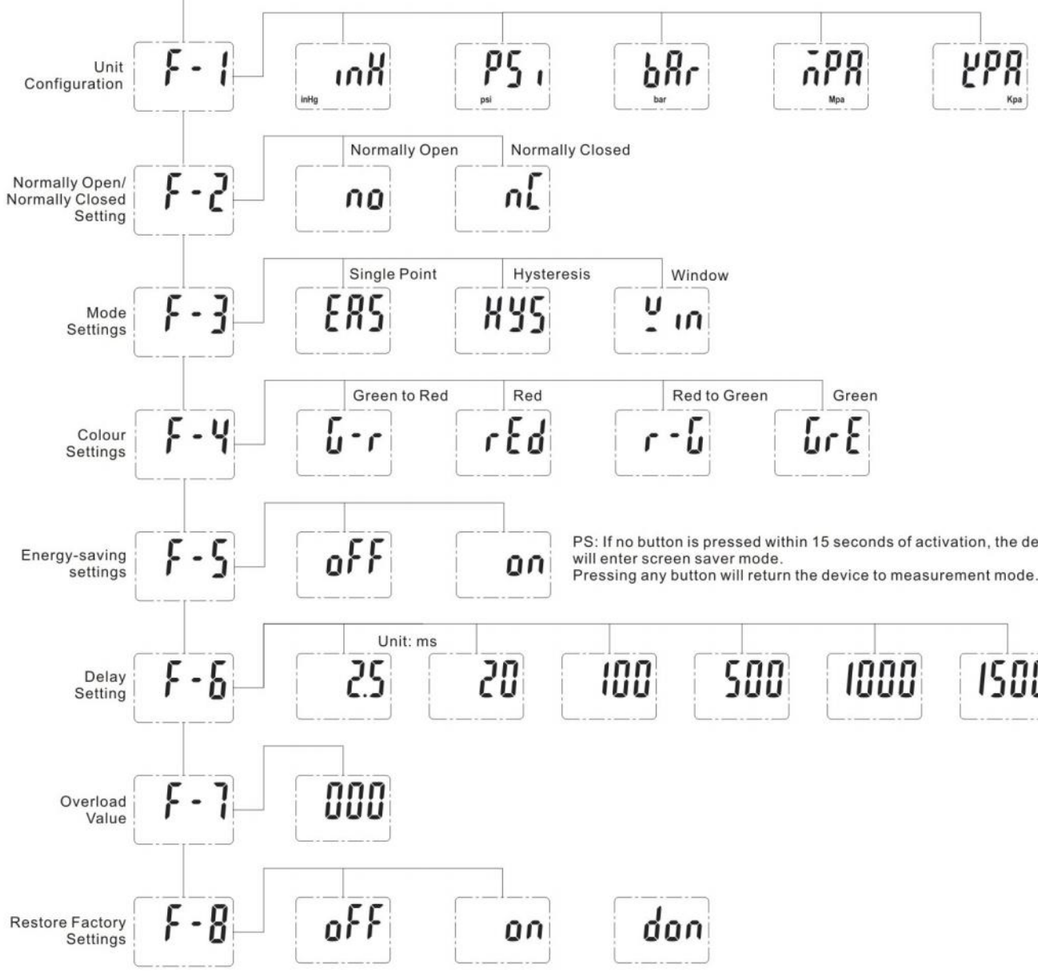

Wire dimension



## Operating Instructions (Standard Function Interface)


In measurement mode, press SET for two seconds to enter the standard function interface.
Use △ and ▽ to navigate menus.

Press SET to enter specific settings. When configuring data values, △ serves as the shift command and ▽ as the increment command.

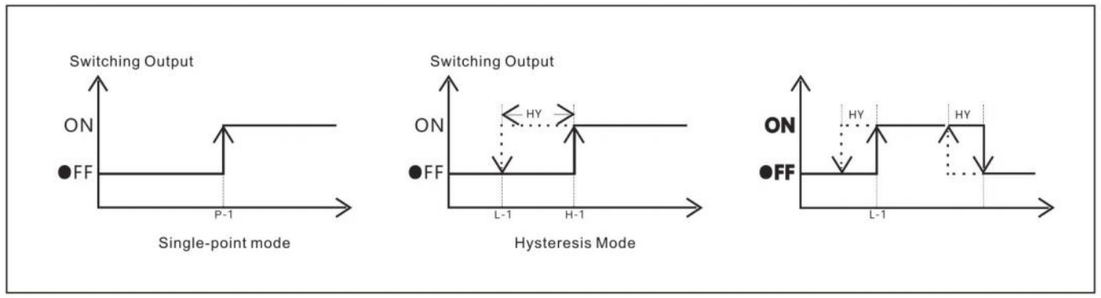



PS: If no button is pressed within 15 seconds of activation, the device will enter screen saver mode.
Pressing any button will return the device to measurement mode.

## Error Code Description

| Error Prompt | Cause | Resolution |
|---|---|---|
| Err1 | Zeroing range exceeded | Zeroing range restricted to 10% F.S. Do not set beyond this value. |
| Err2 | Switch output current is excessive | Please inspect the output connection cables for issues such as short circuits or excessive load. |
| Err4 | Incorrect pressure setting logic | Hysteresis mode: HY S value < O-1 Comparison mode: HY S value < C1L < C1H |
| Err5 | Abnormal stored data | Chip malfunction – repair required |
| XXXXX | Pressure exceeds measurement range | Please reduce the air supply pressure to within the specified range |

## Output Function Diagram for Each Mode in Normally Open State



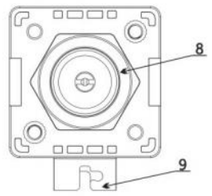

| From \ To | Pa | kPa | MPa | kgf/cm² | mmHg | psi | bar | inHg |
|---|---|---|---|---|---|---|---|---|
| 1Pa | 1 | 0.001 | 0.000001 | | | | | |
| 1kPa | 1000 | 1 | 0.001 | 0.010197 | 7.500616 | 0.145038 | 0.01 | 0.2953 |
| 1MPa | 1000000 | 1000 | 1 | 10.197 | 7500.616 | 145.038 | 10 | 295.2998 |
| 1kgf/cm² | 98066.5 | 98.0665 | 0.098066 | 1 | 735.559 | 14.2233 | 0.980665 | 28.95979 |
| 1mmHg | 133.32 | 0.13332 | 0.000133 | 0.001359 | 1 | 0.019336 | 0.001333 | 0.03937 |
| 1psi | 6895 | 6.985 | 0.006895 | 0.07031 | 51.7157 | 1 | 0.06895 | 2.036074 |
| 1bar | 100000 | 100 | 0.1 | 1.01972 | 750.062 | 14.5038 | 1 | 29.52998 |
| 1inHg | 3386.388 | 3.386388 | 0.003386 | 0.034530 | 25.4 | 0.491141 | 0.033863 | 1 |

### Precautions

1. This product is intended solely for measuring gas pressure; the medium must not contain corrosive or flammable gases.
2. The operating environment avoid high temperatures and humidity.
3. When installing or removing this product, ensure the pressure source is shut off and the output cable is disconnected from the controller to safeguard both the product and personnel. Secure the pressure connection using a hex key; do not rotate the main body directly.
4. During installation, connect using components matching the pressure port dimensions and verify proper sealing to prevent measurement errors or gas leakage.
5. Before powering on, confirm correct wiring connections. Avoid excessive voltage input to prevent product damage.

# DPS–5 Series (Anti–corrsion)

## Panel


| No | Name |
|---|---|
| 1 | Output indicator |
| 2 | Output indicator |
| 3 | Pressure unit |
| 4 | Main display section |
| 5 | Up button |
| 6 | Section button |
| 7 | Down button |
| 8 | Pressure port |
| 9 | Electric interface |

## Specification

| Model | | DPS-501(Compound) | DPS-510(Positive) | DPS-520(Positive) |
|---|---|---|---|---|
| Pressure measure | Range Of Measure | -100KPa~100KPa | -0.1MPa~1MPa | -0.1MPa~2MPa |
| | Setting Range | -100KPa~100KPa | -0.1MPa~1MPa | -0.1MPa~2MPa |
| | Withstand Pressure | 300KPa | 3MPa | |
| | Pressure Type | Any flow which do not react with sus316L | | |
| | Measure Accuracy | ⩽±2%F.S.(ambient temperature 25°c) | | |
| | Temperature Error | ⩽±3%F.S. ( temperature range 0~ 50°c) | | |
| | Measure Pattern | Easy Mode | | |
| | | Hysteresis model | | |
| | | Window mode. | | |
| Port size | | Male thread R1/4, NPT1/4, G1/4, female thread M5 | | |
| Display | Status Display | LCD, 4-digit measurement value, unit display, output status display | | |
| | Display Model | Adjustable backlight, 4 groups of display modes | | |
| Input Power | Voltage Range | 24VCD ±10% | | |
| | Power Comsuption | 40mA max( non-load ) | | |
| Output Signal | Transistor Output | NPN open-collector output<br>Output current :80mA MAX<br>Voltage drop : ⩽1V | PNP open-collector output<br>Output current :80mA MAX<br>Voltage drop : ⩽1V | |
| | Analog Output | Voltage output<br>Signal ampliude:1~5V<br>Load resistance ⩾1KΩ | Current output<br>Signal ampliude:4~20mA<br>Load resistance ⩽400Ω | |
| | Response Time | Adjustable : 2.5ms、 20ms、100ms、 500ms、1000ms、 1500ms | | |
| | Short-circuit Protecdtion | Yes | | |
| Environmetal Resistance | Ip Class | IP65 | | |
| | Ambient Temperature | Operating temperature 0~50°c ,storage temperature -20~60°c | | |
| | Ambient Humidity | Operating humidity 35~ 80%RH | | |
| | Insulation Voltage | 1000VAC 1min | | |
| | Insulation Resistance | ⩾50mΩ(500VDC) | | |
| | Shock | Max100m/s²,3time seach in 6 directions of x,y,z | | |
| | Vibration | 10~150HZ, 1.5 mm full amplitude, 2 hours each direction of x,y,z | | |

## Ordering Code

DPS–5 (1) 10 (2) R (3) V– (4) □ (5)

**1.** DPS-5 Series

**2.** Range
01: -100~100kpa
10: -100~1000kpa
20: -100~2000kpa

**3.** Port
R: R1/4" (M5 female thread)
N: NPT1/4"(M5 female thread)
G: G1/4" (M5 female thread)

**4.** Output
V: 2*NPN+Analog 1~5V
W: 2*PNP+Analog 1~5V
A: 2*NPN+Analog 4~20mA
B: 2*PNP+Analog 4~20mA

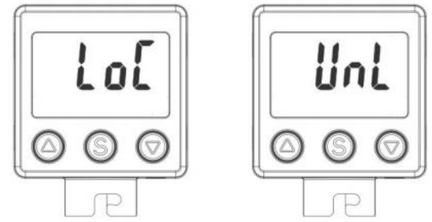
**5.** Mounting
M : Panel
N : Panel+shield
Z : L bracket
S : S bracket

## Quick Setting

### Zero point setting

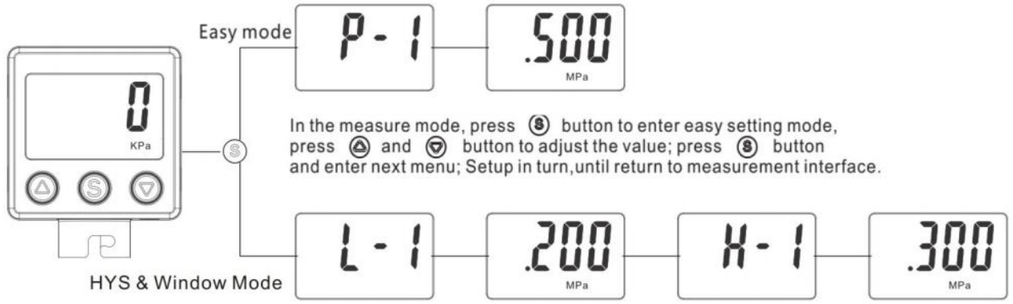

In the measure mode,press ▲ + ▼ button at the same time, until display"0", release the button;
PS: reset range:+/-10%F.S.

### key lock and unlock



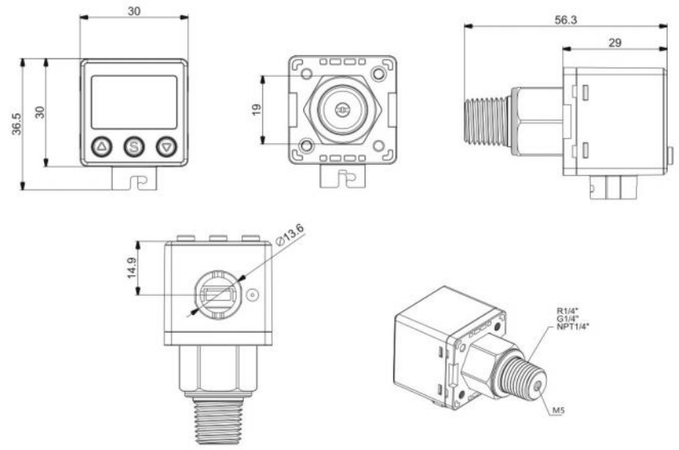

Lock: in the measure mode, press ▲ + S + ▼ button at the same time until "LOC" shown,release the buttons;
Unlock: in the measure mode, press ▲ + S + ▼ button at the same time unitl "UNL" shown,release the buttons.

### Easy setup



## MOUNTING DIMENSIONS(mm)

Overall dimension& connection port



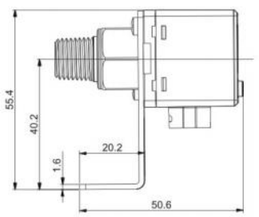

Mounting bracket

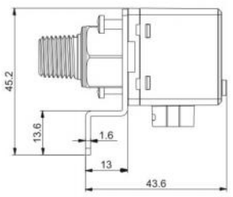
L bracket

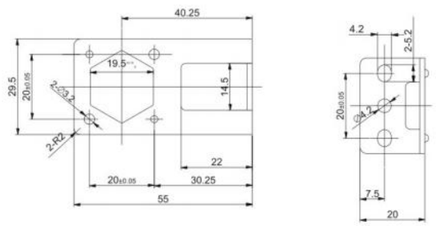


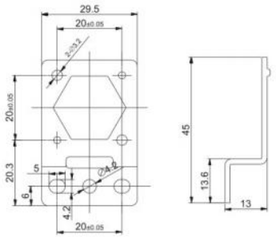
S bracket



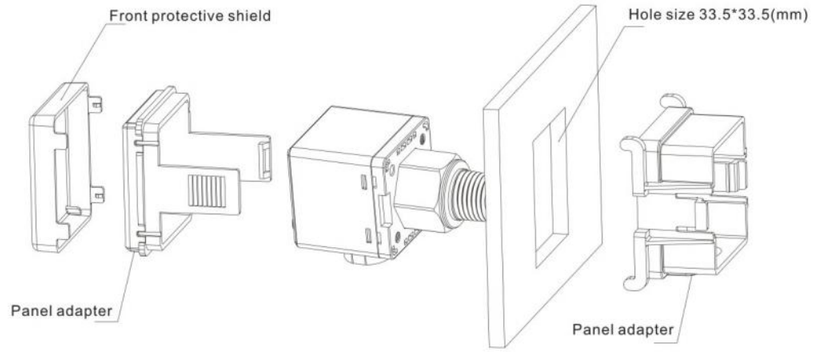


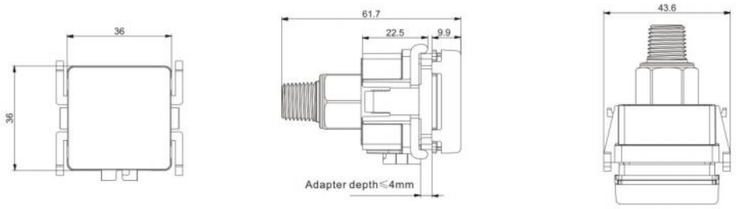




Panel bracket

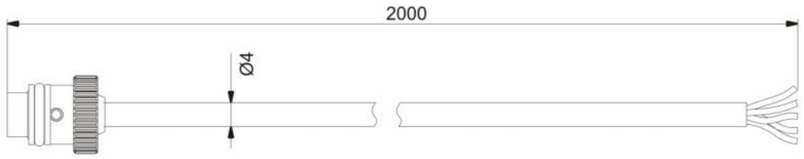



Panel mount


Add dust cover installation

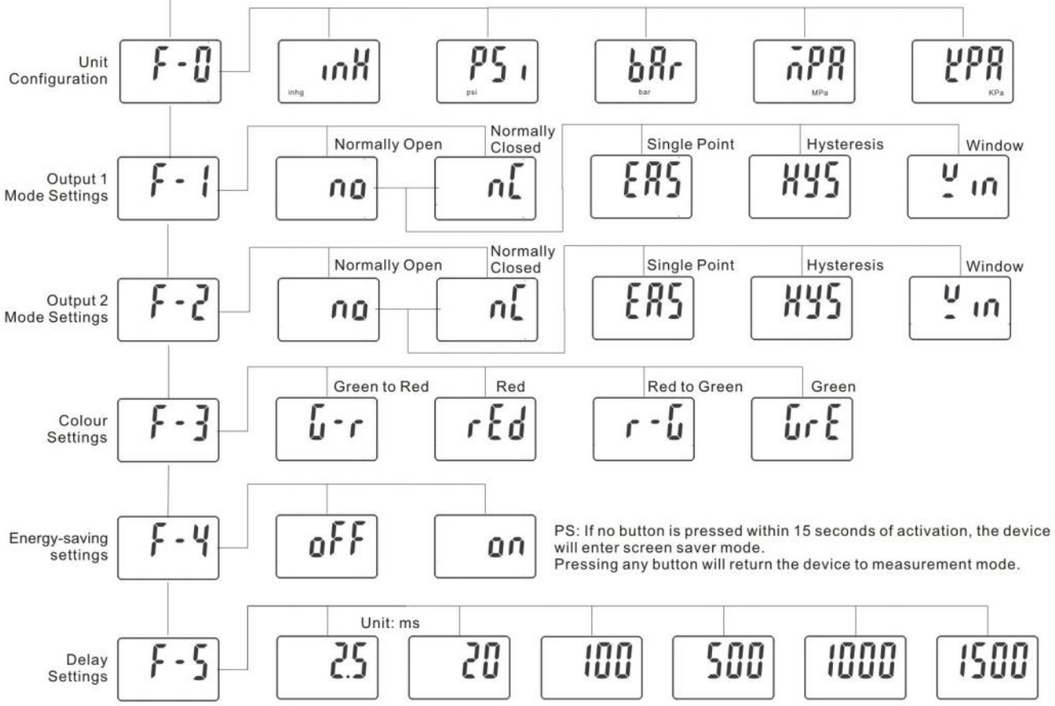



wire dimension



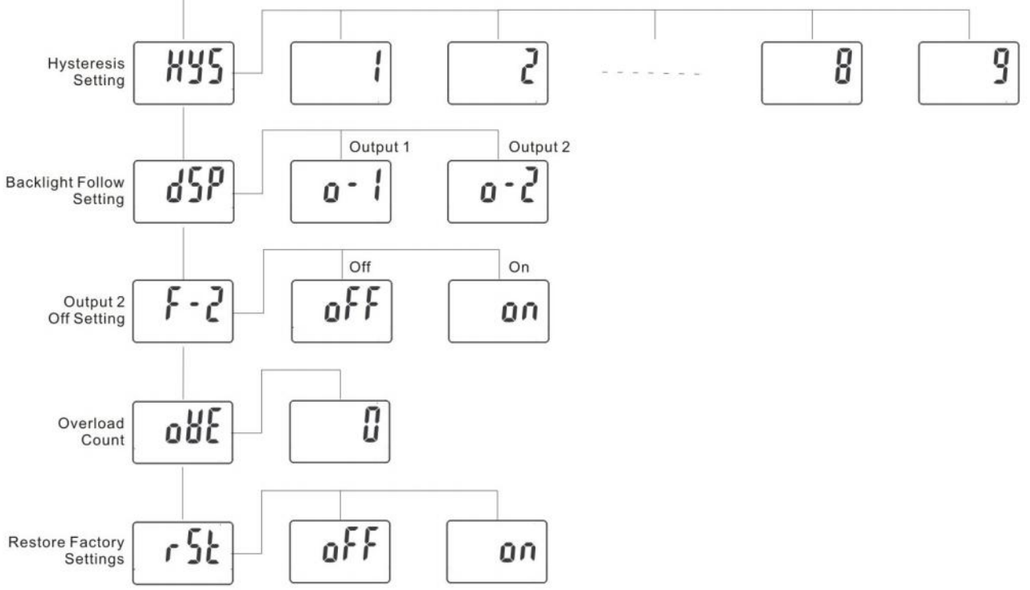
## Operating Instructions (Standard Function Interface)

In measurement mode, press (S) for two seconds to enter the standard function interface.
Use [△] and [▽] to navigate menus.
Press (S) to enter specific settings




## Operating Instructions (Standard Function Interface)

In measurement mode, press (S) for four seconds to enter the standard function interface.
Use [△] and [▽] to navigate menus.
Press (S) to enter specific settings

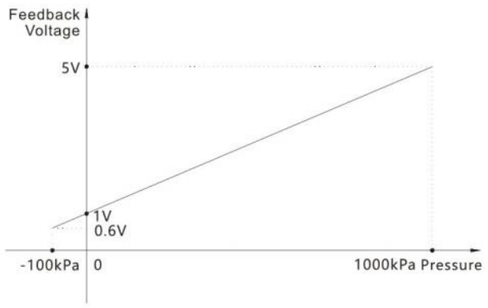



## Error Code Description

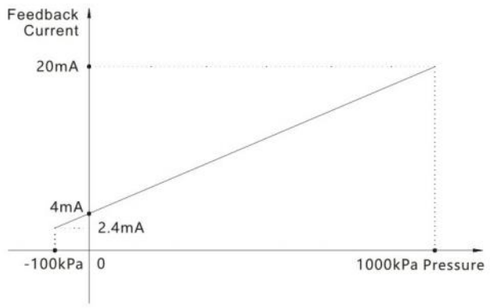
| Error Prompt | Cause | Resolution |
|---|---|---|
| Err1 | Zeroing range exceeded | Zeroing range restricted to 10% F.S. Do not set beyond this value. |
| Err2 | Switch output current is excessive | Please inspect the output connection cables for issues such as short circuits or excessive load. |
| Err4 | Incorrect pressure setting logic | Hysteresis mode: HY S value < O-1 Comparison mode: HY S value < C1L < C1H |
| Err5 | Abnormal stored data | Chip malfunction – repair required |
| HHHH | Pressure exceeds measurement range | Please reduce the air supply pressure to within the specified range |

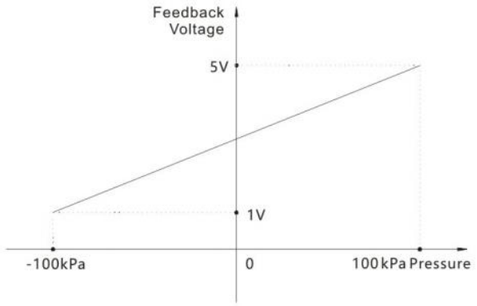
## Pressure-Electrical Signal Feedback Curve Diagram

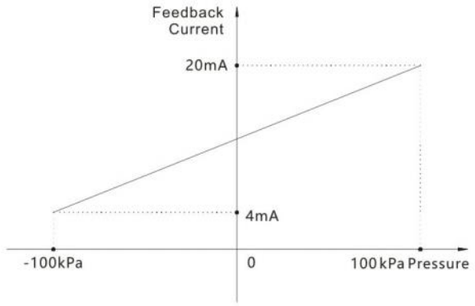
**Feedback Voltage**

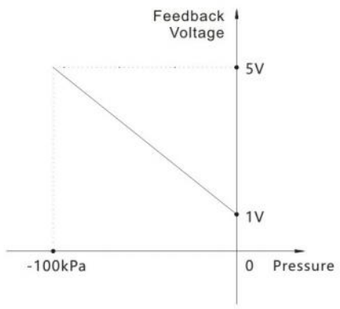


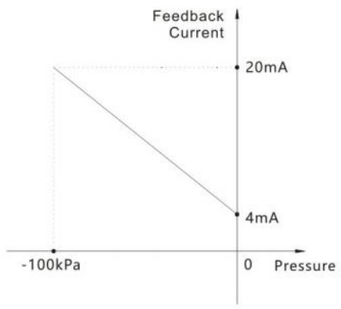

**Feedback Current**



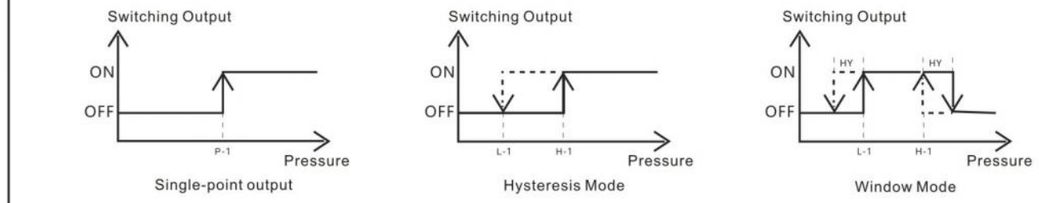




## Output Function Diagram for Each Mode in Normally Open State



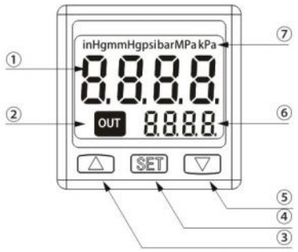

| From \ To | Pa | kPa | MPa | kgf/cm² | mmHg | psi | bar | inHg |
|---|---|---|---|---|---|---|---|---|
| 1Pa | 1 | 0.001 | 0.000001 | | | | | |
| 1kPa | 1000 | 1 | 0.001 | 0.010197 | 7.500616 | 0.145038 | 0.01 | 0.2953 |
| 1MPa | 1000000 | 1000 | 1 | 10.197 | 7500.616 | 145.038 | 10 | 295.2998 |
| 1kgf/cm² | 98066.5 | 98.0665 | 0.098066 | 1 | 735.559 | 14.2233 | 0.980665 | 28.95979 |
| 1mmHg | 133.32 | 0.13332 | 0.000133 | 0.001359 | 1 | 0.019336 | 0.001333 | 0.03937 |
| 1psi | 6895 | 6.985 | 0.006895 | 0.07031 | 51.7157 | 1 | 0.06895 | 2.036074 |
| 1bar | 100000 | 100 | 0.1 | 1.01972 | 750.062 | 14.5038 | 1 | 29.52998 |
| 1inHg | 3386.388 | 3.386388 | 0.003386 | 0.034530 | 25.4 | 0.491141 | 0.033863 | 1 |

### Precautions

1. This product is suitable for media that do not corrode SUS 316L.
2. The operating environment avoid high temperatures and humidity.
3. When installing or removing this product, ensure the pressure source is shut off and the output cable is disconnected from the controller to safeguard both the product and personnel. Secure the pressure connection using a hex key; do not rotate the main body directly.
4. During installation, connect using components matching the pressure port dimensions and verify proper sealing to prevent measurement errors or gas leakage.
5. Before powering on, confirm correct wiring connections. Avoid excessive voltage input to prevent product damage.

# DPS–6 Series

## Panel




| No | Name |
|---|---|
| 1 | Main display area |
| 2 | Output indicator |
| 3 | Up button |
| 4 | Set button |
| 5 | Down button |
| 6 | Sub-display secion |
| 7 | Pressure unit |

## Specification

| Model | | DPS-601(Compound) | DPS-602(Negative pressure) | DPS-610(Positive) |
|---|---|---|---|---|
| Pressure measure | Range of Measure | -100KPa~+100KPa | -100KPa~0KPa | -100KPa~+1000KPa |
| | Setting Range | -100KPa~+100KPa | -100KPa~0KPa | -100KPa~+1000KPa |
| | Withstand Pressure | 500KPa | 500KPa | 1500KPa |
| | Pressure Type | Non flammable，non-corrosive gas, gauge pressure measurement | | |
| | Measure Accuracy | ≤±2%F.S.(ambient temperature 25°c) | | |
| | Temperature Error | ≤±3%F.S. ( temperature range 0~ 50°c) | | |
| | Measure Pattern | Easy mode | | |
| | | Hysteresis model | | |
| | | Compar mode of upper and lower bounds | | |
| Port size | | Internal thread M5 | | |
| Input Power | Voltage Range | 12~24VDC ±10% | | |
| | Power Comsuption | 40mA max( non-load ) | | |
| Output Signal | Transistor output | NPN\PNP open-collector output<br>Output curent: 80mA MAX | | |
| | Response time | Adjustable:MIN 2.5mS | | |
| | Analog output | Voltage output<br>Singal ampliude:1 -5V<br>Load resistace: >1KΩ | | |
| Environmetal Resistance | Ip Class | IP40 | | |
| | Ambient Temperature | Operating temperature 0~50°c ,storage temperature -20~60°c | | |
| | Ambient Humidity | Operating humidity 35~ 80%RH | | |
| | Insulation Voltage | 1000VAC 1min | | |
| | Insulation Resistance | ≥50mΩ(500VDC) | | |
| | Shock | Max100m/s²,3time each in 6 directions of x,y,z | | |
| | Vibration | 10~150HZ, 1.5 mm full amplitude, 2 hours each direction of x,y,z | | |

## Ordering Code

DPS – 6 (1) | 10 (2) | M (3) | X (4) | □ (5)

**1.** DPS-6 Series

**2.** Range
01: -100~100kpa
02: -100~0kpa
10: -100~1000kpa

**3.** Port
M: M5 Female thread
R: R1/8 (M5 female thread)
N: NPT1/8 (M5 female thread)
G:G1/8 (M5 female thread)

**4.** Output
X: NPN+PNP
V: NPN+PNP+1-5V
N: 2*NPN
P: 2*NPN
D: RS485 Communication

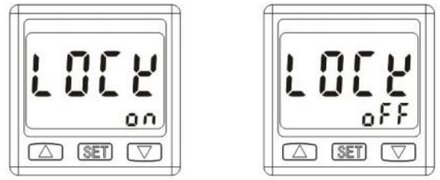
**5.** Mounting
M: Panel
Z: L Bracket
S: S Bracket

## Quick Setting

### Zero point setting

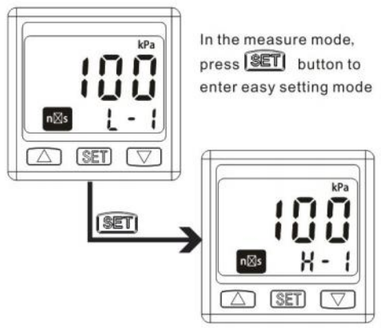

In the measure mode. press ▲ ▼ button at the same time,until display"o", release the button

### key lock and unlock

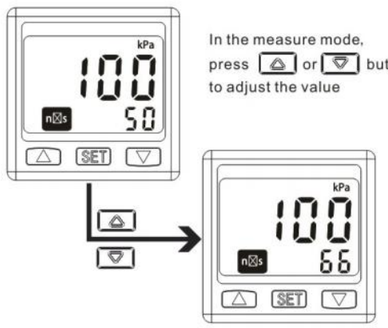



Lock: in measure mode, press ▲ SET+▼ until "LOCK ON" shown;
Unlock: press ▲ SET+▼ until "LOCK OFF" shown;

### Easy setup



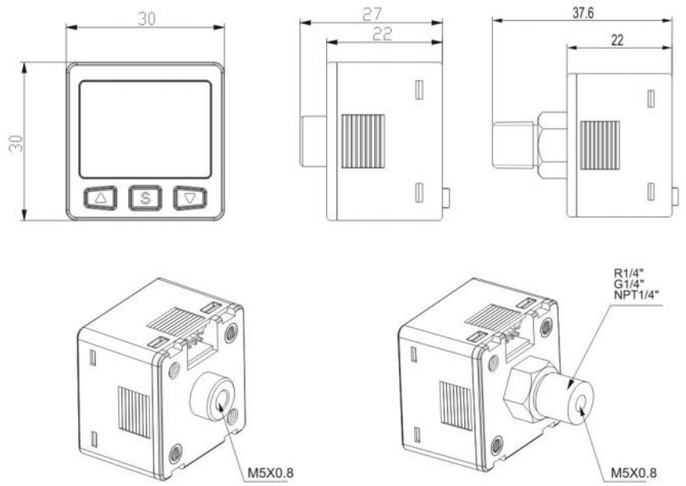

In the measure mode, press SET button to enter easy setting mode




In the measure mode, press ▲ or ▼ button to adjust the value

## MOUNTING DIMENSIONS(mm)

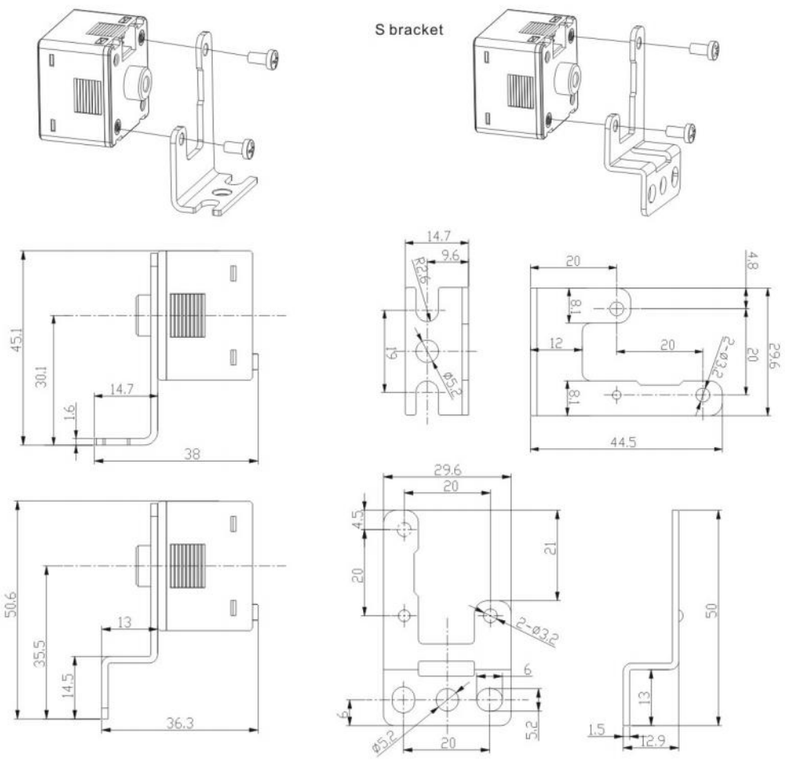
Overall dimension& connection port



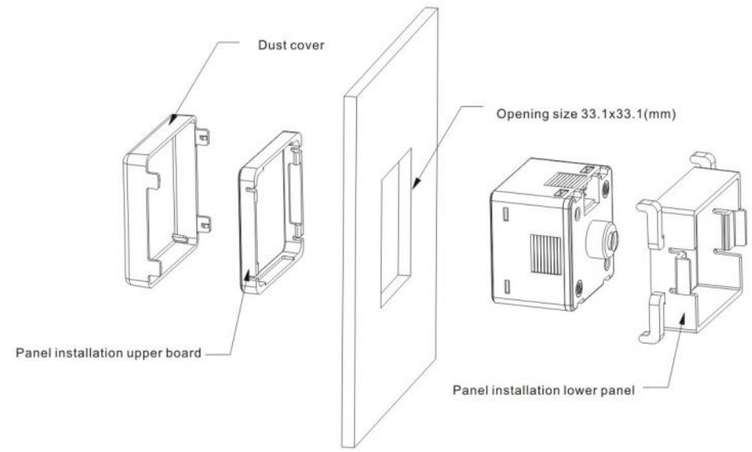

Mounting bracket

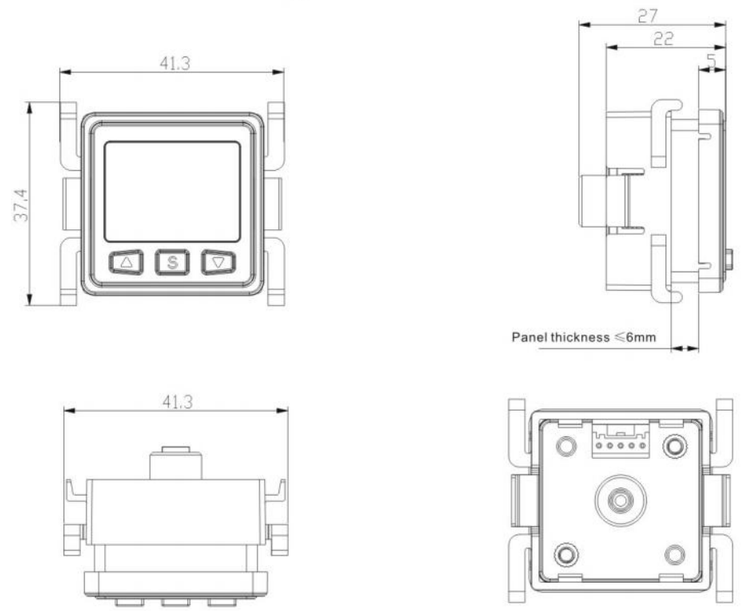
L bracket

S bracket

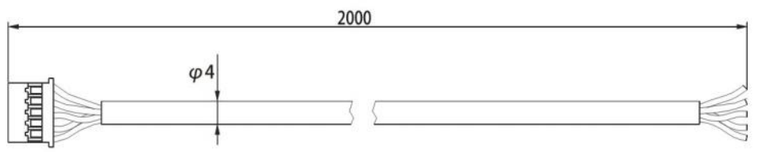



Panel bracket




Wire size

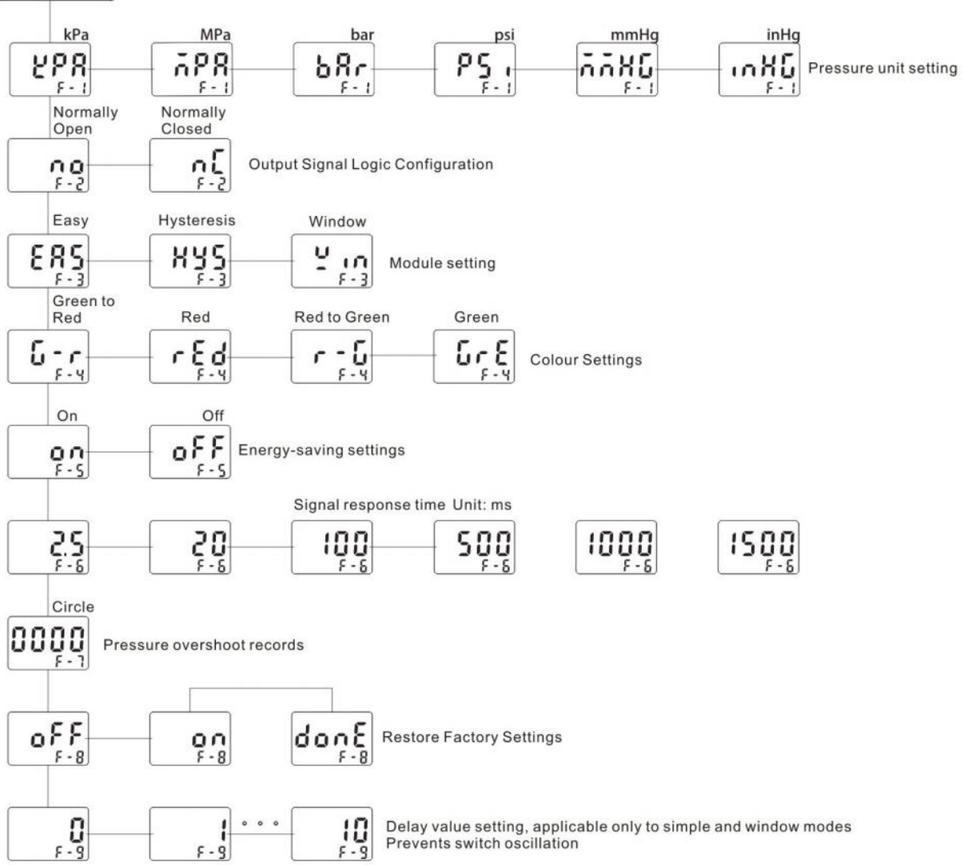


## Operating Instructions (Standard Function Interface)


In measurement mode, press SET for two seconds to enter the standard function interface.

Use △ and ▽ to navigate menus.

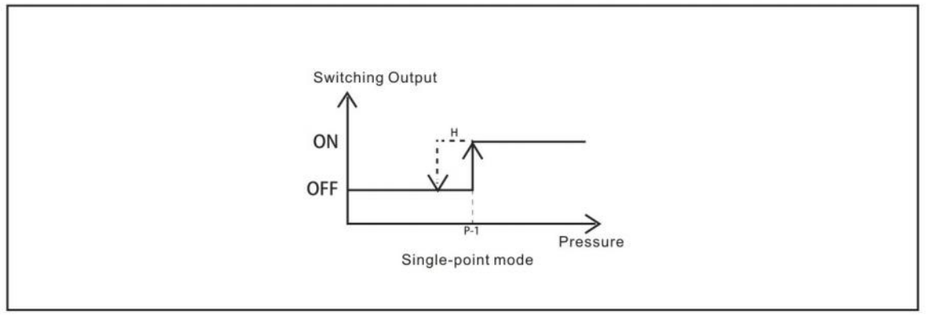
Press SET to enter settings.

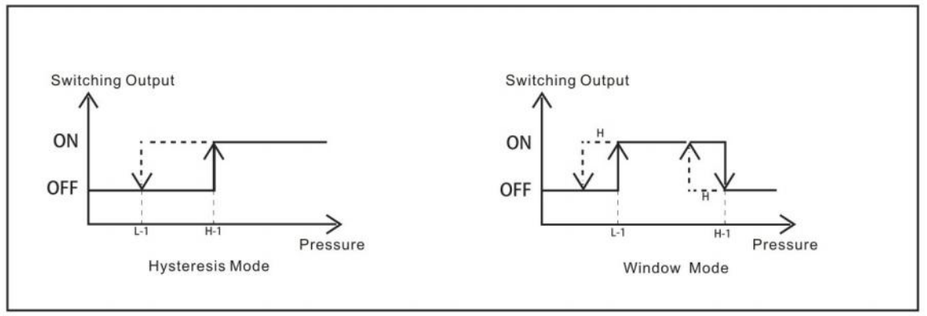



## Error Code Description

| Error Prompt | Cause | Resolution |
|---|---|---|
| Err 1 | Zeroing range exceeded | Zeroing range restricted to 10% F.S. Do not set beyond this value. |
| Err4 | Incorrect pressure setting logic | Hysteresis mode: HY S value < O-1 Comparison mode: HY S value < C1L < C1H |
| Err5 | Abnormal stored data | Chip malfunction – repair required |
| XXXX | Pressure exceeds measurement range | Please reduce the air supply pressure to within the specified range |

## Output Function Diagram for Each Mode in Normally Open State



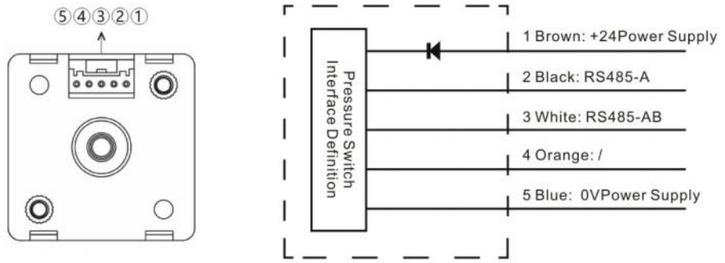

| From \ To | Pa | kPa | MPa | kgf/cm² | mmHg | psi | bar | inHg |
|---|---|---|---|---|---|---|---|---|
| 1Pa | 1 | 0.001 | 0.000001 | | | | | |
| 1kPa | 1000 | 1 | 0.001 | 0.010197 | 7.500616 | 0.145038 | 0.01 | 0.2953 |
| 1MPa | 1000000 | 1000 | 1 | 10.197 | 7500.616 | 145.038 | 10 | 295.2998 |
| 1kgf/cm² | 98066.5 | 98.0665 | 0.098066 | 1 | 735.559 | 14.2233 | 0.980665 | 28.95979 |
| 1mmHg | 133.32 | 0.13332 | 0.000133 | 0.001359 | 1 | 0.019336 | 0.001333 | 0.03937 |
| 1psi | 6895 | 6.985 | 0.006895 | 0.07031 | 51.7157 | 1 | 0.06895 | 2.036074 |
| 1bar | 100000 | 100 | 0.1 | 1.01972 | 750.062 | 14.5038 | 1 | 29.52998 |
| 1inHg | 3386.388 | 3.386388 | 0.003386 | 0.034530 | 25.4 | 0.491141 | 0.033863 | 1 |

### Precautions

1. This product is intended solely for measuring gas pressure; the medium must not contain corrosive or flammable gases.
2. The operating environment avoid high temperatures and humidity.
3. When installing or removing this product, ensure the pressure source is shut off and the output cable is disconnected from the controller to safeguard both the product and personnel. Secure the pressure connection using a hex key; do not rotate the main body directly.
4. During installation, connect using components matching the pressure port dimensions and verify proper sealing to prevent measurement errors or gas leakage.
5. Before powering on, confirm correct wiring connections. Avoid excessive voltage input to prevent product damage.

## MODBUS Communication Protocol - Operating Instructions

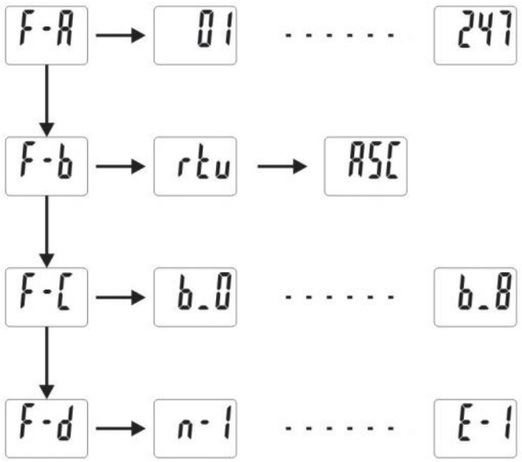
### Wiring Method




Note: The colour of the line indicates the attributes of the wire accessories configured by our company.

### Slave Configuration

In measurement mode, press and hold the S key for 2 seconds to enter the standard function interface settings. Use the ▼ or ▲ keys to switch between options, then press the S key to enter the configuration menu. The F-A/F-B/F-C/F-D menus correspond to MODBUS-related function settings.




MODBUS Settings Menu

1 , 2 , 3 , ..... , 247 ( Default Address 2 )

RTU , ASCII ( Default Mode RTU )

Baud Rate: B_0-115200 , B_1-57600 , B_2-38400 ,
B_3-19200 , B_4-9600 , B_5-4800 , B_6-2400 ,
B_7-1200 , B_8-600 ( Default Baud Rate9600 )

Parity Type: N-1 No Parity, 1 Stop Bit
N-2 No Parity, 2 Stop Bit
O-1 Odd Parity, 1 Stop Bit
E-1 Even Parity, 1 Stop Bit (Default Parity TypeN-1)

### Register Specification

| Name | Function Description | Internal Address | Protocol Address | Function Code |
|---|---|---|---|---|
| Zero Reset | Write 1 to reset pressure display on pressure switch<br>Pressure zero reset range: 10% of full scale | 40004 | 0x03 | Read/write (03, 06) |
| Read Pressure | Read actual pressure of pressure switch | 30001 | 0x00 | Read-only (04) |

### Communication Example

DPS MODBUS Communication Settings
Address: 02( RS485 )
Mode: RTU
Baud Rate: B_4 9600
Parity Type: O_1 Odd Parity Stop Bit

**(1) Read actual pressure (instance reads pressure value of 100 kPa)**

Host transmits data

| Device address | Function code | Register address | Number of registers | Checksum |
|---|---|---|---|---|
| 02 | 04 | 00 00 | 00 01 | 31 F9 |

Return data from machine

| Device address | Function code | Register address | Data | Checksum |
|---|---|---|---|---|
| 02 | 04 | 02 | 00 64 | FC DB |

**(2) Display zero pressure**

Host transmits data

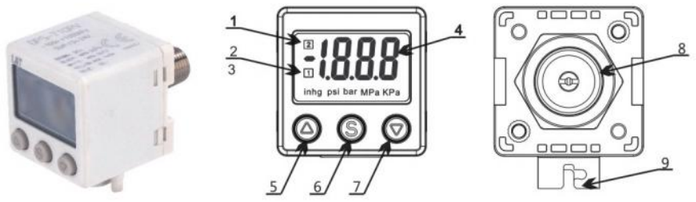
| Device address | Function code | Register address | Data | Checksum |
|---|---|---|---|---|
| 02 | 06 | 00 03 | 00 01 | B8 39 |

Return data from machine

| Device address | Function code | Register address | Data | Checksum |
|---|---|---|---|---|
| 02 | 06 | 00 03 | 00 01 | B8 39 |

# DPS–7 Series

## Panel




| No | Name |
|---|---|
| 1 | Output indicator |
| 2 | Output indicator |
| 3 | Pressure unit |
| 4 | Main display section |
| 5 | Up button |
| 6 | Section button |
| 7 | Down button |
| 8 | Pressure port |
| 9 | Electric interface |

## Specification

| Model | | DPS-701(Compound) | DPS-702(Negative pressure) | DPS-710(Positive) |
|---|---|---|---|---|
| Pressure measure | Range Of Measure | -100KPa~100KPa | -100KPa~0KPa | -0.1MPa~1MPa |
| | Setting Range | -100KPa~100KPa | -100KPa~0KPa | -0.1MPa~1MPa |
| | Withstand Pressure | 500KPa | 500KPa | 1.5MPa |
| | Pressure Type | Gauge pressure test | | |
| | Measure Accuracy | ⩽±2%F.S.(ambient temperature 25°c) | | |
| | Temperature Error | ⩽±3%F.S. ( temperature range 0~ 50°c) | | |
| | Measure Pattern | Easy Mode | | |
| | | Hysteresis model | | |
| | | Window comparator mode | | |
| Display | Status Display | LCD, 4-digit measurement value, unit display, output status display | | |
| | Display Model | Adjustable backlight, 4 groups of display modes | | |
| Input Power | Voltage Range | 24VDC ±10% | | |
| | Power Comsuption | 40mA max( non-load ) | | |
| Output Signal | Transistor Output | NPN open-collector output<br>Output current :80mA MAX<br>Voltage drop : ⩽1V | PNP open-collector output<br>Output current :80mA MAX<br>Voltage drop : ⩽1V | |
| | Analog Output | Voltage output<br>Signal ampliude:1~5V<br>Load resistance ⩾1KΩ | Current output<br>Signal ampliude:4~20mA<br>Load resistance ⩽400KΩ | |
| | Response Time | Adjustable : 2.5ms、 20ms、100ms、 500ms、1000ms、 1500ms | | |
| | Short-circuit Protecdtion | Yes | | |
| Environmetal Resistance | Ip Class | IP65 | | |
| | Ambient Temperature | Operating temperature 0~50°c ,storage temperature -20~60°c | | |
| | Ambient Humidity | Operating humidity 35~ 80%RH | | |
| | Insulation Voltage | 1000VAC 1min | | |
| | Insulation Resistance | ⩾50mΩ(500VDC) | | |
| | Shock | Max100m/s²,3time seach in 6 directions of x,y,z | | |
| | Vibration | 10~150HZ, 1.5 mm full amplitude, 2 hours each direction of x,y,z | | |

## Ordering Code

DPS – 7 (1) 10 (2) R (3) V (4) – □ (5)

**1.** DPS-7 Series

**2.** Range
01: -100~100kpa
02: -100~0kpa
10: -100~1000kpa

**3.** Pressure port
M: M5 Female threadt
R: R1/8 (M5 female thread)
N: NPT1/8 (M5 female thread)
G: G1/8 (M5 female thread)

**4.** Output
V: 2*NPN+Analog 1~5V
W: 2*PNP+Analog 1~5V
A: 2*NPN+Analog 4~20mA
B: 2*PNP+Analog 4~20mA

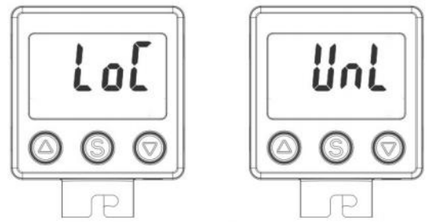
**5.** Mounting
M : Panel
N : Panel+shield
Z : L bracket
S : S bracket

## Quick Setting

● **Zero point setting**

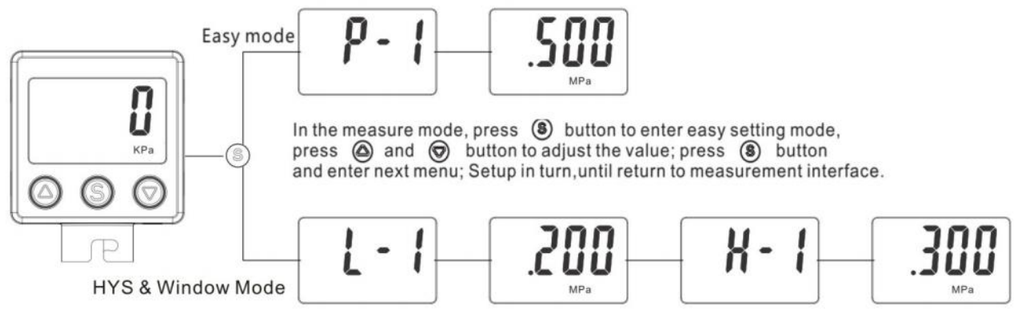

In the measure mode,press ▲ + ▼ button at the same time, until display"0", release the button;
PS: reset range:+/-10%F.S.

● **key lock and unlock**



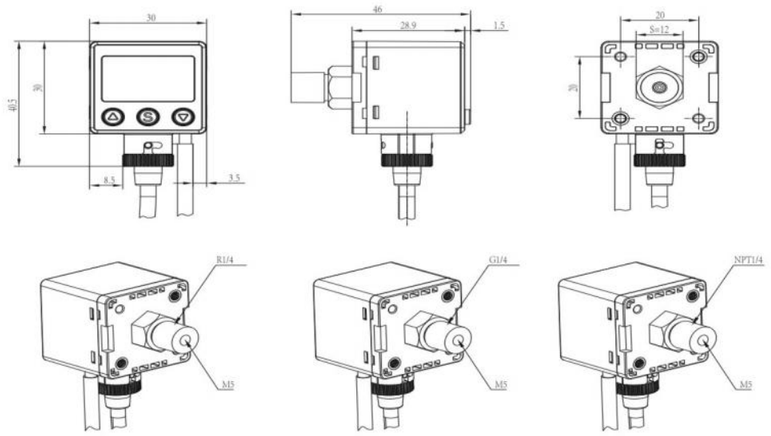

Lock: in the measure mode, press ▲ + S + ▼ button at the same time until "LOC" shown,release the buttons;
Unlock: in the measure mode, press ▲ + S + ▼ button at the same time unitl "UNL" shown,release the buttons.

● **Easy setup**



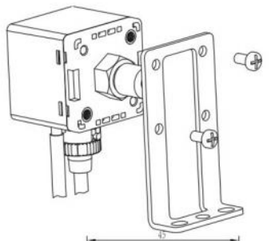
## MOUNTING DIMENSIONS(mm)

Overall dimension& connection port

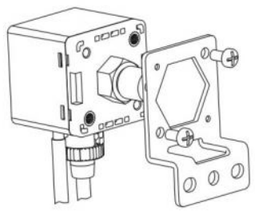


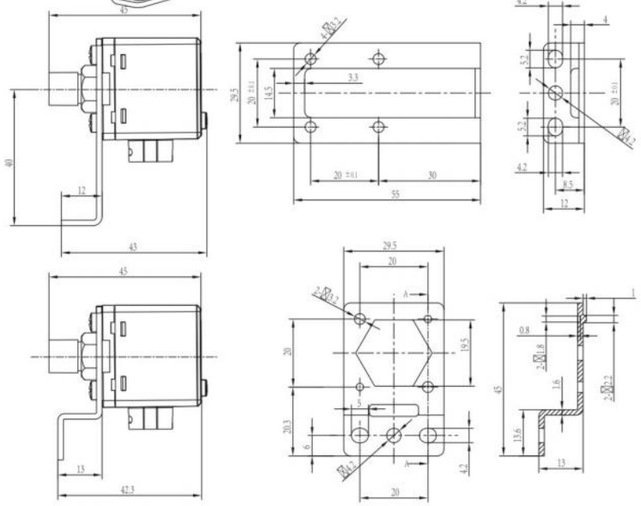

Mounting bracket

L bracket

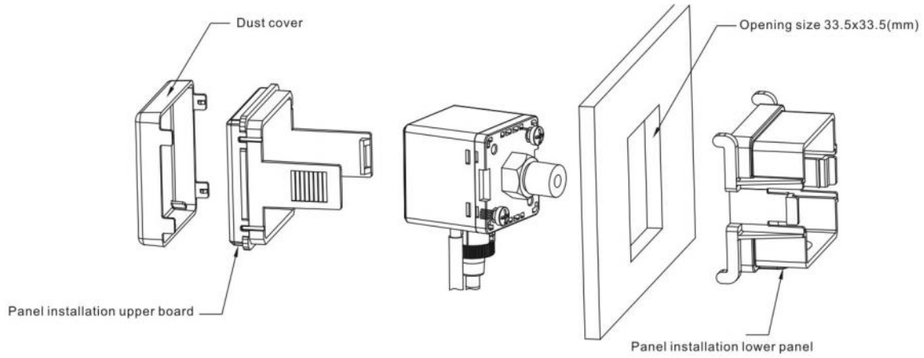


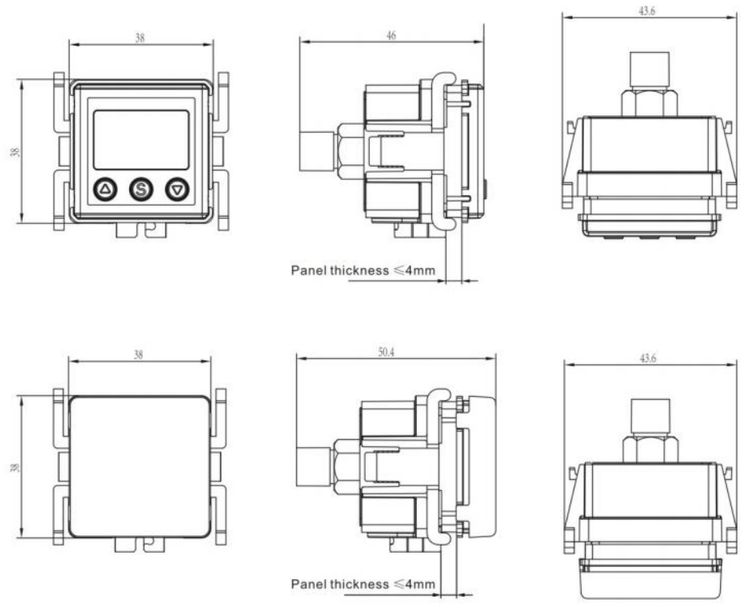
S bracket



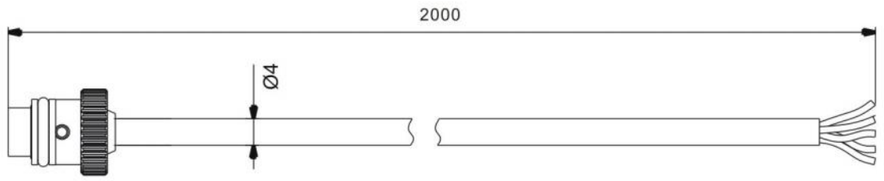



Panel bracket



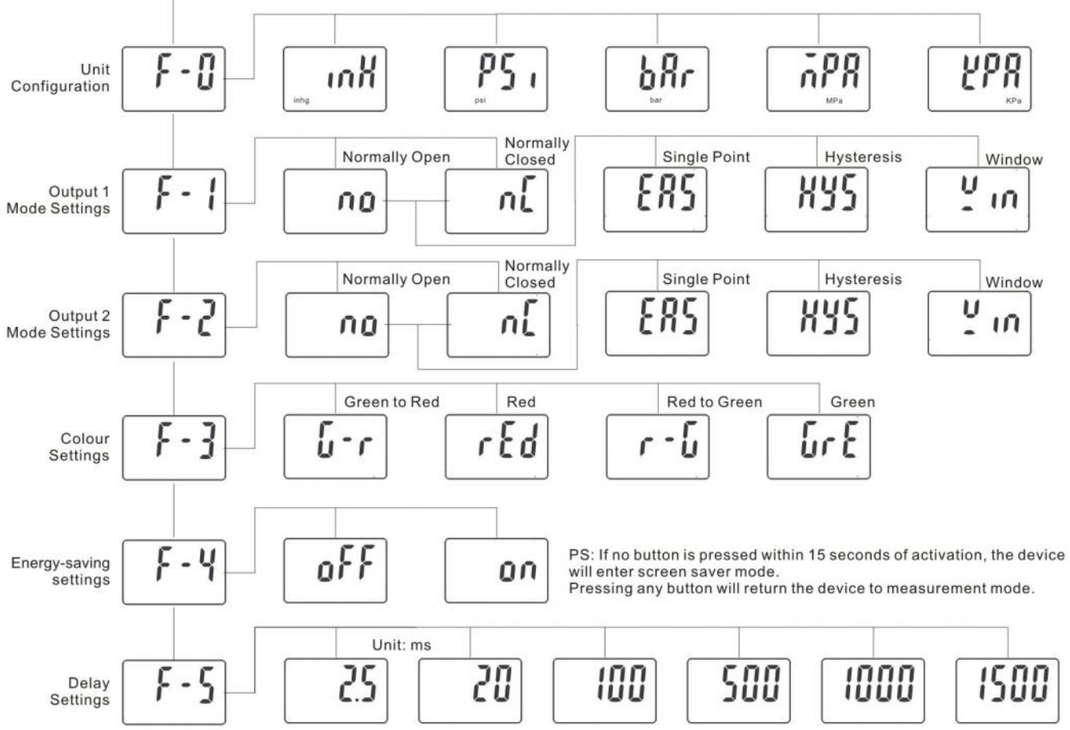




Wire size



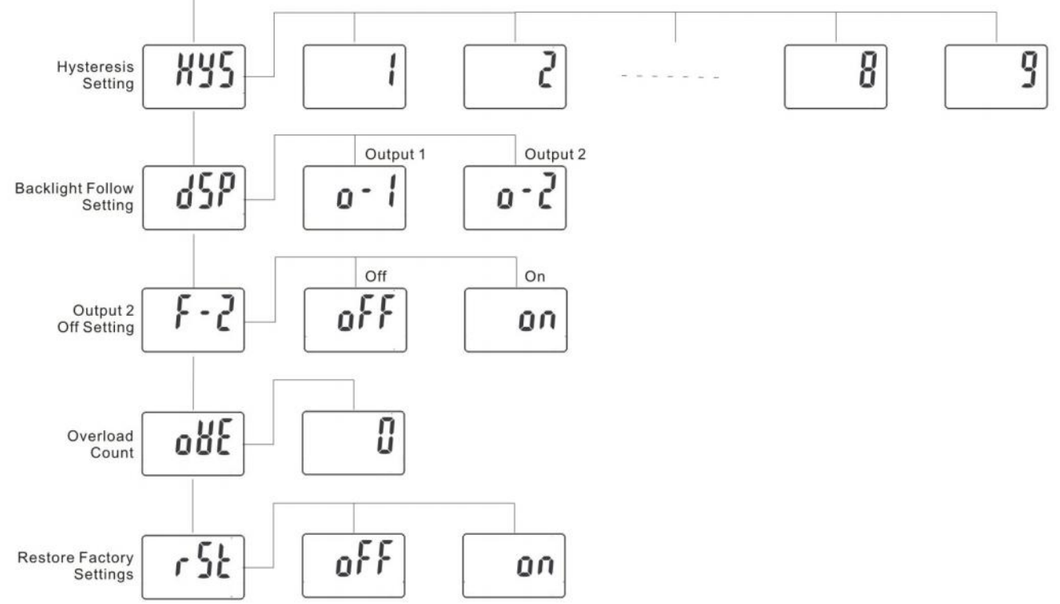
## Operating Instructions (Standard Function Interface)


In measurement mode, press (S) for two seconds to enter the standard function interface.
Use [△] and [▽] to navigate menus.
Press (S) to enter specific settings




## Operating Instructions (Standard Function Interface)


In measurement mode, press (S) for four seconds to enter the standard function interface.
Use [△] and [▽] to navigate menus.
Press (S) to enter specific settings

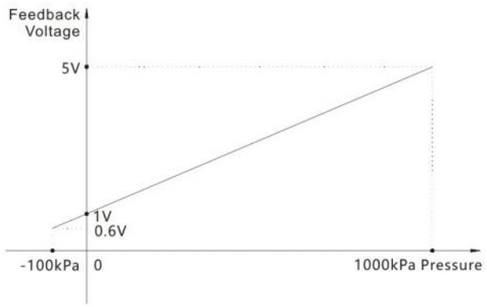



## Error Code Description

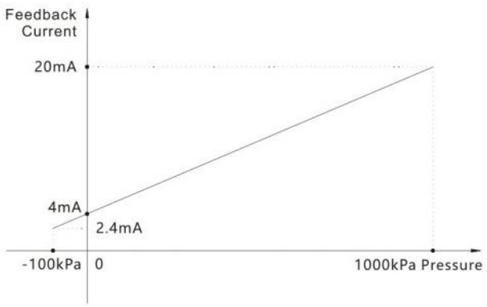
| Error Prompt | Cause | Resolution |
|---|---|---|
| E-1 | Zeroing range exceeded | Zeroing range restricted to 10% F.S. Do not set beyond this value. |
| E-2 | Switch output current is excessive | Please inspect the output connection cables for issues such as short circuits or excessive load. |
| E-3 | Incorrect pressure setting logic | Hysteresis mode: HY S value < O-1 Comparison mode: HY S value < C1L < C1H |
| E-5 | Abnormal stored data | Chip malfunction – repair required |
| HHH | Pressure exceeds measurement range | Please reduce the air supply pressure to within the specified range |

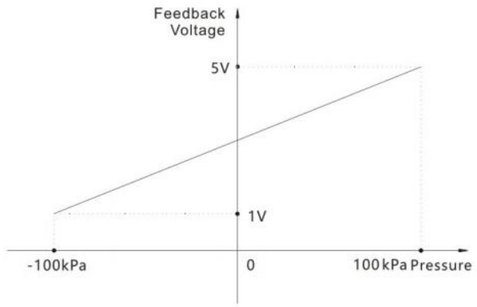
## Pressure-Electrical Signal Feedback Curve Diagram

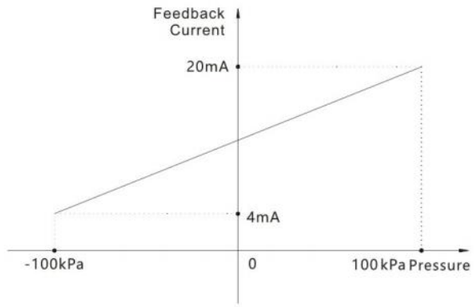
**Feedback Voltage**

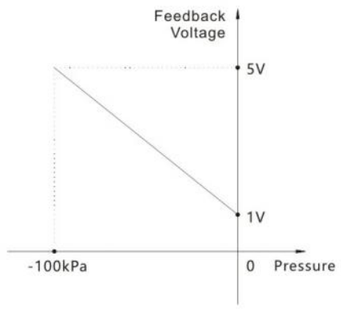


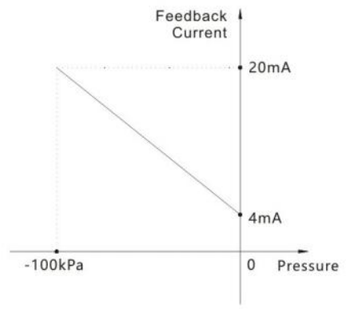

**Feedback Current**



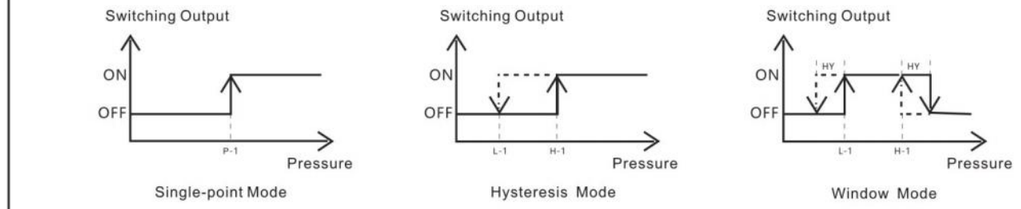




## Output Function Diagram for Each Mode in Normally Open State




| From \ To | Pa | kPa | MPa | kgf/cm² | mmHg | psi | bar | inHg |
|---|---|---|---|---|---|---|---|---|
| 1Pa | 1 | 0.001 | 0.000001 | | | | | |
| 1kPa | 1000 | 1 | 0.001 | 0.010197 | 7.500616 | 0.145038 | 0.01 | 0.2953 |
| 1MPa | 1000000 | 1000 | 1 | 10.197 | 7500.616 | 145.038 | 10 | 295.2998 |
| 1kgf/cm² | 98066.5 | 98.0665 | 0.098066 | 1 | 735.559 | 14.2233 | 0.980665 | 28.95979 |
| 1mmHg | 133.32 | 0.13332 | 0.000133 | 0.001359 | 1 | 0.019336 | 0.001333 | 0.03937 |
| 1psi | 6895 | 6.985 | 0.006895 | 0.07031 | 51.7157 | 1 | 0.06895 | 2.036074 |
| 1bar | 100000 | 100 | 0.1 | 1.01972 | 750.062 | 14.5038 | 1 | 29.52998 |
| 1inHg | 3386.388 | 3.386388 | 0.003386 | 0.034530 | 25.4 | 0.491141 | 0.033863 | 1 |

### Precautions

1. The operating environment avoid high temperatures and humidity.
2. When installing or removing this product, ensure the pressure source is shut off and the output cable is disconnected from the controller to safeguard both the product and personnel. Secure the pressure connection using a hex key; do not rotate the main body directly.
3. During installation, connect using components matching the pressure port dimensions and verify proper sealing to prevent measurement errors or gas leakage.
4. Before powering on, confirm correct wiring connections. Avoid excessive voltage input to prevent product damage.

# DPS–8 Series IO-Link

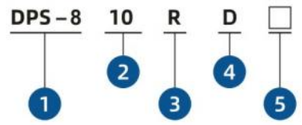
## Panel


| No | Name |
|---|---|
| 1 | Main display area (pressure/function menu) |
| 2 | Communication indication |
| 3 | Frequency lock indicator |
| 4 | Switch output indicator |
| 5 | Up adjustment button |
| 6 | Set function keys |
| 7 | Lower adjustment button |
| 8 | Auxiliary display area (pressure setpoint) |

## Specification

| Model | | DPS-801(Compound) | DPS-810(Positive) |
|---|---|---|---|
| Pressure measure | Range of Measure | -100KPa~+100KPa | -100KPa~+1000KPa |
| | Setting Range | -100KPa~+100KPa | -100KPa~+1000KPa |
| | Withstand Pressure | 500KPa | 1500KPa |
| | Pressure Type | Non flammable，non-corrosive gas, gauge pressure measurement | |
| | Measure Accuracy | ≤ ±2%F.S.(ambient temperature 25°c) | |
| | Temperature Error | ≤ ±3%F.S. ( temperature range 0~ 50°c) | |
| | Measure Pattern | Single point mode | |
| | | Hysteresis model | |
| | | Window comparator mode | |
| Port size | | R1/8、G1/8、NPT1/8、M5 | |
| Input Power | Voltage Range | 12~24VDC ±10% | |
| | Power Comsuption | 40mA max( non-load ) | |
| Output Signal | Switch output | NPN / PNP<br>MAX CURRENT: 250mA | |
| | Response time | Adjustable Lowest 2.5mS | |
| | Communication method | Model: IO-Link<br>Version: V1 .1<br>Communication speed:COM238.4kbps<br>Ssettings file: IODDfile | Minimum cycle time! 2.5mS<br>Process data length: Input 2bytes,output Obytes<br>Vendor ID: 1524 (0x5F4) |
| Environmetal Resistance | Ip Class | IP40 | |
| | Ambient Temperature | Use temperature 0~50°c ,storage temperature -20~60°c | |
| | Ambient Humidity | Operating humidity 35~ 80%RH | |
| | Insulation Voltage | 1000VAC 1min | |
| | Insulation Resistance | ≥ 50mΩ(500VDC) | |
| | Shock | Max100m/s²,3time seach in 6 directions of x,y,z | |
| | Vibration | 10~150HZ, 1.5 mm full amplitude, 2 hours each direction of x,y,z | |

## Ordering Code




**1.** DPS-8 Series

**2.** Range
10: -100~1000kpa
01: -100~100kpa

**3.** Port
R: R1/8 M5
G: G1/8 M5
N: NPT1/8 M5

**4.** Output
D: 2 Line Switch
With M12 aviation plug

**5.** Mounting
M : Panel
Z : L bracket
S : S bracket

## Quick Setting

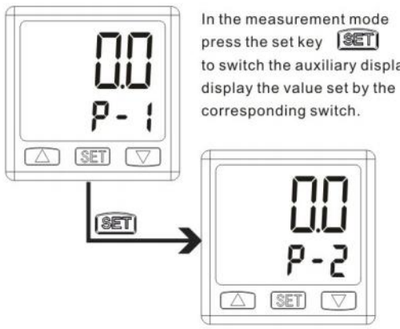
● **Zero point setting**


In the measure mode, Press button ▲ ▼
at the same time.until display"O",release the button
PS: Reset range: 10% F.S.

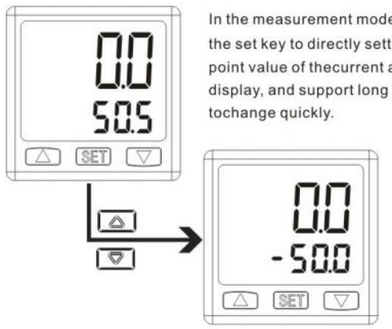
● **key lock and unlock**


Lock: In the measure mode，press ▲ SET button at the same time until "LOCK ON" shown, release the buttons
Unlock: Press same button. until "Lock off"

● **Easy setup**



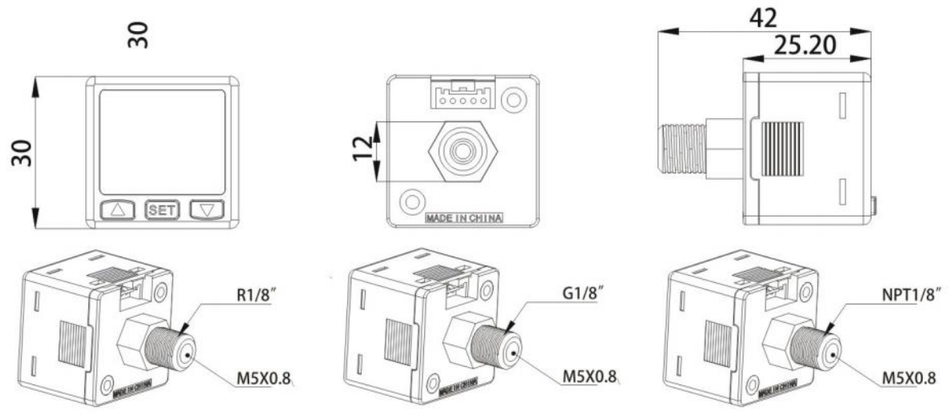

In the measurement mode
press the set key SET
to switch the auxiliary displayto
display the value set by the
corresponding switch.



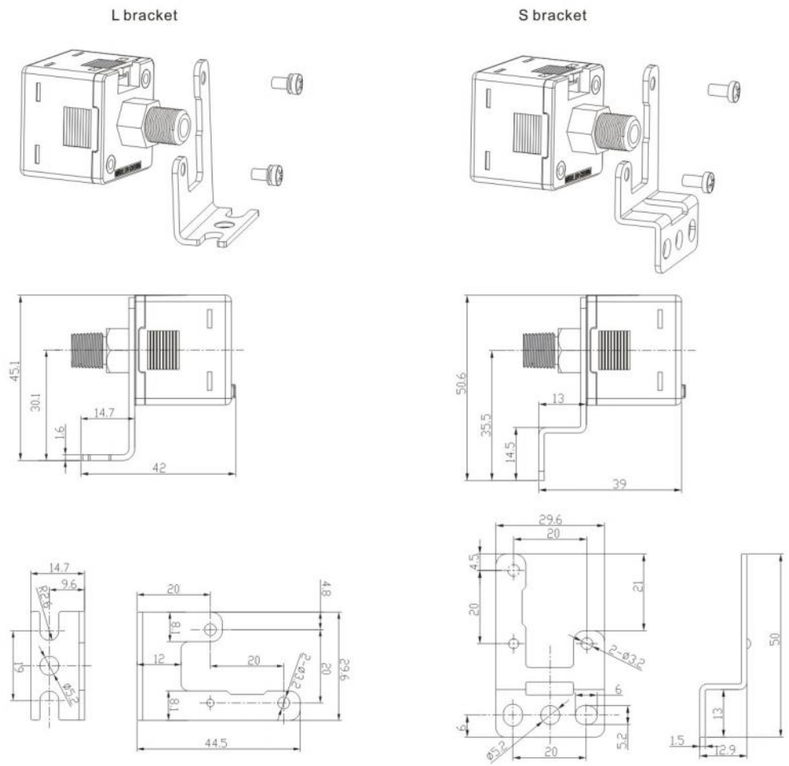

In the measurement mode，press
the set key to directly setthe switch
point value of thecurrent auxiliary
display, and support long press
tochange quickly.

## MOUNTING DIMENSIONS(mm)

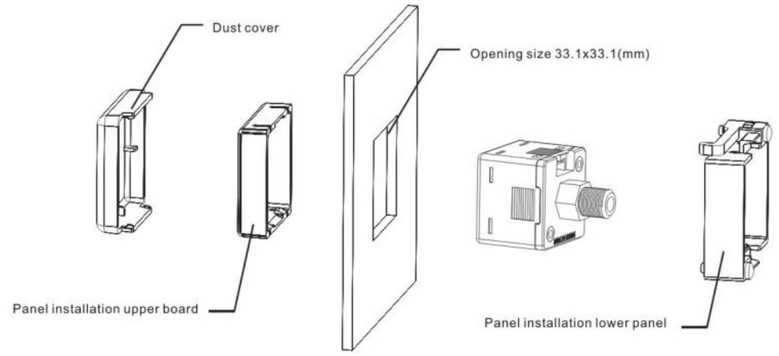
Overall dimension& connection port

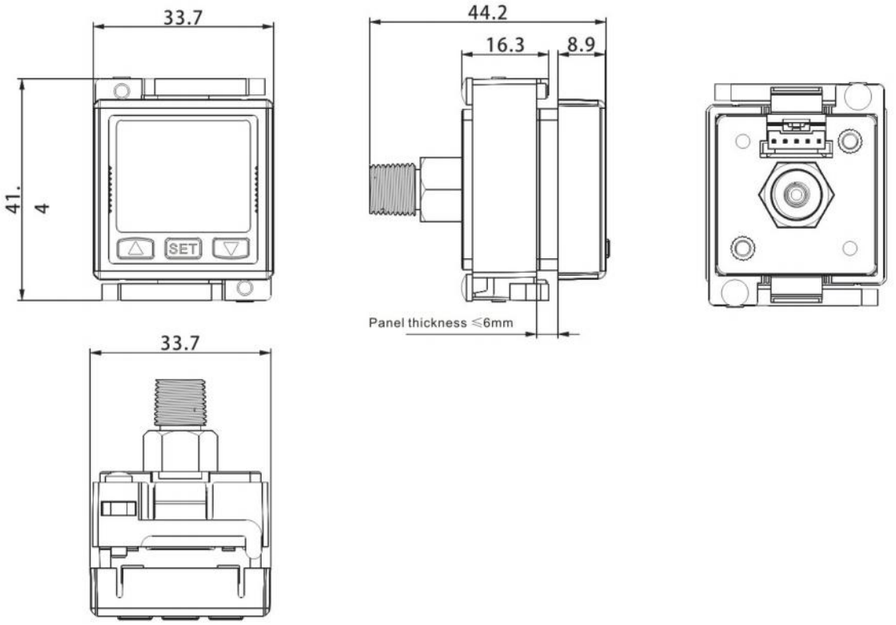



Mounting bracket



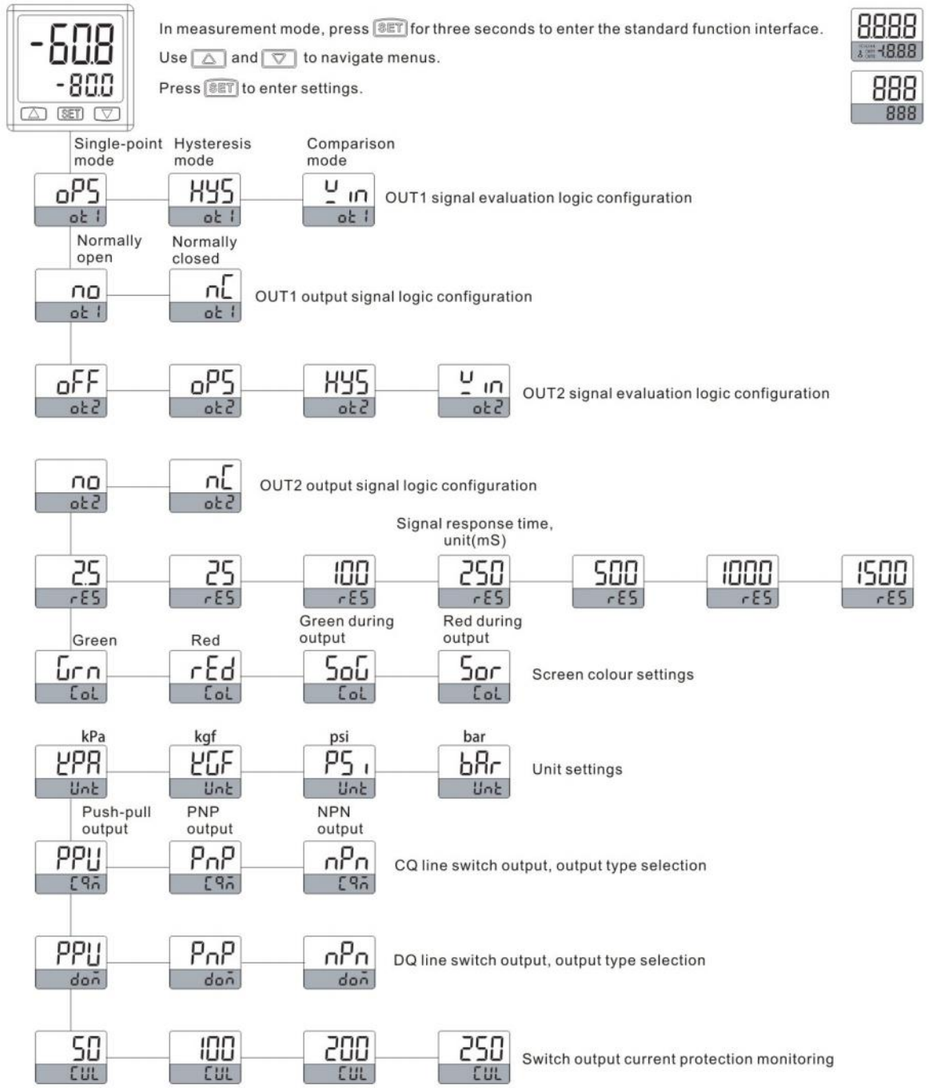

Panel bracket



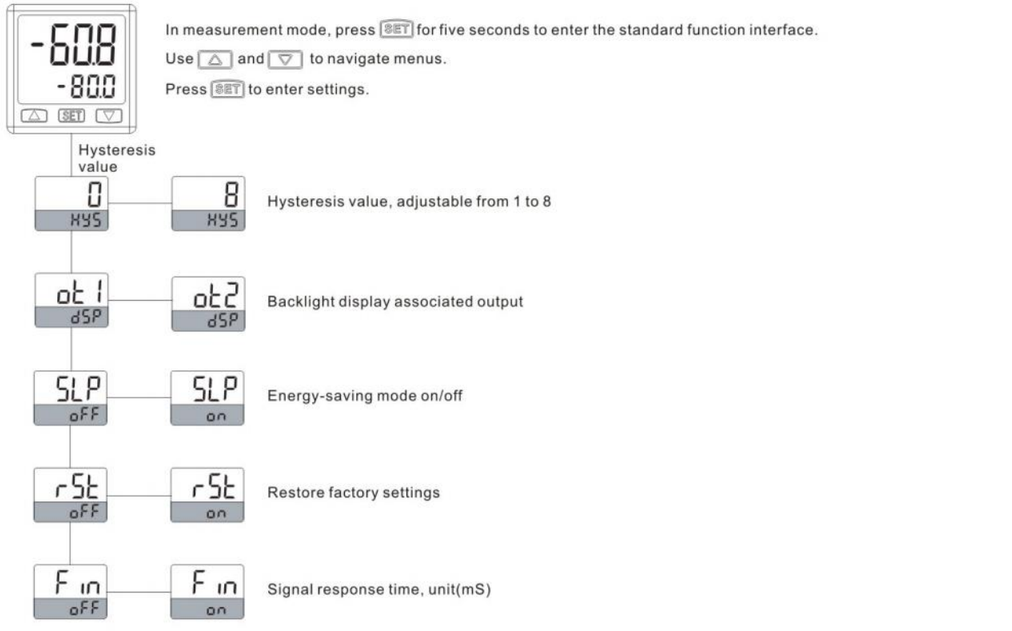




Wire size

## Operating Instructions (Standard Function Interface)



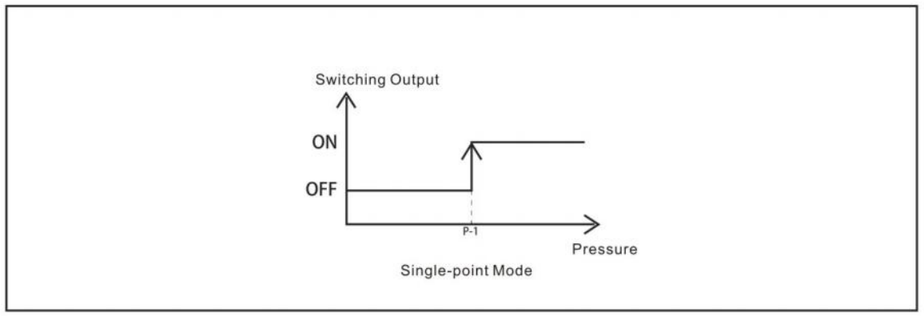

## Operating Instructions (Standard Function Interface)

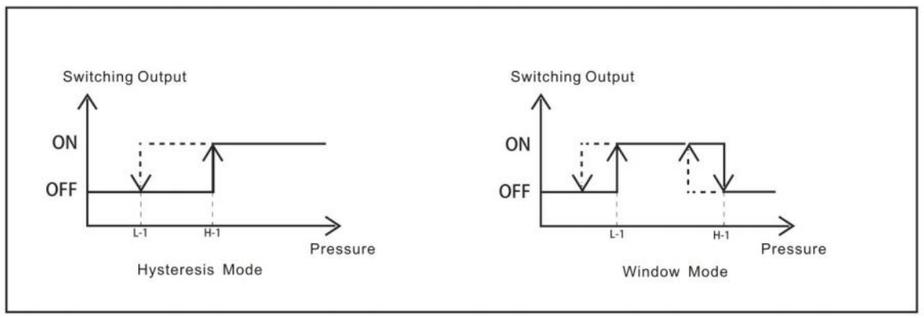



## Error Code Description

| Error Prompt | Cause | Resolution |
|---|---|---|
| ER1 | Output 1 Short Circuit/Overcurrent | Switch off power supply, inspect output circuitry |
| ER2 | Output 2 Short Circuit/Overcurrent | Switch off power supply, inspect output circuitry |
| ER3 | Return-to-Zero Operation Out of Range | Check for external pressure sources |
| HHH/LLL | Pressure Out of Range | Operate within permissible pressure limits |
| ER6~9 | System Error | Power cycle unit, should issue persist, contact after-sales service for factory analysis. |

## Output Function Diagram for Each Mode in Normally Open State




### Precautions

1. This product is intended solely for measuring gas pressure; the medium must not contain corrosive or flammable gases.
2. The operating environment avoid high temperatures and humidity.
3. When installing or removing this product, ensure the pressure source is shut off and the output cable is disconnected from the controller to safeguard both the product and personnel. Secure the pressure connection using a hex key; do not rotate the main body directly.
4. During installation, connect using components matching the pressure port dimensions and verify proper sealing to prevent measurement errors or gas leakage.
5. Before powering on, confirm correct wiring connections. Avoid excessive voltage input to prevent product damage.