PRESSURE CONTROLS





■ Introduction

PX series pressure control is a newly developed high-precision pressure control series that improves the structure and materials of the parts to make the repeatability and durability of the products higher.

PX series pressure controller is an automatic controller that responds to pressure signals. It is widely used as a pressure protection controller in refrigeration and air conditioning systems. When the compressor discharge pressure exceeds the setting value or the suction pressure lower than the setting value, the pressure controller automatically disconnects the power of control circuit , causing the compressor to stop and providing protection.

This series of products has been certified by CE, RoHs and REACH.

■ Technical Parameters

- Ambient temperature: -30 ~ +65°C
- Medium temperature: -30 ~ +120°C
- Applicable medium: R22、R407C、R134a、R404A、R410A、A2L、Does not attack copper alloy fluids and gases and oils with a viscosity less than 2 degrees Engen
- Protection level: IP20、IP44、IP65
- Mechanical Durability: 300,000 Cycles
- Accuracy: ≤ 5%

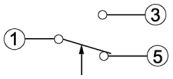
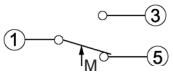
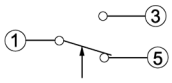
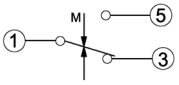
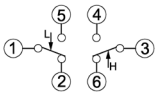
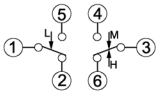
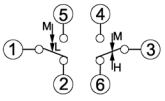
■ Type & Data

Symbol	Model	Low pressure		High pressure		Reset form				Test pressure	
		Pressure adjusting range		Pressure adjusting range		L.P.		H.P.		L.P.	H.P.
		MPa		MPa		Auto.	Manual	Auto.	Manual	MPa	MPa
Single group of low pressure	PX6E	−0.03~0.7	0.06~0.4			●				1.7	
	PX6ME		⩽ 0.1				●				
Single group of high pressure	PX16DE			0.3~1.7	0.2~0.5			●			3.3
	PX20DE			0.7~2	0.15~0.6			●			2.5
	PX30DE			0.7~3.1	0.2~0.8			●			3.5
	PX30ME			0.7~3.1	⩾ 0.2				●		
	PX45DLE			1~4.5	0.5~1.5			●			5
	PX45MLE			1~4.5	⩽ 0.8				●		
Two groups of high and low pressure	PX830E	−0.03~0.7	0.06~0.4	0.7~3.1	0.2~0.8	●		●		1.7	3.5
	PX830HME				⩾ 0.2	●			●		
	PX830HLME		⩽ 0.1				●		●		
	PX745E		0.06~0.4	1~4.5	0.5~1.5	●		●			5
	PX745HME				⩽ 0.8				●		
	PX1245LE	0.2~1.2	0.1~0.5	1~4.5	⩽ 0.8	●		●		2.5	5
	PX1245LHME				⩾ 0.5				●		
	PX1245LHLME		⩾ 0.1				●				

■ Technical data

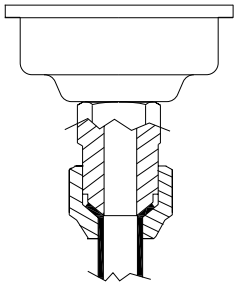
Rated current \ Rated voltage		A.C.110	A.C.220
Non-induced current		24	16
Induced current	Full load current	24	16
	Instantaneous current	114	72

■ Contact form

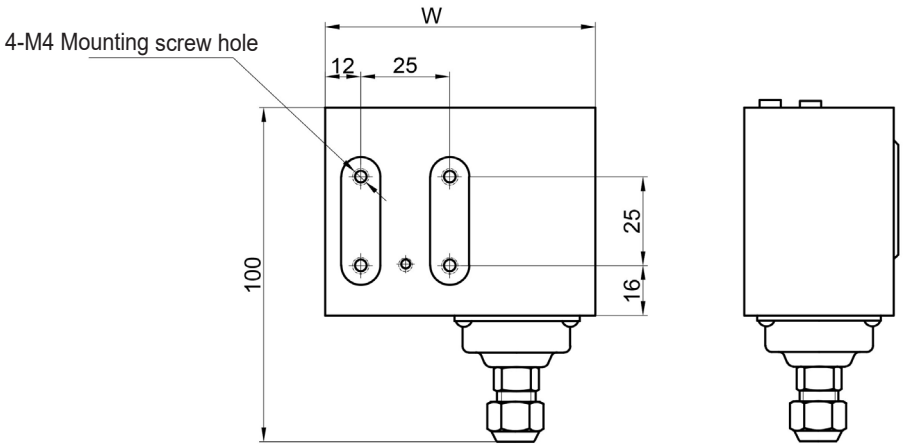
Form	Mode	Reset	Contact Form	Remark
Single group of low pressure	PX6E,PCX6E	automatic		↑: Indicates the direction of pressure rise
	PX6ME,PCX6ME	Manual		↑: Indicates the direction of pressure rise ↑ M: Indicates the direction of manual reset
Single group of high pressure	PX20DE,PCX20DE PX30DE,PCX30DE	automatic		↑: Indicates the direction of pressure rise
	PX30ME,PCX30ME	Manual		↑: Indicates the direction of pressure rise ↑ M: Indicates the direction of manual reset
Two group of high and low pressure	PX830E	automatic		↑ L: Indicates the direction in which the low pressure rises ↑ H: Indicates the direction in which the high pressure rises
	PX830HME	Low pressure automatic High pressure manual		↑ L: Indicates the direction in which the low pressure rises ↑ H: Indicates the direction in which the high pressure rises ↑ M: Indicates the direction of manual reset
	PX830HLME	High and Low pressure manual		↑ L: Indicates the direction in which the low pressure rises ↑ H: Indicates the direction in which the high pressure rises ↑ M: Indicates the direction of manual reset

■ Connection Type

- American thread 7/16-20UNF 1/4" speaker tube model suffix plus E
- Metric thread M12×1.25 Φ6 speaker tube

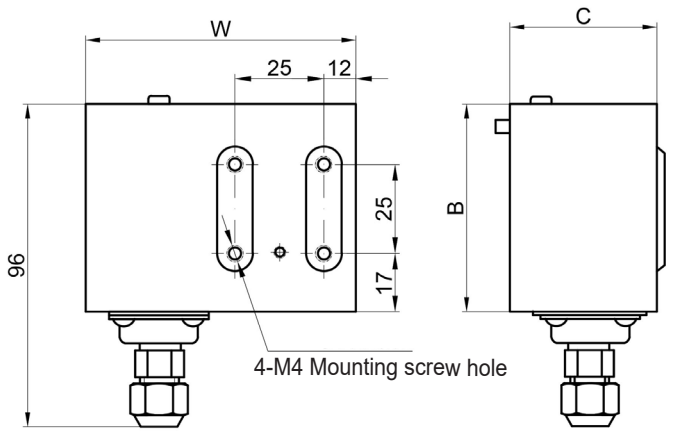


■ Dimensions

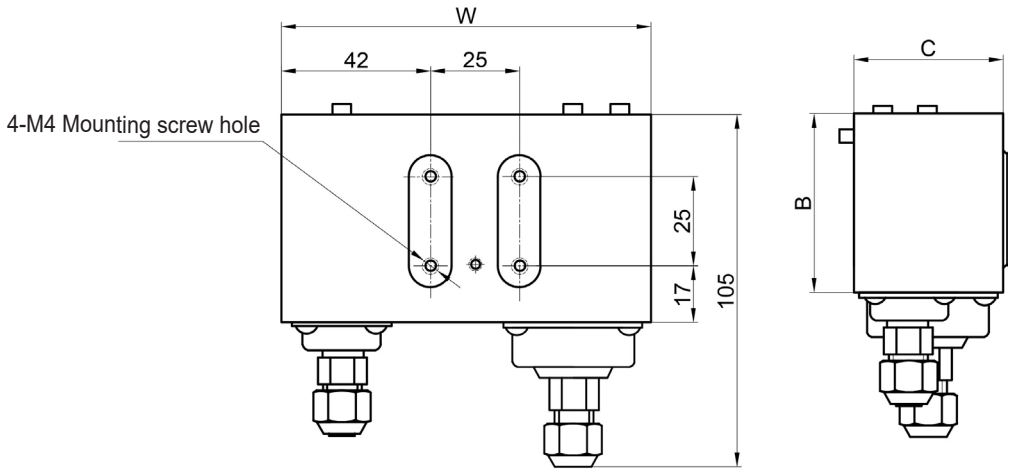


Single group automatic

Series		W	L
Low pressure	PX	80	108
	PCX	68	
Single group high pressure (differential pressure adjustment)	PXX	80	100
	PCX	68	



Single group manual



Dual group automatic / manual



■ Introduction

The PC series pressure controls is an automatic control device that operates under pressure signals.In the refrigeration device, when the compressor discharge pressure exceeds the set value or the suction pressure is lower than the set value,the pressure controls automatically cuts off the circuit to stop the compressor and provide safety protection. In addition to the refrigeration system,the PC series pressure controls can be used for safety protection on pumps, fire protection, boilers, hydraulics, ironing, vacuum and other devices. The PC series pressure controls is equipped with single-pole double-throw, double-pole double-throw and double-pole single-throw sensitive micro-switches to ensure reliable and fast switching of the pressure control.

--PC series pressure controls have obtained: CE, Rohs, UL and other certifications.

---Mechanical durability: 100,000 cycles.

■ Type & Data

Symbol	Model	Low pressure				High pressure				Reset		Max.testing pressure			
		Adjust range		Differential		Adjust range		Differential		L.P.	H.P.	L.P.		H.P.	
		MPa	psi	MPa	psi	MPa	psi	MPa	psi			MPa	psi	MPa	psi
Single GroupLow pressure (L.P.)	PC2	0.05 ~ 0.2	7.25 ~ 29	0.04 ~ 0.1	5.8~14.5					Auto		1.7	246.5		
	PC3	–0.05 ~ 0.3	–7.25~43.5	0.05 ~ 0.2	7.25~29					Auto		1.7	246.5		
	PC6	–0.05 ~ 0.6	–7.25~87	0.1 ~ 0.4	14.5~58					Auto		1.7	246.5		
	PC6M	–0.05 ~ 0.6	–7.25~87	Fixed ⩽ 0.2	Fixed ⩽ 29					Manual		1.7	246.5		
	PC10	0.1 ~ 1.0	14.5~145	0.1 ~ 0.3	14.5~43.5					Auto		1.7	246.5		
	P6W–12S	0.05 ~ 0.2	7.25~29	0.04 ~ 0.1	5.8~14.5					Auto		1.7	246.5		
	P6W–12D	0.05 ~ 0.2	7.25~29	⩽ 0.04	⩽ 5.8					Auto		1.7	246.5		
	P12L	0.2 ~ 1.2	29~174	0.1 ~ 0.5	14.5 ~ 72.5					Auto		2.5	362.5		
	P760	–0.1 ~ 0	–14.5~0							Auto		1.7	246.5		
Single GroupHigh pressure (H.P.)	PC12D					0.2 ~ 1.2	29~174	0.1 ~ 0.5	14.5 ~ 72.5		Auto			3.3	471
	PC16D					0.3 ~ 1.7	43.5~246.5	0.2 ~ 0.5	29 ~ 72.5		Auto			3.3	471
	PC20D					0.4 ~ 2.0	58~290	0.2 ~ 0.5	29 ~ 72.5		Auto			3.3	471
	PC30D					0.5 ~ 3.0	72.5~435	0.5 ~ 1.0	72.5~145		Auto			3.3	471
	PC30					1.0 ~ 3.0	145~435	固定⩽ 0.6	固定⩽ 87		Auto			3.3	471
	PC30M					1.0 ~ 3.0	145~435	固定⩽ 0.6	固定⩽ 87		Manual			3.3	471
	P45L					1.0 ~ 4.5	145~652.5	固定⩽ 0.8	固定⩽ 116		Auto			4.8	696
	P45DL					1.0 ~ 4.5	145~652.5	0.5 ~ 1.5	72.5~217.5		Auto			4.8	696
Dual group high and low pressure	P830	–0.05 ~ 0.6	–7.25~87	0.1 ~ 0.4	14.5~5.8	1.0 ~ 3.0	145~435	固定⩽ 0.6	固定⩽ 87	Auto	Auto	1.7	246.5	3.3	471
	P830HM	–0.05 ~ 0.6	–7.25~87	0.1 ~ 0.4	14.5~5.8	1.0 ~ 3.0	145~435	固定⩽ 0.6	固定⩽ 87	Auto	Manual	1.7	246.5	3.3	471
	P830HLM	–0.05 ~ 0.6	–7.25~87	Fixed ⩽ 0.2	Fixed ⩽ 29	1.0 ~ 3.0	145~435	固定⩽ 0.6	固定⩽ 87	Manual	Manual	1.7	246.5	3.3	471
	P1245L	0.2 ~ 1.2	29~174	0.1 ~ 0.5	14.5 ~ 72.5	1.2 ~ 4.5	174~652.5	固定⩽ 0.8	固定⩽ 116	Auto	Auto	2.5	362.5	3.3	696
	P1245LHM	0.2 ~ 1.2	29~174	0.1 ~ 0.5	14.5 ~ 72.5	1.2 ~ 4.5	174~652.5	固定⩽ 0.8	固定⩽ 116	Auto	Manual	2.5	362.5	4.8	696
	P1245LHLM	0.2 ~ 1.2	29~174	Fixed ⩽ 0.5	Fixed ⩽ 72.5	1.2 ~ 4.5	174~652.5	固定⩽ 0.8	固定⩽ 116	Manual	Manual	2.5	362.5	4.8	696

Remark: The minumum differential pressure must be less than the minumum lower limit of the adjust range.

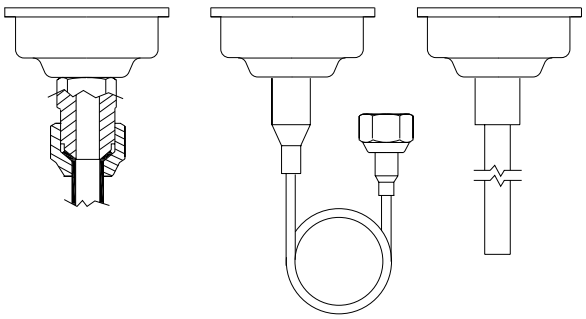
■ Technical Parameters

- Ambient temperature: -20~+65°C
- Medium temperature: -20~+120°C
- Applicable medium: R22、R407C、R134a、R404A、model suffix L is applicable to R410A，as well as medium that do not corrode copper alloys and oils with a viscosity of less than 2 degrees Engen .
- Protection level: Without dust cover IP20，With dust cover IP44 ，With complete protective cover IP65

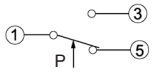
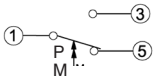
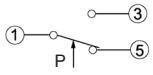
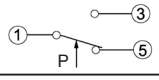
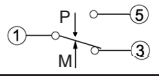
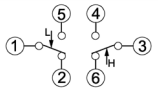
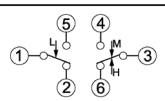
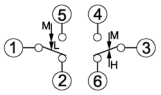
■ Mounting plate (Unit: mm)

Rated current \ Rated voltage		A.C.110	A.C.220
Non-induced current		22	12
Induced current	Full load current	24	12
	Instantaneous current	144	72

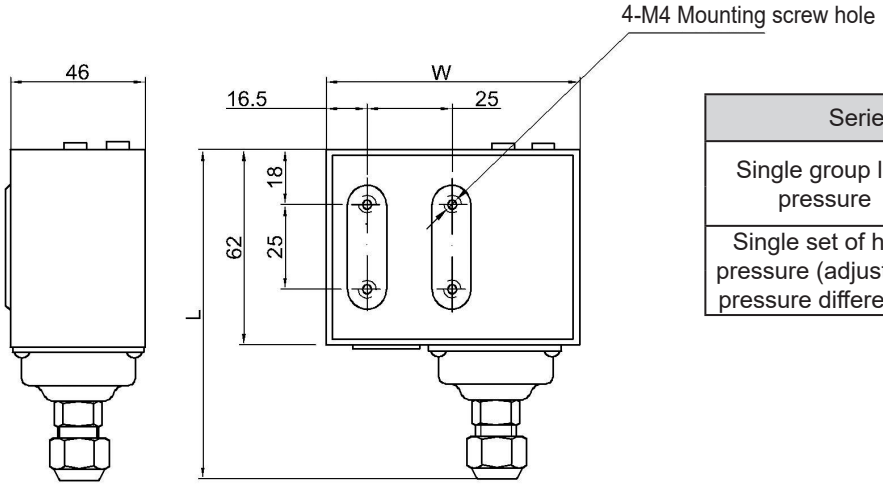
■ Connection form



■ Contact form

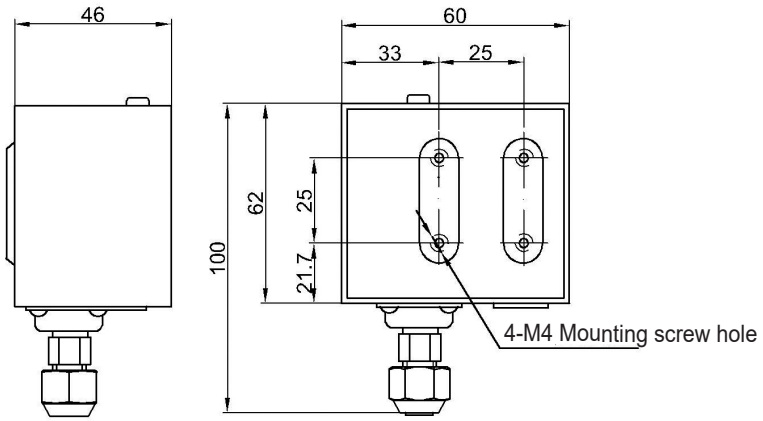
Symbol	Mode	Reset	Contact Form	Remarks
Low pressure (L.P.)	P/PC2、P/PC3、P/PC6、P/PC10	Auto reset		↑：Direction of rising pressure ↑ M：Manual reset direction H:high pressure L:low pressure
Low pressure (L.P.)	P/PC6M	Manual reset		
pressure (H.P.)	P/PC12D、P/PC16D P/PC20D、P/PC30D P/PC12L、P/PC45DL	Auto reset		
pressure (H.P.)	P/PC30、P/PC45L	Auto reset		
pressure (H.P.)	P/PC30M	Manual reset		
Dual pressure	P830、P1245L	Auto reset		
Dual pressure	P830HM、P1245LHM	L.P.:Auto reset H.P.:Manual reset		
Dual pressure	P830HLM、P1245LHLM	L.P.:Auto reset H.P.:Manual reset		

■ Dimensions (Unit: mm)

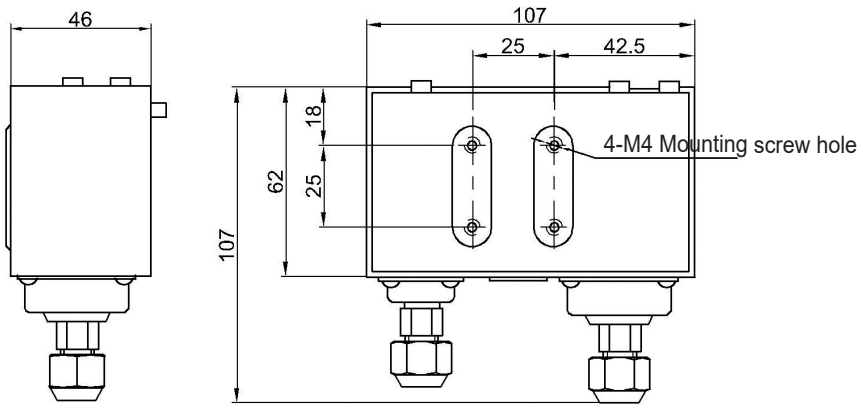


Series		W	L
Single group low pressure	P	80	108
	PC	68	
Single set of high pressure (adjustable pressure difference)	P	80	100
	PC	68	

Single set of high pressure/Low pressure
(adjustable pressure difference)

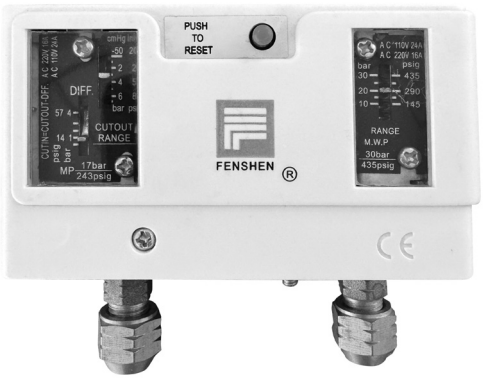


Single group high voltage PC30



Double group P830 series





■ Introduction

The PS series pressure controllers have been improved on the basis of the original P/PC series pressure controls to make them more compact and more reasonable, thus further optimizing product costs and providing multiple options for small units. It is an automatic pressure control device that operates under pressure signals. In the system, when the compressor discharge pressure exceeds the set value or the suction pressure lower than the set value, it automatically cuts off the circuit, and stops the compressor for safety protection. In addition to being used in refrigeration systems, it is also widely applied in industries such as pumps, fire fighting, boilers, hydraulics, ironing, and vacuum systems. The PS series pressure controllers are equipped with single-pole double-throw (SPDT) or double-pole double-throw (DPDT) micro switches.

■ Technical data

- Ambient temperature: -20 ~ +65°C
- Medium temperature: -20 ~ +120°C
- Cable entry hole: Φ15
- Applicable medium: R22、R407C、R134a、R404A、Does not attack copper alloy fluids and gases and oils with a viscosity less than 2 degrees Engen
- Protection level: IP20

■ Type & Data

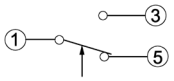
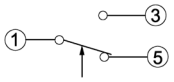
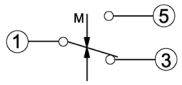
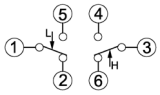
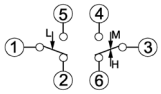
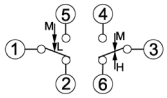
Symbol	Model	Low pressure				High pressure				Reset		Max.testing pressure			
		Adjust range		Differential		Adjust range		Differential		L.P.	H.P.	L.P.		H.P.	
		MPa	psi	MPa	psi	MPa	psi	MPa	psi			MPa	psi	MPa	psi
Low pressure (L.P.)	PS2	0.05 ~ 0.2	7.25 ~ 29	0.04 ~ 0.1	5.8~14.5					Auto.		1.7	246.5		
	PS3	0 ~ 0.3	-7.25~43.5	0.05 ~ 0.2	7.25~29					Auto.		1.7	246.5		
	PS6	0 ~ 0.6	-7.25~87	0.1 ~ 0.4	14.5~58					Auto.		1.7	246.5		
	PS10	0.1 ~ 1.0	14.5~145	0.1 ~ 0.3	14.5~43.5					Auto.		1.7	246.5		
High pressure (H.P.)	PS12D					0.2 ~ 1.2	29~174	0.1 ~ 0.5	14.5 ~ 72.5		Auto.			3.3	471
	PS16D					0.3 ~ 1.7	43.5~246.5	0.2 ~ 0.5	29 ~ 72.5		Auto.			3.3	471
	PS20D					0.4 ~ 2.0	58~290	0.2 ~ 0.5	29 ~ 72.5		Auto.			3.3	471
	PS30D					0.5 ~ 3.0	72.5~435	0.5 ~ 1.0	72.5 ~ 145		Auto.			3.3	471
	PS30M					1.0 ~ 3.0	145~435	Fixed≤0.6	Fixed≤87		Manual			3.3	471
Dual pressure	PS830	-0.05 ~ 0.6	-7.25~87	0.1 ~ 0.4	14.5~58	1.0 ~ 3.0	145~435	Fixed≤0.6	Fixed≤87	Auto.	Auto.	1.7	246.5	3.3	471
	PS830HM	-0.05 ~ 0.6	-7.25~87	0.1 ~ 0.4	14.5~58	1.0 ~ 3.0	145~435	Fixed≤0.6	Fixed≤87	Auto.	Manual	1.7	246.5	3.3	471
	PS830HLM	-0.05 ~ 0.6	-7.25~87	Fixed≤0.2	Fixed≤29	1.0 ~ 3.0	145~435	Fixed≤0.6	Fixed≤87	Manual	Manual	1.7	246.5	3.3	471

Remark: The minumum differential pressure must be less than the minumum lower limit of the adjust range.

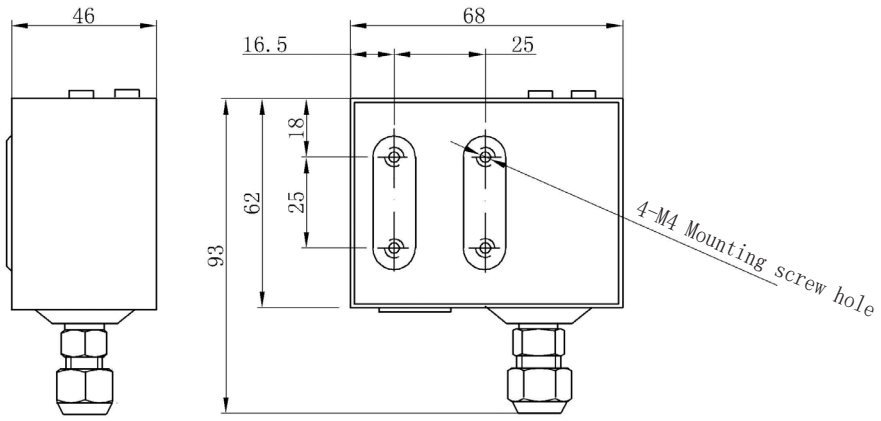
■ Technical data

Rated current \ Rated voltage		A.C.110	A.C.220
Non-induced current		24	12
Induced current	Full load current	24	12
	Instantaneous current	144	72

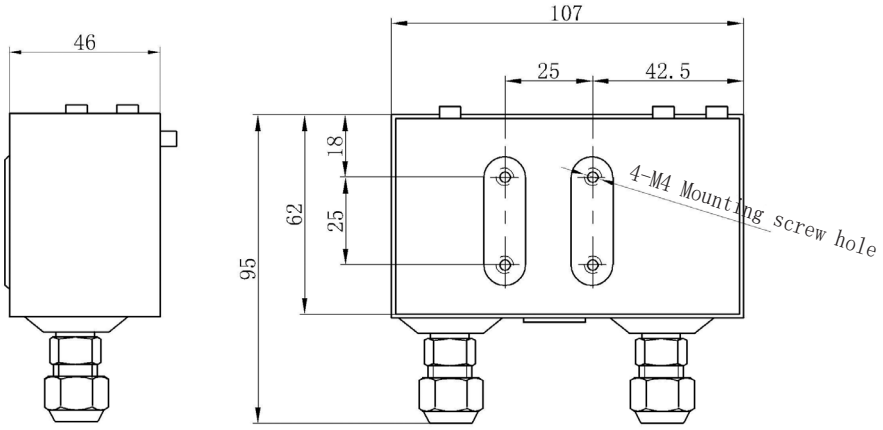
■ Contact form

Symbol	Mode	Reset	Contact Form	Instruction
Low pressure (L.P.)	PS2，PS3 PS6，PS10	Auto reset		↑：Direction of rising pressure
High pressure (H.P.)	PS12，PS16 PS20，PS30	Auto reset		↑：Direction of rising pressure
	PS30M	Manual reset		↑：Direction of rising pressure ↑M：Manual reset direction
Dual pressure	PS830	Auto reset		↑L：Direction of rising pressure at low pressure side ↑H：Direction of rising pressure at high pressure side
	PS830HM	L.P.:Auto reset H.P.:Manual reset		↑L：Direction of rising pressure at low pressure side ↑H：Direction of rising pressure at high pressure side ↑M：Manual reset direction
	P830HLM	L.P.:Manual reset H.P.:Manual reset		↑L：Direction of rising pressure at low pressure side ↑H：Direction of rising pressure at high pressure side ↑M：Manual reset direction

■ Dimensions



Single group series



Two-group series



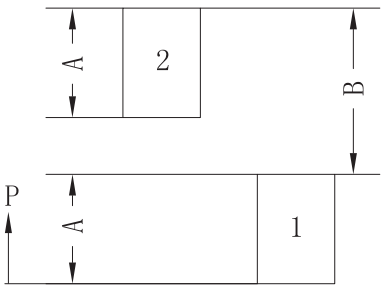

■ Introduction

P30D-3S (2S) three (two) grade pressure controller with three (two) single pole double throw switch, suitable for a variety of heating, ventilation, refrigeration and air conditioning, condenser fan, air compressors, pumps and other energy discharge automatic charge control. It can be used as three (two) level heating, three (two) level cooling and three (two) level water control purposes, to make rational use of energy, saving energy.

■ Technical parameter

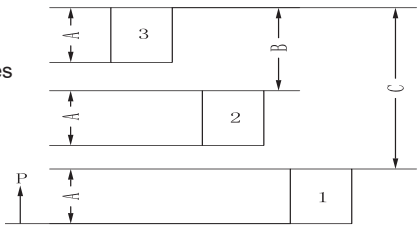
working range		0.5 ~ 3.0MPa
Differential	Each Level	0.2MPa
	Interstage	0.1 ~ 0.3MPa (setting according to customer requirements)
Electrical parameters	resistive load，AC voltage 220V， rated current 5A	

■ Two grade pressure schematic



A) per-stage differential
B) differential between poles
AP) pressure rise direction
A1) First Grade
A2) Second Grade

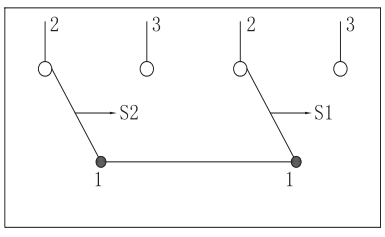
■ Three grade pressure schematic



A) per-stage differential
B) Two grade pressure controller
C) Three grade pressure controller
AP) pressure rise direction
1) First Grade
2) Second Grade
3) Third Grade

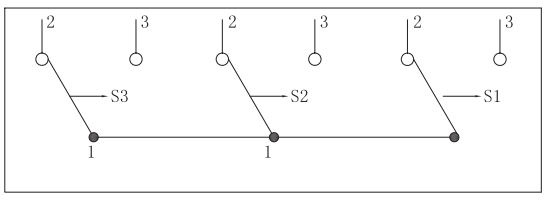
■ Contact form

Two grade pressure controller



When pressure increases, contact 1-3 closes

Three grade pressure controller



When pressure increases, contact 1-3 closes



■ Introduction

P760 pressure control is a pressure protection equipment which is specially designed for refrigeration or other mechanical system with negative pressure vacuum degree control. It can prevent the air leak into the system due to low vacuum from breakdown. It is an automatic controller, which works when receives the pressure signal. In refrigeration equipment, when the pressure of compressor is lower than the setting pressure, the pressure controller will send electricity signal to cut off the circuit to stop the compressor, so as to protect the system.

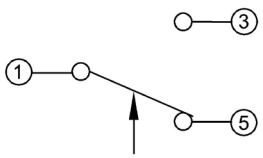
■ Technical Parameters

- Ambient temperature: -20~+65°C
- Medium temperature: -20~+120°C
- Adjustable pressure range: 0~1 bar
- Maximum working pressure: 1bar
- test pressure: 17bar
- Applicable medium: Does not attack copper alloy fluids and gases and oils with a viscosity less than 2 degrees Engen
- 0Protection level: IP20、IP44、P65

■ Electrical rating

Rated current \ Rated voltage		A.C.110	A.C.220
Non-induced current		24	12
Induced current	Full load current	24	12
	Instantaneous current	144	72

■ Contact function



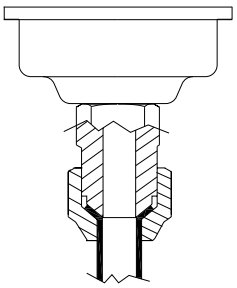
Contact number	Function
1	Common connector
3	Closed when the differential pressure rises
5	Closing when the pressure difference drops

Direction of action when arrow pressure

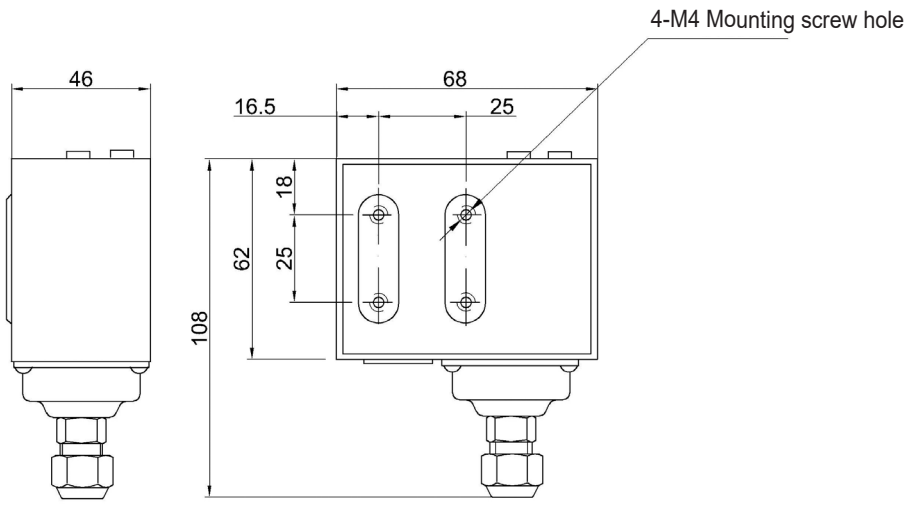
■ Connection form

- Standard threaded joint

1, American thread 7/16-20UNF, 1/4" flare tube, model suffix plus E
2, Metric thread M12×1.25, Φ6 flare tube



■ Dimensions





■ Introduction

P6W-12S pressure control is a control equipment which is specially designed for fire protection system. Its characteristic is: it not only has a fast working SPDT (single pole double throw) switch, but also can control the low pressure. It can send out the signal in a fairly small pressure to make actuators stop working, it protects the pressure well.

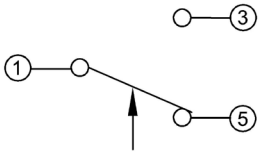
■ Technical Parameters

- Ambient temperature: -20~+65°C
- Medium temperature: -20~+120°C
- Pressure adjustment range: 0~0.2MPa
- Differential pressure adjustment range: 0.04~0.1MPa
- Maximum working pressure: 0.2MPa
- Test pressure: 1.7MPa
- Applicable medium: R22、R407C、R134a、R404A、Does not attack copper alloy fluids and gases and oils with a viscosity less than 2 degrees Engen
- Protection level： IP20、IP44、IP65

■ Electrical rating

Rated current \ Rated voltage		A.C.110	A.C.220
Non-induced current		24	12
Induced current	Full load current	24	12
	Instantaneous current	144	72

■ Contact function



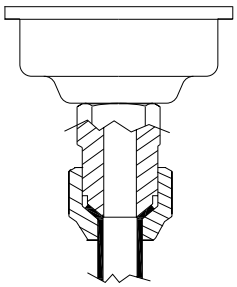
Contact number	Function
1	Common connector
3	Closed when the differential pressure rises
5	Closing when the pressure difference drops

Direction of action when arrow pressure

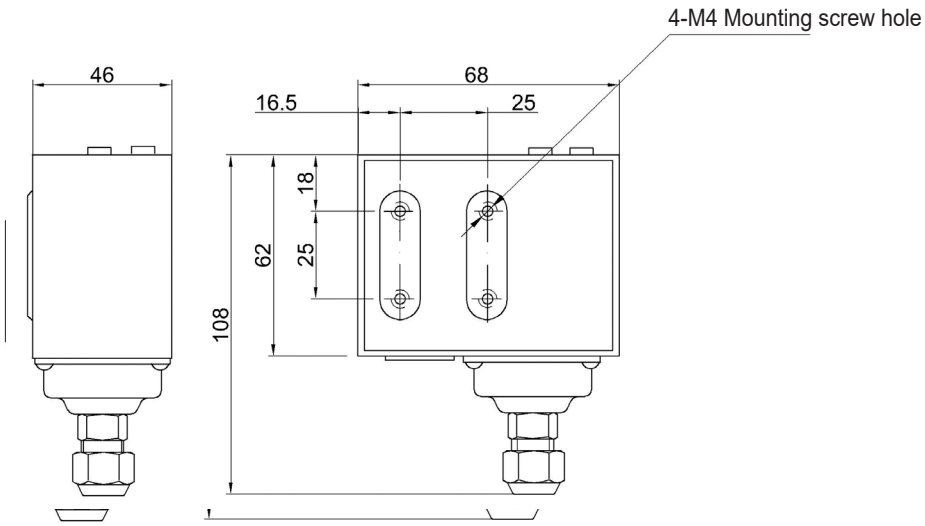
■ Connection form

- Standard threaded joint

1, American thread 7/16-20UNF, 1/4" flare tube, model suffix plus E
2, Metric thread M12×1.25, Φ6 flare tube



■ Dimensions





■ Introduction

P6W-12D pressure controller is a micro-pressure controller specifically designed for fire protection systems. It is equipped with a set of DPDT (Double Pole Double Throw) fast-action micro switches. When the controller receives a pressure signal exceeding the rated pressure, it can simultaneously send out two signals to control the motor to stop running and issue an alarm signal respectively.

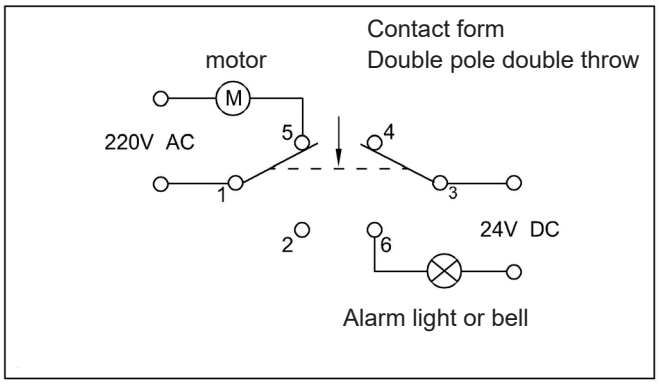
■ Technical Parameters

- Ambient temperature: -20~+65°C
- Medium temperature: -20~+120°C
- Pressure adjustment range: 0.05~0.2Mpa
- Differential pressure: ≤0.04MPa
- Max working pressure: 1.6MPa
- Applicable medium: Does not attack copper alloy fluids and gases

■ Electrical rating

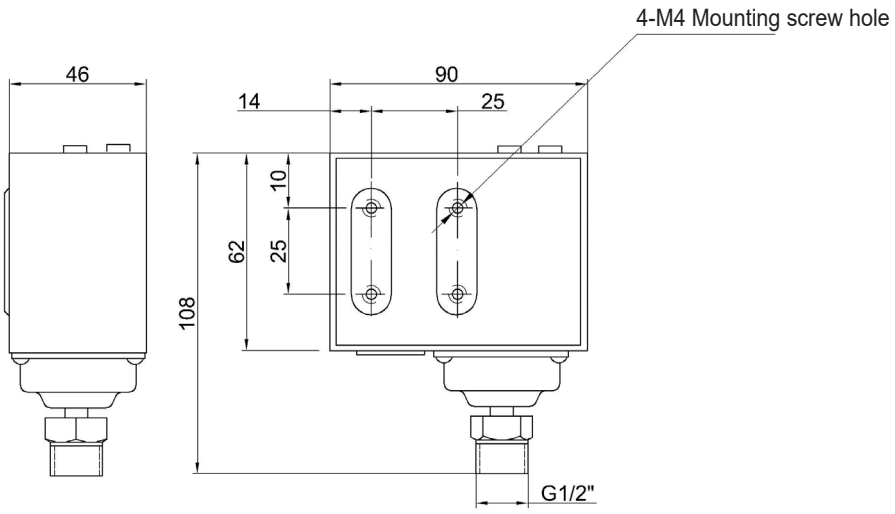
Rated current \ Rated voltage		A.C.110	A.C.220
Non-induced current		22	12
Induced current	Full load current	24	12
	Instantaneous current	144	72

■ Contact function



Contacts 1--5 and 3--4 are a normally closed contact
The ↓ arrow indicates the direction of pressure rise

■ Dimensions





■ Introduction

MP45 series is a constant pressure pressure controller. The pressure data of the MP45 controller is debugged and set in the factory according to the order requirements and then delivered.. By optimizing the precision design of the MP45 pressure controller, it ensures accurate pressure control in industrial processes. Its outstanding design allows the equipment to adapt to various harsh environments. The design of the controller is suitable for various installation and connection methods to meet the diverse needs of different users.In addition, the pressure range and set point of the controller can be freely selected according to the user's requirements.

■ Technical Parameters

- Disconnection pressure range: 0.02~4.5 Mpa
- Connection pressure range: 0.02~4.5 Mpa
- Electric parameter:50/60H DC 36V 3A
- Ambient temperature: -20~+65°C
- Medium temperature: -20~+120°C

■ Type explanation

Model	MP45	F	01	B	11	D	3	T	2.6
Explanation	Type code MP45M means manual reset type	Connect code W	Connect size code X	Switch action code Y	Lead code Z	Off code D	Off pressure	On code T	On pressure

Note: Refer to the table of code instructions for the details of codes in the table.

■ Code instructions

Code	Instruction
W	Connection way: Female flare “F”, Male flare “M”, Solder “W”
X	Flare size code: 01(7/16 ″ -20UNF), 02（1/8 ″ -27UNF), 03（1/4 ″ -18UNF), 04（3/8 ″ -24UNF) Solder size code: 05（Φ6X86), 06（Φ6X94), 07（Φ6X100), 08（Φ6X78X60 right angled),09（Φ2.5X915 capillary tube)
Y	Code: A - Lead wire N.O., B - Lead wire N.C., C - Quick connect terminal N.O., D - Quick connect terminal N.C., E - Lead wire SPDT, F - Quick connect terminal SPDT
Z	Code: 10-Lead wire length 305mm, 11-Lead wire length 610mm, 12-Lead wire length 915mm, 13-Lead wire length 1220mm
D	Off code
Off Pressure	Off pressure range: 0.02 ~ 4.5MPa
T	On code
On Pressure	On pressure range: 0.02 ~ 4.5MPa

Note: 1) Manual reset type MP45M.

2) Consult with Fengshen factory for special requirement.

■ Example MP45F 01 B11 D3T 2.6

Instruction：Type MP45, Female flare, 7/16"-20UNF, Lead wire N.C., Lead wire length 610mm, Off pressure 3MPa, On pressure 2.6MPa.