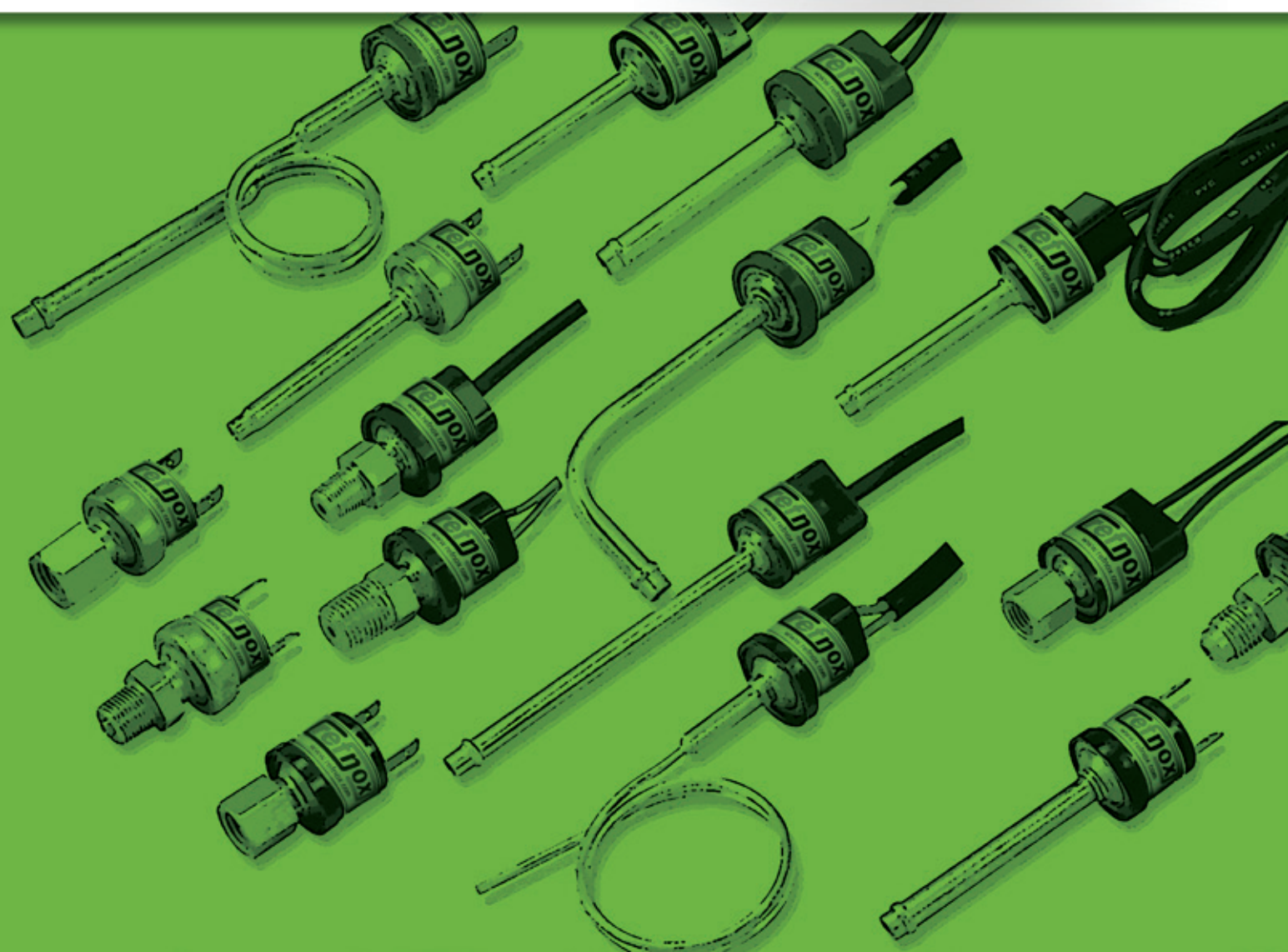


Pressure Switch

refnox



WPS Series Auto-Reset Pressure Control



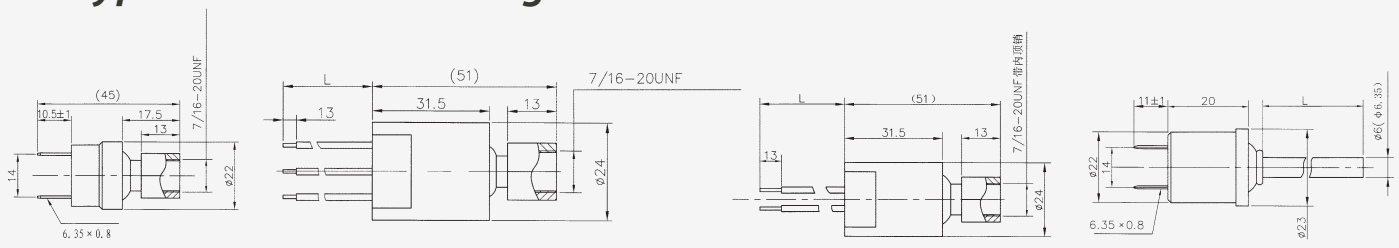
◆ *Product Specifications*

Adopting Eng. thread quick connector (copper flare connection) or brass tube welding fitting structure, flexibly setting, easy to use and no special need for mounting and fixing. Plugging or wiring connection designed to customers' choice. SPST or SPDT connection, normal open or normal close structure to customers' choice.

Security and reliability by adopting fusion welding stainless steel pressure inductor and full air-tight connection. Any pressure value within 3~800 PSI (0.02~5.5MPa) can be made based on customers' requirement. Pre-set pressure parameter before delivery allows direct use without resetting on the customers site.

WPS Series Auto-Reset Pressure Control (WPS-01H WPS-02H WPS-03H WPS-01L WPS-02L WPS-03L)

Typical Outline Drawing



Operating Principle

The series of pressure control are made based on the theory that an inside reversible stainless steel motion diaphragm turns over when inducing certain pressure. The electric contact opens or closes with the leader when the diaphragm moves. The switch resets automatically when induced pressure reduces below rated value.

Application

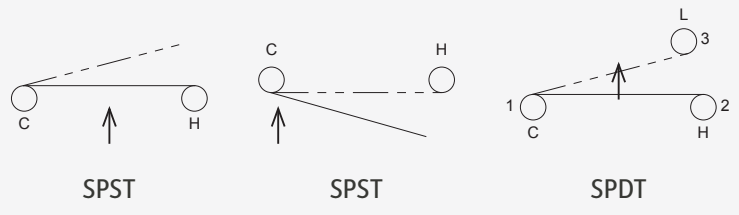
The series of pressure control are used to the high, low pressure protection of some refrigeration system like residential, commercial, automobile air-conditioner and ice maker etc. It can also be used to hydraulic pressure and steam pressure control system of all kinds of air compressor, equipment or tool and agricultural machine.

Designed Parameter

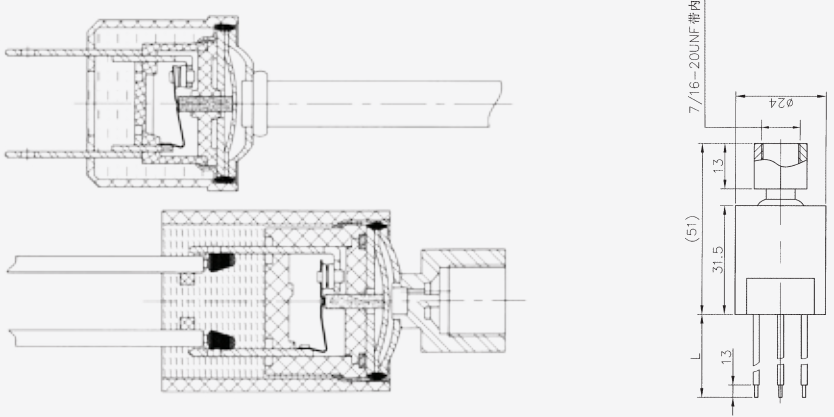
- Working pressure range: 3~800PSI(0.02~5.5MPa)
- Burst Pressure: 5000PSI
- Ambient temperature: -30°C~+80°C
- System medium temperature: -50°C~+120°C
- Life cycles under the rated electric current: 30,000 times, 50,000 times and 100,000 times optional
- Electrical Rating: At 24Vac, normal electric capacity: 125VA At 120/240Vac, normal electric capacity: 375VA
- Dielectric Strength: Between disconnected contacts:
 - AC700V/S
 - Terminal to outer shell: AC2000V/S
- Safety proof pressure: The pressure that the control can endure while not affects the rated motion value

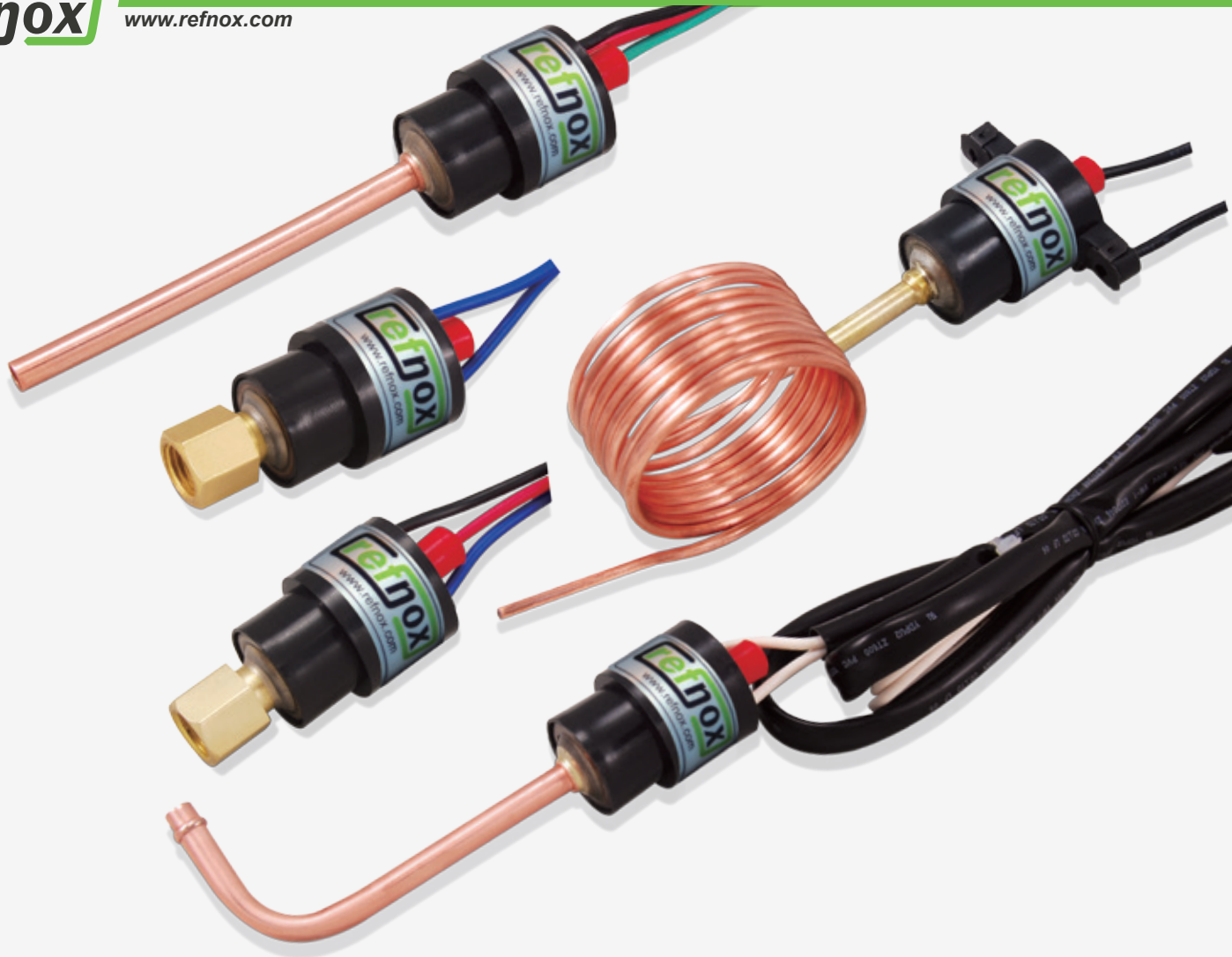
The highest range of working pressure	Safety proof pressure
<145PSI(1MPa)	250PSI(1.7MPa)
145PSI(1MPa)~400PSI(2.75MPa)	600PSI(4.1MPa)
>145PSI(2.75MPa)	800PSI(5.5MPa)

Electric Theory Drawing



Typical Structure Drawing





WPS Series Manual-Reset Pressure Control

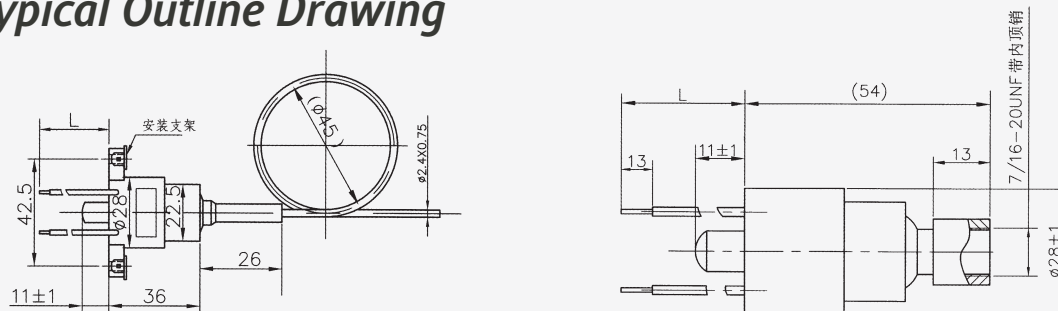
◆ Product Specifications

Adopting Eng. thread quick connector (copper flare connection) or brass tube welding fitting structure, flexibly setting, easy to use and no special need for mounting and fixing. Plugging or wiring connection designed to customers' choice. SPST or SPDT connection, normal open or normal close structure to customers' choice.

Security and reliability by adopting fusion welding stainless steel pressure inductor and full air-tight connection. Any pressure value within 3~800 PSI (0.02~5.5MPa) can be made based on customers' requirement. Pre-set pressure parameter before delivery allows direct use without resetting on the customers site.

WPS Series Manual-Reset Pressure Control

◆ Typical Outline Drawing



◆ Operating Principle

When pressure inside the system is higher than rated safe pressure, the sense disc starts to function instantly, resulting in pushing the security disc to the lock position by the rod and cutting off the switch by security disc through connecting rod at the same time. When the pressure reduces, the sense disc resets automatically while the security disc can't reset because it is at the lock position, hence the switch can't cut in. The system will reset to normal status only when pressing the outside button to push the security disc forcibly to unlock in order to cut in the switch.

◆ Application

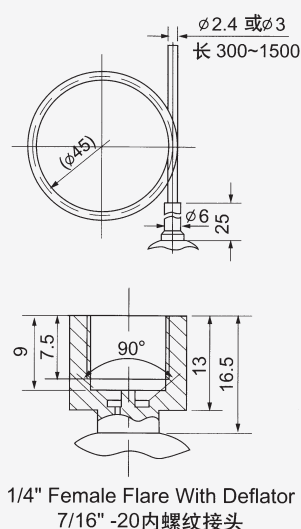
The series of switches are used to all air conditioning and refrigeration systems that require special pressure protection and broad range of extra-high pressure protection for the pressure systems of variety of tools and equipments. They can be directly installed on the pipeline or on the control panel based on the equipments situation.

◆ Designed Parameter

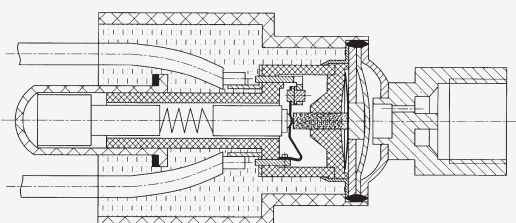
- Working pressure range: 145~800PSI (1~5.5MPa)
- Burst Pressure: 5000PSI
- Ambient temperature: -30°C~+80°C
- System medium temperature: -50°C~+120°C
- Electrical Rating:
- At 24Vac, normal electric capacity: 125VA
- At 120/240Vac, normal electric capacity: 375VA
- Dielectric Strength:
- Between disconnected contacts: AC700V/S
- Terminal to outer shell: AC2000V/S
- Safety proof pressure: The pressure that the control can endure while not affects the rated motion value.

The highest range of working pressure	Safety proof pressure
145PSI(1MPa)~400PSI(2.75MPa)	600PSI(4.1MPa)
>400PSI(2.75MPa)	800PSI(5.5MPa)

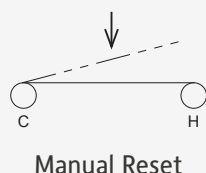
◆ Typical Connector Drawing



◆ Typical Structure Drawing



◆ Electric Theory Drawing





WPS Series Vacuum Pressure Control

◆ Product Specifications

Adopting Eng. thread quick connector (copper flare connection) or brass tube welding fitting structure, flexibly setting, easy to use and no special need for mounting and fixing .

Plugging or wiring connection designed to customers' choice.

SPST connection, normal open or normal close structure to customers' choice.

Security and reliability by adopting fusion welding stainless steel pressure inductor and full air-tight connection.

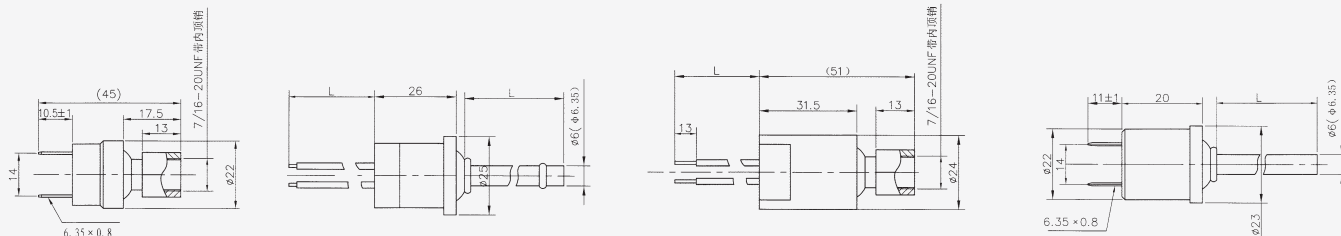
The minimum vacuum pressure can be 15in.Hg

Any pressure value within 15in.Hg~8PSI (-0.1~0.05MPa) can be made based on customers' requirement.

Pre-set pressure parameter before delivery allows direct use without resetting on the customers' site.

WPS Series Vacuum Pressure Control

◆ Typical Outline Drawing



◆ Operating Principle

The series of pressure control are made based on the theory that an inside reversible stainless steel motion diaphragm turns over when inducing certain pressure. The electric contact opens or closes with the leader when the diaphragm moves. The switch resets automatically when induced pressure reduces below rated value.

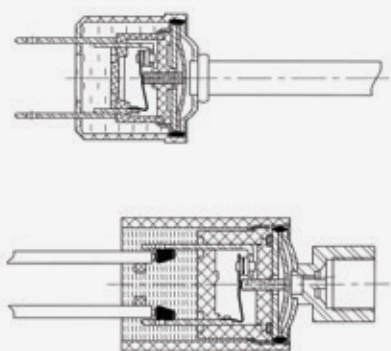
◆ Application

These pressure controller are used to protect the low pressure system of the refrigeration equipment which pressure is negative.(under normal atmospheric pressure). It can also be used for control of pneumatic, hydraulic, lubricating oil system.

◆ Designed Parameter

- Working pressure range: 15in.Hg~8PSI (-0.1~0.05MPa)
- Burst Pressure: 2500PSI
- Ambient temperature: -30°C~+80°C
- System medium temperature: -50°C~+120°C
- Life cycles under the rated electric current: 30,000 times, 50,000 times and 100,000 times optional
- Electrical Rating:
 At 24Vac, normal electric capacity: 125VA
 At 120/240Vac, normal electric capacity: 375VA
- Dielectric Strength:
 Between disconnected contacts: AC700V/S
 Terminal to outer shell: AC2000V/S
- Safety proof pressure: The pressure that the control can endure while not affects the rated motion value

◆ Typical Structure Drawing



◆ Electric Theory Drawing



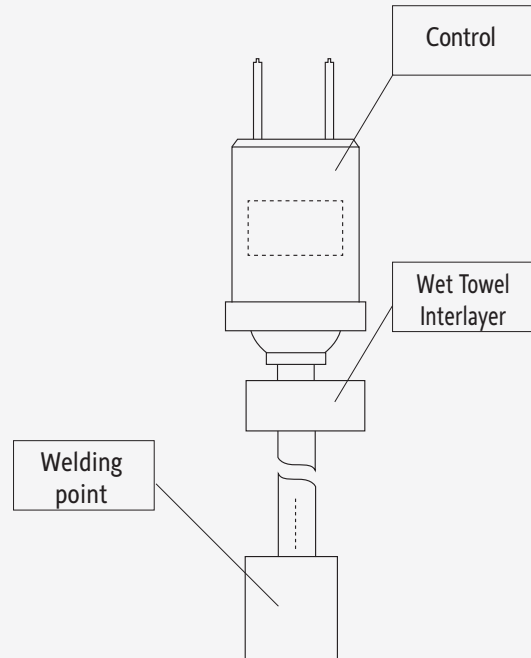
Operation Instruction of WPS Series Pressure Control

◆ Prevention High Pressure Punch

- A pressure reducer must be used when testing and operating the pressure control with working pressure ranging from 145PSI(1Mpa)to 800PSI(5.5Mpa) to avoid high pressure punch over 8000PSI (5.5MPa).
- A pressure reducer (reductor) must be used when testing and operating the pressure control with working pressure below 145PSI (1Mpa) to avoid high pressure punch over 250PSI (1.72Mpa).

◆ Preventing from high temperature injury when welding

When assembling brass tube products, water-cool welding process must be used to avoid injury caused by over temperature.



◆ Pressure Reference and Minimum Tolerance Table

Working pressure (PSI)	Hi-Low pressure dif. ratio (%)	Minimum tolerance(±)(PSI)
3-29	50~70	3
30-80	45~60	5
81-160	50~70	7
161-240	60~75	10
241-350	60~70	15
351-450	65~80	15
451-500	65~80	20
501-800	70~80	25

Hi-low pressure dif.ratio=(rated low pressrue/rated high pressure)×100%

Pressure unit conversion: **1MPa = 145PSI = 10bar = 10.2Kg/cm²**

Contact Engineering Department for any special requirements

WPS - 03H059/25R20R

REFNOX Pressure Control

Factory Code

Dimension Code	01
	02
	03

Series Code	H: High pressure Control(Open on high)
	L: Low pressure Control(Open on low)

Fitting Code	a:f0.236" Solder
0:1/4" Female Flare With Deflator	
1:1/8" Male Pipe Thread	b:f0.236" Solder
2:1/4" Male Pipe Thread	c:f0.236" Solder
3:3/8" Male o-Ring Fitting	f:f0.118" Solder
4:1/4" Solder	g:f0.197" Solder
5:1/4" Male Flare	j:f0.236" Solder
6:1/4" Solder	k:f0.236" Solder
7:3/32" Copper Capillary Tube	m:f0.236" Solder
8:1/4" Solder	r:f0.236" Solder
Unless otherwise specified	

ON: 20 BAR~800PSI/-0.1~5.5MPa

OFF: 2.5 BAR~800PSI/-0.1~5.5MPa

Tolerance in PSI/MPa			
C:±3/0.02	3~10/0.02~0.07	N:±13/0.09	220~249/1.52~1.71
D:±4/0.03	11~19/0.075~0.13	P:±14/0.095	250~279/1.72~1.92
E:±5/0.035	20~39/0.135~0.265	R:±15/0.10	280~309/1.93~2.13
F:±6/0.04	40~49/0.275~0.335	S:±16/0.11	310~379/2.14~2.61
G:±7/0.05	50~59/0.345~0.405	T:±17/0.12	380~399/2.62~2.75
H:±8/0.055	60~79/0.41~0.545	U:±18/0.125	400~449/2.76~3.09
J:±9/0.06	80~99/0.55~0.68	W:±19/0.13	450~479/3.10~3.30
K:±10/0.07	100~149/0.69~1.03	X:±20/0.135	480~609/3.31~4.20
L:±11/0.075	150~179/1.035~1.23	Y:±25/0.17	610~629/4.21~4.33
M:±12/0.08	180~219/1.24~1.50	Z:±30/0.20	630~800/4.34~5.50

Lead Code	
00:2x1/4" Male Spade Terminals(Q.C.)	
06:6" UL1015 18AWG Wire Leads	
12:12" UL1015 18AWG Wire Leads	
18:18" UL1015 18AWG Wire Leads	
24:24" UL1015 18AWG Wire Leads	
30:30" UL1015 18AWG Wire Leads	
36:36" UL1015 18AWG Wire Leads	
48:48" UL1015 18AWG Wire Leads	
60:60" UL1015 18AWG Wire Leads	
72:72" UL1015 18AWG Wire Leads	
L:Blue Leads	
H:Black Leads	
M:Yellow Leads	
Unless otherwise specified	

Standard Product List

Code Nr.	Description	Pressure Area	Close Pressure (bar)	Open Pressure (bar)	Relay Type	Cable Length	Reset Type	Multi Pack Quantity
026AN1000	WPS 03L059/0,0D0,7D	Low Pressure	0,0	0,7	spst	1.5 mt	auto	10
026AN1001	WPS 03L059/0,3D1,8G	Low Pressure	0,3	1,8	spst	1.5 mt	auto	10
026AN1002	WPS 03L059/-0,5G1,8G	Low Pressure	-0,5	1,8	spst	1.5 mt	auto	10
026AN1003	WPS 03L059/0,7F1,7G	Low Pressure	0,7	1,7	spst	1.5 mt	auto	10
026AN1004	WPS 03L059/0,7F2,1G	Low Pressure	0,7	2,1	spst	1.5 mt	auto	10
026AN1014	WPS 03L2x3059/0,7F1,7G	Low Pressure	0,7	1,7	spdt	1.5 mt	auto	10
026AN1005	WPS 03H059/21R16R	High Pressure	21,0	16,0	spst	1.5 mt	auto	10
026AN1006	WPS 03H059/24R18R	High Pressure	24,0	18,0	spst	1.5 mt	auto	10
026AN1007	WPS 03H059/25R20R	High Pressure	25,0	20,0	spst	1.5 mt	auto	10
026AN1015	WPS 03H2x3059/25R20R	High Pressure	25,0	20,0	spdt	1.5 mt	manual	10
026AN1008	WPS 03H059/26R20R	High Pressure	26,0	20,0	spst	1.5 mt	auto	10
026AN1009	WPS 03H059/28R20R	High Pressure	28,0	20,0	spst	1.5 mt	auto	10
026AN1010	WPS 03H059/31R24R	High Pressure	31,0	24,0	spst	1.5 mt	auto	10
026AN1011	WPS 03H059/12R14R	Fan Control	12,0	14,0	spst	1.5 mt	auto	10
026AN1012	WPS 03H059/13R18R	Fan Control	13,0	18,0	spst	1.5 mt	auto	10
026AN1013	WPS 03H059/15R19R	Fan Control	15,0	19,0	spst	1.5 mt	auto	10