



MSV86321



MSV86321EB



MSV86321LB



MSV86321TB



MSV86321PP



MSV86321PPL



MSV86321PB



MSV86321R



MSV86522



MSV86522EB



MSV86522LB



MSV86522TB



MSV86522PP



MSV86522PPL



MSV86522PB



MSV86522R



MSV98322



MSV98322EB



MSV98322LB



MSV98322TB



MSV98322PP



MSV98322PPL



MSV98322PB



MSV98322R

NMSV

86

32

1

R

Series

Type

Configuration

Port Size

Actuator Type

NMSV	BSPP
MSV	BSPP

86
98

32	3-Way
52	5-Way

1	1/8
2	1/4

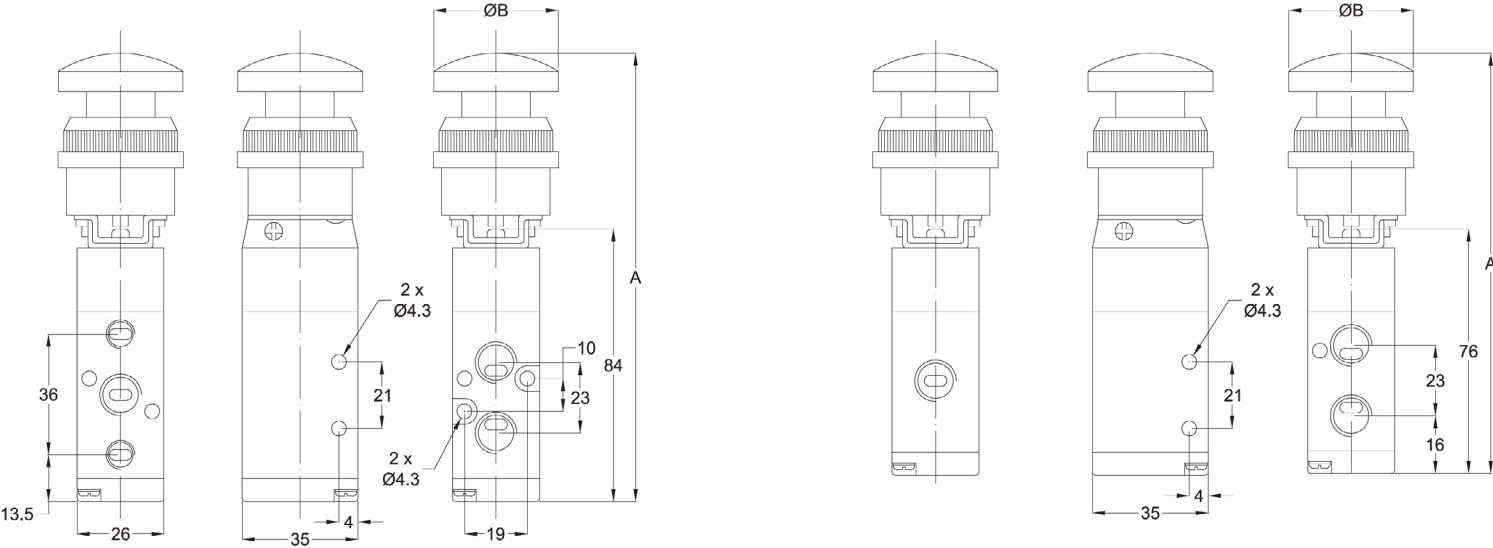
	Plunger
R	Roller
TB	Selector Knob
LB	Extended Selector Knob
PB	Domed Head Button
PP	Push Button
PPL	Raised Push Button
EB	Emergency Stop with Lock

SPECIFICATIONS

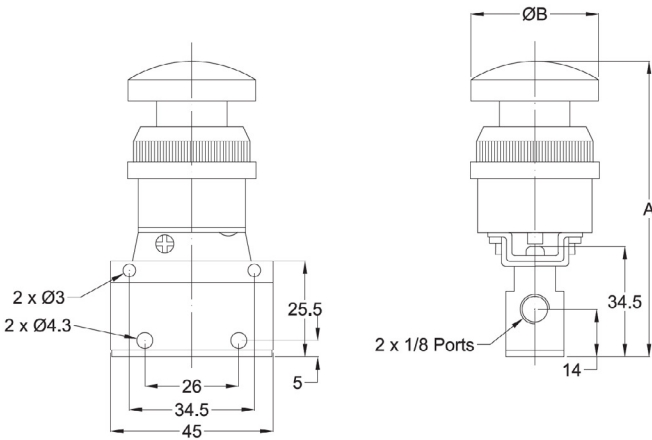
Model	MSV86321	MSV86522	MSV98322
Working Medium	40 Micron Filtered Air		
Configuration	3/2	5/2	3/2
Working Pressure	0-8bar(g) / 0-120psi		
Working Temperature	5-60° / 41-140°F		
Effective CSA	12mm ² (Cv 0.67)	16mm ² (Cv 0.89)	
Port Size	1/8	1/4	

DIMENSIONS (mm)

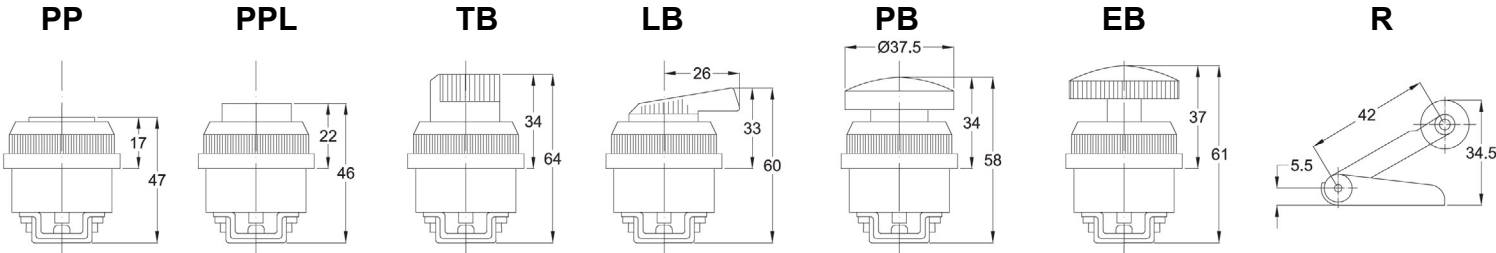
MSV86522



MSV86321

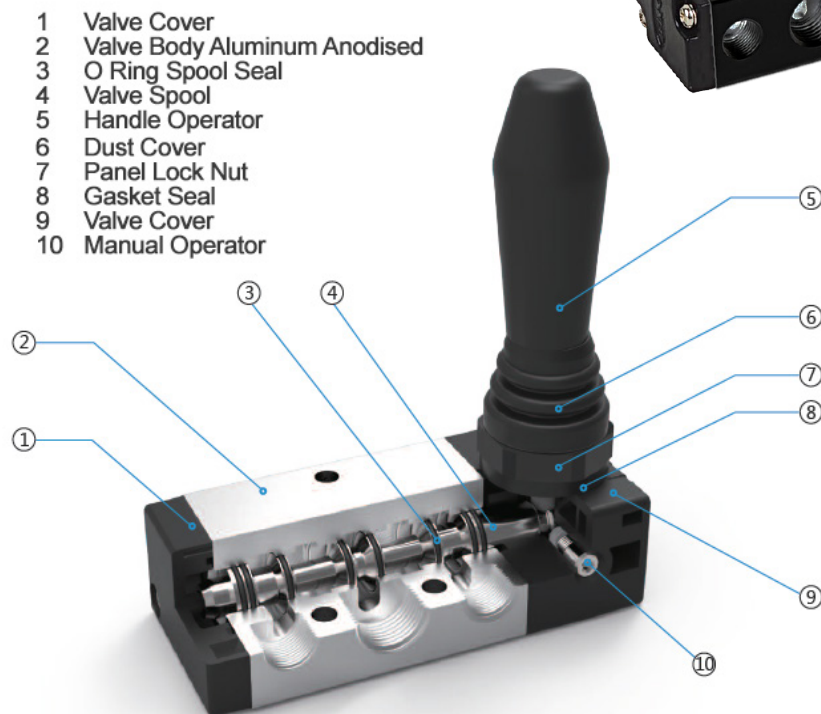


Series	Dimension	PP	PPL	LB	TB	EB	PB	R
MSV86522	A	114	119	133	136.5	134	131	107.5
	B	39.5	24.5	26.5	36.5	39.5	37.5	42.5
MSV98322	A	106	111	125	129.5	126	123	99.5
	B	39.5	24.5	26.5	36.5	39.5	37.5	42.5
MSV86321	A	66	71	85	88.5	86	83	59.5
	B	39.5	24.5	26.5	36.5	39.5	37.5	42.5



N4H Hand Lever Valves

- Hand lever valves for use in manual actuator applications.
- Available in 1/4, 3/8 and 1/2 signal ports.
- Spring return or latching versions.
- 5/2 and 5/3 way models



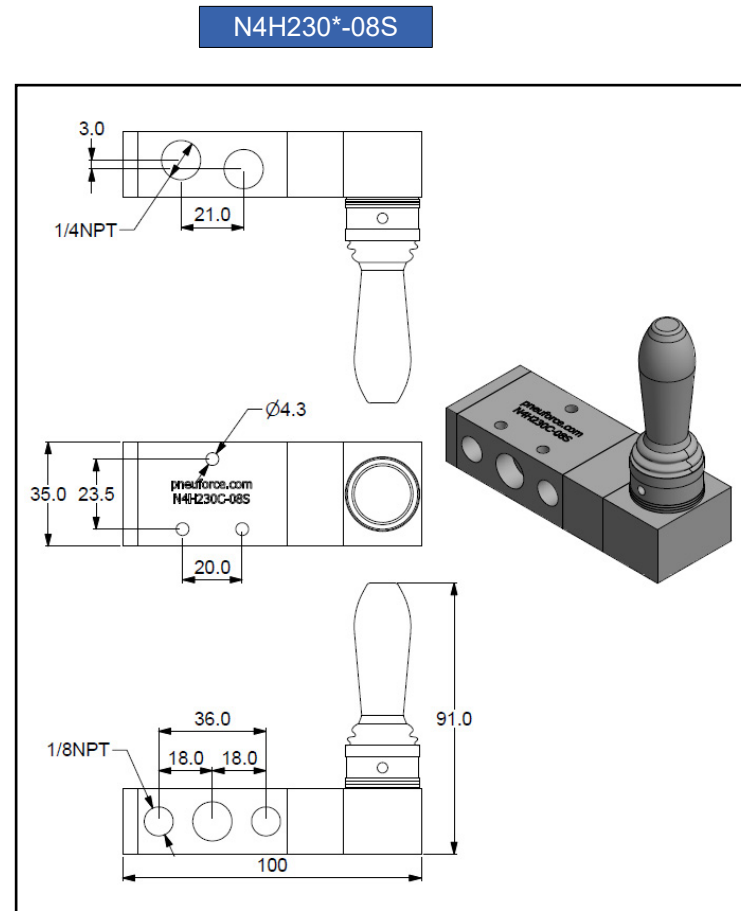
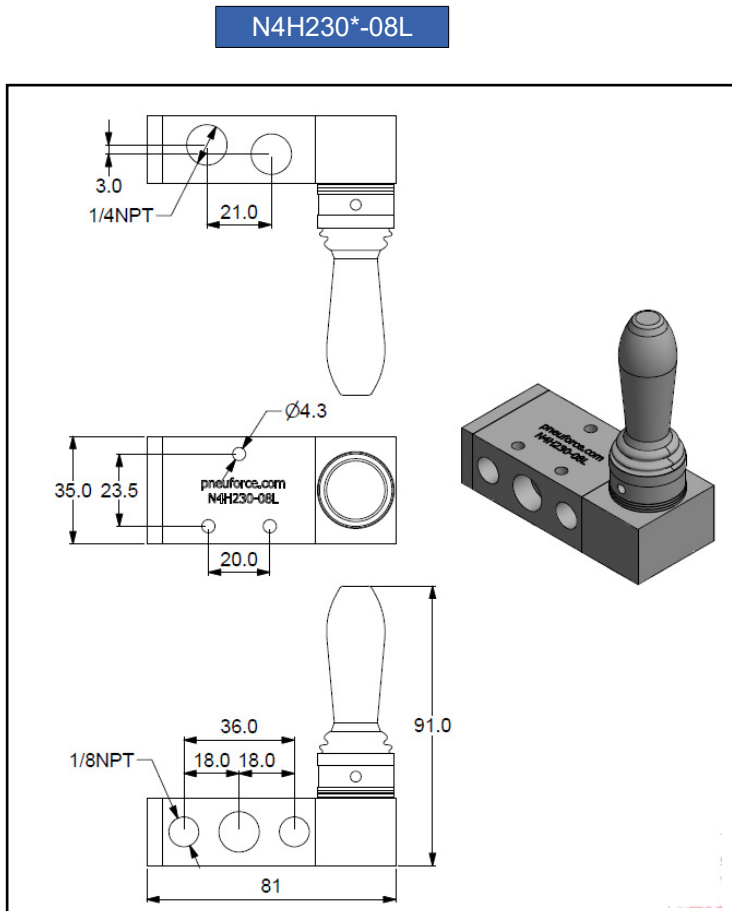
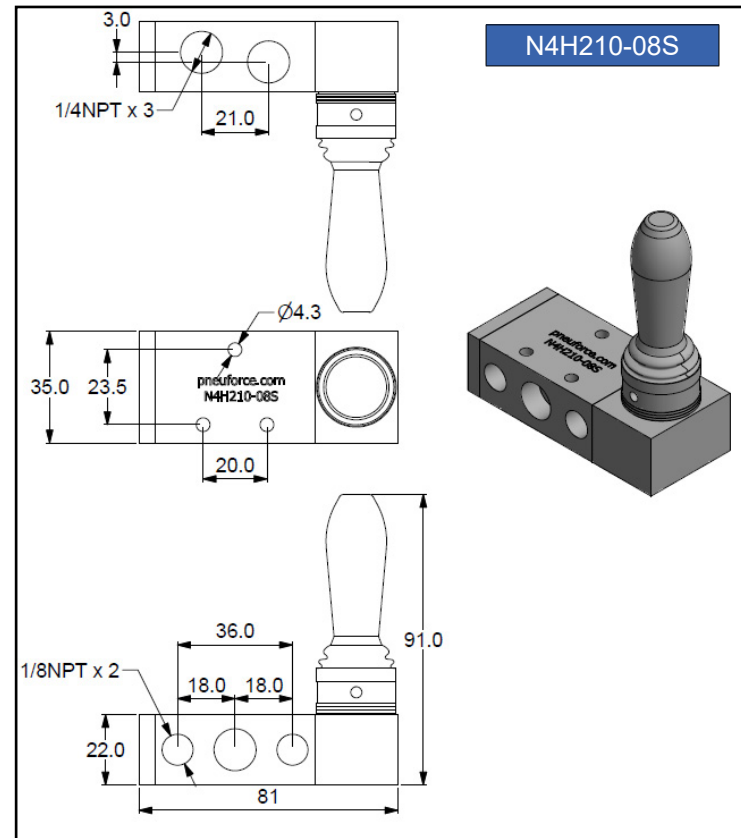
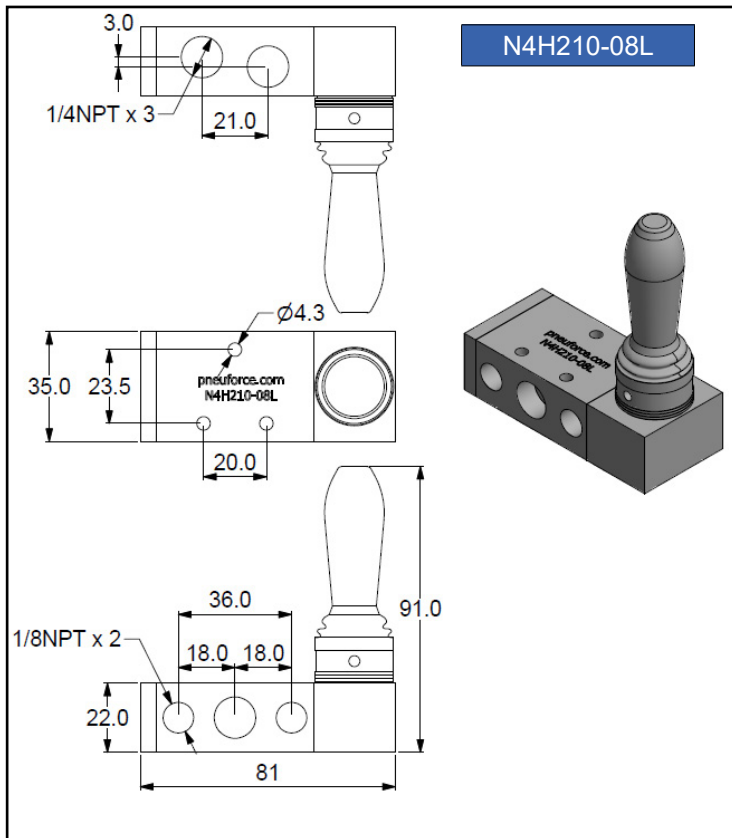
- 1 Valve Cover
- 2 Valve Body Aluminum Anodised
- 3 O Ring Spool Seal
- 4 Valve Spool
- 5 Handle Operator
- 6 Dust Cover
- 7 Panel Lock Nut
- 8 Gasket Seal
- 9 Valve Cover
- 10 Manual Operator

N		4H		2		10		08		L	
Port Threads		Series Type		Body Size		Valve Port Size		Port Size		Detent Option	
N	NPT			2		10	Single Actuator 5/2	08	1/4	S	Spring Return
	BSPP			3		30C	Center Closed	10	3/8	L	Latching
				4		30E	Center Exhaust	15	1/2		
						30P	Center Pressure				

Valve Body Size	210/30	310/30	410/30
Pressure Port	1/4	3/8	1/2
Signal Ports	1/4	3/8	1/2
Exhaust Ports	1/8	1/4	1/2

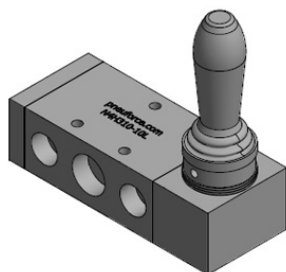
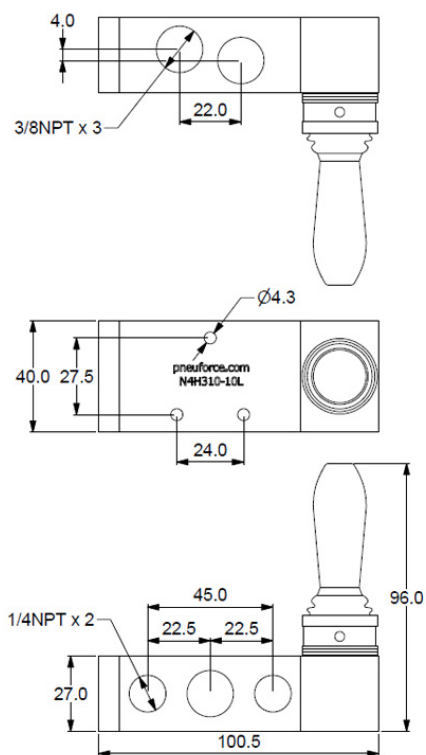
Valve Model	N4H210-08	N4H230-08	N4H310-10	N4H330-10	N4H410-15	N4H430-15
Valve Type	5/2	5/3	5/2	5/3	5/2	5/3
Orifice and Cv	16mm ² 0.78Cv	12mm ² 0.67Cv	30mm ² 1.7Cv	18mm ² 1.0Cv	50mm ² 2.8Cv	30mm ² 1.7Cv
Working Medium	40 Micron Filtered Air					
Working Pressure	1.5 - 8bar (22.5 - 120psi)					
Ambient Temperature	5-50°C (41-122°F)					

DIMENSIONS (mm)

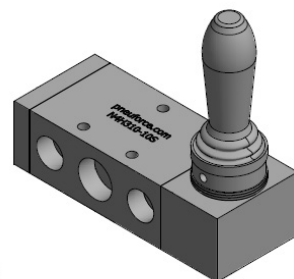
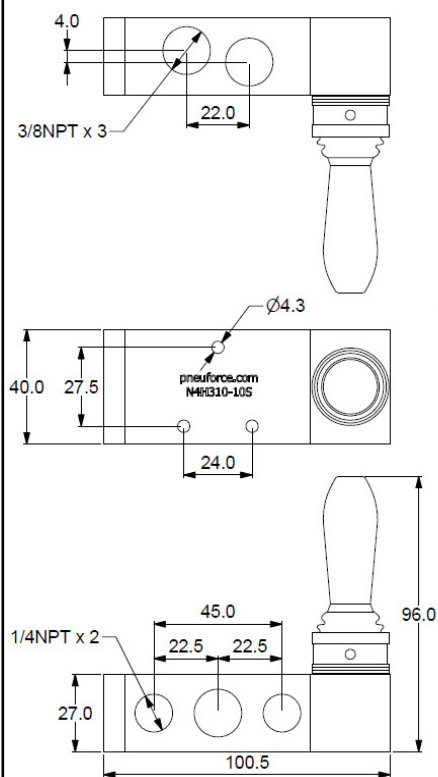


N4H Hand Lever Valves

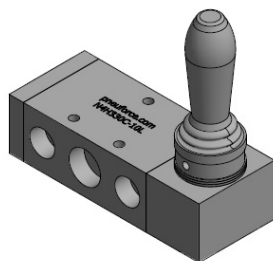
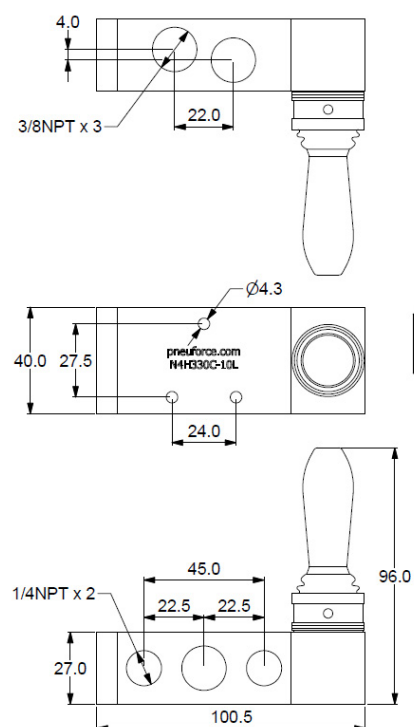
N4H310-10L



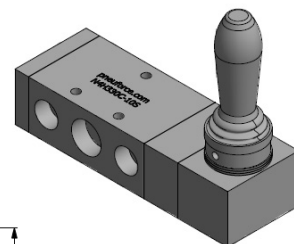
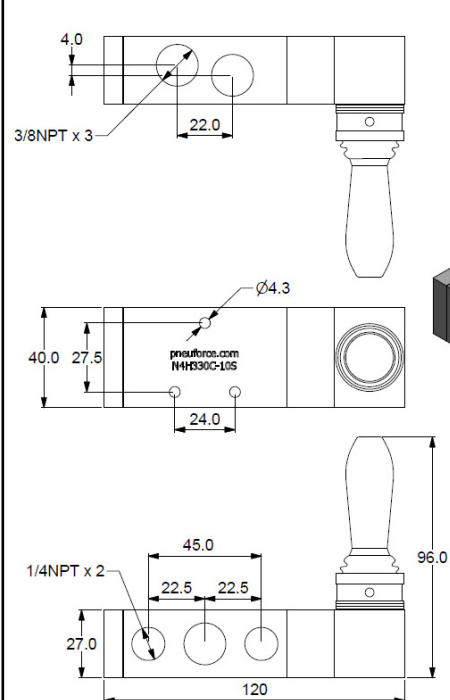
N4H310-10S



N4H330*-10L

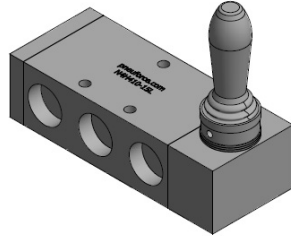
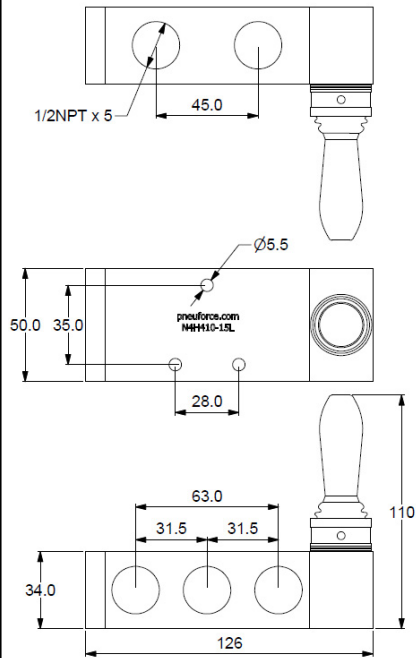


N4H330*-10S

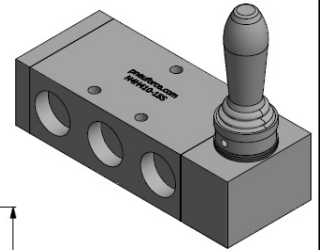
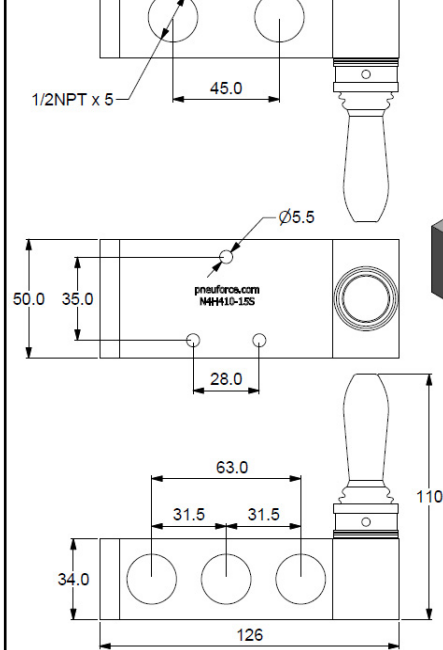


N4H Hand Lever Valves

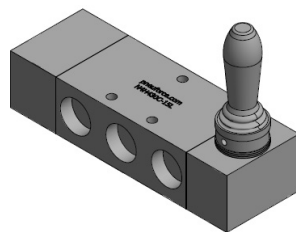
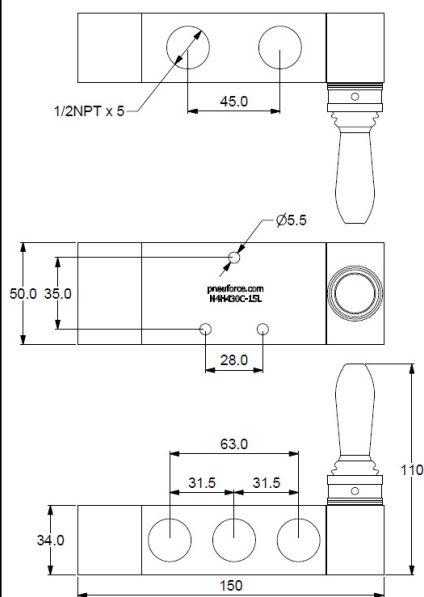
N4H410-15L



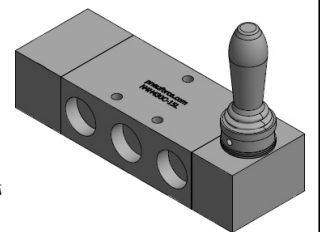
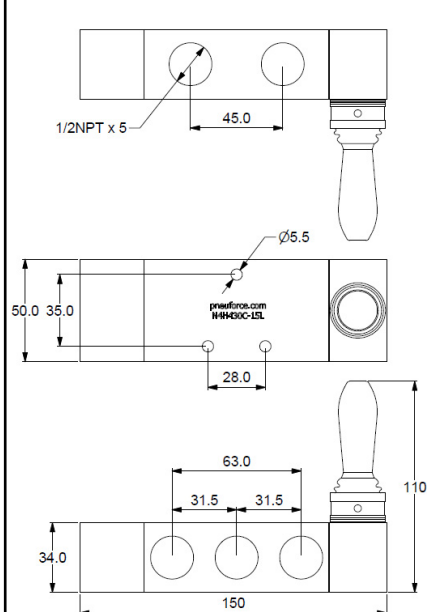
N4H410-15S



N4H430*-15L



N4H430*-15S



N4H Hand Lever Valves

- Hand push pull valves for use in manual actuator applications.
- Available in 1/4, 3/8 and 1/2 signal ports.
- Bi Stable operation
- 5/2 Operation
- Panel mountable



N

Port Threads

N	NPT
	BSPP

4R

Series Type

1

Body Size

1
2
3

10

Valve Port Size

10	Single Actuator 5/2
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06

Port Size

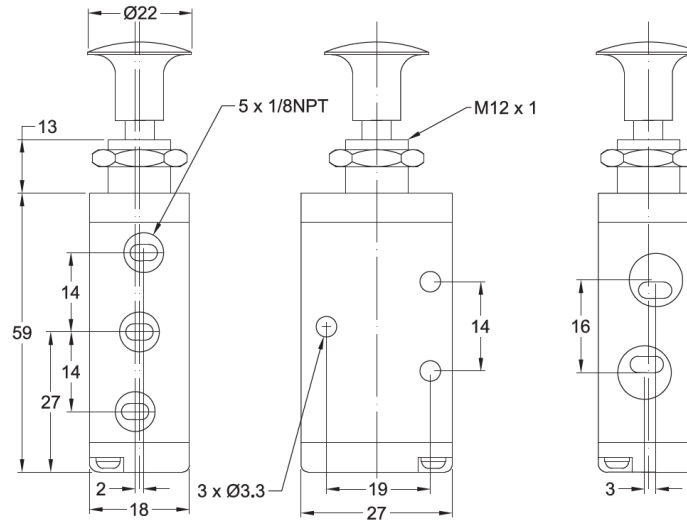
06	1/8
08	1/4
10	3/8

Valve Body Size	N4R110-06	N4R210-08	N4R310-08
Pressure Port	1/8	1/4	3/8
Signal Ports	1/8	1/4	3/8
Exhaust Ports	1/8	1/8	1/4

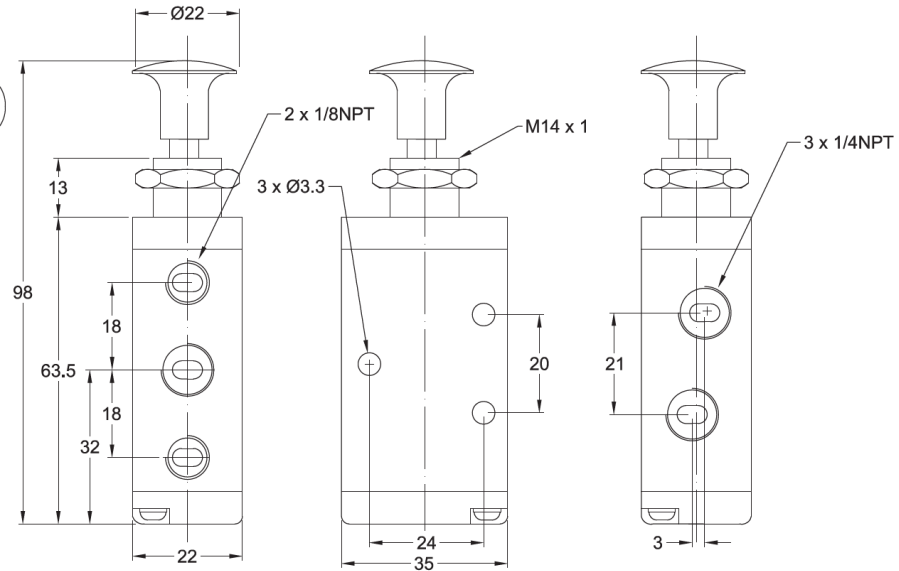
Valve Model	N4R110-06	N4R210-08	N4R310-08
Valve Type	5/2		
Orifice and Cv	10mm ² 0.56Cv	16mm ² 0.89Cv	30mm ² 1.7Cv
Working Medium	40 Micron Filtered Air		
Working Pressure	1.5 - 8bar (22.5 - 120psi)		
Ambient Temperature	5-50°C (41-122°F)		

DIMENSIONS (mm)

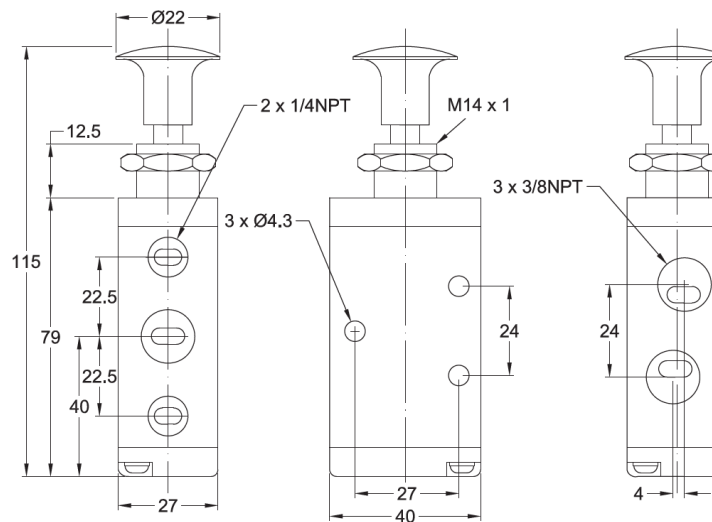
N4R110-06



N4R210-08



N4R310-10



4HV Rotary Hand Valves

- Rotary hand valves for use in manual actuator applications.
- Available in 1/4, 3/8 and 1/2 signal ports.
- Detented three position valves
- Ceramic valve plate for increased durability



N4HV

Series Type

2

Body Size

2

3

4

30

Valve Port Size

30C

Closed Mid Position

30E

Exhaust Mid Position

30P

Pressure Mid Position

08

Port Size

08

1/4

10

3/8

15

1/2

S

Panel Nut

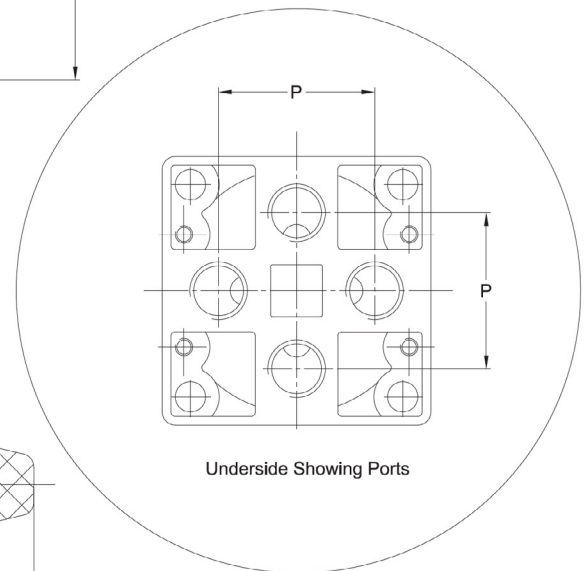
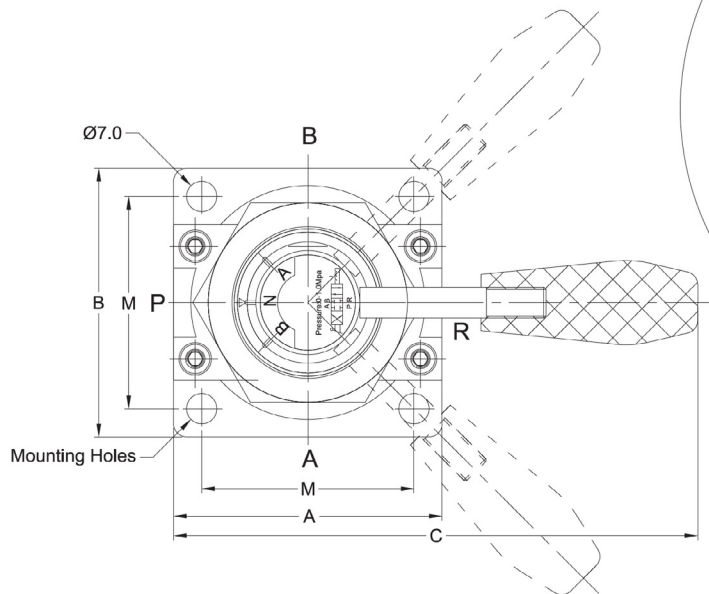
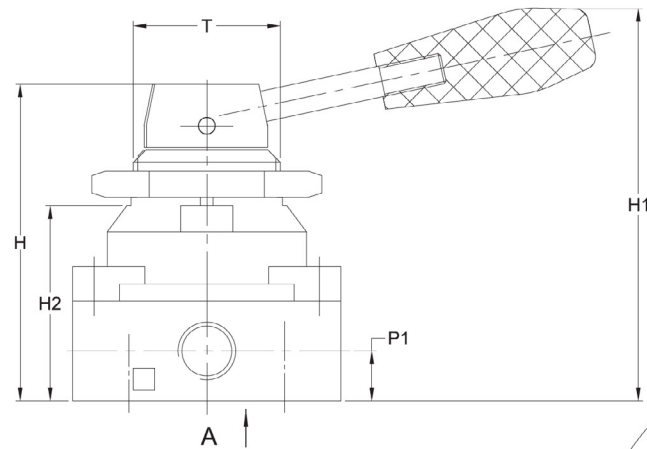
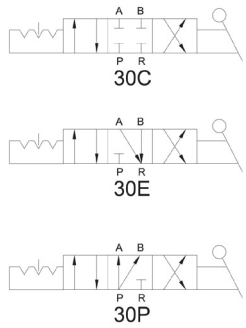
None

S

Included

Valve Model	N4HV230*-08	N4HV330*-10	N4HV430*-15
Valve Type	5/3		
Port Sizes	1/4NPT	3/8NPT	1/2NPT
Working Medium	40 Micron Filtered Air		
Working Pressure	10bar (150psi)		
Ambient Temperature	5-60°C (41-140°F)		

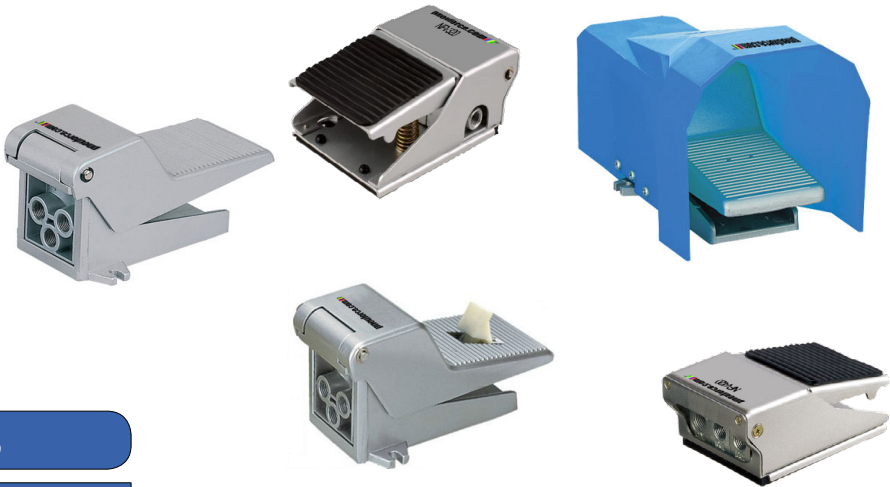
DIMENSIONS (mm)



Dimensions	N4HV230*-08	N4HV330*-10	N4HV430*-15
A	62	74	102
B			
C	89	103	113
H	93	109	128
H	73	94	110
H1	93	109	128
H2	45	56	72
M	49	64	89
P	36	44	46
P1	11.5	13.5	18
T	M34x1.5	M40x1.5	M52x1.5

4F Foot Pedal Valves

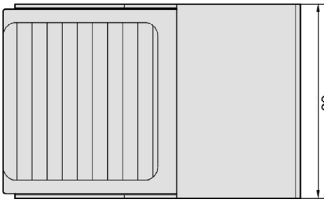
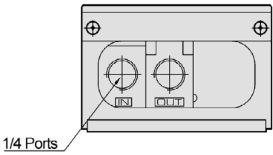
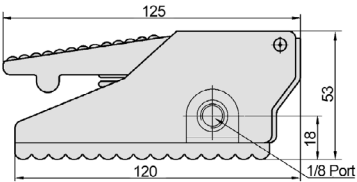
- 3-Way and 5-Way Models
- 1/4NPT & G1/4 Primary Ports
- Spring Return
- Stainless Steel Spring
- Aluminum Valve
- Painted Steel Shell and Plate
- Rubber Coated Foot Plate



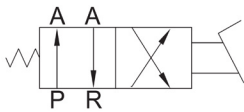
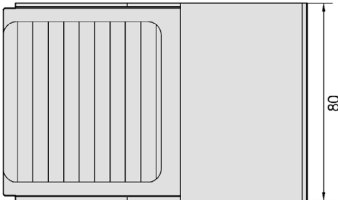
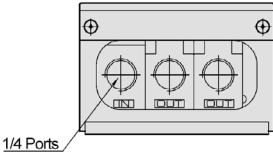
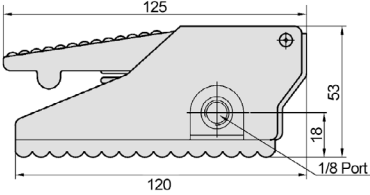
N		FV320		08	
Port Threads		Valve Type		5-Way Type	
N	NPT	FV320	3-way	08	1/4 port
	BSPP	FV420	4-way	08L	1/4 port latching
		4F210	5-way	08G	1/4 port foot guard

Model	FV320	FV420	4F210-08	4F210-08L	4F210-08G
Working Medium	40 Micron Filtered Air				
Type	3/2	4/2	5/3		
Port Size	1/4NPT Supply & Outlet 1/8NPT Exhaust				
Operation	Direct				
Working Pressure	0-8bar(g) 0-120psi				
Working Temperature	0-60°C 32-140°F				

FV320

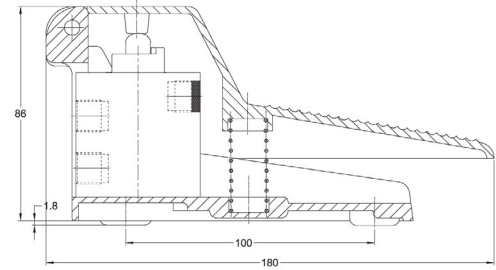
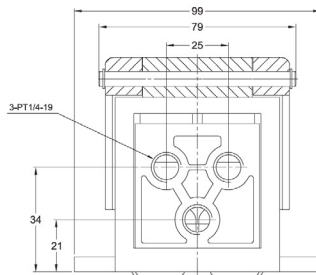
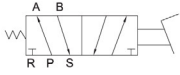


FV420

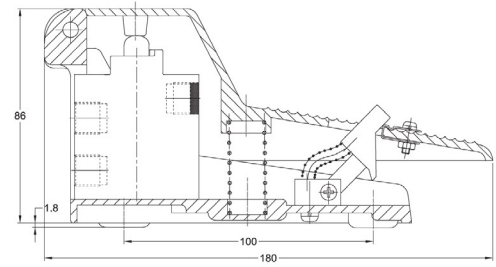
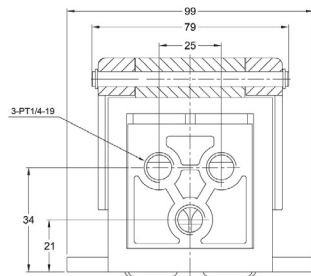
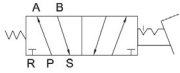


DIMENSIONS (mm)

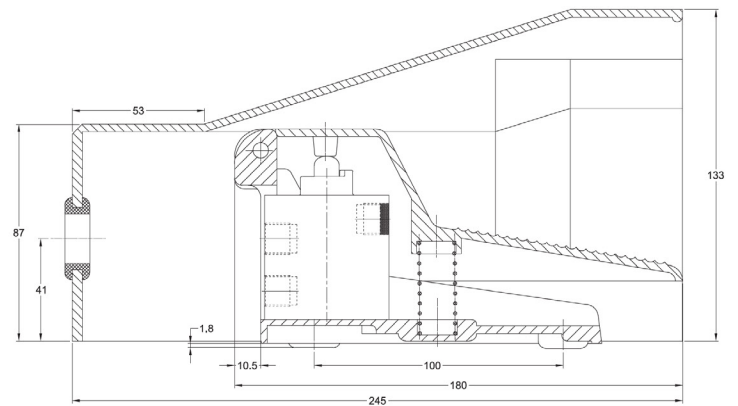
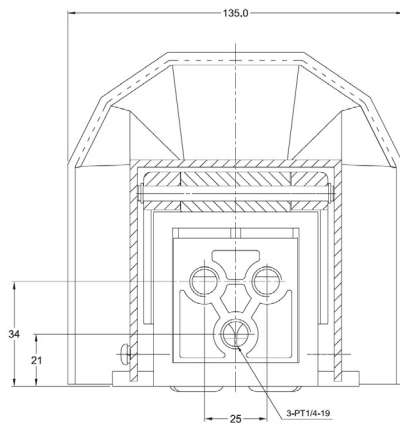
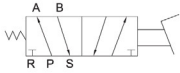
N4F210-08



N4F210-08L



N4F210-08G

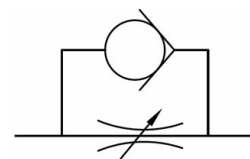


ASC Flow Control Valves

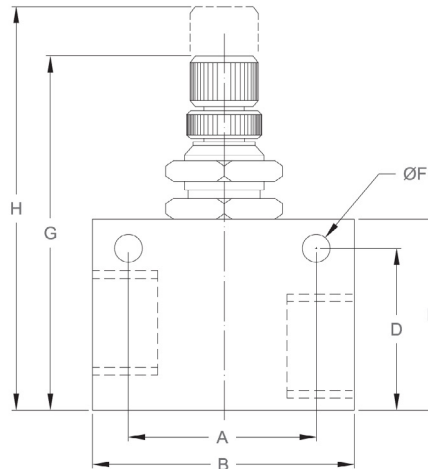
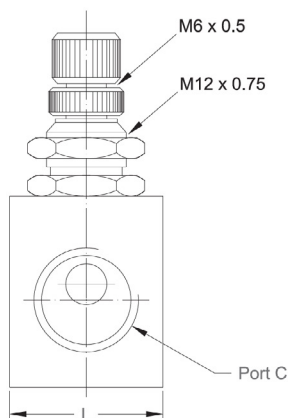
- Precision flow control valves
- Hard anodized aluminum body
- 1/8, 1/4, 3/8 & 1/2 Ports
- Panel mountable
- Unidirectional flow control



N		ASC		08	
Port Threads		Valve Type		Port Size	
N	NPT			06	1/8
	BSPP			08	1/4
				10	3/8
				15	1/2



DIMENSIONS (mm)



Model	A	B	C	D	E	F	G	H	K	L
ASC-06	22	32	1/8	22	27	4.3	49.7	56.5	12	18
ASC-08	26	36	1/4	22	27	4.3	49.7	56.5	12	18
ASC-10	28	40	3/8	25	30	4.3	52.7	59.5	13	22
ASC-15	28	40	1/2	30	35	4.3	58.7	65.5	13.5	26

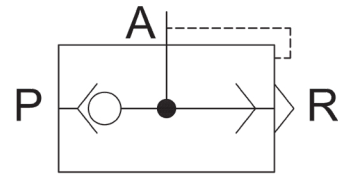
QE Quick Exhaust Valves

Quick exhaust valves are used to increase the speed of pneumatic cylinders by dumping the exhaust stream directly at the cylinder port instead of back through the control valve.

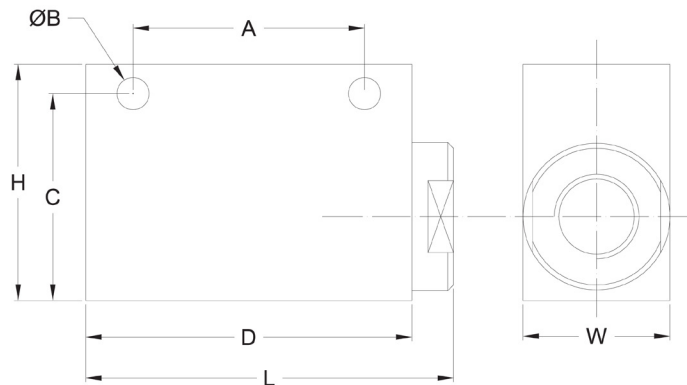
The QE valve is available in 4 port sizes and manufactured in aluminum with an anodized finish.



N		QE		08	
Port Threads		Valve Type		Port Size	
N	NPT			06	1/8
	BSPP			08	1/4
				10	3/8
				15	1/2



DIMENSIONS (mm)



Model	Ports	L	W	H	A	B	C	D
QE-06	1/8	46	20	32	30	4.3	27	40
QE-08	1/4	62	25	40	39	5.6	33.5	55
QE-10	3/8	62	25	40	39	5.6	33.5	55
QE-15	1/2	98	38	64	-	-	-	90

AP25 & 30 Pressure Sensors

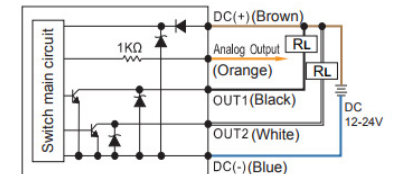
- Solid state digital vacuum & pressure switches
- Two types AP25 and AP30
- Suitable for vacuum and pressure use
- Selectable pressure units, kPa, bar, psi, mmHg
- IP65 Insulation



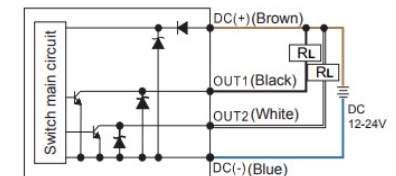
AP25		V		01		QD	
Series		Type		Output		Connection	
AP25		C	Compound	01	2 x NPN + 1 x Analogue		600mm Lead
AP30		P	Pressure	02	2 x NPN		QD M8 Male non analogue only
		V	Vacuum	03	2 x PNP + 1 x Analogue		
				04	2 x PNP		

SPECIFICATIONS	
Media	Non lubricated dry air or non corrosive gas
Over Pressure	3bar (45psi)
Electrical Connection	M8 4 Pin male connector (analogue use 6ft lead wire)
Operating Voltage	12 – 24VDC $\pm 10\%$
Current Consumption	$\leq 55\text{mA}$
Display	4 Digit 7 Segment Red LED
Display Units	kPa, MPa, kgf/cm ² , bar, psi, inHg, mmHg, mmH ₂ O
Repeatability	$\leq 2\%$ F.S ± 1 digit
Hysteresis	Adjustable
Response Time	$\leq 2.5\text{ms}$ (chatter proof selectable 24, 192 & 768ms)
Indicator	OUT1 = Green LED OUT2 = Red LED
Analogue Output	1 to 5V $\leq \pm 5\%$ F.S Linearity $\leq \pm 1\%$ F.S
Insulation	AP25 - IP65, AP30 - IP40
Ambient Temperature	0-50°C (32-122°F)
Vacuum / Pressure Port	G1/8 & 1/8NPT Female
Shock Resistance	980m/s (100G) 3 times in each direction X,Y & Z
Weight 71g 35g	AP25 - 71g, AP30 - 35g

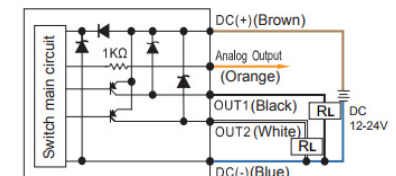
NPN Output & Analog Output



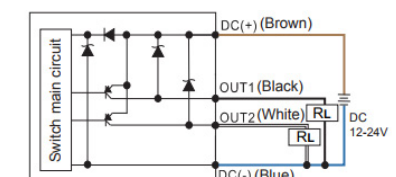
NPN Output



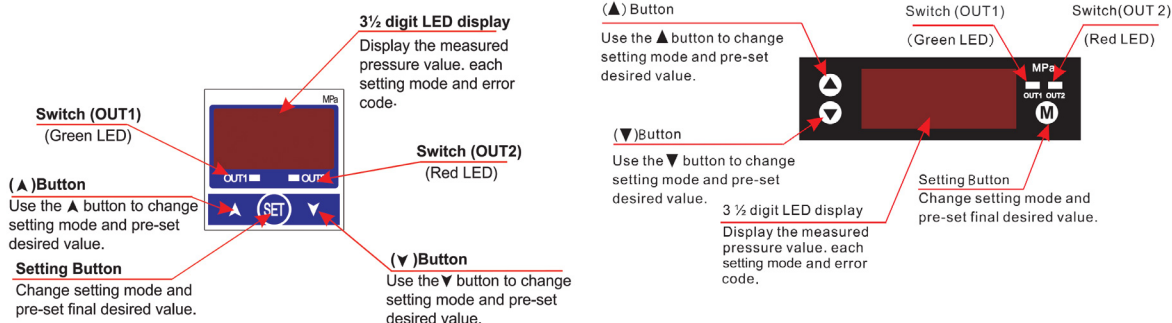
PNP Output & Analog Output



PNP Output



Panel Instructions



AP10 Pressure Sensors

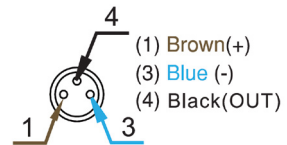
- Solid state digital vacuum & pressure switches
- Suitable for vacuum and pressure use
- Miniature design
- Stem and thread connection ports



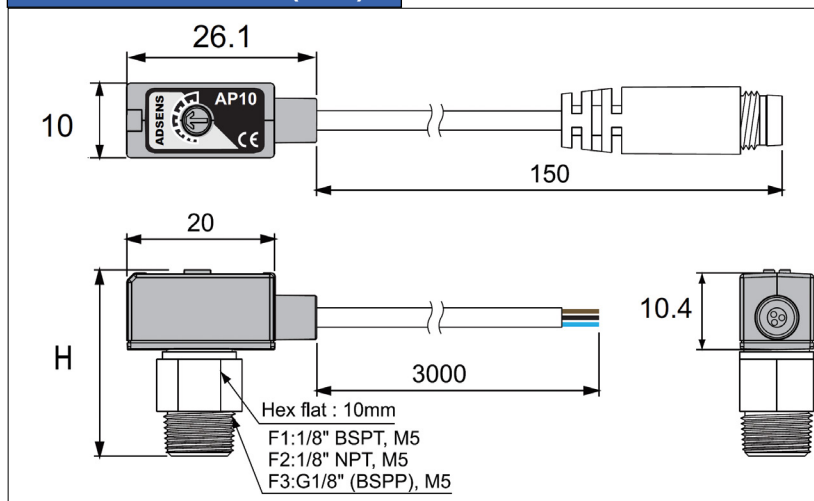
AP10	V	01	1/4	C
Series	Type	Output	Vacuum Port	Electrical Connection
	P Pressure	02 2 x NPN	1/4 Ø1/4" Stem	9ft Lead
	V Vacuum	04 2 x PNP	R4 Ø4mm Stem	C M8 3 Pin Male
			R6 Ø6mm Stem	
			F1 1/8BSPT	
			F2 1/8NPT	
			M5 M5x0.8	

SPECIFICATIONS	
Media	Non lubricated dry air or non corrosive gas
Maximum Over Pressure	AP10V - 6bar (87psi), AP10P - 14bar (217psi)
Electrical Connection	M8 3 Pin male connector or 9ft lead wire
Operating Voltage	10.8 – 30VDC (includes ripple voltage)
Load Current	90mA max.
Repeatability	≤1% F.S ± 1 digit
Hysteresis	3% F.S. max
Response Time	≤2.5ms (chatter proof selectable 24, 192 & 768ms)
Indicator	Red LED turns on
Insulation	IP40
Ambient Temp.	0-60°C (32-140°F)
Vacuum / Pressure Port	Push In Stem for Fitting or 1/8NPT Male
Shock Resistance	980m/s (100G) 3 times in each direction X,Y & Z
Weight	50g with 9ft cable

SWITCH CONNECTOR



DIMENSIONS (mm)



Height (H)

		Height (H)
1/4	Ø1/4" Stem	30mm
R4	Ø4mm Stem	32mm
R6	Ø6mm Stem	30mm
F1	1/8BSPT	25mm
F2	1/8NPT	
M5	M5x0.8	23mm