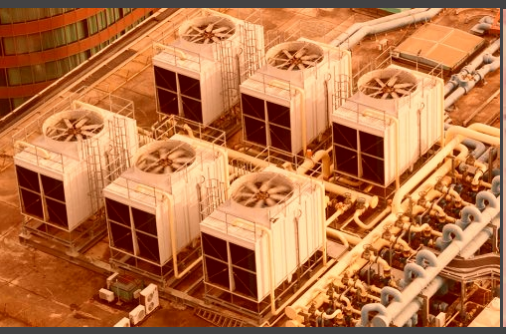
Anwoll
CONTROLS

Reliable Engineering Project Partner



PRESSURE | DIFFERENTIAL PRESSURE | TEMPERATURE AND HUMIDITY | SWITCH | FLOW | HVAC

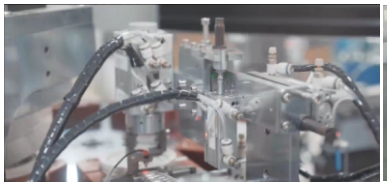
Anwoll· Global

Anwoll, a global leader in process control, has four offices in the Americas and Asia. We are always at your service.

As experts in pressure, differential pressure, temperature and humidity, switching, flow and HVAC, we offer efficient solutions for plant and process automation. With many years of experience in the manufacturing sector, we can respond quickly and flexibly to local market needs.

Whether in the HVAC, automation, food manufacturing, chemical or pharmaceutical industries, Anwoll offers control solutions and products to improve the efficiency and security of your systems. Not only that, you can reduce procurement, inventory, installation costs, and improve operational safety through efficient and standardized products. With intelligent manufacturing, a rich product range, and a worldwide distribution network, we provide users with tailor-made product solutions.






SMALL PRESSURE SWITCH MODEL SPS11

SPS11 small pressure switch mode

1)SPS11-22 Small pressure switch 2)SPS11-12 Small pressure switch 3)SPS11-27 Small pressure switch

The SPS11 switches are fixed set point, factory-calibrated pressure switches. They have an automatic reset and can have normally open or normally closed contacts. All metallic wetted components make the SPS11 switch compatible with a multitude of chemicals in liquid or gas form. It offers numerous types of electrical terminations, from different sizes and styles of push-on terminals to wire leads with an array of standard industry connectors.

Features

- Switch with automatic reset design
- Suitable for applications such as air and water pressure control, internal circuitry of electrical refrigeration equipment, indoor air conditioning, or indoor cooling devices
- Wide pressure setting range, suitable for different requirements

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Pressure set range (gauge pressure)	From 0.02 MPa to 6.5 MPa; below 1.0 MPa is considered low pressure, while 1.0 MPa and above is considered high pressure
Process connection	M threads (below M10), M threads (above M12), NPT threads, R threads, G threads, UNF threads, and copper pipes, etc
Burst pressure	34.5MPax1min, no damage or leakage
Mechanical lifespan (switching cycles)	100,000
Electrical lifespan (switching cycles)	30,000
Tests/Admissions	UL

Electrical overview

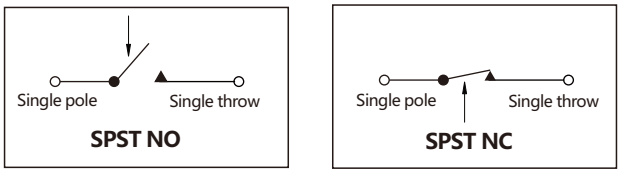
Switching load	24...250VAC/0.02...6A; 8...36VDC/0.02...3A;600VAC 0.02...3A(UL)
	120VAC/6A;250VAC/6A(CE);250VAC/3A(CQC)

Under the condition of ensuring electrical lifespan without pressure difference switch, the maximum current is 0.5A

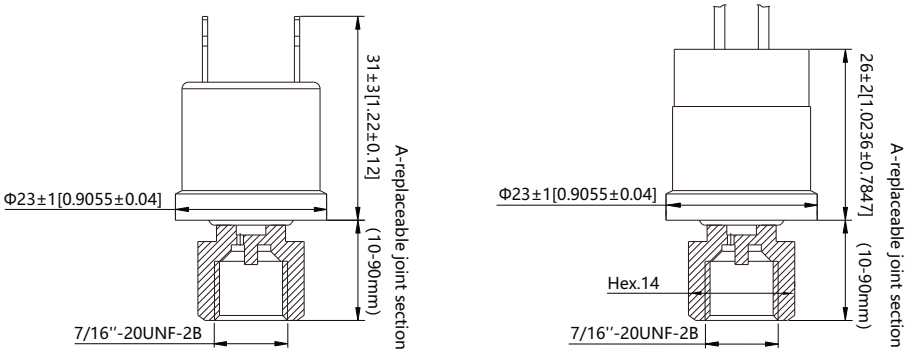
Operating conditions

Medium	Air,water,motor oils,transmission oils, jet fuels and other similar Hydrocarbon Media
Temperature	Ambient:-40...+65°C[-40...+149°F](Low pressure); -40...+120°C[-40...+248°F](High pressure) Medium:-40...+80°C[-40...+176°F](Low pressure); -40...+135°C[-40...+275°F](High pressure)
IP grade	IP67

Contact version



Dimensiones in mm(in)



Ordering information

Example part number:SPS11-121C-145-175bar

Model SPS11 small pressure switch,electrical connections:wire leads,process connection:M thread(below M10),base material:brass, contact version:SPST-NC,Pressure setting:Reset pressure 145psi,Action pressure 175psi.

S	P	S	1	1	-	1	2	1	C	-	145-175bar
①						②	③	④	⑤		Set point

①

Name	Action Pressure	Tolerance	Proof Pressure
SPS11	0.02<<0.6MPa	±0.03MPa	1.5MPa
	0.6<<1.0MPa	±0.05MPa	2.0MPa
	1.0<<2.0MPa	±0.07MPa	3.0MPa
	2.0<<3.0MPa	±0.10MPa	4.0MPa
	3.0<<4.0MPa	±0.15MPa	5.5MPa
	4.0<<5.0MPa	±0.20MPa	6.5MPa
	5.0<<6.5MPa	±0.25MPa	8.0MPa

②

Electrical Connections	
1	Wire leads
2	Blade

③

Process Connection	
0	Other (Insert rod/Barb)
2	M thread (below M10)
3	M thread (below M12)
4	NPT thread
5	R thread
6	G thread
7	UNF thread
8	Purple copper tube

④

Base Material	
1	Brass
2	Stainless steel
8	Purple copper

⑤

Contact Version	
C	SPST-NC
O	SPST-NO

1bar=100kPa=0.1MPa=14.5psi
Please make separate remarks for special requirements.

SMALL HIGH CURRENT PRESSURE SWITCH MODEL SPS13

1)SPS13 front view 2)SPS13 thread view

The SPS13 switches are fixed set point, factory calibrated pressure switches. It is automatic reset, and can be normally open or normally close contacts. All metallic wetted components make the SPS13 switch compatible with a multitude of chemicals in liquid or gas form. It is offered numerous types of electrical terminations from different size and style push on terminals to wire leads with an array of standard industry connectors.

Features

- Switch with automatic reset design
- The maximum pressure set point can reach 942psi, and the maximum rated current is 25A
- Typical application safety devices/air conditioning/refrigeration equipmen

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Pressure set range (gauge pressure)	From 0.1 MPa to 6.5 MPa; below 1.0 MPa is considered low pressure, while 1.0 MPa and above is considered high pressure
Process connection	M threads, NPT threads, R threads, G threads, UNF threads, and copper pipes(Other sizes can be customized)
Burst pressure	34.5MPax1min, no damage or leakage
Mechanical lifespan (switching cycles)	100,000
Electrical lifespan (switching cycles)	30,000

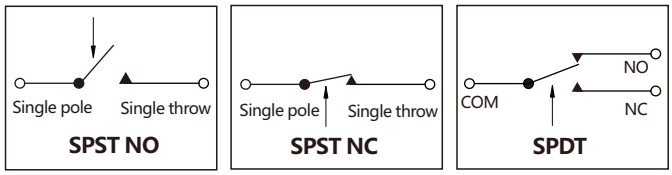
Electrical overview

Switching load	120VAC /20A,250VAC/10A;36VDC/15A

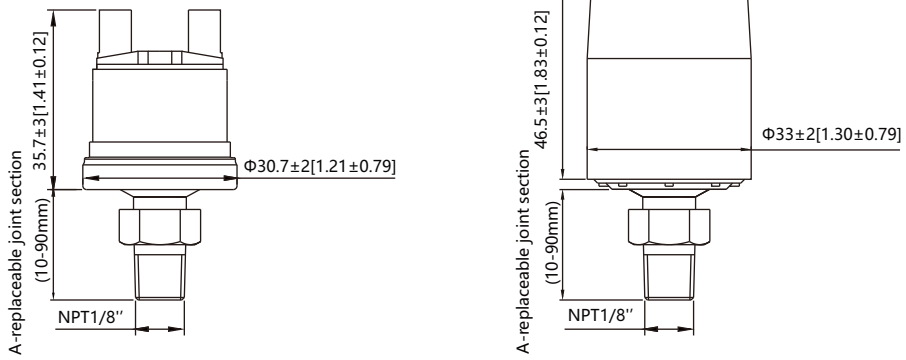
Operating conditions

Medium	Air,water,motor oils,transmission oils,jet fuels and other similar Hydrocarbon Media
Temperature	Ambient:-40...+65℃[-40...+149℉](Low pressure); -40...+120℃[-40...+248℉](High pressure) Medium:-40...+80℃[-40...+176℉](Low pressure); -40...+135℃[-40...+275℉](High pressure)
IP grade	IP67

Contact version



Dimensiones in mm(in)



Ordering information

Example part number:SPS13-121C-145-175bar

Model SPS13 small high current pressure switch,electrical connections:wire leads,process connection:M thread(below M10), base material:brass,contact version:SPST-NC,Pressure setting:Reset pressure 145psi ,Action pressure 175psi.

S	P	S	1	3	-	1	2	1	C	-	145-175bar
①						②	③	④	⑤		Set point

①

Name	Action Pressure	Tolerance	Proof Pressure
SPS13	0.1≤<0.6MPa	±0.03MPa	1.5MPa
	0.6≤<1.0MPa	±0.05MPa	2.0MPa
	1.0≤<2.0MPa	±0.07MPa	3.0MPa
	2.0≤<3.0MPa	±0.10MPa	4.0MPa
	3.0≤<4.0MPa	±0.15MPa	5.5MPa
	4.0≤<5.0MPa	±0.20MPa	6.5MPa
	5.0≤<6.5MPa	±0.25MPa	8.0MPa

②

Electrical Connections	
1	Wire leads
2	Blade

③

Process Connection	
0	Other (Insert rod/Barb)
2	M thread (below M10)
3	M thread (below M12)
4	NPT thread
5	R thread
6	G thread
7	UNF thread
8	Purple copper tube

④

Base Material	
1	Brass
2	Stainless steel
8	Purple copper

⑤

Contact Version	
C	SPST-NC
O	SPST-NO
D	SPDT

1bar=100kPa=0.1MPa=14.5psi

* Please make separate remarks for special requirements.

PRESSURE SWITCH FOR WATER PURIFIER MODEL SPS14

1)SPS14 front view 2)SPS14 interface view

This product is specially designed for water purifier, which can replace traditional high-low pressure switch. It is more sensitive action and used for wider range of applications.

Features

- Dedicated to water purifiers, replacing traditional high and low voltage switches for water purifiers
- More sensitive response and wider applicability

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5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Pressure set range (gauge pressure)	From 0.02 MPa to 1.0 MPa; below 0.6 MPa is considered low pressure, while 0.6 MPa and above is considered high pressure
Burst pressure	3.2MPax1min, no damage or leakage
Mechanical lifespan (switching cycles)	100,000
Electrical lifespan (switching cycles)	30,000

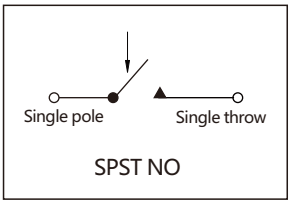
Electrical overview

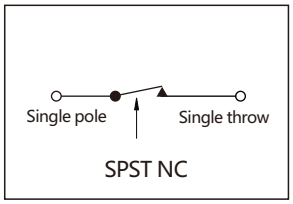
Switching load	24...250VAC/0.02...6A;8...36VDC/0.02...3A Under the condition of ensuring electrical lifespan without pressure difference switch, the maximum current is 0.5A

Operating conditions

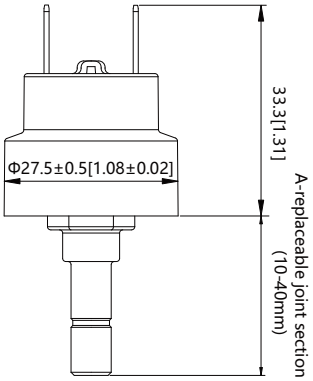
Medium	Air,water
Temperature	Ambient:-40...+65℃[-40...+149°F](Low pressure); -40...+120℃[-40...+248°F](High pressure) Medium:-40...+80℃[-40...+176°F](Low pressure); -40...+100℃[-40...+212°F](High pressure)
IP grade	IP54

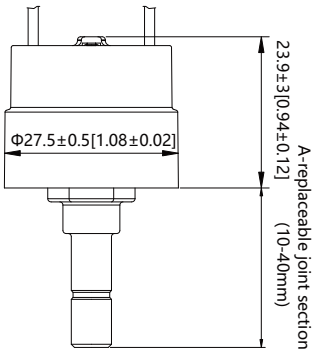
Contact version





Dimensiones in mm(in)





Ordering information

Example part number:SPS14-101C-10psi

Model SPS14 pressure switch for water purifier,electrical connections:wire leads,process connection:other(Insert rod),interface material: plastics,contact version:SPST-NC,Pressure setting:10psi.

S	P	S	1	4	-	1	0	1	C	-	10psi
①						②	③	④	⑤		Set point

①

Name	Action Pressure	Tolerance	Proof Pressure
SPS14	0.02<<0.6MPa	±0.03MPa	1.5MPa
	0.6<<1.0MPa	±0.03MPa	2.0MPa

1bar=100kPa=0.1MPa=14.5psi

②

Electrical Connections	
1	Wire leads
2	Blade

③

Process Connection	
0	Other (Insert rod)

④

Interface Material	
1	Platics

⑤

Contact Version	
C	SPST-NC
O	SPST-NO

Please make separate remarks for special requirements.

AIR COMPRESSOR PRESSURE SWITCH MODEL CPS23

1)CPS23 front view 2)CPS23 side view 3)CPS23 back view

CPS23 air compressor pressure switch, this product is used for adjusting the pressure which in the compressor tank to operate between two preset pressure values. The pressure switch with an unloading valve prevents the air compressor fromoverloading and the handle is supposed to manually power off the compressor. The four-way base connection makes the installation of additional parts more convenient.

Features

- Adjust pressure in the air compressor tank
- Choose to have a relief valve function to avoid compressor overload starting
- The four ports connector facilitates the installation of components such as safety valves
- The attached handle can cut off the compressor power manually

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HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Pressure range	95...125-200psi
Process connection	Single port/Female thread, Four ports/Female thread, Single port/male thread,Double female and male thread NPT1/4,R1/4,G1/4(can be customized)
Tests/Admissions	CSA

Electrical overview

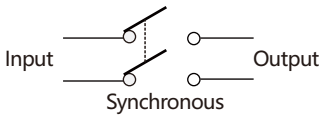
Switching load	26A at 120VAC,50HZ 20A at 240VAC,60HZ

Operating conditions

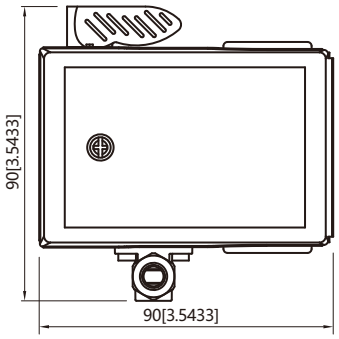
Medium	Air,non-flammable,non-hazardous and non-corrosive gas
Temperature	Ambient:-20...+80℃[-4...+176°F]
Unloading valve connection	Φ6.0 mm,Φ6.4 mm,Φ6.5 mm, can be customized
IP grade	IP20

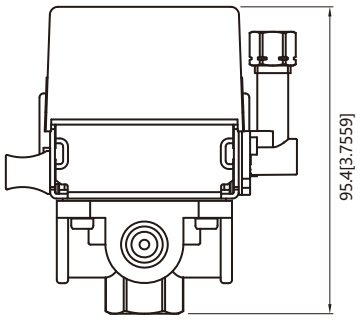
Contact version

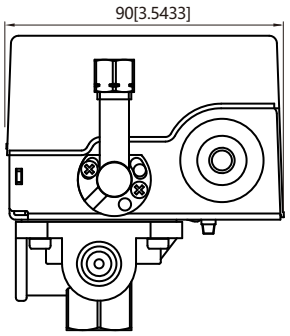
DPST



Dimensiones in mm(in)







Ordering information

Example part number:CPS23-125ARK4INDW

Model CPS23 air compressor pressure switch,pressure range:95...125psi,differential pressure range:25...65psi,maximum working:200psi; unloading valve:Φ6.0mm;handle:red handle;connector:NPT1/4;interface type:four ports/female thread;form of unloading valve:none; direction of unloading valve: 270°(down); threaded connection: wire terminal cover.

C	P	S	2	3	-	1	2	5	A	R	K	4	I	N	D	W
①						②			③	④	⑤	⑥		⑦	⑧	⑨

①

Name	Certification
CPS23	-
ANW9715	CSA

②

Model	Pressure Range	Differential Pressure Range	MAX. Working Pressure
125	95...125psi	25...65psi	200psi
135	100...135psi		
150	120...150psi		
175	145...175psi		
200	150...200psi		

1bar=100kPa=0.1MPa=14.5psi

③

Unloading Valve	
N	None
A	Φ6.0mm
B	Φ6.4mm
C	Φ6.5mm

④

Handle	
N	None
R	Red handle
B	Black handle

⑤

Process Connection	
K	NPT1/4
L	R1/4
M	G1/4

⑥

Interface Type	
1I	Single port/Female thread
4I	Four ports/Female thread
1O	Single port/Male thread
2IO	Double female and male thread

⑦

Form Of Unloading Valve	
N	None
S	Short
L	Long

⑧

Direction Of Unloading Valve	
R	45°(upper right)
U	90°(upwards)
L	180°(left)
D	270°(down)

⑨

Threaded Connection	
M	Metal threaded connection
W	Wire terminal cover

Please make separate remarks for special requirements.

EXTENDED DUTY PRESSURE SWITCH MODEL SPS15

SPS15 extended duty pressure switch is specifically designed to stand up to extended duty applications. This switch is factory set but capable of field adjustment. It features different diaphragms for compatibility with a wide variety of fluids, and various terminations including a Metri-Pack connector that forms a tight seal when connected. It can be widely used for pool and spa, anti- skid braking systems, water pump systems, and dental air compressors, heavy construction, off road equipments and other pressure control systems.

Features

- Specially designed for enduring continuous loads
- Featuring Kapton (polyimide) diaphragms compatible with various liquids
- Durable structure with stable volume and set points

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Pressure set range	0.5...150psi
Process connection	1/8NPT,1/4NPT,R1/8,R1/4,G1/8,G1/4 (Optional other interface forms)
Terminal	#8-32 screws,1/4"blade
Material	Contact: silver alloy,gold plated;Base:brass; Cover:glass reinforced polyester; Diaphragm: polyimide film
Max operating pressure	150psi for 0.5...24psi set point range, 250psi for 25...150psi set point range
Switch type	Direct action,blade contact
Tests/Admissions	UL

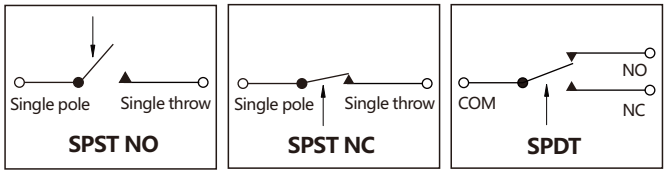
Electrical overview

Electric rating	Resistive:15AMP-6VDC,8AMP-12VDC,4AMP-24VDC; Inductive: 1AMP-120VAC,0.5AMP-240VAC

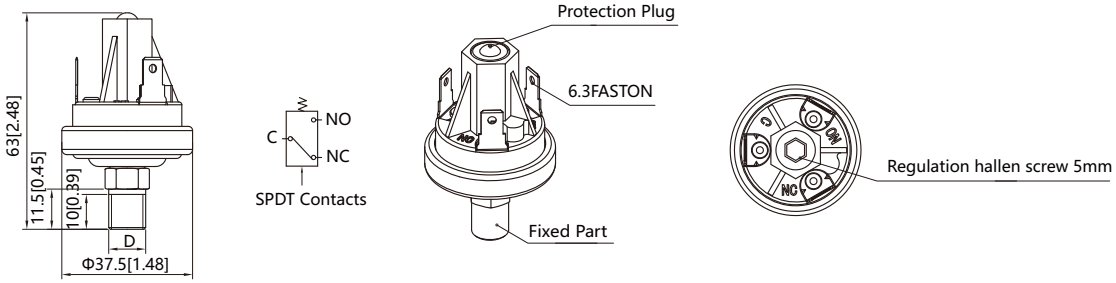
Operating conditions

Medium	Air,water,motor oils,transmission oils, jet fuels and other similar Hydrocarbon Media
Temperature	Working:-40...+120℃[-40...+248℉]

Contact version



Dimensiones in mm(in)



Ordering information

Example part number:SPS15-C2AB1A

Model SPS15 extended duty pressure switch,pressure set point range:3.1...7psi±1psi,contact version:SPST-NO,process connection: 1/8NPT;base material:brass;terminals:1/4blade;cover:cover a.

S	P	S	1	5	-	C	2	A	B	1	A
①						②	③	④	⑤	⑥	⑦

① Name

Name
SPS15

② Pressure Set Point Range

A	0.5...1psi±0.3psi
B	1.1...3psi±0.5psi
C	3.1...7psi±1psi
D	8...13psi±2psi
E	14...24psi±3psi
F	25...50psi±5psi
G	51...90psi±7psi
H	91...150psi±10psi

③ Contact Version

1	SPST-NC
2	SPST-NO
3	SPDT-NO-C-NC
4	SPST-NO(adjustable)
5	SPDT-NO-C-NC (adjustalble)

④ Process Connection

A	A=1/8NPT
B	B=1/4NPT
C	C=R1/8
D	D=R1/4
E	E=G1/8
F	F=G1/4

⑤ Base Material

B	Brass
Q	Plated steel
S	Stainless steel

⑥ Terminal

1	1/4 blade
2	#8-32 scerws
3	Wire leads

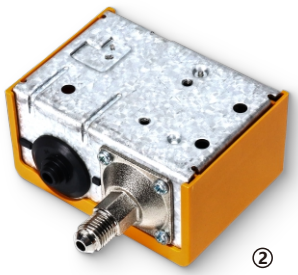
⑦ Cover

N	None
A	Cover A
B	Cover B

1bar=100kPa=0.1MPa=14.5psi
Please make separate remarks for special requirements.

PRESSURE SWITCH
MODEL PS31

①



②

③

1)PS31 side view 2)PS31 thread view 3)PS31 adjusting screw view

PS31 Series pressure switches are used to control the pressure of compressor in refrigerant system, also available in air or water fluid. This series have quite stable performance with internal micro-switch structure. Standard mounting bracket are provided.

Features

- Suitable for refrigeration systems
- Manual and automatic reset functions
- Adjustable pressure and differential pressure

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Process connection	G1/4 male,1/4SAE male The threads can be customized
Cable diameter	6-14mm
Tests/Admissions	UL508

Electrical overview

Switching load	FL8A/LR48A at 240VAC FL16A/LR96A at 120VAC
Dielectric strength	2000V/one minute without breakdown

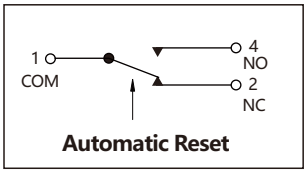
Installantion arrangement

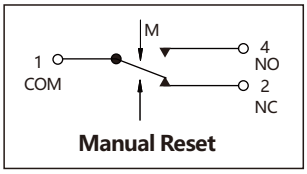
Installation torque	2N*M
Factory set	Vertical, pressure connections facing downwards

Operating conditions

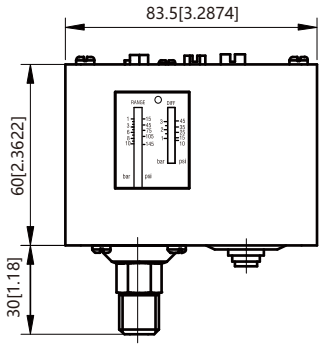
Medium	R22,R134a,R404A,air,liquid,etc
Temperature	Medium:-40...+120℃[-40...+248℉] Ambient:-20...+65℃[-4...+149℉]
IP grade	IP20,IP30(with bracket and cover), IP44(with bracket, cover, and cap), IP55(with integral cover)

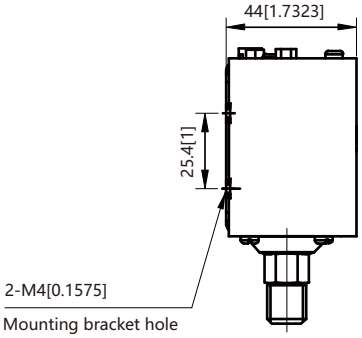
Contact version





Dimensiones in mm(in)





Ordering information

Example part number:PS31-02NAL

Model PS31 pressure switch,pressure range:-0.5...2bar,differential pressure range:0.2...0.7bar,maximum working:10bar; reset method:auto reset;process connection:1/4sae male;backet:L type.

P	S	3	1	-	0	2	N	A	L
①					②		③	④	⑤

①

Name
PS31

②

Model	Pressure Range	Differential Pressure Range	MAX. Working Pressure
02	-0.5...2bar	0.2...0.7bar	10bar
03	-0.5...3bar	0.35...1.5bar	10bar
06	-0.5...6bar	0.6...4bar	17bar
08	-0.2...7.5bar	0.7...4bar	17bar
10	1...10bar	1...3bar	17bar
14	2...14bar	1...4bar	17bar
16	3...16bar	1...4bar	20bar
20	5...20bar	2...5bar	35bar
30D	5...30bar	3...10bar	35bar
32	8...32bar	2...6bar	35bar
42	8...42bar	4...10bar	45bar

③

Reset Method	
N	Auto reset
M	Manual reset

④

Process Connection	
A	1/4SAE male
B	G1/4 male
C	NPT1/4 male
D	R1/4 male
E	G1/4 male
F	NPT1/4 female
G	R1/4 female
H	M12*1.25 male
I	Welded copper pipe

⑤

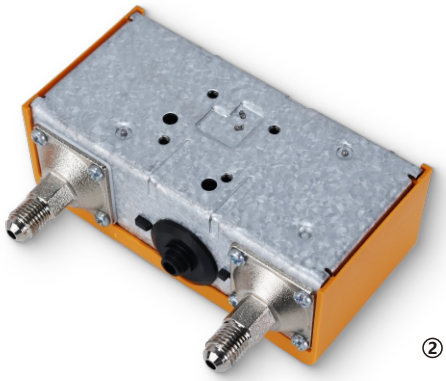
Bracket	
N	Without bracket
P	Flat type
L	L type
U	U type

1bar=100kPa=0.1MPa=14.5psi

Please make separate remarks for special requirements.

PRESSURE SWITCH
MODEL PS32

①



②

③

1)PS32 front view 2)PS32 thread view 3)PS32 adjusting screw view

PS32 pressure switch is an automatic control device that receives pressure signals and actuates. It is usually used to control the start and stop of compressors and fans in refrigeration systems. It can also be used in water pumps, fire protection, boilers, hydraulics, ironing and other devices as a safety protection.

Features

- Suitable for refrigeration systems
- Manual and automatic reset functions
- Adjustable pressure and differential pressure
- Design of Double Head Pressure Switch

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Process connection	G1/4 male,1/4SAE male The threads can be customized
Cable diameter	6-14mm
Tests/Admissions	UL508

Electrical overview

Switching load	FL8A/LR48A at 240VAC FL16A/LR96A at 120VAC
Dielectric strength	2000V/one minute without breakdown

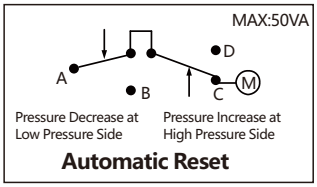
Installantion arrangement

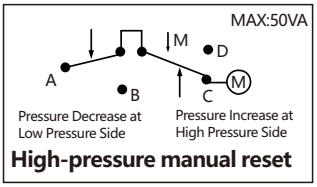
Installation torque	2N*M
Factory set	Vertical, pressure connections facing downwards

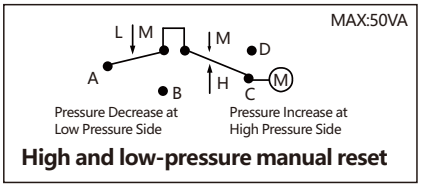
Operating conditions

Medium	R22,R134a,R404A,air,liquid,etc
Temperature	Medium:-40...+120°C[-40...+248°F] Ambient:-20...+65°C[-4...+149°F]
IP grade	IP20,IP30(with bracket and cover), IP44(with bracket, cover, and cap)

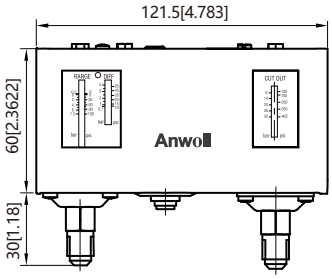
Contact version

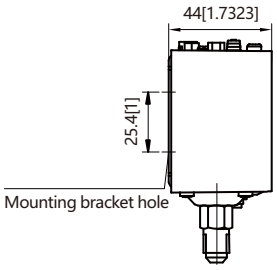






Dimensiones in mm(in)





Ordering information

Example part number:PS32-32NAL

Model PS32 pressure switch,low-pressure side(pressure range:-0.2...7.5bar,differential pressure range:0.7...4bar,maximum working: 17bar),high-pressure side(pressure range:8...32bar,differential pressure range:fixed 4bar,maximum working:35bar);reset method:auto reset;process connection:1/4sae male;backet:L type.

P	S	3	2	-	3	2	N	A	L
①					②		③	④	⑤

①

Name
PS32

②

Model	Low-Pressure Side		
	Pressure Range	Differential Pressure Range	MAX. Working Pressure
32	-0.2...7.5bar	0.7...4bar	17bar
45	2...12bar	1...5bar	17bar

Model	High-Pressure Side		
	Pressure Range	Differential Pressure Range	MAX. Working Pressure
32	8...32bar	fixed 4bar	35bar
45	8...45bar	fixed 7bar	48bar

③

Reset Method	
N	Auto reset
HM	High-pressure manual reset
HLM	High and low-pressure manual reset

④

Process Connection	
A	1/4SAE male
B	G1/4 male
H	M12*1.25 male
I	Welded copper pipe

⑤

Bracket	
N	Without bracket
P	Flat type
L	L type
U	U type

1bar=100kPa=0.1MPa=14.5psi

Please make separate remarks for special requirements.

PRESSURE SWITCH
MODEL HPS41

①

②

③

1)HPS41 front view 2)HPS41 back view 3)HPS41 side view

HPS41 series pressure switches are mainly used to control pressure of boiler or water tower regulating system. When the system pressure exceed the setting point, the switch will cut off the circuit for protection. With SPDT contact arrangement, HPS41 switch can detect the pressure change and shift the internal status accordingly to control the on/off of external circuits, which is available for the pressure control, limit and alarm of non-hazardous liquid, gas and steam.

Features

- Suitable for controlling the pressure regulation of boilers and water towers
- Manual and automatic reset functions
- Adjustable pressure and differential pressure

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

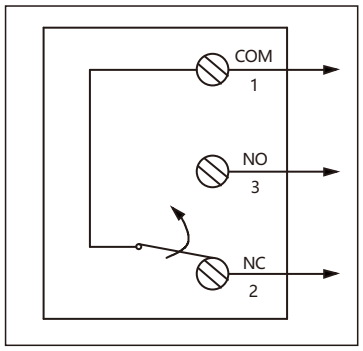
General

Basic information	
Pressure range	15...100-2070kPa(2...15-300psi)
Process connection	NPT1/4,G1/4,R1/4 The threads can be customized
Cable diameter	22mm
Mechanical lifespan (switching cycles)	50,000
Electrical lifespan (switching cycles)	30,000
Electrical overview	
Switching load	FL5.1A/LR30.6A at 240VAC FL8A/LR48A at 120VAC
Dielectric strength	2000V/one minute without breakdown
Installantion arrangement	
Installation torque	2N*M
Factory set	Vertical, pressure connections facing downwards

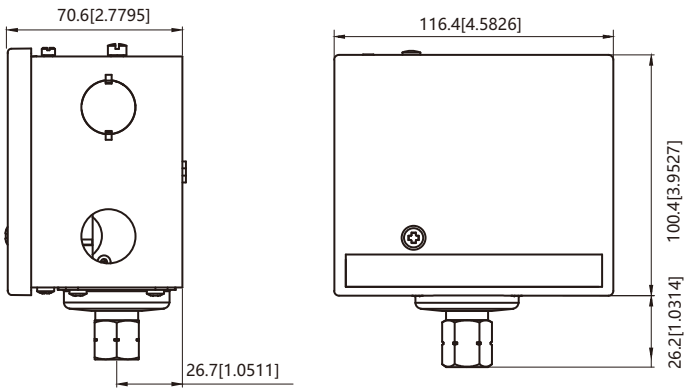
Operating conditions

Medium	Air,water,oil,steam,liquid and other non-corrosivemedia, chlorinecontaining liquid is not available
Temperature	Medium:-40...+180°C[-40...+365°F] Ambient:-29...+66°C[-20.2...+150.8°F]
Pressure diaphragm	Stainless steel,corrugated tube
Thermal material	Brass

Contact version



Dimensiones in mm(in)



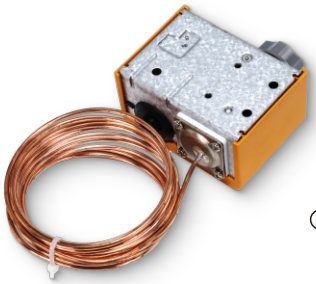
Ordering information

Name	Model	Pressure Range		Differential Pressure Range		Maximum Working Pressure	
		kPa	psi	kPa	psi	kPa	psi
HPS41	15	15...100	2...15	15...40	2...6	170	25
	50	35...350	5...50	40...100	4...14	590	85
	150	70...1035	10...150	70...150	10...22	1550	225
	300	140...2070	20...300	140...345	20...50	2410	350

1bar=100kPa=0.1MPa=14.5psi
Please make separate remarks for special requirements.

THERMOSTAT
MODEL TS34

①



②

③

1)TS34 side view 2)TS34 capillary view 3)TS34 adjusting screw view

TS34 are used for regulation, but can also be seen in safety monitoring systems.They are available with vapor charge or with adsorption charge. With vapor charge the differential is very small.The TS34 Thermostats with adsorption charge are widely used to give frost protection.

Features

- Detect the temperature change of the medium and perform the switching action
- Automatic reset function
- The action temperature and differential is adjustable

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

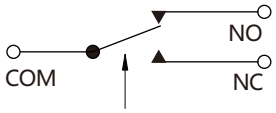
Basic information	
Temperature bulb	Φ2.5 Capillary,the minimum length of capillary and controlled environment is 0.25m(customizable)
Tests/Admissions	UL508
Electrical overview	
Switching load	FL8A/LR48A at 240VAC FL16A/LR96A at 120VAC
Dielectric strength	2000V/one minute without breakdown
Installantion arrangement	
Installation torque	2N*M
Factory set	Vertical

Operating conditions

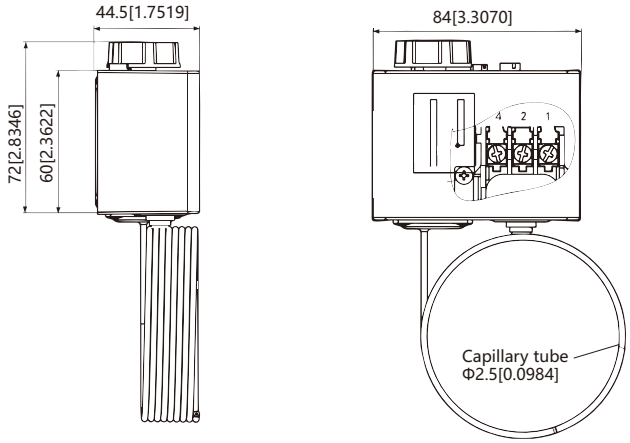
Medium	Mainly the greenhouse air
Temperature	Medium:-40...+120℃[-40...+248℉] Ambient:-25...+65℃[-13...+149℉]
IP grade	IP30

Contact version

SPDT



Dimensiones in mm(in)



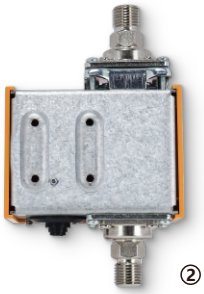
Ordering information

Name	Model	Temperature Range	Temperature Difference Range	Factory Set
TS34	15	-30...15℃[-22...59℉]	2...10℃[35.6...50℉]	-7/-9℃[19.4/15.8℉]
	30	-5...30℃[23...86℉]	2...12℃[35.6...53.6℉]	10/7℃[50/44.6℉]

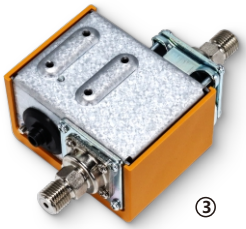
Note: The length of the capillary tube is customizable, with a default length of 3 meters.

DIFFERENTIAL PRESSURE SWITCH MODEL DPS33

①



②



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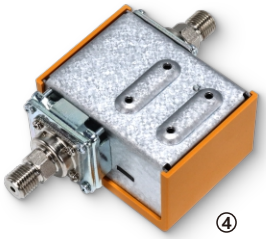


④

1)DPS33 front view 2)DPS33 back view 3)DPS33 thread view 4)DPS33 thread view

The DPS33 differential pressure switch features highly sensitive pressure sensors on both sides that trigger the switch mechanism to control equipment like motor-driven valves. It's typically used to manage pressure differences between supply and return pipes in water and oil systems. For example, it can control a valve in the bypass near the pump; when the pressure difference exceeds the set value, the valve opens or closes to maintain normal system operation.

Features

- Adjustable design for differential pressure setting
- Manual reset and automatic reset modes are optional
- Using bellows for pressure transfer, it has the characteristics of stable linear pressure coefficient and long life
- Various mounting modes of mounting brackets can be customized

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

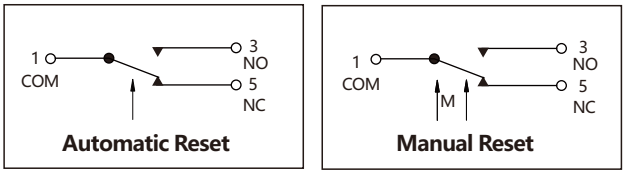
General

Basic information	
Process connection	1/4SAE male,G1/4 male,M12*1.25 male
Cable diameter	6-14mm
Tests/Admissions	UL508
Electrical overview	
Switching load	FL8A/LR48A at 240VAC FL16A/LR72A at 120VAC
Dielectric strength	1500V/one minute without breakdown
Installantion arrangement	
Installation torque	2N*M
Factory set	Vertical, pressure connections facing downwards

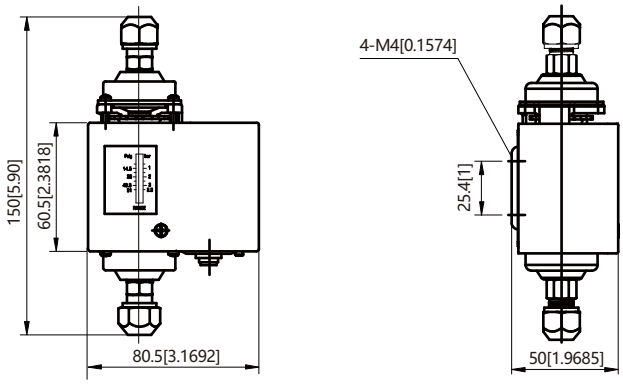
Operating conditions

Medium	Refrigerant,air,water,oil
Temperature	Medium:-40...+120℃[-40...+248°F] Ambient:-20...+65℃[-4...+149°F]
IP grade	IP20

Contact version



Dimensiones in mm(in)



Ordering information

Example part number:DPS33-2MAL-1bar

Model DPS33 differential pressure switch,differential pressure range:0.5...2bar,reset type:manual;connection size:1/4sae male,L type bracket,set point:1bar.

D	P	S	3	3	-	2	M	A	L	-	1bar
①						②	③	④	⑤		set point

①

Name
DPS33

②

Model	Pressure range	Factory setting	Max. working pressure
2	0.5...2	0.5	17
4	0.5...3.5	1	17
4H	0.5...3.5	1	33
6	1...6	1	17
6H	1...6	1	33

Unit:bar

③

Reset type	
A	Auto
M	Manual

④

Connection size	
A	1/4 sae male
B	G1/4 male
I	M12*1.25 male

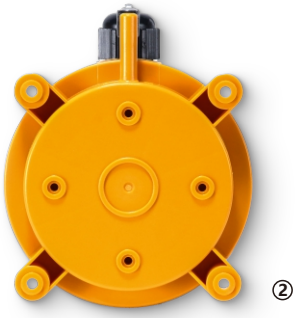
⑤

Bracket	
N	No bracket
P	Plate type
L	L type
U	U type

Please make separate remarks for special requirements.

MICRO DIFFERENTIAL PRESSURE SWITCH MODEL DPS52


①


②


③

1)DPS52 front view 2)DPS52 bottom view 3)DPS52 upper part view

The DPS52 is an adjustable differential pressure switch capable of detecting miniscule changes in pressure due to the size and proven design. The switch set point or switching point can be field adjustable without the need of a manometer by simply using the adjustment knob and the built in calibrated visual scale. This switch is equipped a clear cover that not only protects the adjustment knob to be move involuntary but also provides class IP54 protection.

Features

- Sense the slight change of pressure, suitable for HVAC systems
- Automatic reset function
- Widely used in wards, laboratories, clean workshops and so on

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

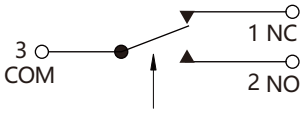
Basic information	
Pressure difference range	20...200-5000Pa
Process connection	ϕ6.4mm for tube connection
Terminal block	6.35*0.8 AMP standard flat insert
Tests / Admissions	UL60730
Electrical overview	
Switching load	1.5A(0.4A) at 250VAC
Resistive(inductive)	0.1A at 24VDC
Initial contact resistance	<100 milliohms
Installantion arrangement	
Installation torque	0.8N*M
Factory set	Vertical, pressure connections facing downwards

Operating conditions

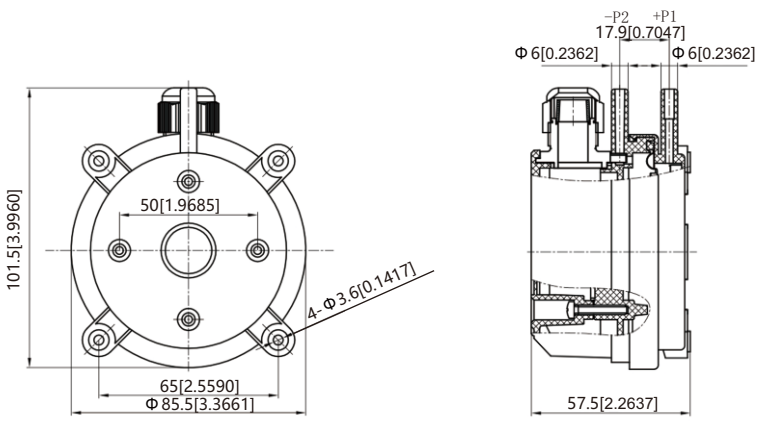
Medium	Air,non flammable or non hazardous gases
Temperature	Medium:-20...+85℃[-4...+185℉] Ambient:-40...+85℃[-40...+185℉]
IP grade	IP54 (with cover)

Contact version

SPDT



Dimensiones in mm(in)

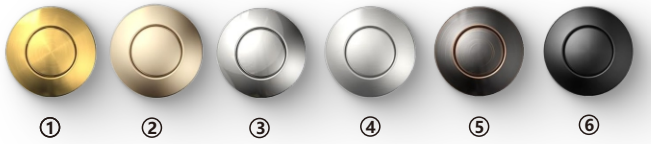


Ordering information

Name	Model	Differential Pressure Range	Return Difference	Tolerance
DPS52	02	20...200Pa	10±3Pa	15%
	03	30...300Pa	10±3Pa	15%
	04	40...400Pa	20±4Pa	15%
	05	50...500Pa	20±4Pa	15%
	10	200...1000Pa	100±15Pa	15%
	25	500...2500Pa	150±15Pa	15%
	11	100...1000Pa	50±5Pa	15%
	50	1000...5000Pa	250±25Pa	15%
	03A	20...300Pa	10±3Pa	15%
	05A	30...500Pa	20±4Pa	15%
	06A	40...600Pa	20±4Pa	15%
	06	60...600Pa	20±4Pa	15%
	15	100...1500Pa	50±5Pa	15%
	20	200...2000Pa	100±10Pa	15%
	45	500...4500Pa	250±25Pa	15%

Note: The default accessories are a pipette, air tube (1.5m default length), and optional bracket.
1bar=100kPa=0.1MPa=14.5psi
Please make separate remarks for special requirements.

AIR SOCKET SWITCH
MODEL ASS61



ASS61 air switch button color

1)PVD treatment on brass surface (circular pattern) 2)Rose Gold (PVD Panel) 3)Stainless steel, surface coated with decorative chromium 4)Stainless steel glossy surface 5)Black antique copper wire drawing (circular pattern) 6)Dot plated matte black

The ASS61 air socket switch is provided with a snap action switching for higher current capacity. It can be used together with air button for remote control purpose, which is widely used in food waste disposer, pumps for swimming pools and spas, hot tubs, sanitary equipment, medical equipment etc.

Features

- Suitable for kitchen waste disposal, swimming pools, hot springs, cleaning equipment, etc
- Use as remote control device that works in conjunction with pneumatic buttons
- Only for indoor use

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Gas tightness	Under 50psi pressure, no leakage phenomenon
Pressure range	< 1.8psi
Air tube	Air tube length optional
Tests / Admissions	UL 60730

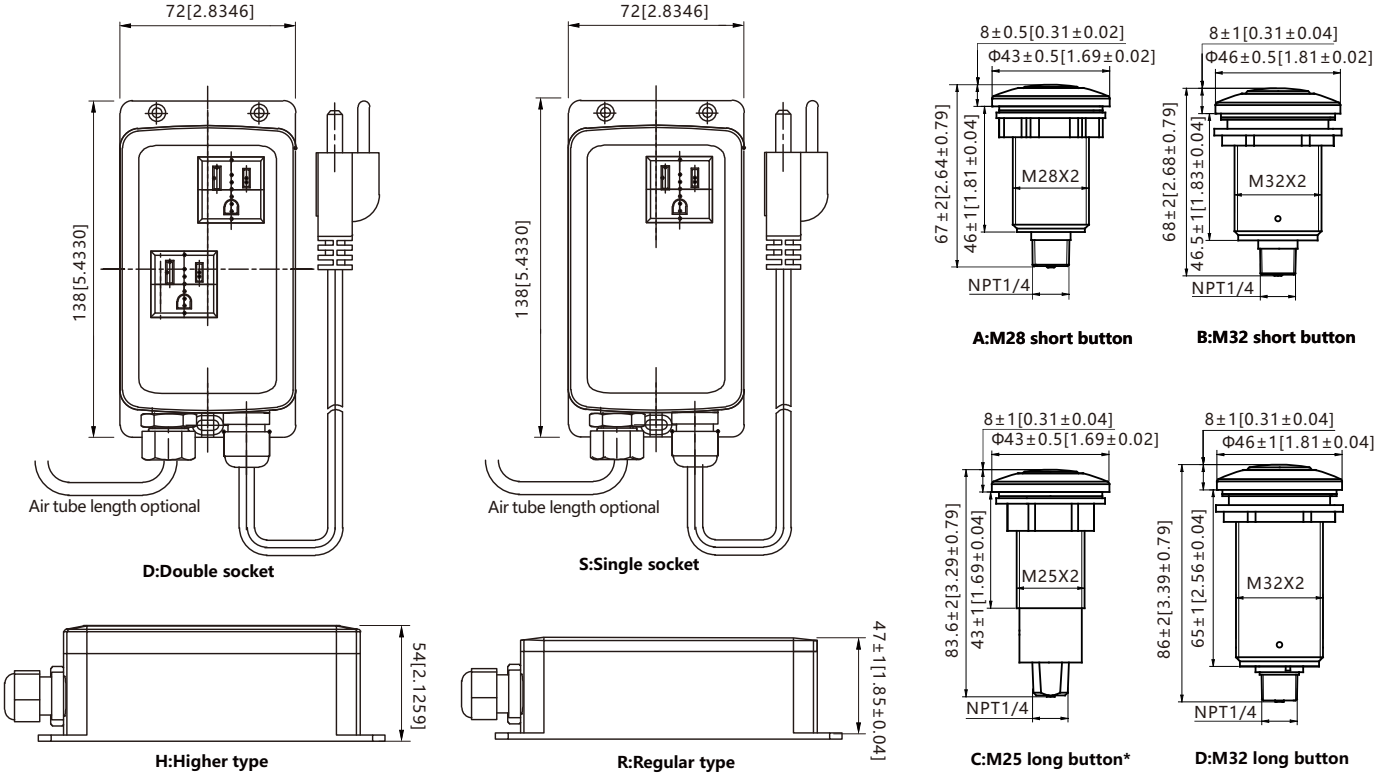
Electrical overview

Switching load	12A at 125VAC
Dielectric strength	1500V

Operating conditions

Temperature	Ambient:-10...+50℃[+14...+122°F]

Dimensiones in mm(in)



Ordering information

Example part number:ASS61-RSASA

Model ASS61 air socket switch,thickness:regular type;socket hole:single socket;button type:M28 short button;button:stainless steel, surface coated with decorative chromium,air tube length:1m.

A	S	S	6	1	-	R	S	A	S	A
①						②	③	④	⑤	⑥

①

Name
ASS61

②

Thickness	
H	Higher type
R	Regular type

③

Socket Hole	
D	Double socket
S	Single socket

④

Button Type	
A	M28 short button
B	M32 short button
C	M25 long button*
D	M32 long button

⑤

Button Color	
B	PVD treatment on brass surface (circular pattern)
R	Rose Gold (PVD Panel)
S	Stainless steel,surface coated with decorative chromium
G	Stainless steel glossy surface
B	Black antique copper wire drawing (circular pattern)
M	Dot plated matte black
O	Other colors can contact the factory

⑥

Air Tube Length	
A	1M
B	2M
C	3M
D	Other lengths can be customized

* This button is designed specifically for small hole countertops, with low air pressure and only compatible with 1-meter air pipes. If the length of the trachea exceeds this specification, the switch may not be activated.

AIR SOCKET SWITCH
MODEL ASS62

ASS62 air switch button color

1)PVD treatment on brass surface (circular pattern) 2)Rose Gold (PVD Panel) 3)Stainless steel, surface coated with decorative chromium 4)Stainless steel glossy surface 5)Black antique copper wire drawing (circular pattern) 6)Dot plated matte black

ASS62 air socket switch is provided with a snap action switching for higher current capacity. It can be used together with air button for remote control purpose, which is widely used in food waste disposer, pumps for swimming pools and spas, hot tubs, sanitary equipment, medical equipment etc.

Features

- Suitable for kitchen waste disposal, swimming pools, hot springs, cleaning equipment, etc
- Use as remote control device that works in conjunction with pneumatic buttons
- Only for indoor use

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General General

Basic information

Gas tightness	Under 50psi pressure, no leakage phenomenon
Pressure range	< 1.8psi
Air tube	Air tube length optional
Tests / Admissions	UL 60730

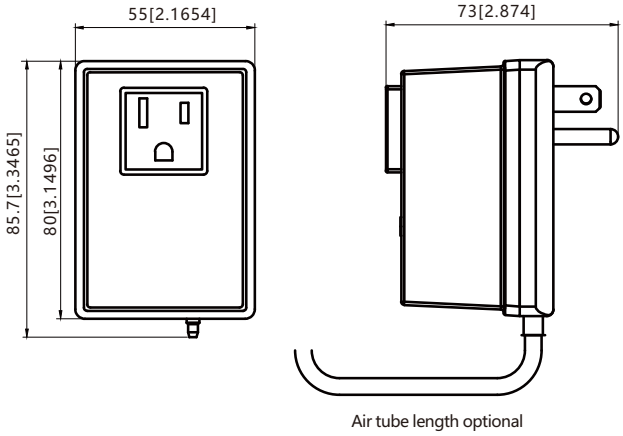
Electrical overview

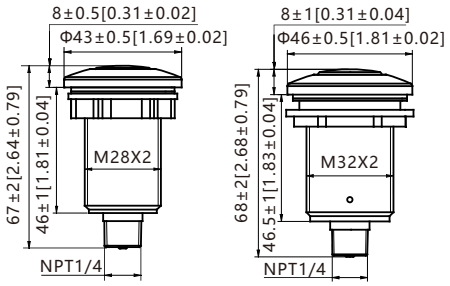
Switching load	15A at 120VAC
Dielectric strength	1500V

Operating conditions

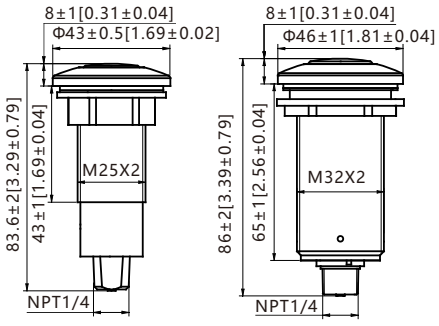
Temperature	Ambient: -10...+60℃[+14...+140℉]

Dimensiones in mm(in)





A:M28 short button **B:M32 short button**



C:M25 long button* **D:M32 long button**

Ordering information

Example part number:ASS62-ASA

Model ASS62 air socket switch,button type:M28 short button;button:stainless steel,surface coated with decorative chromium,air tube length:1m.

A	S	S	6	2	-	A	S	A
①						②	③	④

①

Name
ASS62

②

	Button Type
A	M28 short button
B	M32 short button
C	M25 long button*
D	M32 long button

③

	Button Color
B	PVD treatment on brass surface (circular pattern)
R	Rose Gold (PVD Panel)
S	Stainless steel,surface coated with decorative chromium
G	Stainless steel glossy surface
B	Black antique copper wire drawing (circular pattern)
M	Dot plated matte black
O	Other colors can contact the factory

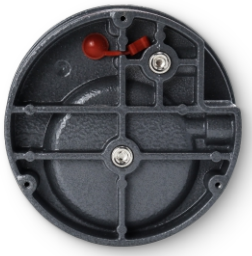
④

	Air Tube Length
A	1M
B	2M
C	3M
D	Other lengths can be customized

* This button is designed specifically for small hole countertops, with low air pressure and only compatible with 1-meter air pipes. If the length of the trachea exceeds this specification, the switch may not be activated.

DIFFERENTIAL PRESSURE GAUGE MODEL DPG51

①



②

③

1)DPG51 front view 2)DPG51 back view 3)DPG51 side view

The DPG51 differential pressure gauge is widely used for measuring the fans or blowers pressure, filter resistant, wind speed, furnace gas pressure, Orifice pressure difference, bubble level and hydraulic system pressure. It is also applied to regulate the air-gas combustion ratio and automatic valve or detecting the breathing, and blood pressure in medical equipment. There are some more applications like micro-electronics, aviation and space, environmental protection project, biological engineering, intelligent uilding, HVAC, food and beverage and precision electronic processing.

Features

- Motion of the pointer without inertia or drift
- No hysteresis
- Positive, negative or differential pressure can be measured
- Two pressure ports on the side and back, with three installation options for flexible and versatile applications

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HOUSTON TX 77041-5561

Technical parameter

General

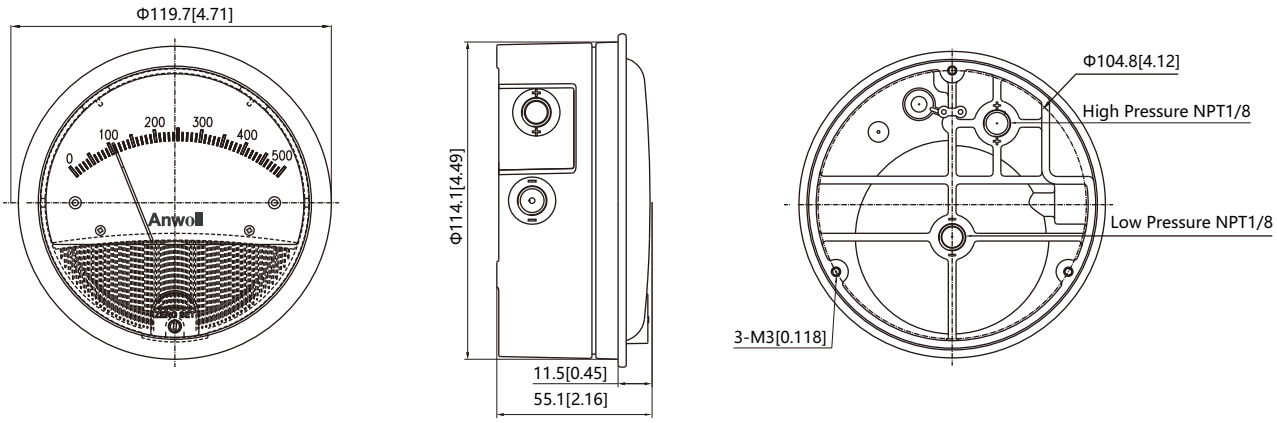
Basic information

Pressure range	0...10kPa
Over-pressure protection	110kPa...150kPa, the rubber plug pops out automatically
Process connection	1/8*NPT female thread high and low pressure(positive and negative pressure) connection, side and back both a pair
IP grade	IP66
Accuracy	±2% FS under 21.1℃[70℉] (≤125Pa ±3%,≤60Pa ±3Pa)

Operating conditions

Medium	Air and non-flammable gases
Temperature	Ambient:-6.67...+60℃ [+20...+140℉]

Dimensiones in mm(in)



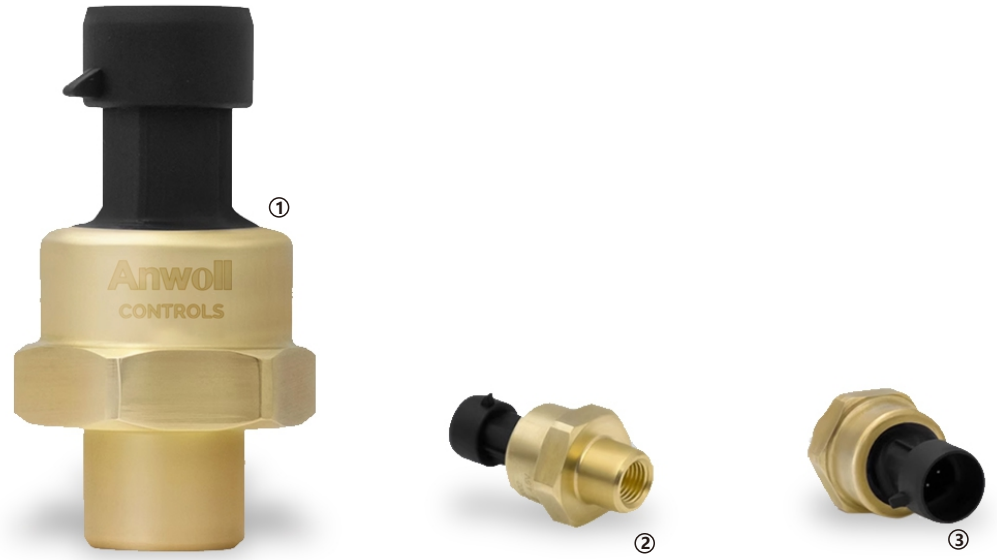
Ordering information

Name	Model	Range	Model	Range
DPG51	30Pa	0...30Pa	8kPa	0...8kPa
	±30Pa	-30...30Pa	10kPa	0...10kPa
	60Pa	0...60Pa	0.5inWC	0...0.5inWC
	±60Pa	-60...60Pa	1inWC	0...1inWC
	125Pa	0...125Pa	2inWC	0...2inWC
	±125Pa	-125...125Pa	3inWC	0...3inWC
	250Pa	0...250Pa	5inWC	0...5inWC
	300Pa	0...300Pa	10inWC	0...10inWC
	±250Pa	-250...250Pa	15inWC	0...15inWC
	500Pa	0...500Pa	5mmWC	0...5mmWC
	750Pa	0...750Pa	6mmWC	0...6mmWC
	1kPa	0...1kPa	10mmWC	0...10mmWC
	2kPa	0...2kPa	25mmWC	0...25mmWC
	3kPa	0...3kPa	30mmWC	0...30mmWC
	5kPa	0...5kPa	50mmWC	0...50mmWC

1Pa = 0.001kPa=0.10197mmWC
1inWC=249.08891Pa

Please make separate remarks for special requirements.

CERAMIC CAPACITOR CORE PRESSURE TRANSMITTER MODEL PT11



1)PT11 front view 2)Process connection view 3)Electrical connection view

The PT11 pressure transmitter adopts ceramic capacitor core,which is an ideal choice for refrigerant pressure measurement occaslons. The standard 0.5-4.5V output signal, has the advantages of wide operating temperature high precision, high waterproof level, and anti-condensation water.It is suitable for the pressure measurement of most common refrigerants, and also has a high burst pressure.

Features

- Designed for the refrigeration industry
- High waterproof grade, anti-condensation
- High cost performance

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Technical parameter

General

Basic information

Measurement range	0~10...50bar
Overload pressure	2 times of the rated pressure
Burst pressure	3 times of the rated pressure
Accuracy	±1.5%F.S(-20...+80℃)[-4...+176℉] ±2.5%F.S(-40...+120℃)[-40...+248℉]
Pressure form	Guage pressure G
Measured medium	R12,R22,R32,R134a,R404a,R407c, R410a,R502,R507

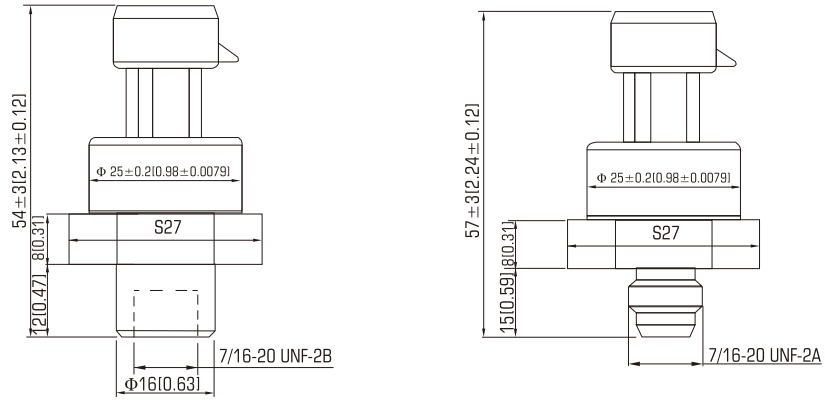
Operating conditions

Process connection	7/16-20UNF Internal thread 7/16-20UNF External thread
Temperature	Working : -40...+120°C[-40...+248°F]
IP grade	IP67

Electrical overview

Electrical propertie	3-wired
Output signal	0.5...4.5V(Proportional voltage output)
Power supply	4.75...5.25VDC
Electrical connection	Packard
Dielectric strength	500VAC for 1min

Dimensiones in mm(in)



Ordering information

Example part number:PT11(0...60)-MV052.5PB2.0T2

Model PT11 pressure transmitter,Measuring range 0...30bar,Signal output 0.5...4.5V,Accuracy 2.5%F.S,Electrical connection packard , Process connection 7/16-20UNF Internal thread,Built-in cable length 1M,Unit Kpa,Working Temp -40...120℃(-40...248℉).

P	T	1	1	(	0	...	3	0	)	-	M	V	0	5	2	.	5	P	B	2	.	0	T	2
①					②						③	④			⑤			⑥	⑦	⑧			⑨		

① Name: PT11

② Range: 0-10...50Bar

③ Unit

K	kPa
B	bar
P	psi
M	MPa

④ Output

V05	0.5...4.5V(Three-wired)

⑤ Accuracy

1.5	1.5%F.S,-20...+80℃(-4...+175℉) Working Temperature
2.5	2.5%F.S,-40...+120℃(-4....+248℉) Working Temperature

⑥ Electrical connection

P	Packard

⑦ Process connection

U	7/16-20UNF male
B	7/16-20UNF female

⑧ Cable length

1.0	1m
2.0	2m
3.0	3m

⑨ Medium

A	R22
B	R12
C	R134
D	R410
E	Other medium

Please make separate remarks for special requirements.

CERAMIC SENSITIVE DIAPHRAGM PRESSURE TRANSMITTER MODEL PT12

PT12 pressure transmitter outlet mode

1)PT12 Packard connector 2)PT12 Hirschmann connector 3)PT12 GX12 aviation connector 4) PT12 M12 cable outlet

PT12 oil-filled silicon core pressure transmitter is widely used in the measurement of fluid medium pressure in test systems such as fire protection, water treatment, water supply systems, air compressors,pneumatic devices, andfactory automation. Adopt ceramic sensitive diaphragm with high overload capacity.It has excellent anticorrosion and anti-wear performance, adopts ASIC technology, MEMS technology, and digital compensation And it has the characteristics of small size and low price. can be applied in various complex environment.

Features

- Oil-filled silicon core with high overload capacity
- Excellent resistance to corrosion and wear
- Using ASIC technology, digital compensation
- Can be used in a variety of complex environments

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Technical parameter

General

Basic information

Measurement range	-100KPa~0.3MPa...6MPa,0~0.3MPa...60MPa
Overload pressure	1.5 times of the rated pressure(up to 80MPa)
Burst pressure	2 times of the rated pressure(up to 90MPa)
Accuracy	±0.5%F.S,±1.0%F.S
Stability	< 0.5%F.S/year
Pressure form	Guage pressure G
Measured medium	Gas or liquid compatible with 1Cr18Ni9Ti, 304 stainless steel, Fluorine rubber or Nitrile rubber

Operating conditions

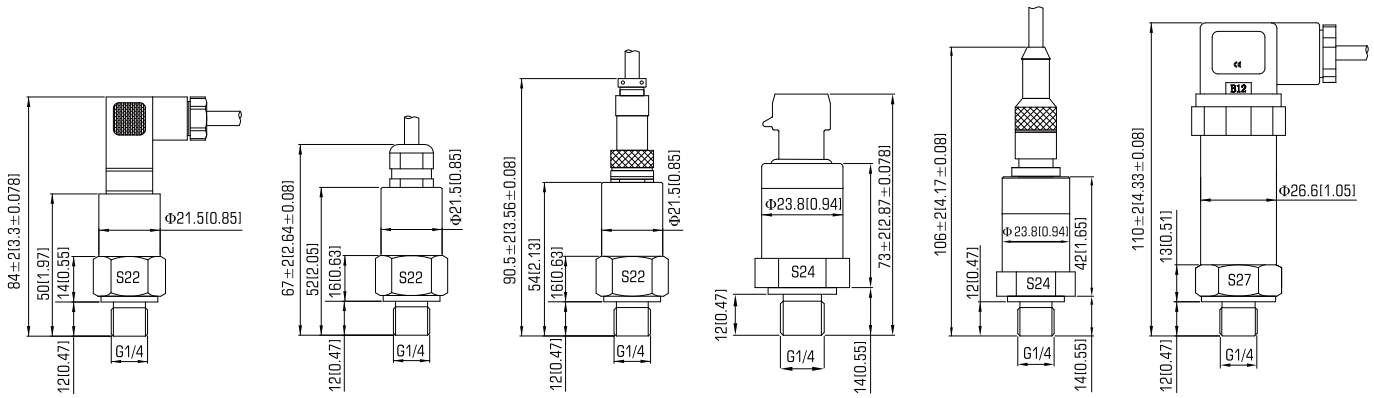
Process connection	G1/4,NPT1/4,R1/4,G1/2, 7/16-20UNF,M20*1.5,M10*1,M14*1.5etc
Temperature	Working:-20...+85°C[-4...185°F] Storage:-40...+100°C[-40...212°F]
IP grade	IP54(GX12 aviation),IP65(DIN43650A, M12 waterproof outlet,M12 four-core aviation connenctor)

Electrical overview

Electrical connection: Packard, DIN43650C (small Hirschmann), DIN43650A (big Hirschmann), M12 waterproof outlet, M12 aviation connector, GX12 aviation connector (three-core/four-core)

Electrical properties	2-wired(current)	3-wired(voltage)		
Output signal	4...20mA	0.5...4.5V	0...5V	0...10V
Power supply	8...36VDC	4.75...5.25VDC	8...36VDC	12...36VDC

Dimensiones in mm(in)



Small hirschmann connector | M12 cable outlet | Gx12 Aviation connector | Packard connector | M12 Aviation connector | Big hirschmann connector

Ordering information

Example part number:PT12(0...60)-KV051.0DN2.0

Model PT13 pressure transmitter, Measuring range 0...60MPa,Signal output 0.5...4.5V,Accuracy 1.0%F.S, Electrical connection DIN43650C(Small hirschmann) ,Process connection NPT1/4,Built-in cable length 2M.

P T 1 2 (0 ... 6 0) - M V 0 5 1 . 0 D N 2 . 0

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Name: PT12

② Range: -100KPa~0.3MPa...6MPa, 0~0.3MPa...60MPa

③ Unit

K	kPa
B	bar
P	psi
M	MPa

④ Output

A4	4...20mA
V05	0.5...4.5V
V0	0..5V
V10	0...10V
RS	RS-485

⑤ Accuracy

0.5	0.5%F.S
1.0	1.0%F.S

⑥ Electrical connection

P	Packard
D	DIN43650C(Small hirschmann)
D1	DIN43650A(Big hirschmann)
M	M12(water proof outlet)
C3	GX12 Three core aviation
C4	GX12 Four core aviation
H	M12 Four core aviation

⑦ Process connection

G	G1/4 male
G1	G1/4 female
G2	G1/2
G3	G1/8
G4	G3/4
N	NPT1/4
N1	NPT1/2
N2	NPT1/8
R	R1/4

⑧ Cable length

1.0	1m
2.0	2m
3.0	3m

* Please make separate remarks for special requirements.

OIL-FILLED SILICON CORE PRESSURE TRANSMITTER MODEL PT13

PT13 pressure transmitter outlet mode

1)PT13 GX12 aviation connector 2)PT13 M12 cable outlet 3)PT13 Hirschmann connecto
4) Internal structure diagram

PT13 oil-filled silicon core pressure transmitter is widely used in the measurement of fuid medium pressure in test systems such as fre protection, water treatment, water supply systems, air compressors, and pneumatic device and factory automation. It has excellent anti-corrosion and anti-wear performance, adopts ASIC technology, MEMS technology, digital compensation, and can be applied in various complex environment.

Features

- Oil-filled silicon core with high overload capacity
- Excellent resistance to corrosion and wear
- Using ASIC technology, digital compensation
- Can be used in a variety of complex environments

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Technical parameter

General

Basic information

Measurement range	-100KPa...0~5KPa...60MPa
Overload pressure	1.5 times of the rated pressure
Accuracy	±0.5%F.S(-100KPa...0~5KPa...60MPa) ±0.25%F.S(-100KPa...0~10KPa...60MPa)
Stability	< 0.5%F.S/year
Pressure form	Guage pressure G/Absolute pressure A
Measured medium	Gas or liquid compatible with 304 and 316L stainless steel, Fluorine rubber or Nitrile rubber

Operating conditions

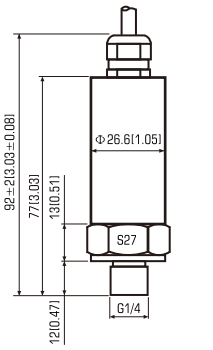
Process connection	G1/4,NPT1/4,R1/4,G1/2, 7/16-20UNF,M20*1.5,M10*1,M14*1.5etc
Temperature	Working:-20...+85°C[-4...185°F] Storage:-40...+100°C[-40...212°F]
IP grade	IP54(GX12 aviation),IP65(DIN43650A, M12 waterproof outlet,M12 four-core aviation connenctor)

Electrical overview

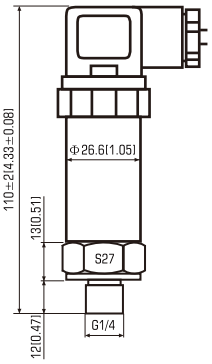
Electrical connection DIN43650A(Big Hirschmann),M12 waterproof outlet，GX12 aviation（three-core/four-core),
M12 four-core aviation connenctor

Electrical properties	2-wired(current)	3-wired(voltage)			4-wired
Output signal	4...20mA	0.5...4.5V	0...5V	0...10V	RS485
Power supply	8...36VDC	4.75...5.25VDC	8...36VDC	12...36VDC	10...30VDC

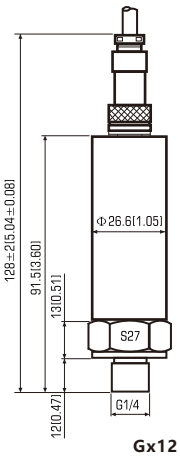
Dimensiones in mm(in)



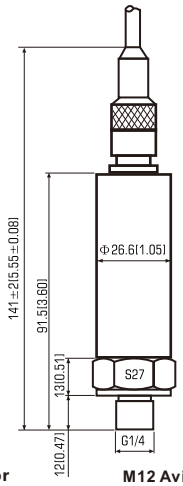
M12 Cable outlet



Hirschmann connector



Gx12 Aviation connector



M12 Aviation connector

Ordering information

Example part number:PT13(0...60)-A40.251.0C3NK

Model PT13 pressure transmitter，Measuring range 0...60kPa,Signal output 4...20mA,Accuracy 0.25%F.S,Built-in cable length 1M, Electrical connection CX12-3P ,Process connection NPT1/4.

P T 1 3 (0 ... 6 0) - K A 4 0 . 2 5 1 . 0 C 3 N

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Name: PT13

② Range: -100kPa...0~10kPa...60MPa

③ Unit

K	kPa
B	bar
P	psi
M	MPa

④ Output

A4	4...20mA(two-wire)
V05	0.5...4.5V(three-wire)
V0	0..5V(three-wire)
V10	0...10V(three-wire)
RS	RS-485(three-wire)

⑤ Accuracy

0.25	0.25%F.S
0.5	0.5%F.S
1.0	1.0%F.S

⑥ Cable length

1.0	1m
2.0	2m
3.0	3m

⑦ Electrical connection

D1	DIN43650A
M	M12(waterproof outlet)
C3	GX12-3P
C4	GX12-4P
H	M12-4P

⑧ Process connection

G	G1/4 male
G1	G1/4 female
G2	G1/2
G3	G3/8
G4	G1/8
N	NPT1/4
N1	NPT1/2
N2	NPT1/8
M	M12*1

* Please make separate remarks for special requirements.

MONOCRYSTALLINE SILICON PRESSURE TRANSMITTER MODEL MST21

①

②

1)Orange style 2)Blue style

The MST21 monocrystalline silicon pressure transmitter is used to measure the liquid leve density and pressure of liquid, gas or steam, then convert it to 4...20mA DC output signal. The transmitter can be operated locally with three buttons, or remotely operated by a universal hand operator, configuration software, and mobile phone APP. It can perform display and configuration adjustments without affecting the output signal of 4~20mA DC.

Features

- Adopts MEMS monocrystalline silicon high-precision pressure sensor
- Fast response, high stability, measuring accuracy 0.075%FS
- Range ratio up to 100:1
- Reversible in-place display screen with backlit high brightness LCD display
- Local zero clearing function, local zero, full point setting adjustment

Technical parameter

Standard specifications

Standard zero point as the Reference Calibration Range, stainlesssteel 316L diaphragm, silicone oil as filing liquid.

Performance specifications

The overall performance includes but is not limited to [reference accuracy], [environmental temperature impact] and comprehensiveerror of other impact.

- Typical accuracy: ±0.075% of the upper limit of the range
- Annual stability: ±0.2% of the upper limit of the range

1)Reference accuracy of range adjustment

Includes linearity from zero, hysteresis and repeatability

Linear Output Accuracy	TD≤10	±0.075%	Nominal range 6KPa, 40KPa,250KPa,1MPa, 3MPa,10MPa
	10 < TD≤100	±0.0075TD%	

Note: TD = Turn down

|URV|≥|LRV|, TD=URL/|URV|

|URV|≤|LRV|, TD=URL/|LRV|

2)Influence of ambient temperature

The accuracy of the range below 6Kpa is 0.075% in the normal temperature range, and the accuracy of the full temperature range of -20...70℃ is 0.15%.

3)Power influence

When the power supply voltage changes within 12...36V DC, the change of zero point and range does not exceed ±0.005% of the upper limit of the range/V, which can be ignored.

Functional specifications

1)Range selection

Within the range of the upper and lower limits, the turn down ratio can be adjusted to select the range. For example, the upper and lower limit sare -40~40kpa. At this time, choose to adjust the turndown ratio to 10, and choose to output 0~4Kpa, or -4~4kpa. In order to ensure the accuracy, the turn down ratio should be as small as possible, generally within 10, too large will affect the accuracy.

2)Zero setting

Zero point and range can be adjusted to any value within the measurement range in the table, the calibration range must ≥ the minimum range.

3)Impact of installation position

Install at any position, the maximum does not exceed 400Pa can be corrected by clearing.

4)Range and scope

Gauge pressure

Range/URL/LRL		KPa	Turndown ratio
B	Range	0.2...6	1...30
	URL/LRL	-6...6	
C	Range	0.4...40	1...100
	URL/LRL	-40...40	
D	Range	2.5...250	1...100
	URL/LRL	-100...250	
E	Range	10...1000	1...100
	URL/LRL	-100...1000	
F	Range	30...3000	1...100
	URL/LRL	-100...3000	
G	Range	100...10000	1...100
	URL/LRL	-100...10000	

Absolute pressure

Range/URL/LRL		KPa	Turndown ratio
H	Range	0~100...250KPa	1...3
	URL/LRL	0...250KPa	
I	Range	0~0.1...1MPa	1...10
	URL/LRL	0...1MPa	
J	Range	0~0.1...3MPa	1...30
	URL/LRL	0...3MPa	

5)Output

Signal	Type	Output
4...20mA	Linear	Two-wire
4...20mA+HART	Linear	Two-wire
RS485	Linear	Four-wire

6)Alarm current

- Low alarm mode(minimum): 3.8mA.
- High alarm mode(maximum):20.8mA
- No alarm mode(Hold): Maintain the high-alarm mode of effective current value before failure .
- Alarm current standard setting : high-alarm mode.

7)Response time

- The total damping constant time; equal to the sum of the damping time of electronic circuit components and the sensor case.
- Electronic circuit component damping time: 0-60S range adjustable.
- Sensing case damping time: ≤0.2S.
- Power-on start-up time after power failure: ≤5S
- Data recovery to normal use time: ≤2S.

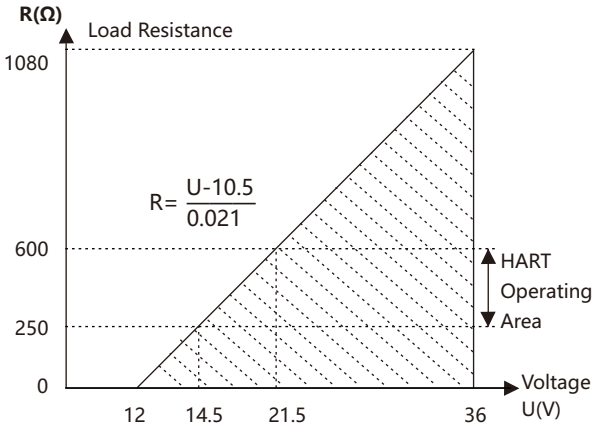
8)Ambient temperature

Item	Operating conditions
Working temperature	-20...+70℃[-4...+158℉] with display
Storage temperature	-40...+85℃[-40...+185℉]
Working humidity	5...100%RH@40℃
Production grade	IP65
Dangerous place	ExdIICT6

Installation

1)Power supply and load conditions

Item	Operating conditions
Standard/flameproof	14.5...36VDC.The load resistance during communication is 250...600Ω
RS485	12...36VDC



2)Electronic connection

Type	Directions
Electrical connection	Aluminum alloy junction box, two outlets with internal thread M20*1.5, the main body is blue, and the cover is white.
Outlet protection	One end is equipped with M20*1.5 waterproof connector, the other end is equipped with plug PVC material,applicable wire diameter 6-8 mm protection grade IP65.
	Explosion-proof configuration, one end is equipped with NPT1/2 female thread , the other end is equipped with plug, stainlesss teel material applicable wire diameter 6-8 mm, protection grade IP65.
	Explosion-proof configuration, one end is equipped with M20*1.5 female thread, the other end is equipped with plug, stainlesss teel material, applicable wire diameter 6-8 mm, protection grade IP65.

Physical specifications

Sensor case	Stainless steel 316L
Diaphragm	Stainless steel 316L,Hastelloy, Tantalum
Process connection	Stainless steel 304,stainless steel 316L
Thread specification	M20*1.5,G1/2, NPTF1/2, others
Transmitter shell	Aluminum alloy material
Shell seal	NBR
Name plate	Stainless steel 304

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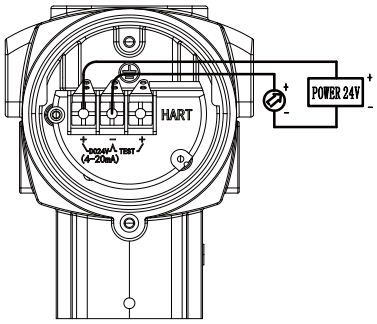
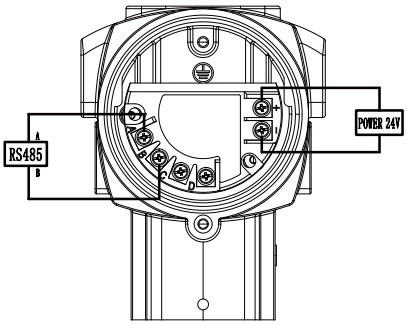
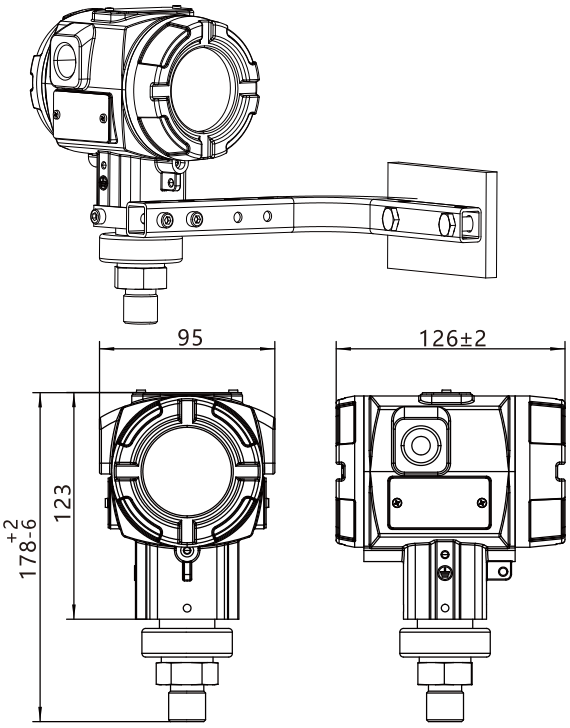
Electric Connection & Dimensiones in mm



Note: The quick interface function is equivalent to the signal terminal.





Ordering information

Example part number:MST21-GSD1NGNNM5L

MST21 pressure transmitter, gauge pressure type, 0 - 400 Pa range, 316L diaphragm, silicone oil fill, M20×1.5 female thread (PVC), 4 - 20 mA + HART output, M20×1.5 male thread for process connection, no bracket, common type for explosion - proof, with display, no extra requirements.

M	S	T	2	1	-	A	C	S	D	1	J	M	N	N	M	5	□
①						②	③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪		⑫

①

Model
MST21

②

Pressure type	
A	Gauge pressure
G	Absolute pressure

③

Measuring range	
H	0-100~250kPa(0-10~25mmH2O)/(0-1~2.5bar) (Absolute pressure version available)
I	0-0.1~1MPa(0-10~100mmH2O)/(0-1~10bar) (Absolute pressure version available)
J	0-0.1~3MPa(0-10~300mmH2O)/(0-1~30bar) (Absolute pressure version available)
B	0-200Pa~6kPa(0-20~600mmH2O)/(0-2~60mbar)
C	0-400Pa~40kPa(0-40~4000mmH2O)/(0-4~400mbar)
D	0-2.5kPa~250kPa(0-0.25~25mH2O)/(0-25~2500mbar)
E	0-10kPa~1MPa(0-1~100mH2O)/(0-0.1~10bar)
F	0-30kPa~3MPa(0-3~300mH2O)/(0-0.3~30bar)
G	0-100kPa~10MPa(0-10~1000mH2O)/(0-1~10mbar)

④

Diaphragm material	
S	316L
H	Hastelloy C
T	Tantalum

⑤

Filling liquid	
D	Silicone oil

⑥

Electrical connection	
1	M20*1.5 female thread, PVC
2	M20*1.5 female thread, stainless steel
4	1/2NPT female thread, stainless steel

⑦

Output	
N	4...20mA
J	4...20mA+HART
F	RS485

⑧

Process connection	
M	M20*1.5 male thread
G	G1/2 male thread
N	NPT1/2 male thread
A	NPT1/2 female thread
Y	others

⑨

Mounting brackets	
N	No bracket
B4	Pipe bend bracket (carbon steel)
B5	Flat Bend Bracket (Carbon Steel)

⑩

Explosion-proof treatment	
N	Normal type
D	Explosion proof ExdIICT6 (PVC threads are not applicable)

⑪

Display	
M5	With display
N	No display

⑫

Additional requirements	
P	M20*1.5 male thread with pressure welding head
N	Material of connector 316L
K	Degreasing and cleaning treatment
L	Hanging number plate
H	Lightning protection (transient voltage resistance)
E	English nameplate
V2	Two valve group

MONOCRYSTALLINE SILICON DIFFERENTIAL PRESSURE TRANSMITTER MODEL MST22

1)Orange style 2)Blue style

MST22 differential pressure transmitter uses single crystal silicon sensor chip which adopts German advanced MEMS technology.It has built-in temperature compensation element and extremely high measurement accuracy and long-term stability over a wide range of static pressure and temperature variations. It can measure level, density, pressure of liquid, gas and steam. It is widely used in industrial process control, automated manufacturing, aerospace automotive and marine petroleum and petrochemical, electronic power, medical and health and many other fields.
MST22 can accurately measure differential pressure and convert it into 4-20 mA DC output signal and can be operated locally through three buttons, and remotely operated by a general-purpose communicator, configuration software, and mobile phone APP, to perform display and configuration adjustment without affecting the 4-20 mA DC output signal.

Features

- High product life and long-term stability
- Double Wheatstone bridge design, "double beam" resistance temperature characteristics complement each other, improve the anti-interference ability of the chip
- LCD with backlit digital watch head can display pressure, percentage and current and 0 to 100% analog indication

Technical parameter

Standard specifications

Standard zero point as the Reference Calibration Range, stainlesssteel 316L diaphragm, silicone oil as filing liquid.

Performance specifications

The overall performance includes, but not limited to, the combined error of Reference Accuracy, Static Pressure Effect, Ambient Temperature Effect and other effects.

- Typical accuracy: ±0.075% of the upper limit of the range
- Annual stability: ±0.2% of the upper limit of the range

1)Reference accuracy of range adjustment

Includes linearity from zero, hysteresis and repeatability

Linear Output	TD≤10	±0.075%	Nominal range 6KPa, 40KPa,250KPa,1MPa, 3MPa,10MPa
Accuracy	10 < TD≤100	±0.0075TD%	

Note: TD = Turn down

|URV|≥|LRV|, TD=URL/|URV|

|URV|≤|LRV|, TD=URL/|LRV|

2)Static pressure impact

Zero impact	±0.15TD% Upper range limit/10MPa
Full scale effect	±0.2TD% Upper range limit/10MPa

3)Ambient temperature influence of range below 6KPa

Range	Temperature	Accracy
Below 6 KPa	Normal Temp range	0.15%
	-20...70℃ Temp range	0.075%

4)Power supply impact

When the power supply voltage varies within 12~36V DC, the variation of zero point and range is not exceed ±0.005% of the upper limit range/V, which can be ignored.

Functional specifications

1)Range limits

Range can be adjusted by turn down adjustment within URL and LRL.Such as for URL/LRL -40～40 kPa, TD=10, range can be 0～4kPa or -4～4kPa. Turn down should be as low as possible to ensure accuracy.In general, turn down is within 10, too big will affect accuracy

2)Zero point setting

Zero and span can be adjusted to any value within the measurement range in the table, as long as calibration range is not less than minimum range.

3)Impact of installation position

Install at any position, the maximum does not exceed 150Pa can be corrected by clearing.

3)Range and scope

Range/URL/LRL		KPa	Turndown ratio
B	Range	0.2...6	1...30
	URL/LRL	-6...6	
C	Range	0.4...40	1...100
	URL/LRL	-40...40	
D	Range	2.5...250	1...100
	URL/LRL	-250...250	
E	Range	20...1000	1...100
	URL/LRL	-500...1000	
F	Range	30...3000	1...100
	URL/LRL	-500...3000	

5)Output

Signal	Type	Output
4...20mA	Linear	Two-wire
4...20mA+HART	Linear	Two-wire
RS485	Linear	Four-wire

6)Alarm current

Low report mode(Minimum): 3.8 mA.
High report mode (maximum): 20.8 mA.
No report mode (hold) : keep the effective current value before the fault
Standard setting of alarm current: high alarm mode.

7)Response time

- The total damping constant time; equal to the sum of the damping time of electronic circuit components and the sensor case.
- Electronic circuit component damping time: 0-60S range adjustable.
- Sensing case damping time: ≤0.2S.
- Power-on start-up time after power failure: ≤5S
- Data recovery to normal use time: ≤2S.

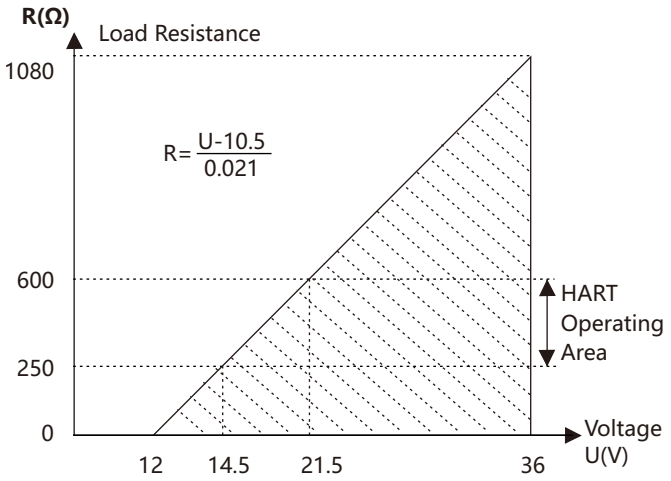
8)Ambient temperature

Item	Operating conditions
Working temperature	-20...+70℃[-4...+158℉] with display
Storage temperature	-40...+85℃[-40...+185℉]
Measuring medium temperature range	Silicon oil filled sensor: -40...+120℃[-40...+248℉]
Working humidity	5...100%RH@40℃
Production grade	IP65
Dangerous place	ExdIICT6

Installation

1)Power supply and load conditions

Item	Operating conditions
current mode	14.5-36VDC communication load:250-600Ω
RS485	12...36VDC



2)Electronic connection

Type	Directions
Electrical connection	Junction box is Aluminum alloy with two outlets M20 *1.5 Female. Main body is orange. Shell cover is white.
Outlet protection	One end is equipped with M20*1.5 waterproof connector, the other end is equipped with plug PVC material,applicable wire diameter 6-8 mm protection grade IP65.
	Explosion-proof configuration, one end is equipped with NPT1/2 female thread , the other end is equipped with plug, stainlesss teel material applicable wire diameter 6-8 mm, protection grade IP65.
	Explosion-proof configuration, one end is equipped with M20*1.5 female thread, the other end is equipped with plug, stainlesss teel material, applicable wire diameter 6-8 mm, protection grade IP65.

Physical specifications

Sensor case	Stainless steel 316L
Diaphragm	Stainless steel 316L,Hastelloy,Tantalum
Process connection	Stainless steel 304,stainless steel 316L
Nut and bolt	Stainless steel (A4), color zinc
Sealing ring	NBR,FKM,EPDM
Transmitter shell	Aluminum alloy material
Shell seal	NBR
Name plate	Stainless steel 304

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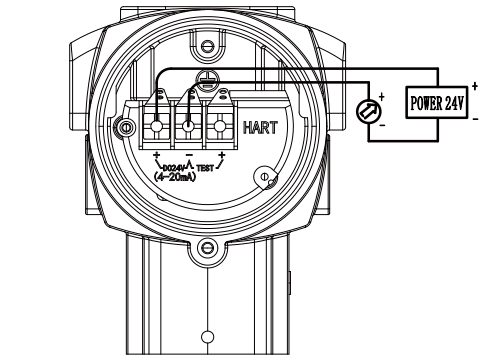
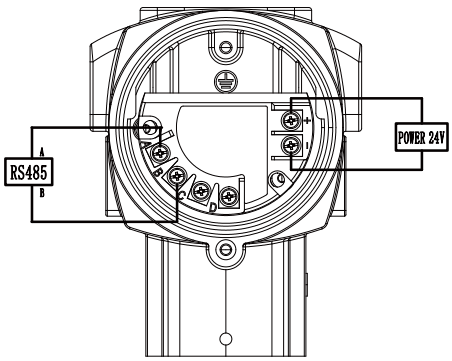
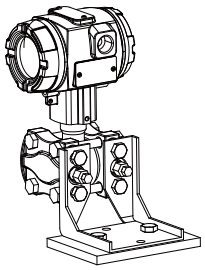
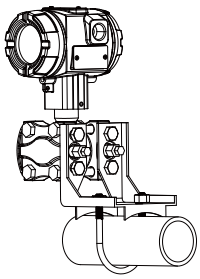
Electric Connection & Dimensiones in mm



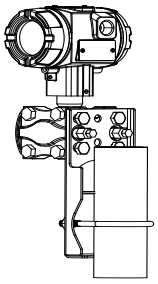




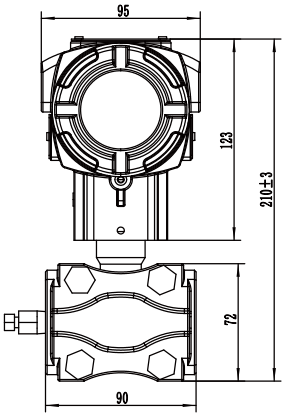
B1 Board-mounted Bend Bracket

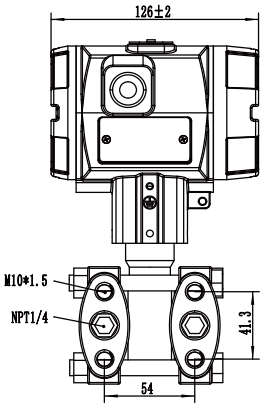


B2 Pipe-mounted Bend Bracket



B3 Pipe-mounted Flat Bracket





Ordering information

Example part number:MST22-CSD1JADDNB1

The MST22 series differential pressure transmitter has a measurement range of 0...40 kPa, a 316L stainless steel diaphragm, and silicone oil filling. It features an M20*1.5 internal electrical connection, PVC housing, and outputs a 4~20 mA signal with HART. The process connection includes a pressure tap with M20*1.5 external threading and a welded pressure tap tube. The sealing ring is FKM, and the carbon steel mounting bracket is standard explosion-proof without additional requirements.

M	S	T	2	2	-	C	S	D	1	J	A	D	B	1	D	M	5	
①						②	③	④	⑤	⑥	⑦	⑧	⑨		⑩	⑪		⑫

①

Model
MST22

②

Measuring range	
B	0-200Pa~6KPa(0-20~600mmH2O)/(0-2~60mbar)
C	0-400Pa~40KPa(0-40~4000mmH2O)/(0-4~400mbar)
D	0-2.5KPa~250KPa(0-0.25~25mH2O)/(0-25~2500mbar)
E	0-10KPa~1MPa(0-1~100mH2O)/(0-0.1~10bar)
F	0-30KPa~3MPa(0-3~300mH2O)/(0-0.3~30bar)

③

Diaphragm material	
S	316L
H	Hastelloy C
T	Tantalum

④

Filling liquid	
D	Silicone oil

⑤

Electrical connection	
1	M20*1.5 female thread, PVC
2	M20*1.5 female thread, stainless steel
4	1/2NPT female thread, stainless steel

⑥

Output	
N	4...20mA
J	4...20mA+HART
F	RS485

⑦

Process connection	
N	Without(NPT 1/4 female thread on chamber flange)
A	Back welded connector and M20*1.5 male
B	Oval Flange connector: NPT1/2 Female

⑧

Sealing ring	
N	NBR
D	FKM
I	EPDM

⑨

Mounting bracket	
B1	Plate Bending Bracket(Carbon Steel)
B2	Tube Bending Bracket(Carbon Steel)
B3	Tube Flat Bracket(Carbon Steel)
B5	Plate Bending Bracket(Stainless steel)
B6	Tube Bending Bracket(Stainless steel)
B7	Tube Flat Bracket(Stainless steel)
N	Without

⑩

Explosion-proof treatment	
N	Normal type
D	Explosion proof ExdIICT6 (PVC threads are not applicable)

⑪

Display	
M5	With display
N	No display

⑫

Additional requirements	
N	Connector material is 316L
K	Degreasing and cleaning treatment
L	Hanging number plate
H	Lightning protection (transient voltage resistance)
E	English nameplate
V3	Three valve group
V5	Five valve group

Please make separate remarks for special requirements.

FLANGE-MOUNT PRESSURE TRANSMITTER MODEL MST23

①

②

1)Orange style 2)Blue style

The MST23 single flange differential pressure transmitter is composed of an MST22 differential pressure transmitter and a welded liquid level flange. The pressure is transmitted between the flange and the sensor using silicone oil or other filling liquid to avoid the influence of the measured medium on the measurement through the impulse tube, including crystallization, solidification, vaporization (boiling), condensation, fractionation (severe changes), etc. Used to measure the liquid level, flow rate, and pressure of liquid gases or vapors, and then convert them into 4-20 mA DC signal output.

Features

- Adopts MEMS monocrystalline silicon high precision pressure sensor
- Provide standard HART bus communication mode perfect self-diagnosis and remote communicationSignal function
- High brightness LCD display with backlight, reversible in-place displaycurtain
- Local zero clearing function, local zero, full point setting adjustment function
- Convenient local current loop check function
- Various specifications of process connection can be selected according to requirements

Technical parameter

specifications

The range is adjusted based on the standard zero point. The diaphragm is stainless steel 316L, and the filling liquid is silicone oil.

1)Reference Accuracy of Range Adjustment

Includes linearity from zero, hysteresis and repeatability

Linear output accuracy	TD≤10	±0.2%	Nominal range: 40KPa, 250KPa 1MPa, 3MPa
	10 < TD≤100	±0.02TD%	

Note: TD = Turn down

|URV|≥|LRV|, TD=URL/|URV|

|URV|≤|LRV|, TD=URL/|LRV|

2)Power impact

When the power supply voltage changes within 12 ~ 36V DC, the change of zero point and range does not exceed ±0.005% of the upper limit of the range/V, which can be ignored.

Functional specifications

1)Range limits

Within the range of the upper and lower limits, the TD value can be adjusted within the allowable range to select the range.For example, the upper and lower limits are -40~40kpa. At this time, choose to adjust the TD value to 10, and choose to output 0~4Kpa, or -4~4kpa.In order to ensure the accuracy, the TD value should be as small as possible, generally within 10, too large will affect the accuracy

2)Range and upper&lower limits

Range/URL/LRL		KPa	Turndown ratio
C	Range	1...40	1...40
	URL/LRL	-40...40	
D	Range	2.5...250	1...100
	URL/LRL	-250...250	
E	Range	10...1000	1...100
	URL/LRL	-500...1000	
F	Range	30...3000	1...100
	URL/LRL	-500...3000	

3)Zero point setting

Zero point and range can be adjusted to any value within the measuring range in the table, as long as: calibration range ≥ minimum range.

4)Installation position influence

It can be installed at any position through the liquid level flange. The best state is to keep the process flange in a vertical state. The offset caused by the position deviation can be corrected by clearing the operation.

5)Output

Signal	Type	Output
4...20mA	Linear	Two-wire
4...20mA+HART	Linear	Two-wire
RS485	Linear	Four-wire

6)Alarm current

- Low alarm model (Min):3.8mA.
- High alarm mode(Max):20.8mA.
- Alarm current standard setting: high alarm mode.
- Non-alarm mode (maintain): maintain the current practical value before the fault.

7)Response time

- The total damping constant time equal to the sum of the damping time constant of the electronic circuitcomponents and the sensing bellows.
- Electronic circuit component damping time: 0-60S range adjustable.
- Sensing bellows damping time: ≤0.2S.
- Power-on start-up time after power failure: ≤5S.
- Data recovery to normal usage time: ≤2S.

8)Ambient temperature

Item	Operating conditions
Working temperature	-20...+70℃[-4...+158℉] with display
Storage temperature	-40...+85℃[-40...+185℉]
Measuring medium temperature range	Silicon oil filled sensor: -40...+120℃[-40...+248℉]
Working humidity	5...100%RH@40℃
Production grade	IP65
Dangerous place	ExdIICT6

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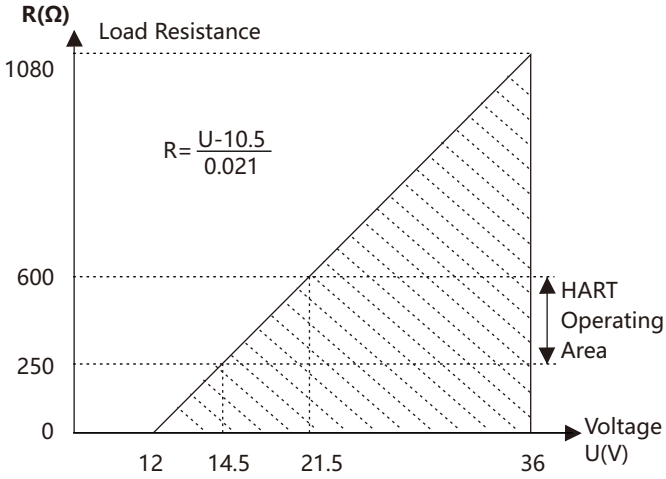
Installation

1)Power supply and load conditions

Item	Operating conditions
Standard/ Flameproof	14.5...36VDC communication load:250...600Ω
RS485	12...36VDC



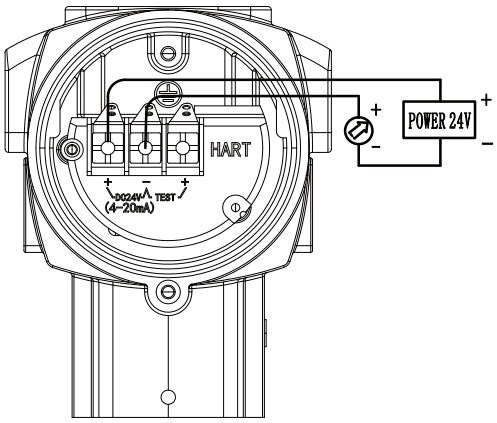
2)Electronic connection

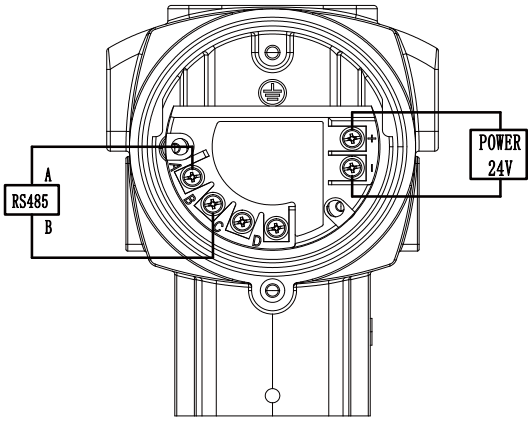
Type	Directions
Electrical connection	Junction box is Aluminum alloy with two outlets M20 *1.5 Female. Main body is blue. Shell cover is white.
Outlet protection	One end is equipped with M20*1.5 waterproof connector, the other end is equipped with plug PVC material,applicable wire diameter 6-8 mm protection grade IP65.
	Explosion-proof configuration, one end is equipped with NPT1/2 female thread , the other end is equipped with plug, stainlesss teel material applicable wire diameter 6-8 mm, protection grade IP65.
	Explosion-proof configuration, one end is equipped with M20*1.5 female thread, the other end is equipped with plug, stainlesss teel material, applicable wire diameter 6-8 mm, protection grade IP65.

Physical specifications

Sensor case	Stainless steel 316L
Diaphragm	Stainless steel 316L,Hastelloy, Tantalum, FEP, PFA, PTFE coated film
Process flange	Stainless steel 304,stainless steel 316L
Nuts and bolts	Stainless steel(A4),Color zinc
Sealing ring	NBR,FKM,EPDM
Transmitter shell	Aluminum alloy
Shell seal	NBR
Name plate	Stainless steel 304

Electrical connection





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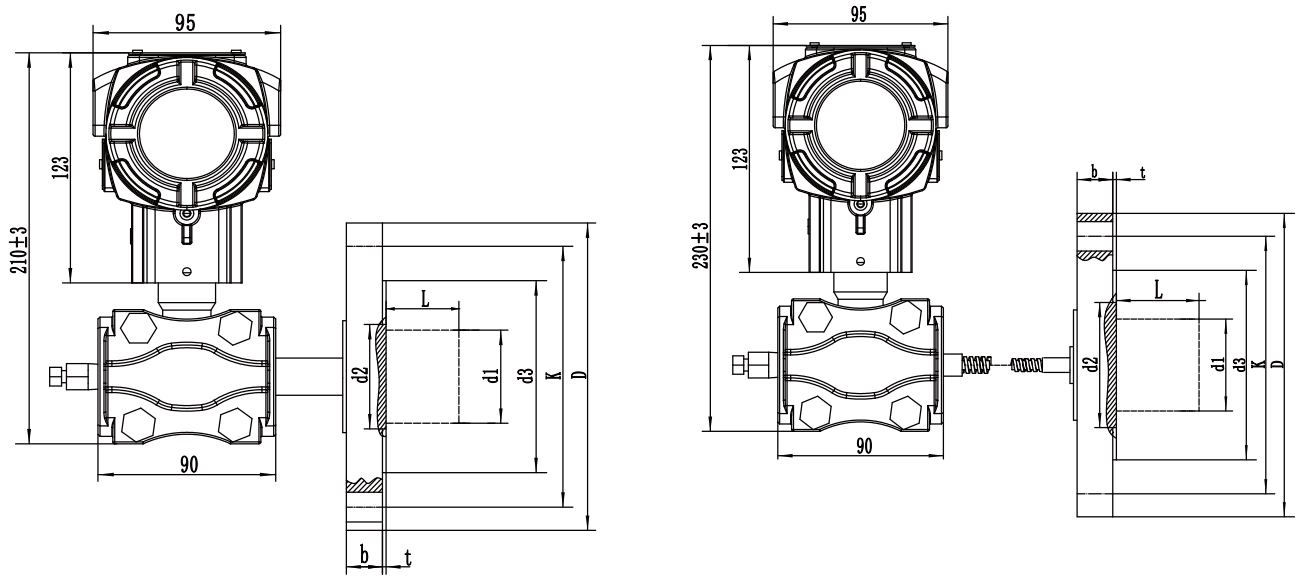
Dimensiones in mm



Ordering information

Example part number:MST23-CSD1NNRD50P1S004NN

M	S	T	2	3	-	C	S	D	1	N	N	R	D	5	0	P	1	S	0	0	4	N	N	E
①						②	③	④	⑤	⑥	⑦	⑧	⑨			⑩		⑪			⑫	⑬	⑭	⑮

①

Name
MST23

②

Measuring range	
C	0-1kPa~40kPa(0-100~4000mmH2O)/(0-10~400mbar)
D	0-2.5kPa~250kPa(0-0.25~25mH2O)/(0-25~2500mbar)
E	0-10kPa~1MPa(0-1~100mH2O)/(0-0.1~10bar)
F	0-30kPa~3MPa(0-3~300mH2O)/(0-0.3~30bar)

③

Diaphragm material	
S	316L
H	Hastelloy C(This option is not available for the insertion tube)
T	Tantalum(This option is not available for the insertion tube)

④

Filling liquid	
D	Normal temperature silicone oil(-30...180°C)
E	Low temperature silicone oil(-40...80°C)
F	High temperature silicone oi(-10...350°C)

⑤

Electrical connection	
1	M20*1.5 female thread, PVC
2	M20*1.5 female thread, stainless steel
4	1/2NPT female thread, stainless steel

⑥

Output	
N	4...20mA
J	4...20mA+HART
F	RS485

⑦

Flange Standard	
N	HG-T20592-2009(Steel pipe flange PN series) (Quoting European DIN system standard)
J	HG-T20615-2009(Steel pipe flange Class series) (refer to American ANSI system standard)
F	Other Flange Standards

⑧

Flange Type	
R	Flange Type
E	Insert barrel type (only DN80, 2 inches and above)

⑨

Flange Size	
D50	DN50 (2Inch)
D80	DN80 (3Inch)
D100	DN100 (4Inch)
DXX	Other

⑩

Nominal Pressure Rating		
DIN		ANSI
P1	PN10	Class150(lb)
P2	PN16	Class300(lb)
P3	PN25	Class300(lb)
P4	PN40	
PX	Other	

⑪

Insertion barrel extension length	
S0	0(without insert barrel)
S2	50mm
S4	100mm
S6	150mm
S8	200mm
SX	special requirements

⑫

Capillary length	
□□	The capillary length ranges from 1 to 10m,Represented by □□ (e.g. 4m, 04)

⑬

Explosion-proof treatment	
N	Normal type
D	Explosion proof ExdIICT6 (PVC threads are not applicable)

⑭

Display	
M5	With display
N	No display

⑮

Additional requirements	
N	Material of connector 316L
K	Degreasing and cleaning treatment
L	Hanging number plate
H	Lightning protection (transient voltage resistance)
E	English nameplate

REMOTE FLANGE DIFFERENTIAL PRESSURE TRANSMITTER Γ24

1)Orange style 2)Blue style

MST24 double flange differential pressure transmitter is composed of the MST22 differential pressure transmitter and a small welded remote flange with a capillary tube. between the flange and the sensor, silicon oil and other filling fluids are used to transmit pressure, to prevent the measured medium from passing through the impulse pipe. Which will impact the measurement. The impact of the measured medium pass through the impulse pipe includes crystallization, solidification vaporization (boiling), condensation fractionation (severe change) and etc. The Transmitter is used to measure the liquid level, flow and pressure of liquid, gas or steam, and then convert it into 4...20 mA signal output. The working principle of MST24 double flange differential pressure transmitter is the same as MST22 differential pressure transmitter except that the pressure transmission path on the positive pressure side is slightly different, that is the pressure acting on the highpressure side firstly passes through the diaphragm and the filing liquid of the remote flange, and then pass to the transmitter body via capillary tube, and finally reach the high pressure side of measurement sensor.

Features

- Adopts MEMS monocrystalline silicon high-precision pressure sensor
- Fast response and high stability
- Convenient local current loop check function
- Various specifications of process connection can be selected according to requirements
- Provide standard HART bus communication mode perfect self-diagnosis and remote communicationSignal function

Technical parameter

specifications

The range is adjusted based on the standard zero point. The diaphragm is stainless steel 316L, and the filling liquid is silicone oil.

1)Reference accuracy of range adjustment

Includes linearity, hysteresis and repeatability from zero.

Linear Output	TD≤10	±0.2%	Nominal range: 40kPa, 250kPa 1MPa, 3MPa
Accuracy	10 < TD≤100	±0.02TD%	

Note: TD = Turn down

|URV|≥|LRV|, TD=URL/|URV|

|URV|≤|LRV|, TD=URL/|LRV|

2)Power impact

When the power supply voltage changes within 12 ~ 36V DC, the change of zero point and range does not exceed ±0.005% of the upper limit of the range/V, which can be ignored.

Functional specifications

1)Range limits

Range can be adjusted by turn down adjustment within URL and LRL. Such as for URL/LRL -40～40 kPa, TD=10, range can be 0～4kPa or -4～4kPa. Turn down should be as low as possible to ensure accuracy. In general, turn down is within 10, too big will affect accuracy

2)Range and scope

Range/URL/LRL		KPa	Turndown ratio
C	Range	1...40	1...40
	URL/LRL	-40...40	
D	Range	2.5...250	1...100
	URL/LRL	-250...250	
E	Range	10...1000	1...100
	URL/LRL	-500...1000	
F	Range	30...3000	1...100
	URL/LRL	-500...3000	

3)Zero point setting

Zero point and range can be adjusted to any value within the measuring range in the table, as long as: calibration range ≥ minimum range.

4)Installation position influence

It can be installed at any position through the liquid level flange. The best state is to keep the process flange in a vertical state. The offset caused by the position deviation can be corrected by clearing the operation.

5)Output

Signal	Type	Output
4...20mA	Linear	Two-wire
4...20mA+HART	Linear	Two-wire
RS485	Linear	Four-wire

6)Alarm current

- Low alarm model (Min):3.8mA.
- High alarm mode(Max):20.8mA.
- Alarm current standard setting: high alarm mode.
- Non-alarm mode (maintain): maintain the current practical value before the fault.

7)Response time

- The total damping constant time equal to the sum of the damping time constant of the electronic circuitcomponents and the sensing bellows.
- Electronic circuit component damping time: 0-60S range adjustable.
- Sensing bellows damping time： ≤0.2S.
- Power-on start-up time after power failure: ≤5S.
- Data recovery to normal usage time: ≤2S.

8)Ambient temperature

Item	Operating conditions
Working temperature	-20...+70℃[-4...+158℉] with display
Storage temperature	-40...+85℃[-40...+185℉]
Measuring medium temperature range	Silicon oil filled sensor: -40...+120℃[-40...+248℉]
Working humidity	5...100%RH@40℃
Production grade	IP65
Dangerous place	ExdIICT6

Installation

1)Power supply and load conditions

Item	Operating conditions
Standard/ Flameproof	14.5...36VDC communication load:250...600Ω
RS485	12...36VDC

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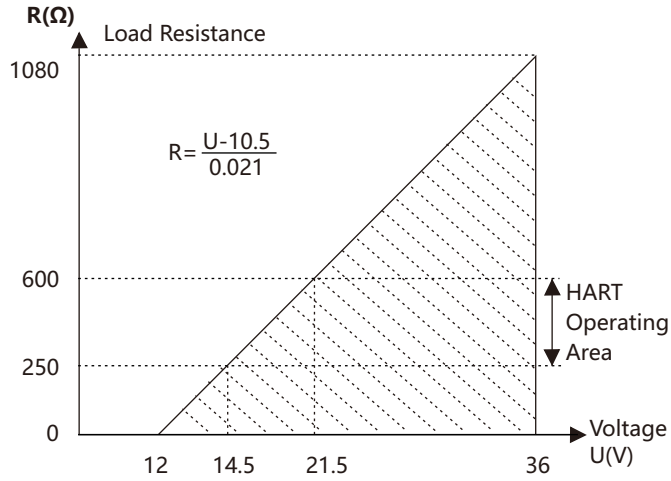


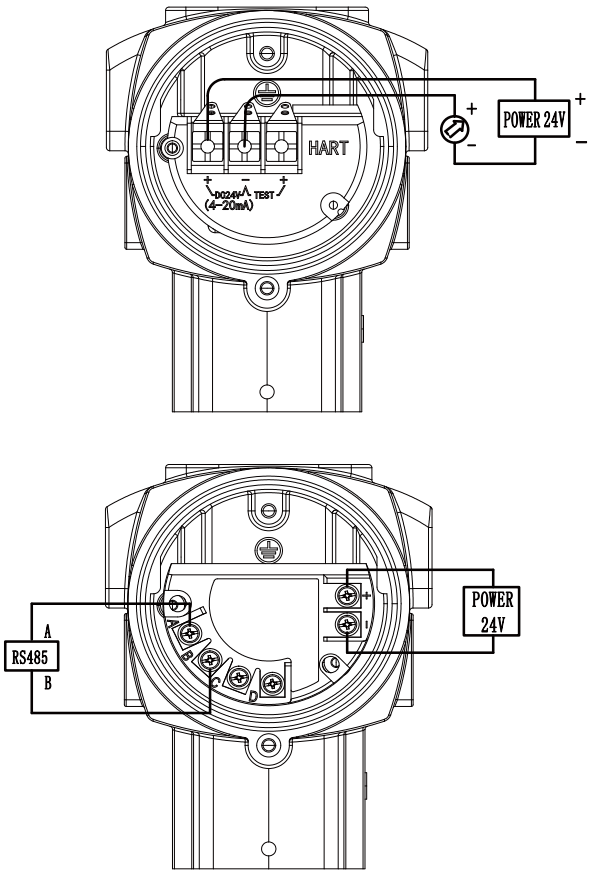
2)Electronic Connection

Type	Directions
Electrical connection	Junction box is Aluminum alloy with two outlets M20 *1.5 Female. Main body is blue. Shell cover is white.
Outlet protection	One end is equipped with M20*1.5 waterproof connector, the other end is equipped with plug PVC material,applicable wire diameter 6-8 mm protection grade IP65.
	Explosion-proof configuration, one end is equipped with NPT1/2 female thread , the other end is equipped with plug, stainlesss teel material applicable wire diameter 6-8 mm, protection grade IP65.
	Explosion-proof configuration, one end is equipped with M20*1.5 female thread, the other end is equipped with plug, stainlesss teel material, applicable wire diameter 6-8 mm, protection grade IP65.

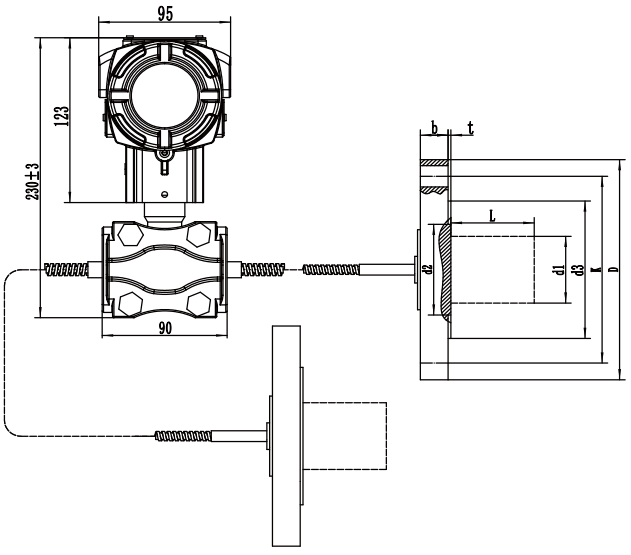
Physical specifications

Sensor case	Stainless steel 316L
Diaphragm	316L, Hastelloy, Tantalum, PTFE Coating
Process flange	Stainless steel 304,stainless steel 316L
Nuts and bolts	Stainless steel(A4),Color zinc
Sealing ring	NBR,FKM,EPDM
Transmitter shell	Aluminum alloy
Shell seal	NBR
Name plate	Stainless steel 304

Electrical connection



Dimensiones in mm(in)



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Ordering information

Example part number:MST24-CSD1NNND50P2S20404NN

Model MST24 double flange differential pressure transmitter features a measurement range of 0.40 kPa, with a diaphragm made of 316L stainless steel and a filling liquid of room temperature silicone oil. It has an electrical connection with an M20 x 1.5 internal thread and PVC material, providing an output signal of 4...20 mA. The transmitter complies with the flange standard HG-T20592-2009 (Steel Pipe Flange PN Series), referencing European DIN system standards. It is designed as a flanged type with a flange size of DN50 and a nominal pressure rating of PN16. The insertion tube extends 50 mm, with high-pressure and low-pressure capillary lengths of 4 m each. The device is treated for ordinary explosion protection and does not include a display, featuring an English nameplate.

M	S	T	2	4	-	C	S	D	1	N	N	N	D	5	0	P	2	S	2	0	4	0	4	N	N	E
①						②	③	④	⑤	⑥	⑦	⑧	⑨			⑩		⑪		⑫		⑬		⑭	⑮	⑯

①

Model
MST24

②

Measuring range	
C	0-1kPa~40kPa(0-100~4000mmH20)/(0-10~400mbar)
D	0-2.5kPa~250kPa(0-0.25~25mH20)/(0-25~2500mbar)
E	0-10kPa~1MPa(0-1~100mH20)/(0-0.1~10bar)
F	0-30kPa~3MPa(0-3~300mH20)/(0-0.3~30bar)

③

Diaphragm material	
S	316L
H	Hastelloy C (not available for insertion tube option)
T	Tantalum (not available for insertion tube option)

④

Filling liquid	
D	Normal temperature silicone oil(-30...180°C)
E	Low temperature silicone oil(-40...80°C)
F	High temperature silicone oi(-10...350°C)

⑤

Electrical connection	
1	M20*1.5 female thread, PVC
2	M20*1.5 female thread, stainless steel
4	1/2NPT female thread, stainless steel

⑥

Output	
N	4...20mA
J	4...20mA+HART
F	RS485

⑦

Flange Standard	
N	HG-T20592-2009(Steel pipe flange PN series) (Quoting European DIN system standard)
J	HG-T20615-2009(Steel pipe flange Class series) (refer to American ANSI system standard)
F	Other Flange Standards

⑧

Flange Type	
N	Flanged type
J	Insertion tube type (available only for DN80, 2 inches and above)

⑨

Flange Size	
D50	DN50 (2Inch)
D80	DN80 (3Inch)
D100	DN100 (4Inch)
DXX	Other

⑩

Nominal Pressure Rating		
DIN		ANSI
P1	PN10	Class150(lb)
P2	PN16	Class150(lb)
P3	PN25	Class300(lb)
P4	PN40	
PX	Other	

⑪

Insertion barrel extension length	
S0	0(without insert barrel))
S2	50mm
S4	100mm
S6	150mm
S8	200mm
SY	special requirements

⑫

High-pressure capillary tube length
Capillary tube length from 1 to 10 m, represented as (e.g., 4 m, 04)

⑬

Low-pressure capillary tube length
Capillary tube length from 1 to 10 m, represented as (e.g., 4 m, 04)

⑭

Explosion-proof treatment	
N	Normal type
D	Explosion proof ExdIICT6 (PVC threads are not applicable)

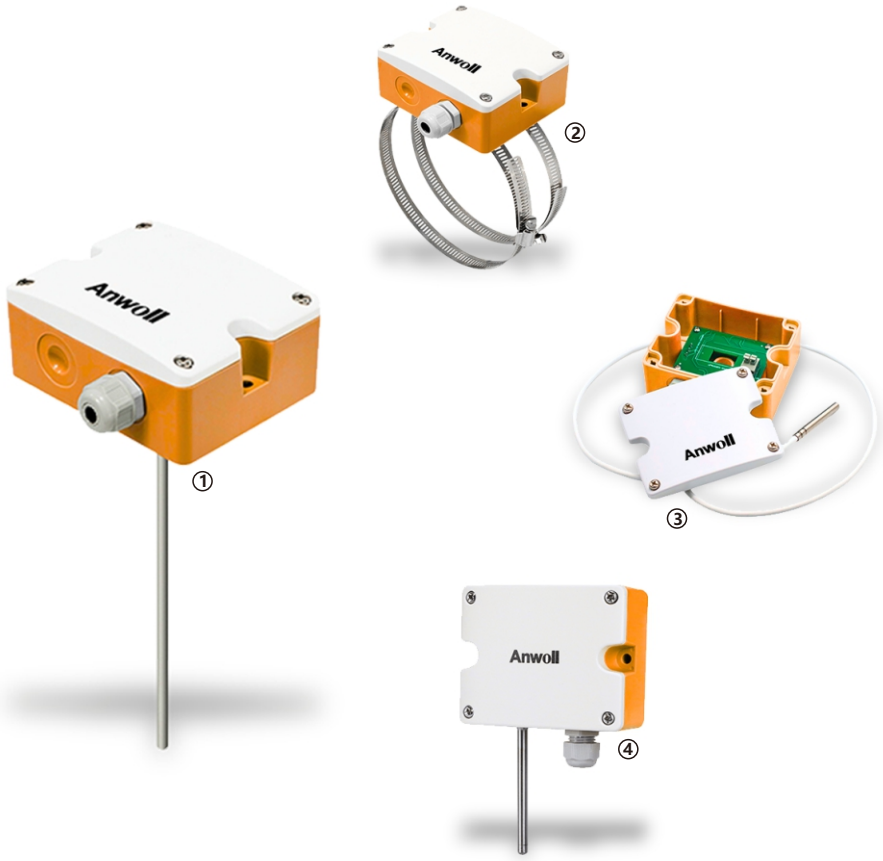
⑮

Display	
M5	With display
N	No display

⑯

Additional requirements	
N	316L Material for Connectors
K	Degreasing and cleaning treatment
L	Hanging number plate
H	Lightning protection (transient voltage resistance)
E	English nameplate

TEMPERATURE TRANSMITTER MODEL TT61



1)TT61 water pipe type 2)TT61 clamp type 3)TT61 split type 4)TT61 wall mounted type

The TT61 series temperature transmitter is a sensor specially designed for industrial applications . It is specially designed for lightning surge , electrostatic discharge , group pulse , pressure resistance,etc., and has strong anti-interference ability . There are five installation methods :wall mounted, airpipe/water pipe, split , and clamp . Three output modes of current , voltage, and thermal resistance areoptional. Strong onsite trial installation capability . Spring screws and terminal posts are designed forquick installation. It can be widely used in computer rooms , HVAC, buildings , storage and other places where temperature measurement and control are required.

Features

- Multiple signal output types, suitable for various processing equipment
- Five installation structures, suitable for various installation environments
- The protection level is Ip65

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Technical parameter

General

Sensor High-precision thermal resistance,see selection table (resistance output type)/PT1000,Class A (analog output type)

Accuracy Typical 0.2...0.5℃@0/25℃,see order reference No.±0.3℃@25℃,see temperature accuracy curve for details

Operating conditions

Housing material PC housing, stainless steel probe (6mm) and casing

Temperature -40...70℃,0...95%RH(Non-condensing)

IP grade IP65

Electrical overview

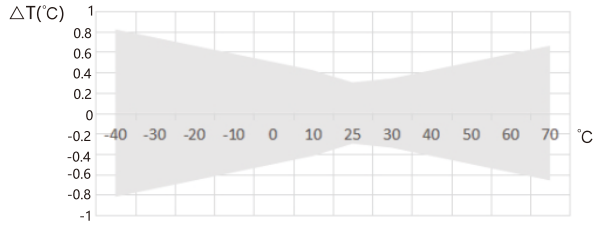
Output Resistance value ,please refer to the selection table and thermal resistance indexing table 4...20mA or 0...10VDC,0...5VDC

Thermal resistance Please check the selection table and thermalresistance indexing table

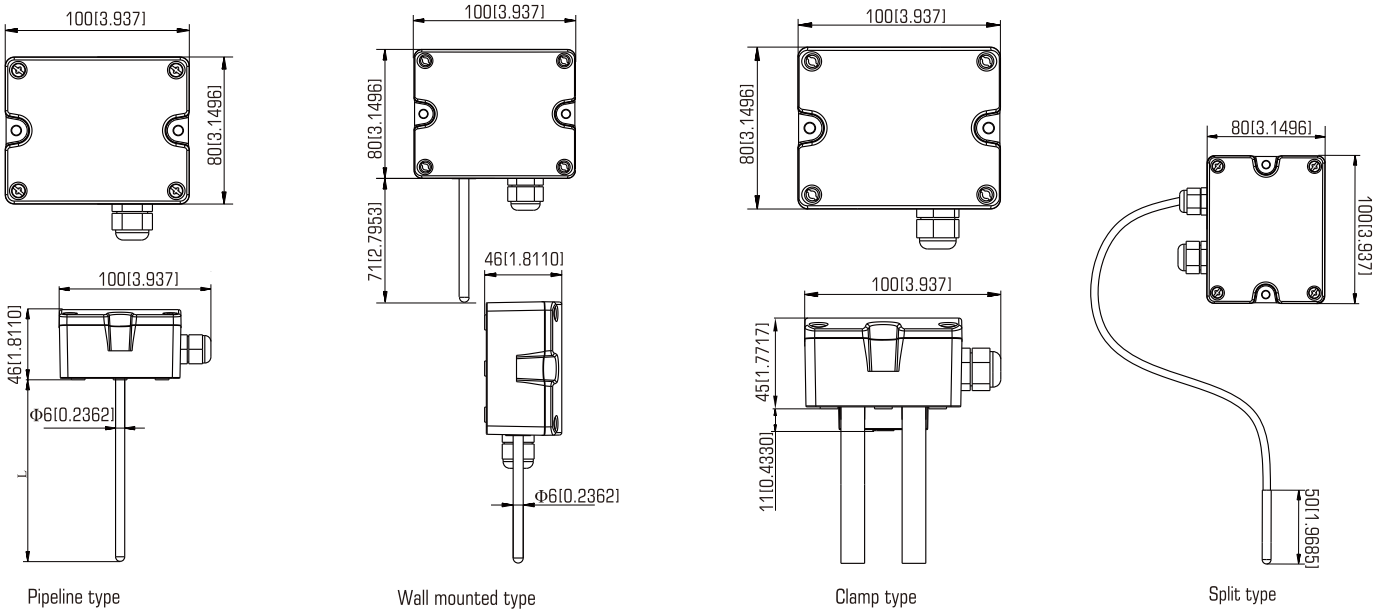
Power supply Voltage type 15...35VDC/24VAC±20% Current type 18.5...35VDC (RL=500Ω) 8.5...35VDC(RL=0Ω)

Output load (Analog output type)≤500Ω(Current type), ≥2KΩ(0...5V),≥3KΩ(0...10V)

Temperature Accuracy Curve(Analog output model)



Dimensiones in mm(in)



Ordering information

Example part number:TT61-2111

Model TT61 series temperature transmitter,Installation type Duct Type,Output PT1000,±0.2°C@0°C,Temperature range 0...50℃, Probe length 100MM.

T	T	6	1	-	2	1	1	1
①					②	③	④	⑤

①

Name
TT61

②

Installation type	
1	Wall Mounted Temperature Transmitter
2	Duct Type Temperature Transmitter
3	Water Pipe Type Temperature Transmitter
4	Split Type Temperature Transmitter
5	Clamp Type Temperature Transmitter

③

Output	
V0	0...10VDC(3-wire)
A4	4...20mA(2-wire)
V5	0...5VDC(3-wire)
0	PT1000,±0.2°C@0°C
1	PT100,±0.2°C @0°C
2	NTC20K,±0.3°C@25°C
6	NTC10K,±0.3°C@25°C

④

Temperature range	
0	Null
1	0...50℃
2	-20...60℃
8	Others (Customer specified)

⑤

Probe length(TT61-2/3)	
0	65MM
1	100MM
2	200MM
3	150MM
8	Others(available on request)

Please make separate remarks for special requirements.

TEMPERATURE AND HUMIDITY TRANSMITTER MODEL THT66

1)THT66-2 duct type temperature and humidity transmitter 2)THT66-1 wall-mounted temperature and humidity transmitter
3)THT66-3 split type temperature and humidity transmitter

THT66 series temperature and humidity transmitter is a transmitter specially designed for industrial applications it has three installation methods: wallmounted, duct type, and split. The three output modes of current, voltage and RS485 are optional. The on-site adaptability is strong, and the terminal design is suitable for rapid installation,it can be widely used in computer rooms, HVAC, buildings, warehousing and other places where temperature an humidit y measurement is required.

Features

- Multiple signal output types, suitable for various processing equipment
- Thress installation structures, suitable for various installation environments
- The protection level is Ip65

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Technical parameter

General

Relative humidity

Sensor	Digital type
Measuring range	0%...100%RH
Output	Output:RS485/Modbus,0...10VDC,4...20mA optional
Accuracy	±3%@ 20℃ & 20...80%RH
Response time	≤10s(20℃,slow flow air)

Temperature

Sensor	Digital type or thermal resistance , see Order Ref No
Measuring range	0...50℃,-20...60℃ etc
Output	Output:RS485/Modbus,0...10VDC,4...20mA optional
Thermal resistance	See order ref No. and thermal resistance Indexing table
Accuracy	Digital type: ±0.3℃@0...60℃ Thermal resistance : typical±0.2...0.4℃@25℃, see Order Ref No.

Operating conditions

Housing material PC shell, PA6 probe rod and polymer filter (optional stainless steel probe and stainless steel sintered filter)

Temperature Working:-20...60℃,5%...95%RH(Non-condensing)

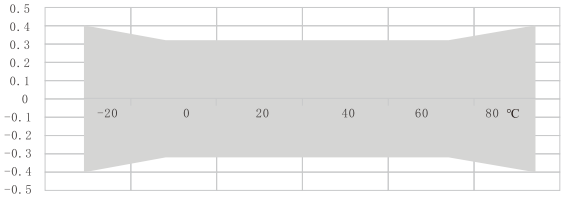
IP grade IP65

Electrical overview

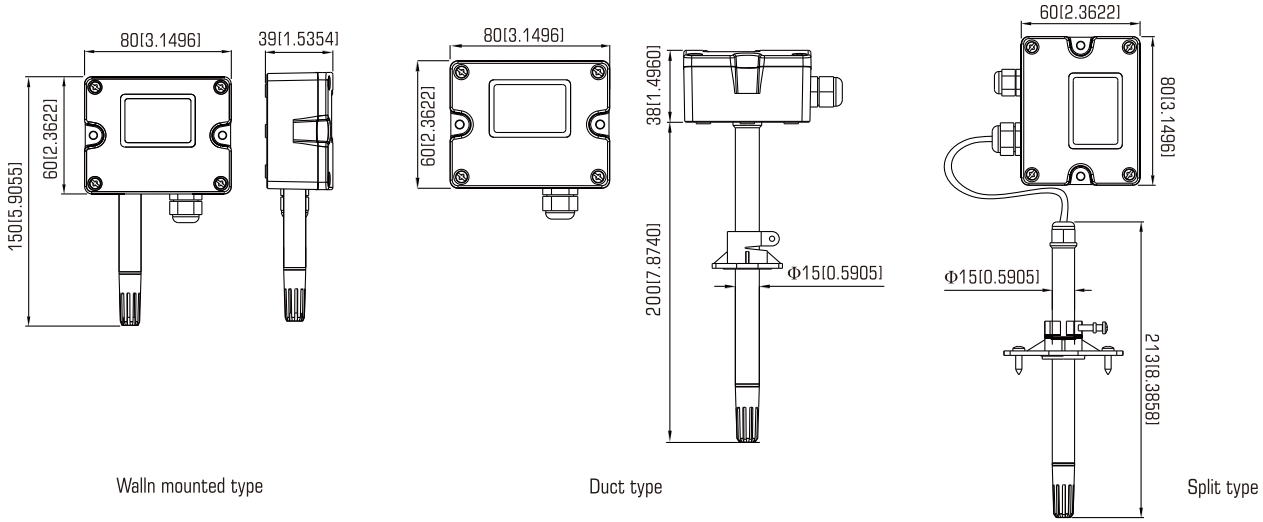
Power supply Voltage type/RS-485:15...35VDC/24VAC+20%
(AC power supply requires isolated power supply)
Current type: 19.5...35VDC(RL=500Ω)/9.5...35VDC(RL=0Ω)

Output load ≤250Ω(Current type), ≥2KΩ(Voltage type)

Digital sensor temperature accuracy curve



Dimensiones in mm(in)



Walln mounted type　　Duct type　　Split type

Ordering information

Example part number:THT66-2A4V021

Model THT66 Temperature and Humidity Transmitter,Installation type Duct Type,Humidity Output 4~20mA(2-wire),Temperature Output 0~10VDC(3-wire),Temperature range -20~60℃,Display LCD display.

T	H	T	6	6	-	2	A	4	V	0	2	1
①						②	③		④		⑤	⑥

①

Name
THT66

②

Installation type	
1	Wall Mounted Temperature Transmitter
2	Duct Type Temperature Transmitter
3	Split Type Temperature Transmitter

③

Humidity Output	
V0	0...10VDC(three-wire)
A4	4...20mA(two-wire)
RS	RS485/Modbus
C5	0...5VDC(three-wire)

④

Temperature Output	
V0	0...10VDC(3-wire)
A4	4...20mA(2-wire)
RS	RS485/Modbus
0	PT1000,±0.2°C@0°C
1	PT100,±0.2°C @0°C
2	NTC20K,±0.3°C@25°C
6	NTC10K,±0.3°C@25°C

⑤

Temperature range	
0	Null
1	0...50℃
2	-20...60℃
8	Others (Customer specified)

⑥

Display	
0	None
1	LCD display

* Please make separate remarks for special requirements.

CARBON DIOXIDE TRANSMITTER MODEL CDT71

1)CDT71 front view 2)CDT71 internal structure diagram
3)CDT71 back view

CDT71 Wal-mounted Carbon Dioxide Transmitter is based on the fact that different gases have different absorption capabilities for infrared light in a specific band. It measures the concentration of the measured gas by measuring the degree of infrared l ight absorption. Compared with electrochemical sensors, it has the characteristics of long life and good stability, wide power supply range and power supply antireverse connection protection. It is suitable for indoor air quality detection, air conditioners. air purifiers. vegetable greenhouses and other occasions to measure carbon dioxide gas.

Features

- Multiple signal output types, suitable for various processing equipment
- Up to 5 years of service life
- The protection level is Ip6X

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Technical parameter

General

Basic information

Measured concentration	±(40PPm+3%Fs)@25℃
Preheat time	2min(available)-10min(maximum accuracy)
Accuracy	0-2000PPM/0-5000PPM/0-10000PPM
Service life	>5 years

Operating conditions

Working temperature	-10℃~50℃
Working humidity	0-80%RH(no condensation)
IP grade	IP6X

Electrical overview

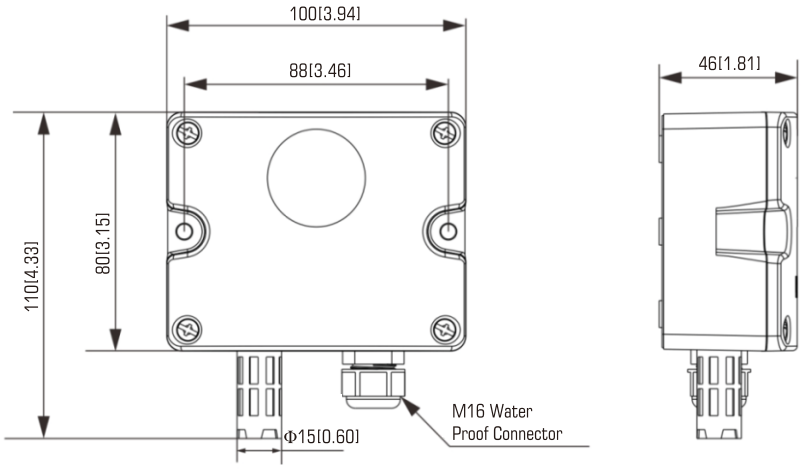
Electrical properties	3-wired			4-wired
Output signal	4...20mA	0...5V	0...10V	RS485
Working voltage	10...30Vdc	10...30Vdc	16...30Vdc	10...30Vdc

Wiring instructions

RS485 digital output type wiring		
Power supply	Red	Positive power
	Black	Negative power
Communication	Green	485-A
	White	485-B

Voltage/Current analog output type wiring		
Power supply	Red	Positive power
	Black	Negative power
Communication	Green	Voltage/Current output positive
	White	Voltage/Current output negative

Dimensiones in mm(in)



Ordering information

Example part number:CDT71-2A4
Model CDT71 Wal-mounted Carbon Dioxide Transmitter ,Range 5000ppm,output 4...20mA.

C	M	D	7	1	-	2	A	4
①						②	③	

① Model: CDT71

② Range:

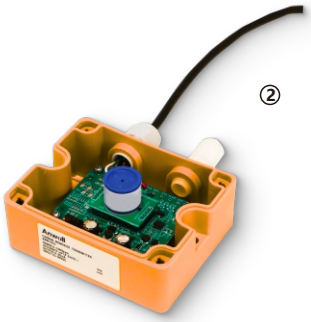
1	2000ppm
2	5000ppm
3	10000ppm

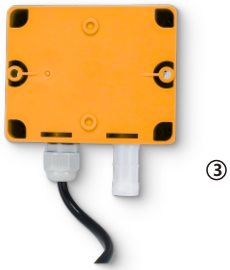
③ Output:

V0	0...5V
V10	0...10V
A4	4...20mA
RS	RS485/Modbus

* Please make separate remarks for special requirements.

CARBON MONOXIDE TRANSMITTER MODEL CMT76





1)CMT76 front view 2)CMT76 internal structure diagram
3)CMT76 back view

CMT76 wall-mounted carbon monoxide transmitter uses electrochemical principle to detect carbon monoxide in the air, with good selectivity and stability. Three output modes of current, voltage and RS485 are optional, wide voltage power supply and power supply ant-reverse connection protection, It is suitable for carbon monoxide gas monitoring in indoor air quality detection, air conditioners, air purifiers, underground parking lots and other occasions.

Features

- Multiple signal output types, suitable for various processing equipment
- Up to 5 years of service life
- The protection level is Ip6X

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Technical parameter

General

Basic information

Measured concentration	0-500ppm/0-1000ppm
Response time(T_{90})	≤15s
Accuracy	±5%F. S@25℃
Service life	>5 years

Operating conditions

Temperature	Working:-10...+50℃[+14...+122℉]
Working humidity	15%...90%RH
Work pressure	1atm(Standard Atmospheric Pressure)±10%
IP grade	IP6x

Electrical overview

Electrical properties	3-wired			4-wired
Output signal	4...20mA	0...5V	0...10V	RS485
Working voltage	10...30Vdc	10...30Vdc	16...30Vdc	10...30Vdc

Wiring instructions

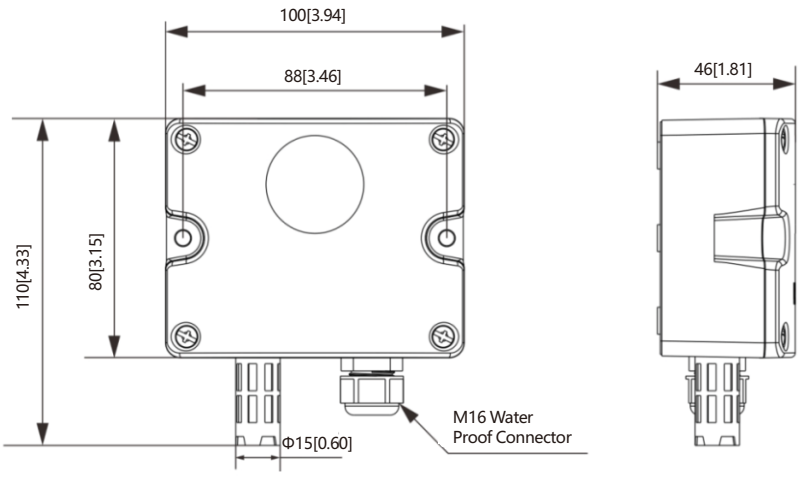
RS485 digital output type wiring

Power supply	Red	Positive power
	Black	Negative power
Communication	Green	485-A
	White	485-B

Voltage/Current analog output type wiring

Power supply	Red	Positive power
	Black	Negative power
Communication	Green	Voltage/Current output Positive
	White	Voltage/Current output negative

Dimensiones in mm(in)



Ordering information

Example part number:CMT76-2A4

Model CMT76 Wall-mounted Carbon Monoxide Transmitter ,Range 1000ppm,output 4...20mA.

C M T 7 6 - 2 A 4

① ② ③

① Model: CMT76

② Range

1	500ppm
2	1000ppm

③ Output

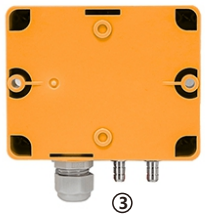
V0	0...5V
V10	0...10V
A4	4...20mA
RS	RS485/Modbus

Please make separate remarks for special requirements.

MICRO DIFFERENTIAL PRESSURE TRANSMITTER MODEL DPT51

①

②


③


④

1)DPT51 main view 2)DPT51 side view
3)DPT51 dorsal view

DPT51 differential pressure transmitter is the latest release. It has flexibility of multi-rangesensor, high function of single range sensor, and is ideal for industrial appl i cation. Thedifferential pressure transmitter has built in multiple optional pressure range and unitselection, and is easily to adjust through built-in DIP switch. The shell protect is Ip65 andequipped with stainless steel conduit for convenient wire arrangement. It is widely used inHVAC, energy management system, VAV and fan control, clean room pressure, smokehood control, oven pressurization, furnace ventilation, furnace ventilation control etc.

Features

- Rich signal output types
- Accuracy up to ±1%F.S
- The protection level is Ip65

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Technical parameter

General

Basic information

Measured medium	Air or Neutral gas
Measurement range	±100Pa,±1000Pa,±10000Pa
Accuracy	±1%F.S
Overload pressure	5kPa(DPT-6);10kPa(DPT-0);80kPa(DPT-2)
Response time	0.5s(Default)/1.0s/2s/4s
Pressure connection	Metal barbed interface,φ6.2mm
Housing material	UL94-V0/PC
Display	LCD backlight digital display

Operating conditions

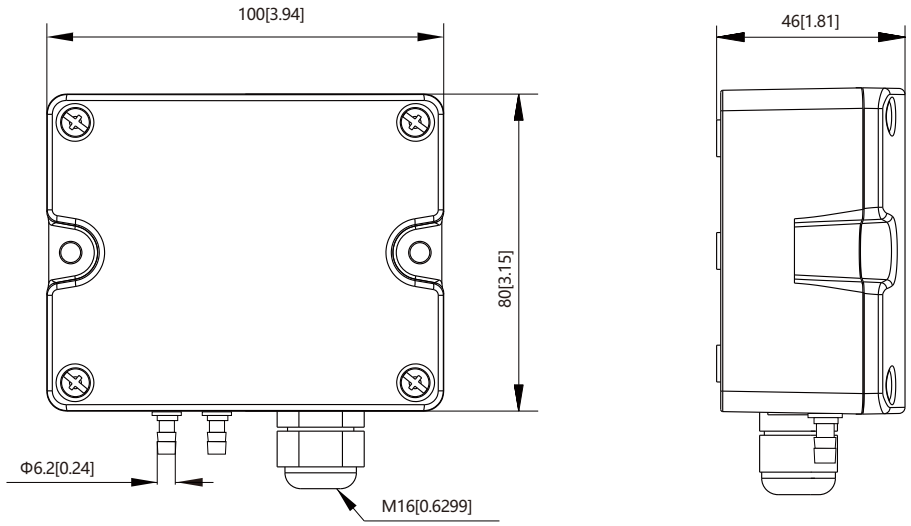
Temperature	0peration:-20...+70℃[-4...+158℉]
	Compensated:-10...+60℃[-14...+140℉]
	Storage:-40...+70℃[-40...+158℉]
IP grade	IP65

Electrical overview

Power consumption	≤1.5W
Communication	RS-485 standard interface,Modbus RTU protoco
Electromagnetic compatibility	EN 61326-1

Electrical properties	2-wired	3-wired	4-wired	6-wired
Output signal	4~20mA(No backlight)	0...5VDC/0...10VDC	RS485	4...20mA&0...10VDC
Power supply	12...30 VDC	12...30VDC/24VAC+20%	9...30VDC	12...30VDC/24VAC+20%

Dimensiones in mm(in)



Ordering information

Example part number:DPT51-6DA

Model DPT51 differential pressure transmitter,Measurement Range -100~100Pa,Display Wth display, Output 4...20mA and 0...10VDC(Simultaneous output).

D	P	T	5	1	-	6	D	A
①						②	③	④

①

Name
DPT51

②

Measurement Range	
6	-100...100Pa
0	-1000...1000Pa
2	-10000...10000Pa

③

Display	
D	Wth display
N	Without display

④

Output	
A	4...20mA and 0...10VDC(Simultaneous output)
B	4...20mA(two-wired)(without backlight)
C	0...10VDC(3-wired)
D	0...5VDC(3-wired)
E	RS-485 communication
E1	RS-485 communication(isolation output)

⑤

Accuracy
±1.0%FS

* Please make separate remarks for special requirements.

AIR VELOCITY TRANSMITTER MODEL ST81

①

②

③

1)ST81 main view 2)ST81 front view
3)ST81 side view

Based on heat conduction principle, the sensor probe of air velocity transmitter ST81is made of MEMS technology, which has the characteristics of high measurement accuracy, wide measurement range, good stability and strong environmental adaptability. It is an ideal choice for wind speed measurement in HVAC, duct air volume measurement, process and environmental control and other applications.

Features

- Widely used, suitable for pipeline, environmental control and other scenarios
- Accuracy up to 0.01m/s
- The protection level is IP65

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Range①	0-10m/s,0-15m/s,0-20m/s,0-30m/s
Resolution	0.01m/s
Accuracy	± (0.2m/s+3% of mv)(20℃,45%RH and 1013hPa)
Probe length	210mm(optional)
Display	Optional LCD display with unit display and backlight
Housing material	Shell PC, Probe Pa6

①Can be selected by jumper(Analog output version)

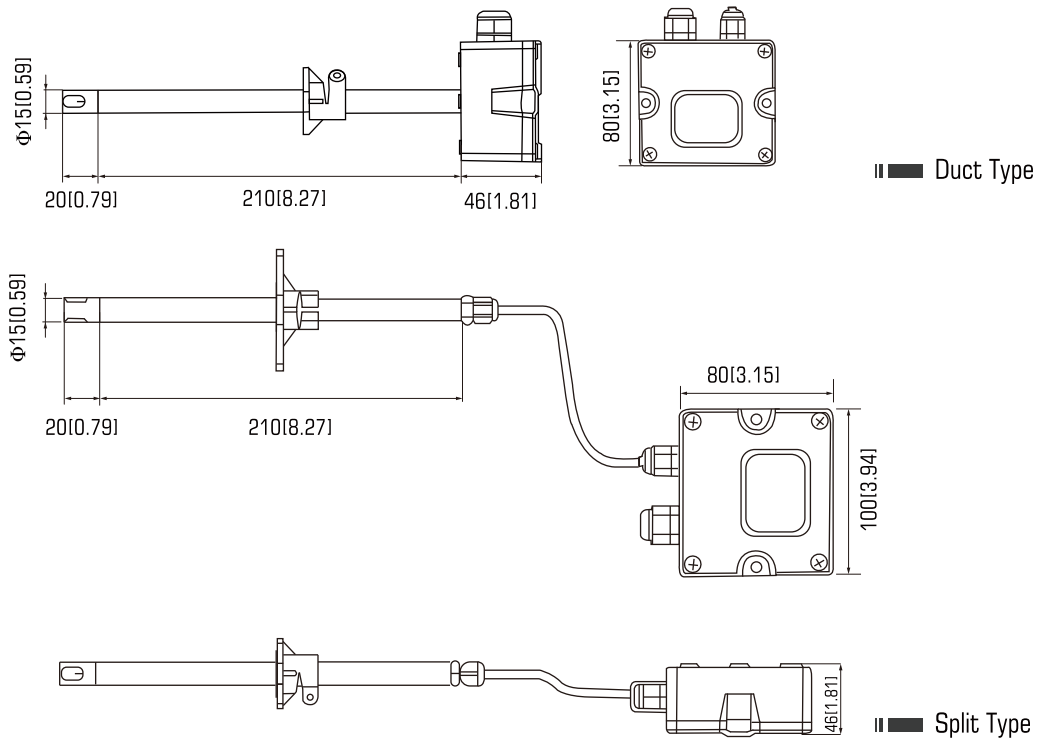
Operating conditions

Temperature	Working:-10...60℃[+14...+140℉]
	Storage:-20...80℃[-4...+176℉]
IP grade	Shell IP65,Probe IP20

Electrical overview

Working Voltage	24VAC/DC±20%
Output mode	RS485/Modbus,0...10VDC/4...20mA(3-wire)
Output load	≤500Ω/(Current output),≥2KΩ(Voltage output)
Electromagnetic compatibility	EN 61326-1

Dimensiones in mm(in)



Ordering information

Example part number:ST81-1V11D

Model ST81 Air Velocity Transmitter ,Range 0...10m/s,Output 0...10VDC/4...20mA,Installation method Duct Type Air Velocity Transmitter, Display Wth display.

S	T	8	1	-	1	V	1	1	D
①					②	③		④	⑤

①

Name
ST81

②

Range	
1	0...10m/s
2	0...15m/s
3	0...20m/s
4	0...30m/s
5	Customized

③

Output	
V1	0...10VDC/4...20mA
RS	RS485/Modbus

④

Installation method	
1	Duct Type Air Velocity Transmitter
2	Split Type Wind Speed Transmitter

⑤

Display	
D	Wth display
N	Without display

⑥

Probe length	
1	210mm
2	Customized

Please make separate remarks for special requirements.

ELECTROMAGNETIC FLOWMETER MODEL EFM61

The main function of the EFM61 electromagnetic flowmeter is to measure the flow of conductive fluid. It uses the principle of electromagnetic induction to calculate the flow rate of a conducting fluid by measuring the electromotive force induced by an applied magnetic field. Electromagnetic flowmeters can measure positive and negative flow, display instantaneous flow and cumulative flow, and are suitable for a variety of conductive media, such as liquids and liquid-solid two-phase suspension liquids.

Features

- High accuracy, Linearity and Stability.
- Good reliability and Anti-interference performance.
- Good pressure sealing and High intelligence.
- No pressure loss, lower requirements for straight pipe section.
- Good corrosion resistance and wear resistance.
- The converter can be in the same shape or separate form withthe sensor.
- Two-way measurement system, which can measure forward flow andreverse flow.
- Special production process and high quality materials are adopted toensure that the performance of products remains stable for a long time.

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HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Latus rectum	10...3000mm
Comprehensive precision	0.5
Nominal pressure	1.6MPa,1.0MPa,0.6MPa
Lining material	Neoprene rubber, polytetrafluoroethylene, polyammonia-vinegarrubber, polyperfluorinated ethylene propylene, PFA, ceramics, etc
Connecting flange material	Carbon steel,stainless steel (304,316,316L)
Transmission distance	Split type electromagnetic flowmeter. The sensor and converter are connected by a signal cable.the cable length should be less than 100m
Peak flow rate	15m/s

Operating conditions

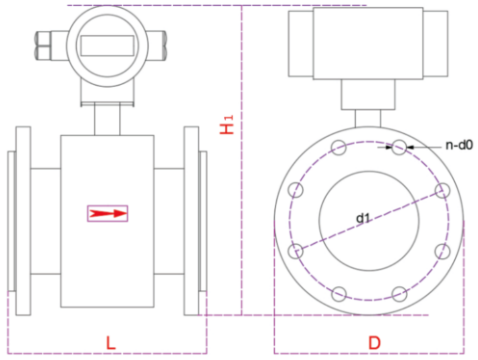
Temperature	Environmrnt:-25...60℃[-13...+140℉]
IP grade	IP65,IP68

Electrical overview

Output signal	4...20mA,HART,RS485
Power supply	220VAC,24VDC

Signal electrode form	Fixed, scraper type
Electrical connection	Terminal
Fluid conductivity	≥50μS/cm
Consumed power	< 20W
Electrode material	316L,HastelloyB,HastelloyG,Titanium, tantalum,platinum-iridium alloy, tungsten carbide
Ground ring material	Stainless steel 1Cr18Ni9Ti
Number of electrodes	Standard 3 electrodes (two measuring electrodes, one impact electrode)

Dimensiones in mm(in)



Ordering information

Example part number:EFM61-0.43111122LB

Model EFM61 electromagnetic flowmeter,Flange size (DN2200-DN3000),Lining material polyurethane， Electrode materials Stainless steel 0Cr18Ni12Mo2Ti, Shell protection Ip65,Explosion-proof marks Exdm IICT4 (No acetylene) (A shape,l P65,Magnetic bond or no display),Attachment None,Structure Eh A shape， Chinese and English Menu,Power 11-40VDC,Converter form LB Key,double line display,output standard,RS485,HART

E	F	M	6	1	-	0	.	4	3	1	1	1	1	2	2	L	B
①						②			③	④	⑤	⑥	⑦	⑧	⑨	⑩	

① Model

Model
EFM61

② Diameter

1.6	(DN10-DN200)
1.0	(DN250-DN1000)
0.6	(DN1200-DN2000)
0.4	(DN2200-DN3000)
XX	Special customized

③ Lining material

1	Teflon(HG)
2	Polychloroprene rubber
3	polyurethane
4	Polyperfluoroethylene propylene
5	And network PFA

④ Electrode materials

1	Stainless steel 0Cr18Ni12Mo2Ti
2	The type of alloyB
3	The type of alloyC
4	Titanium
5	Platinum-iridium alloy
6	Tantalum
7	Stainless steel coated with tungsten carbide

⑤ Shell protection

1	Ip65
2	IP68+1P65 (The sensor is polychloroprene rubber sensor IP68+ converter IP65 or polyurethane -explosion-proof separation type is optional)

⑥ Explosion-proof marks

0	None
1	Exdm IICT4 (No acetylene) (A shape,l P65,Magnetic bond or no display)
2	Exdm IICT4 (No acetylene) (separation type,IP65,Magnetic bond or no display)
3	Exdm IICT4 (No acetylene) (separation type,l P65,Converter in safe zone)

⑦ Attachment

0	None
1	Grounding electrode
2	Ground flange
3	Inlet protection flange
4	Electrode scraper mechanism

⑧ Structure

1	Erseparation type，Chinese and English Menu
2	Eh A shape，Chinese and English Menu
	Separate type special cable with meter 10M , More than 10 M needs to be customized.

⑨ Power

1	85-265V 45-400Hz
2	11-40VDC

⑩ Converter form

MA	MA Key,double line display,output standard
MB	MB Key,double line display,output standard,RS485
LA	LA Key,double line display, output standard
LB	LB Key,double line display,output standard,RS485,HART
AA	AA Key,English menu,double line display, output standard,RS232

Please make separate remarks for special requirements.

VORTEX FLOWMETER
MODEL VFM71

The working principle of vortex flowmeters is based on the Karman vortex principle, which states that when an object is placed in a fluid, alternating shedding vortices will occur on both sides of the object, a phenomenon known as the Karman vortex street. By detecting the frequency of these vortices, the flow rate of the fluid can be calculated. This flowmeter is suitable for measuring gas, liquid and steam and other media, widely used in petroleum, chemical, electric power, light industry and other industries.

Features

- High accuracy,linearity and stability
- Simple and firm structure,no moving parts, high reliability
- Good reliability and anti- interference performance.
- Wide range of applications, the flow of steam, gas and liguid can be measured.
- Smaller pressure loss, lowe roperating costand more energy saving

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Path	15...600mm

Path	Liquid (test medium, normal temperature water)		Gas (Test medium: 20 ℃, air under 101325Pa)	
(mm)	Standard	Extended		
15	0.8-6	0.5-8	6-40	5-50
20	1-8	0.6-12	8-50	6-60
25	1.5-12	0.8-16	10-80	8-120
40	2.5-30	2-40	25-200	20-300
50	3-50	2.5-60	30-300	25-500
65	5-80	4-100	50-500	40-800
80	8-120	6-160	80-800	60-1200
100	12-200	8-250	120-1200	100-2000
125	20-300	12-400	160-1600	150-3000
150	30-400	18-600	250-2500	200-4000
200	50-800	30-1200	400-4000	350-8000
250	80-1200	40-1600	600-6000	500-12000
300	100-1600	60-2500	1000-10000	600-16000
400	200-3000	120-5000	1600-16000	1000-25000
500	300-5000	200-8000	2500-25000	1600-40000
600	500-8000	300-10000	4000-40000	2500-60000

Maximum flow rate	10m/s
Comprehensive accuracy	1.0
Nominal pressure	4.0MPa,2.5MPa,1.6MPa,0.6MPa
Connection flange material	stainless steel (304,316,316L)

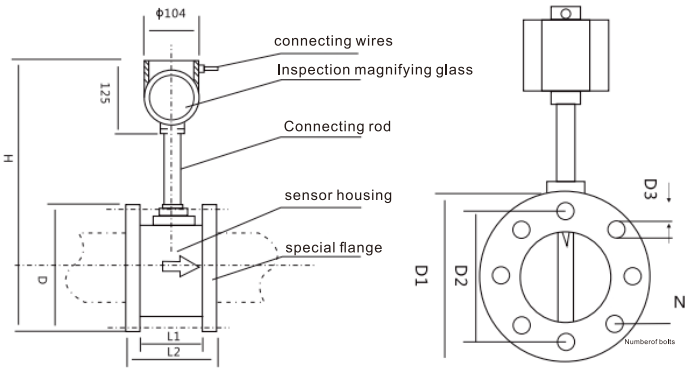
Operating conditions

Ambient temperature	-25...60℃[-13...+140℉]
IP grade	IP65

Electrical overview

Output signal	4...20mA,HART,RS485
Power supply	220VAC,24VDC
Electrical connection	Terminal
Fluid conductivity	≥50μS/cm
Consumed power	≤20W

Dimensiones in mm(in)



Ordering information

Example part number:VFM71-151312411111

Model VFM71 vortex flowmeter,Diameter DN 15mm,Flange material 304,Measured medium Steam,Temperature compensation No temperature compensation,Power supply 3.6V,Output signal Frequency / Pulse output,Display method LCD display momentarily/Cumulative flow,Accuracy 1%FS,Electrical connection Within M20*1.5,Pressure level 1.6MPa,Explosion-proof grade CT4.

V	F	M	7	1	-	1	5	1	3	1	2	4	1	1	1	1	1
①						②		③	④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫

① Name: VFM71

② Diameter: DN10...100...600

③ Flange material

1	304
2	316

④ Measured medium

1	Liquid
2	Gas
3	Steam

⑤ Temperature compensation

1	No temperature compensation
2	With temperature compensation

⑥ Power supply

1	24V DC
2	3.6V

⑦ Output signal

1	4...20mA two-wire system
2	4...20mA+ HA RT two-wire system
3	RS485/Modubus four wire-system
4	Frequency / Pulse output
5	Customizable

⑧ Display method

1	LCD display momentarily/Cumulative flow
2	Customizable

⑨ Accuracy

1	1%FS
2	1.5%FS

⑩ Electrical connection

1	Within M20*1.5
2	Customizable

⑪ Pressure level

1	1.6MPa
2	2.5MPa
3	4.0MPa
0	Customizable

⑫ Explosion-proof grade

1	CT4
2	CT6

Please make separate remarks for special requirements.

TURBINE FLOWMETER
MODEL TFM81

The working principle of turbine flowmeter is mainly based on the action of fluid inertia force. When the measured flow volume flows through the turbine, the inertia force of the fluid causes the turbine blades to be subjected to a torque, thus making the turbine spin. As the flow rate increases, the turbine spins faster, and by measuring the speed of the turbine, the flow rate of the fluid can be calculated.

Turbine flowmeters usually consist of a turbine, bearing, sensor and display device. When the fluid flows through the turbine, the turbine blade is rotated by the thrust of the fluid. The sensor detects the turbine speed and converts it into an electrical signal, and finally displays the flow value through the display device.

Features

- High precision linear stability
- Good reliability and anti-interference performance
- No zero drift, strong anti-interference ability

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HOUSTON TX 77041-5561

Technical parameter

General

Basic information

Path	10-500mm
Maximum flow rate	10m/s
Comprehensive accuracy	1.0
Nominal pressure	10MPa,6.3MPa,2.5MPa,1.6MPa
Connection flange material	stainless steel (304, 316,316L)

Operating conditions

Ambient temperature	-25...+60℃[-13...+140℉]
IP grade	IP67

Electrical overview

Output signal	4...20mA,HART,RS485
Power supply	220VAC,24VDC
Electrical connection	Terminal
Fluid conductivity	≥50μS/cm
Consumed power	≤20W

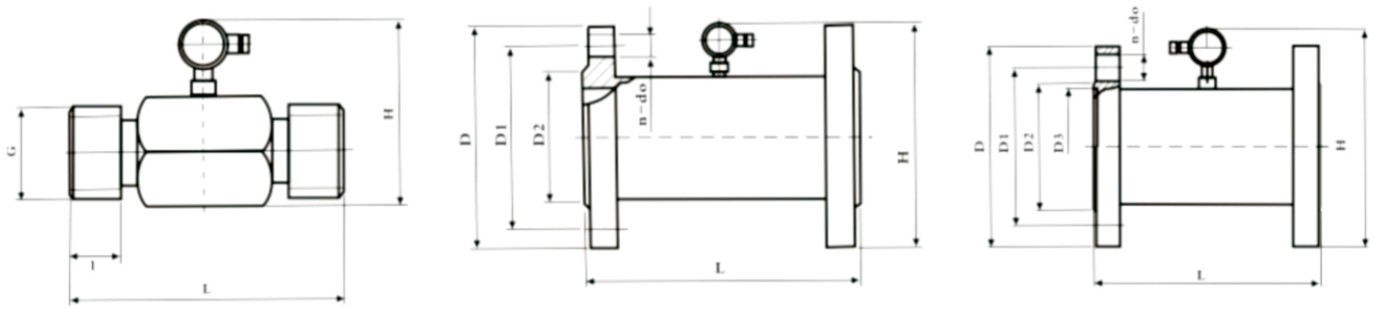
Diameter parameter liquid

Path	Flow range (m3/h)			Fluid Temperature Range (℃)		Nominal Pressure (Mpa)
(mm)	0.2	0.5	1.00	One-piece	Explosion-proof	
10		0.4-1.2	0.2-1.2	-20...+50 -20...+100	-20...70	6.3
15	12-4	0.6-6	0.4-6			2.5
25	3-10	1.2-12	1.2-12			6.3
40	8-25	3-30	3-30			16
50	12-40	5-50	5-50			
80	20-100	16-100	12-120			6.3
100	50-160	25-160	20-200			2.5
150	100-300	50-300	40-400			
200	200-600	100-600	80-800			
250	300-1000	160-1000	120-1200			
300		250-1600				2.5
400		400-2500				
500		600-4000				

Diameter parameter gas

Path (mm)	Flow range (m3/h)	Fluid Temperature Range (℃)		Minimum Allowable Fluid Density (kg/m³)	Nominal Pressure (Mpa)	Accuracy
		One-piece	Explosion-proof			
15	4-16	-20...+55 -20...+100	-20...+70	0.6	1.6 2.5 6.3	±1.5%
25	8-20					
40	20-100					
50	30-200					

Dimensiones in mm(in)



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HOUSTON TX 77041-5561

Ordering information

Example part number:TFM81-1531261182

Model TFM81 turbine flowmeter,Diameter Dn15,Nominal Pressure 1.6,Pipe Connection Method Flange connection,Output Signal 4...20mA Two wire, Power Supply +24VDC,Fluid Temperature (℃) -20...55,Shell Material Stainless steel,Structure Type Plug-in,Explosion-proof Registration d II Bt3.

T	F	M	8	1	-	1	5	3	1	2	6	1	1	8	2
①						②		③	④	⑤	⑥	⑦	⑧	⑨	⑩

①

Name
TFM81

②

Diameter
DN10...100...500

③

Nominal Pressure	
3	1.6
4	2.5
6	6.3
7	10

④

Pipe Connection Method	
1	Flange connection
3	Pipe thread connection
5	Clamp type connection

⑤

Output Signal	
2	4...20mA Two wire
3	Frequency (three-wire system)
4	Frequency (two-wire system)

⑥

Power Supply	
6	+24VDC
7	8...+24VDC

⑦

Fluid Temperature (℃)	
1	-20...55
2	-20...70
3	-20...120

⑧

Shell Material	
1	Stainless steel
2	Stainless steel and carbon steel flange

⑨

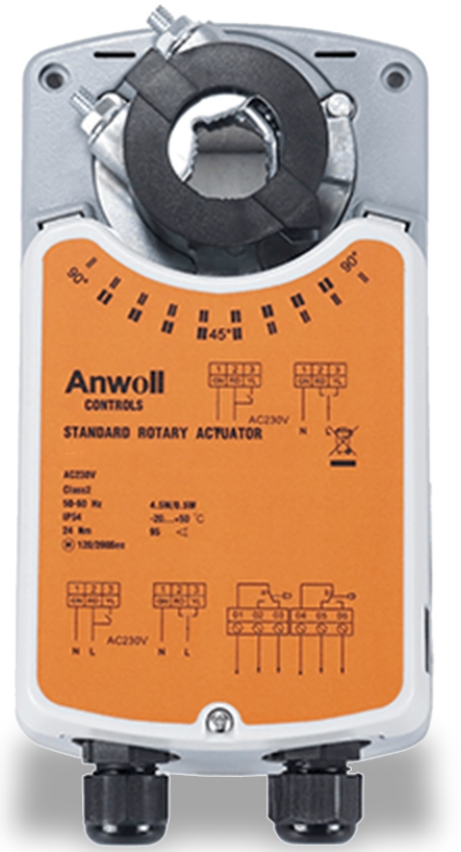
Structure Type	
1	One-piece
3	Bi-directional
8	Plug-in

⑩

Explosion-proof Registration	
0	Not explosion-proof
2	d II Bt3
4	ib II Ct3

Please make separate remarks for special requirements.

STANDARD ACTUATOR MODEL SA61



SA61 series electric damper actuator adopts imported DC motor/brushless motor to supply power energy, And it can offer 2NM~40NM torque, it can directly works on rotar y control of air system and water systems,and can realize signal control of voltage 0(2)-10V and current 0(4)-20mA also can provide mutual convertible current or voltage signal feedback ,It is easy to install and can be easily fixed on the square shaft, round shaft or other shaped damper shaft,This product has advantage of long life, low noise, and multi-functional intelligent control.The whole series of products are available with manual operation function. The protection grade of the product is IP54, and it's stable and efficient, with full overload protection function. All products are equipped with manual limit.

Features

- Suitable torque actuator is selected according to the throttle area
- The shaft Angle of the actuator can be manually adjusted
- Low power consumption

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Function parameter

torque	2Nm	4Nm	6Nm	8Nm	16Nm	24Nm	32Nm
suitable air door size	0.3m²	0.5m²	0.8m²	1.2m²	2.5m²	3.7m²	5.2m²

Rotation direction	Can be selected by DIP switch
manual adjustment	Actuator can be manually adjusted after pressing the gear set disengagement button
Nominal/Maximum Corner	90°/95°
noise level	46dBA (within 1 meter)
location indication	Rotation angle provided by position indicator
L×W×H/mm	detail see dimensional drawing
Minimum shaft length	> 50mm
Weight	<1.3 Kg

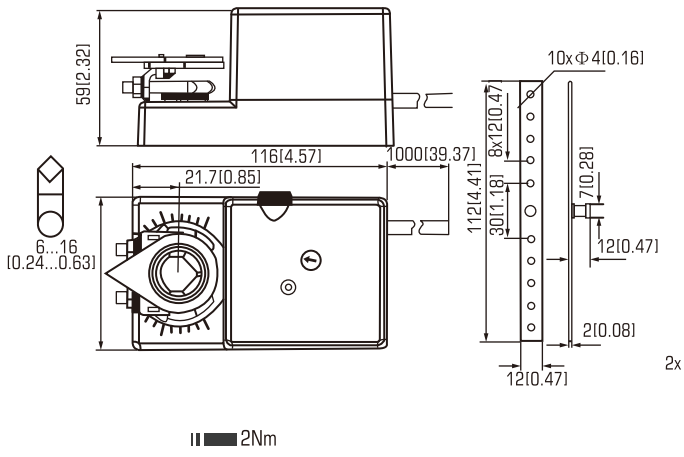
Operating conditions

Electrical grade	III (safety low voltage) II (double insulation)
IP grade	IP54
Working environment temperature	-20...+50℃[-4...+122℉]
Storage ambient temperature	-20...+50℃[-4...+122℉]
Temperature test	95% RH, non-condensing /EN 60730-1

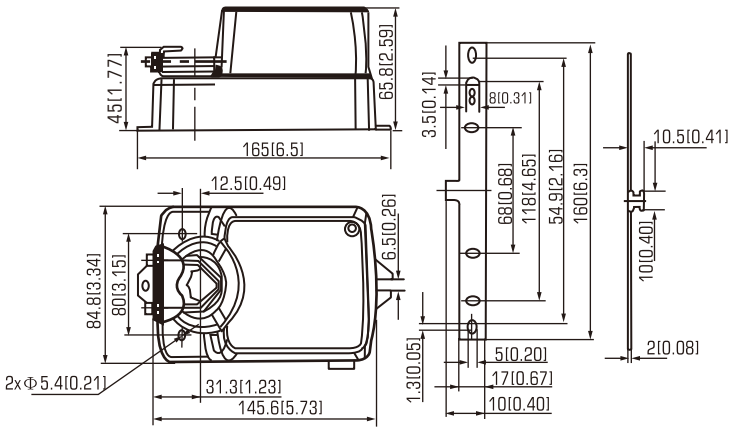
Electrical overview

Rated voltage	AC24V 50/60Hz DC24V /AC100...240V 50/60Hz
Rated voltage range	AC/DC19.2...28.8V /AC85...265V
Power consumption	Operating state 4.5w,Standby state 0.5W
Wire specification	0.5mm²
Terminal specification	Max 2mm²

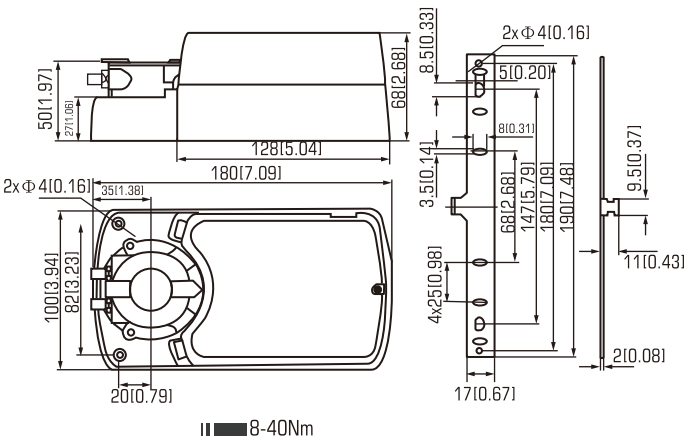
Dimensiones in mm(in)



2Nm



4-6Nm



8-40Nm

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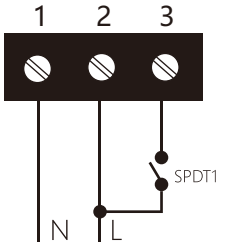
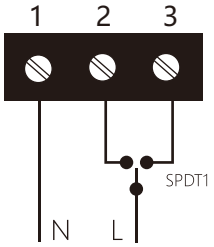
HOUSTON TX 77041-5561

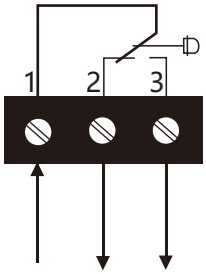
Wiring mode



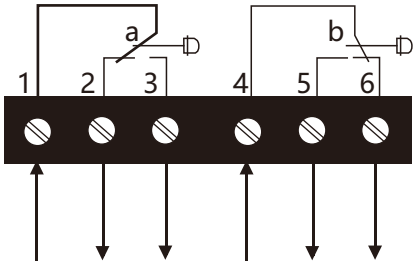
Two-point control wiring



Three-point control wiring



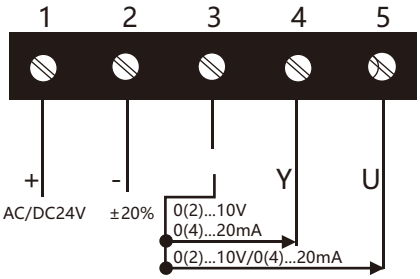
One set of auxiliary switch wiring methods



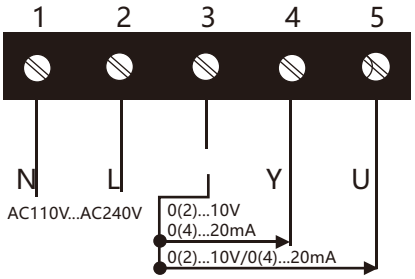
Two sets of auxiliary switch wiring methods

Switch outputconnection method, working Voltage:AC/DC 24V;AC100V...AC240V

Resistive load 3A 220V Inductive load 1.5A 220V



Volt0(0)...10V input resistance≥200KΩ
Current0(4)...20mA input resistance=500Ω
Analog wiring, the power supply
Voltage can be AC/DC 24V



Volt0(0)...10V input resistance≥200KΩ
Current0(4)...20mA input resistance=500Ω
Analog wiring, supply voltage
AC100V...AC240V

Ordering information

Model	Output Torque	Power Supply	Running Time	Control Signal	Optional F auxiliary switch
SA61-0224/230-K/KF	2N	24V/230V	20-25S	ON-OFF control	One set of auxiliar y switches
SA61-0224/230-M/MF	2N	24V/230V	20-25S	0(2)~10V/0(4)~20mA	One set of auxiliar y switches
SA61-0424/230-K/KF	4N	24V/230V	25-30S	ON-OFF control	Two sets of auxiliar y switches
SA61-0424/230-M/MF	4N	24V/230V	25-30S	0(2)~10V/0(4)~20mA	Two sets of auxiliar y switches
SA61-0624/230-K/KF	6N	24V/230V	25-30S	ON-OFF control	Two sets of auxiliar y switches
SA61-0624/230-M/MF	6N	24V/230V	25-30S	0(2)~10V/0(4)~20mA	Two sets of auxiliar y switches
SA61-0824/230-K/KF	8N	24V/230V	30-45S	ON-OFF control	Two sets of auxiliar y switches
SA61-0824/230-M/MF	8N	24V/230V	30-45S	0(2)~10V/0(4)~20mA	Two sets of auxiliar y switches
SA61-1624/230-K/KF	16N	24V/230V	30-45S	ON-OFF control	Two sets of auxiliar y switches
SA61-1624/230-M/MF	16N	24V/230V	30-45S	0(2)~10V/0(4)~20mA	Two sets of auxiliar y switches
SA61-2424/230-K/KF	24N	24V/230V	120-160S	ON-OFF control	Two sets of auxiliar y switches
SA61-2424/230-M/MF	24N	24V/230V	120-160S	0(2)~10V/0(4)~20mA	Two sets of auxiliar y switches
SA61-3224/230-K/KF	32N	24V/230V	160-200S	ON-OFF control	Two sets of auxiliar y switches
SA61-3224/230-M/MF	32N	24V/230V	160-200S	0(2)~10W/0(4) ~20mA	Two sets of auxiliar y switches
SA61-4024/230-K/KF	40N	24V/230V	200-220S	ON-OFF contro	Two sets of auxiliar y switches
SA61-4024/230-M/MF	40N	24V/230V	200-220S	l0(2)~10V/0(4)~20mA	Two sets of auxiliar y switches

Please make separate remarks for special requirements.

SPRING RESET DAMPER ACTUATOR MODEL SRA81

SRA81 series electric damper actuators adopt imported DC motor/brushless motor to provide power with torques of 5NM. It is widely used in building ventilation felds, which can realize mechanical reset when power off and electric start, providing more than 30000 times of repeated action.

Features

- Fast and reliable reset in case of power failure or emergency
- The actuator is equipped with a high-precision control system for precise execution and positioning

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Function parameter

Torque	5Nm
Suitable damper size	Under normal wind resistance, 1NM matches 0.1 square meter (indude airtight valve matching scheme)
Rotating direction	Manual adjustment available
Manual operation	Available in all series
Rotation angle	Max 95°. Full stroke can be adjusted by mechanical limit
Run time	Adjustable within the parameter range
Noise level	Motor running 46db, spring reset 62db
Position indication	mechanical indication
Dimension	See Dimension drawing
Length of Shaft	>50mm
Size of Shaft	10-20 Round Shaft 10x10..16x16 Round Shaft
Weight	<1.8kg

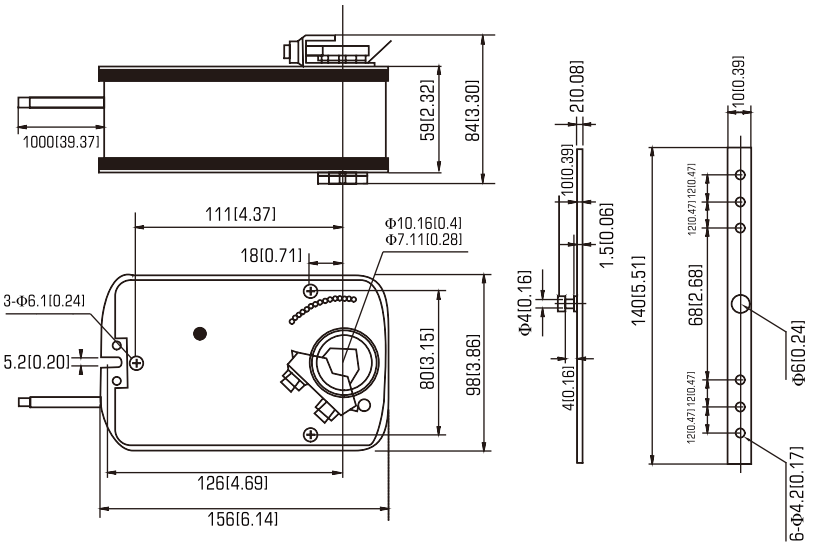
Operating conditions

Electrical grade	III (safety low voltage) II (double insulation)
IP grade	IP54
Working environment temperature	-20...+50℃[-4...122℉]
Storage ambient temperature	-30...+80℃[-22...176℉]
Temperature test	95% RH, non-condensing /EN 60730-1

Electrical overview

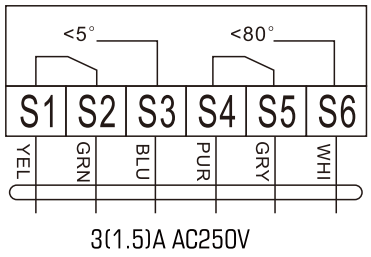
Rated voltage	AC24V 50/60Hz DC24V /AC100...240V 50/60Hz
Rated voltage range	AC/DC19.2...28.8V /AC85...265V
Power consumption	Run status standby status
Cable size	0.5mm²
Auxiliary switch rating	3A,AC230V

Dimensiones in mm(in)

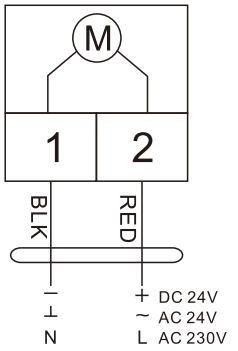


5Nm

Wiring diagram



3(1.5)A AC250V



ON-OFF type

Ordering information

Model	Output Torque	Power Supply	Running Time	Control Signal	Optional F auxiliary switch
SRA81-T0524-K/T1024-K	5N/10N	24V	Motor run time 70s; Spring reset time<20s	ON-OFF control	/
SRA81-T0524-KF/T1024-KF	5N/10N	24V		ON-OFF control	Two sets of auxiliary switches
SRA81-T05230-K/T10230-K	5N/10N	230V		ON-OFF control	/
SRA81-T05230-KF/T10230-KF	5N/10N	230V		ON-OFF control	Two sets of auxiliary switches

Please make separate remarks for special requirements.

ELECTRICAL REGULATING BALL VALVE MODEL EBV91

In HVAC and water system, ball valves are used as automatic control valves. It has adjustable flow ratio, high reliability and long ser vice life. It uses graphite to strengthen the valve body sealing ring and double EPDM valve stem sealing ring. It has integrated valve distribution butterfly inside and is not afraid of reverse pressure difference. It has the characteristic of equal percentage flow. Its high turn-off pressure is 1.4MPa. The rated working pressure is PN20. The maximum working pressure difference is 0.35Mpa. It has a manual actuator short-circuit push button .

Working temperature is -5 to 121 °C. It is suitable for central air conditioning, hot and cold water supply system, steam humidification, etc.

Features

- The electric ball valve actuator has the characteristics of quick switching, which can realize the opening and closing of the valve in a short time
- The fluid resistance of the electric ball valve actuator is small, which can reduce the pressure loss of fluid in the pipeline and improve the overall efficiency of the pipeline

ANWOLL USA
5634 GRAND FLORAL BLVD
HOUSTON TX 77041-5561

Technical parameter

General

Function parameter

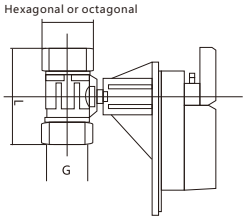
Diameter range	DN15-DN150
Connection mode	DN15-DN50(female thread connection) DN65-DN150(flanged connection)
Adjustable ratio of valve	>100
Leakage rat	No leakage from the factory
Max. allowable pressure difference	0.35Mpa
Max. cutoff pressure difference	1.4Mpa
Rotation angle	0...90°
Installation position	Vertical installation
Flow characteristics	Equal percentage

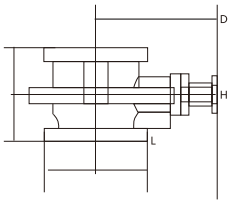
Bearing pressure of valve body	1.6M paflang 2.0Mpa screw thread
Material of valve body	Forged brass (thread) nodular cast iron (flange)
Valve core material	304 stainless steel
Valve stem material	304 stainless steel
Sealing ring	EPDM

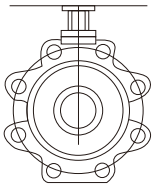
Operating conditions

Medium	Hot and cold water, unsaturated steam, 50% ethanol water, etc.
Temperature	Medium:-5...+120℃[+23...+248℉]

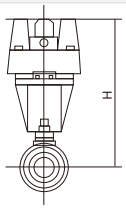
Dimensiones in mm







DN65-150



DN15-50

Model	G	H(mm)	H1(mm)	L(mm)	Model	Flange indexing circle	L(mm)	D(mm)	H(mm)	n-d
DN 15	G1/2	184	37.5	60	DN 65	145	97	105	136	4-18
DN 20	G3/4	184	44	73	DN 80	160	108	120	140	8-18
DN 25	G1	189	47	89	DN 100	175	120	145	104	8-18
DN 32	G1-1/4	199	52.5	102.5	DN 125	200	145	175	115	8-18
DN 40	G1-1/2	208	57	113	DN 150	230	165	205	138	8-18
DN 50	G2	219	62	127.5						

Ordering information

Model		Diameter	Two-way flow	Power supply	Control signal	Fauxiliary switch	Bracket	Actuator
Two-way	Three-way							
EBV91 15-V	EBV91 15-Y	DN 15	4.0	AC/DC24V/230V	switch/adjust	one set	High platform ball valve bracket with packing / short ball valve bracket with packing	4NM
EBV91 20-V	EBV91 20-Y	DN 20	4.0	AC/DC24V/230V	switch/adjust	one set	High platform ball valve bracket with packing / short ball valve bracket with packing	4NM
EBV91 25-V	EBV91 25-Y	DN 25	10.0	AC/DC24V/230V	switch/adjust	two sets	High platform ball valve bracket with packing / short ball valve bracket with packing	6NM
EBV91 32-V	EBV91 32-Y	DN 32	16.0	AC/DC24V/230V	switch/adjust	two sets	High platform ball valve bracket with packing / short ball valve bracket with packing	6NM
EBV91 40-V	EBV91 40-Y	DN 40	25.0	AC/DC24V/230V	switch/adjust	two sets	High platform ball valve bracket with packing / short ball valve bracket with packing	6NM
EBV91 50-V	EBV91 50-Y	DN 50	40.0	AC/DC24V/230V	switch/adjust	two sets	High platform ball valve bracket with packing / short ball valve bracket with packing	6NM
EBV91 65-V	/	DN 65	63.0	AC/DC24V/230V	switch/adjust	two sets	High platform ball valve bracket with packing	16NM
EBV91 80-V	/	DN 80	100.0	AC/DC24V/230V	switch/adjust	two sets	High platform ball valve bracket with packing	16NM
EBV91 100-V	/	DN 100	160.0	AC/DC24V/230V	switch/adjust	two sets	Ball valve bracket with packaging	24NM
EBV91 125-V	/	DN 125	250.0	AC/DC24V/230V	switch/adjust	two sets	Ball valve bracket with packaging	24NM
EBV91 150-V	/	DN 150	400.0	AC/DC24V/230V	switch/adjust	two sets	Ball valve bracket with packaging	32NM

Anwoll
CONTROLS

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