AVENTICS™ Solenoid Pilot, Air Pilot or Hand Lever Actuated Valves

Table of Contents, Spool and Sleeve
1/8”, 1/4”, 3/8” tapped

Series
L1-L2



L1 Series (1/8” and 1/4” tapped)

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AVENTICS™ Solenoid Pilot or Air Pilot Actuated Valves

5-way, 5 ported, 2 and 3 positions, Spool and Sleeve
1/8" and 1/4" tapped

5/2-5/3
Series
L1

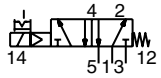
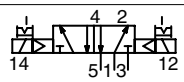
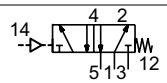
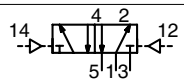
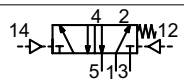
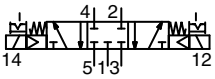
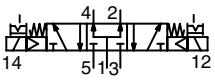
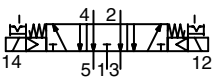
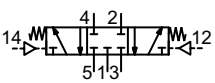
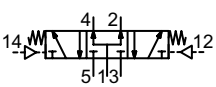
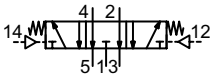
Features and Benefits

- *Solenoid air pilot or air pilot actuated*
- *DIN plug-in solenoid and plug connector with indicator light*
- *Unlubricated or lubricated service*
- *In-line or manifold mounted*
- *Reliability: steel spool & sleeve technology with long service life*
- *Robust valve design, particularly recommended for use in harsh environments*



Technical data

Flow capacity	Cv 1
Operating pressure	-0.95 to 10 bar (28"Hg Vacuum to 150 PSIG)
Pilot pressure	1 to 10 bar (14.5 to 150 PSIG) [internal and external]
Flow rate	985 Nl/min (6 bar upstream/5 bar downstream) 46 SCFM (Upstream pressure to atmosphere at 80 PSIG)
Fluids	Air or neutral gas, filtered at 40 µm, lubricated or not
Sealing	Spool and sleeve metal-to-metal
Ambient temperature	
Solenoid pilot	-23°C to +46°C (-10°F to +115°F)
Air pilot	-23°C to +66°C (-10°F to +150°F)

	Valve type	Operators	
		Pilot (14)	Return (12)
5/2			
	**BA4**	solenoid air	spring
	**BB4**	solenoid air	solenoid air
	**PA4**	air	spring
	**PP4**	air	air
	**PM4**	air	air + spring
5/3			
	**BB6**	**W1** closed centre position solenoid air, spring return to centre position	
	**BB7**	**W2** centre open to pressure solenoid air, spring return to centre position	
	**BB5**	**W3** centre open to exhaust solenoid air, spring return to centre position	
	**PP6**	**W1** closed centre position air operated	
	**PP7**	**W2** centre open to pressure air operated	
	**PP5**	**W3** centre open to exhaust air operated	

AVENTICS™ Spool and Sleeve Valves

Operating data

All solenoids are continuous duty rated		12 VDC	24 VDC	24 VAC 50 Hz	24 VAC 60 Hz	115 VAC 50 Hz	120 VAC 60 Hz	230 VAC 50 Hz	240 VAC 60 Hz
Power (Watts)		3.5	3.5	4.8	3.3	4.8	4.0	5.0	3.5
Holding current (A)		0.30	0.15	0.380	0.280	0.064	0.054	0.030	0.023
Inrush current (A)		-	-	0.500	0.420	0.087	0.082	0.042	0.036
Energize in seconds	2-Position, single, spring return	0.010	0.010	0.007	0.007	0.007	0.007	0.007	0.007
	2-Position, double, detented	0.010	0.010	0.007	0.007	0.007	0.007	0.007	0.007
	3-Position, spring centered	0.010	0.010	0.007	0.007	0.007	0.007	0.007	0.007
De-energize in seconds	2-Position, single, spring return	0.035	0.035	0.035	0.035	0.035	0.035	0.035	0.035
	2-Position, double, detented	-	-	-	-	-	-	-	-
	3-Position, spring centered	0.030	0.035	0.035	0.035	0.035	0.035	0.035	0.035

*A 1.4 Watt DC solenoid is available. Add "17G" to the model number. Example: L12BA400B017G61.
Maximum pilot pressure is reduced to 116 PSIG (8 bar).

How to order

In-line valves

PRODUCT CODE

L12 PA 4 52 O 0 000 00

Valve series and port size
L11 = 1/8"
L12 = 1/4"

Valve type
BA = Single solenoid air pilot, spring return with maintained manual operator
BB = Double solenoid air pilot with maintained manual operator
PA = Single air pilot, spring return
PP = Double air pilot
PM = Double air pilot with spring offset

Function
4 = 2 position, 5-way
5 = 3 position, 5-way exhausted center
6 = 3 position, 5-way closed center
7 = 3 position, 5-way pressurized center
Open to 4 and 2 in center

Enclosure type
52 = In-line valve
(Manifold mount with adapter 239-311 to be ordered separately)

Voltage
20 = 24 V / 50-60 Hz
30 = 110 -120 VAC / 50-60 Hz
40 = 220-240 VAC / 50-60 Hz
60 = 12 V DC
61 = 24 V DC
00 = Non applicable (Used with air pilot)

Options
Without manual operator
14A = External pilot supply
17G = Low Watt solenoid 1.42 Watt
17P = Impulse manual operator
18D = Side port (drawing L1-BB452, page 5)

Port type
G = ISO 228/1 (1/8" or 1/4")
0 = NPTF (ANSI B.1.20.3)

Wiring option
B = DIN plug-in DC solenoid
O(1) = DIN plug-in AC solenoid or air pilot
(1) Letter "O"

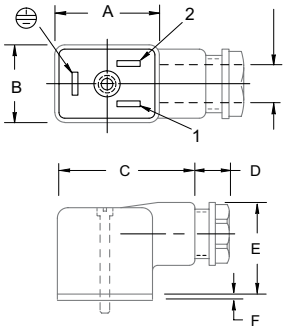
AVENTICS™ Spool and Sleeve Valves

Plug connector assemblies

NOTE: Plug connector is NOT included with DIN solenoid. Order plug-in connector assembly separately
EN 175301-803, industry standard form B (11 mm) / IP65

Plug connector description	Part No.
Grey (14 end solenoid) Plug Assembly	230-363
Black (12 end solenoid) Plug Assembly	230-364
Plug Assembly with 24 V Light	230-365
Plug Assembly with 110 V Light	230-366
Plug Assembly with 220 V Light	230-367

Dimensions mm (inches), **Weight** kg (Lbs)



Normal polarity:
1 = (+) Positive, high
2 = (-) Negative, neutral
= Chassis ground

A	B	C	D	E	F	weight	
28.4	21.1	39.9)	10.2	27.9	1.5	0.025	kg
(1.12)	(0.83)	(1.57)	(0.40)	(1.10)	(0.06)	0.055	(Lbs)

How to order

Manifold Assembly

PRODUCT CODE

AK 0 2 D 0000 2 N STD

Electrical / electronics type and location
0 = Standard

Product series
2 = L1

Number of valve stations
B = 2 **F** = 6
C = 3 **H** = 8
D = 4 **J** = 10
E = 5 **L** = 12

Options
STD = Used with line mounted valves, includes adapter kits (valve mounting = 52)

Port type
N = NPTF (ANSI B 1.20.3)

End plate port size
2 = 1/4”

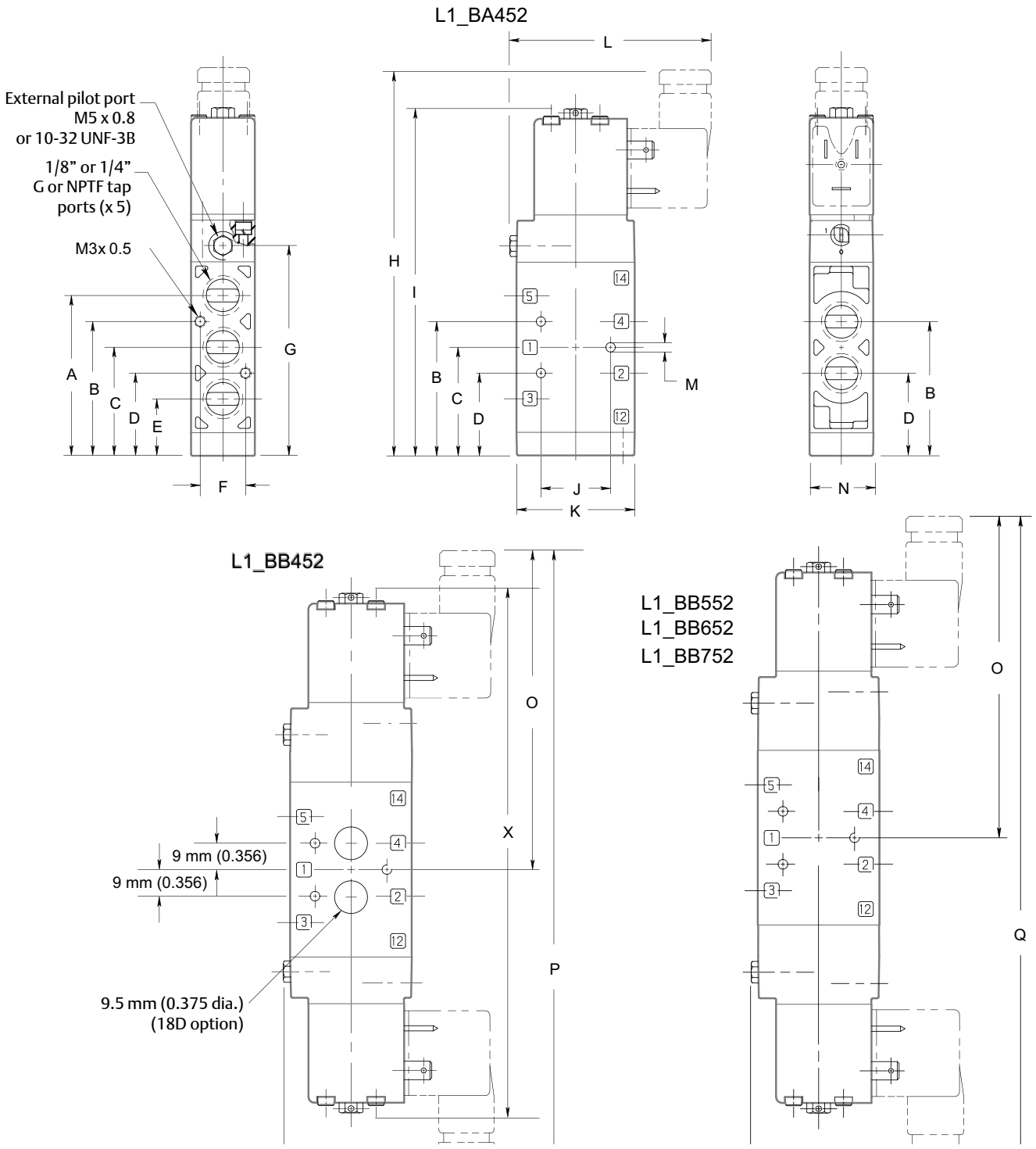
Example order: (Assembled)

Assembly Kit:	AK02D00002NA21
Station 1:	L12BB52O000030
Station 2:	L12BA52O000030
Station 3:	L12PP52O000000
Station 4:	L12PA52O000000

AVENTICS™ Spool and Sleeve Valves

Dimensions mm (inches)

Solenoid-pilot valve

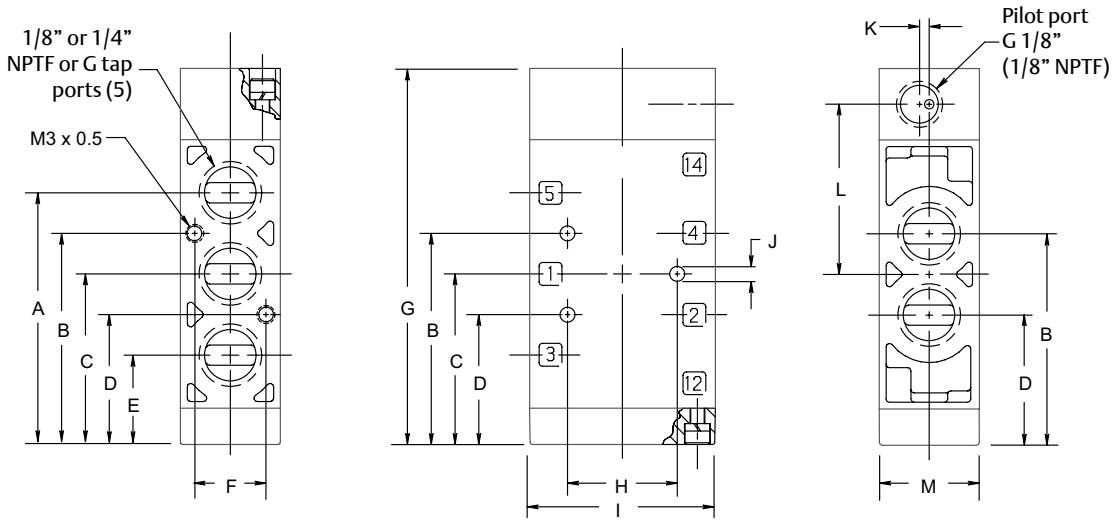


A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
56.1 (2.21)	47.0 (1.85)	38.1 (1.50)	29.0 (1.14)	19.8 (0.78)	15.7 (0.62)	73.6 (2.90)	137.4 (5.41)	123.2 (4.85)	24.4 (0.96)	41.1 (1.62)	70.4 (2.77)	3.3 (0.13)	22.4 (0.88)	109.7 (4.32)	209.0 (8.23)	219.5 (8.64)

AVENTICS™ Spool and Sleeve Valves

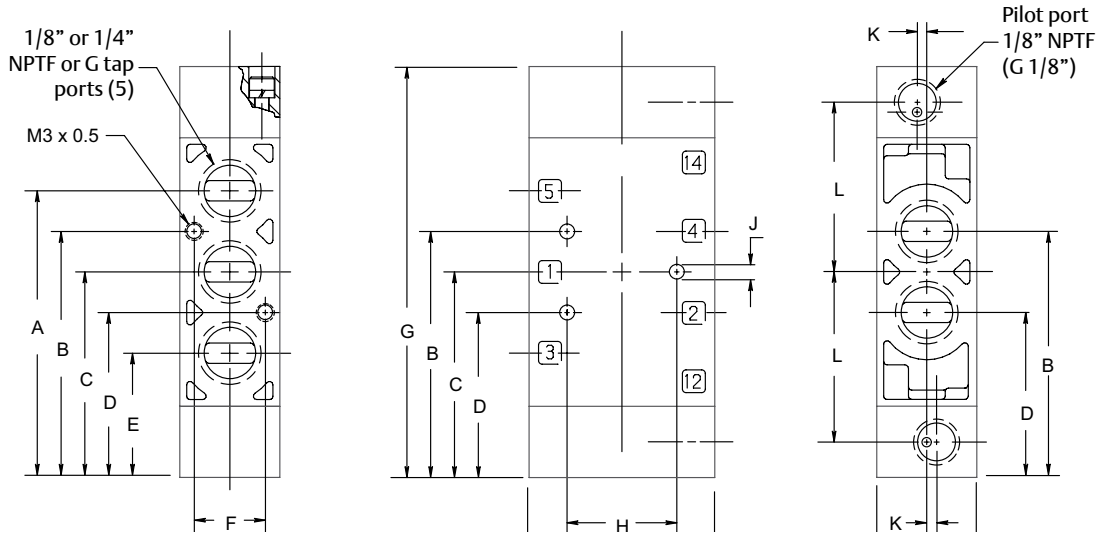
Dimensions mm (inches)

Air-pilot valve L1_PA452



A	B	C	D	E	F	G	H	I	J	K	L	M
56.1 (2.21)	47.0 (1.85)	38.1 (1.50)	29.0 (1.14)	19.8 (0.78)	15.7 (0.62)	83.8 (3.30)	24.4 (0.96)	41.1 (1.62)	3.3 (0.13)	2.2 (0.09)	37.9 (1.49)	22.4 (0.88)

Air-pilot valve L1_PP452, L1_PP552, L1_PP652, L1_PP752, L1_PM452

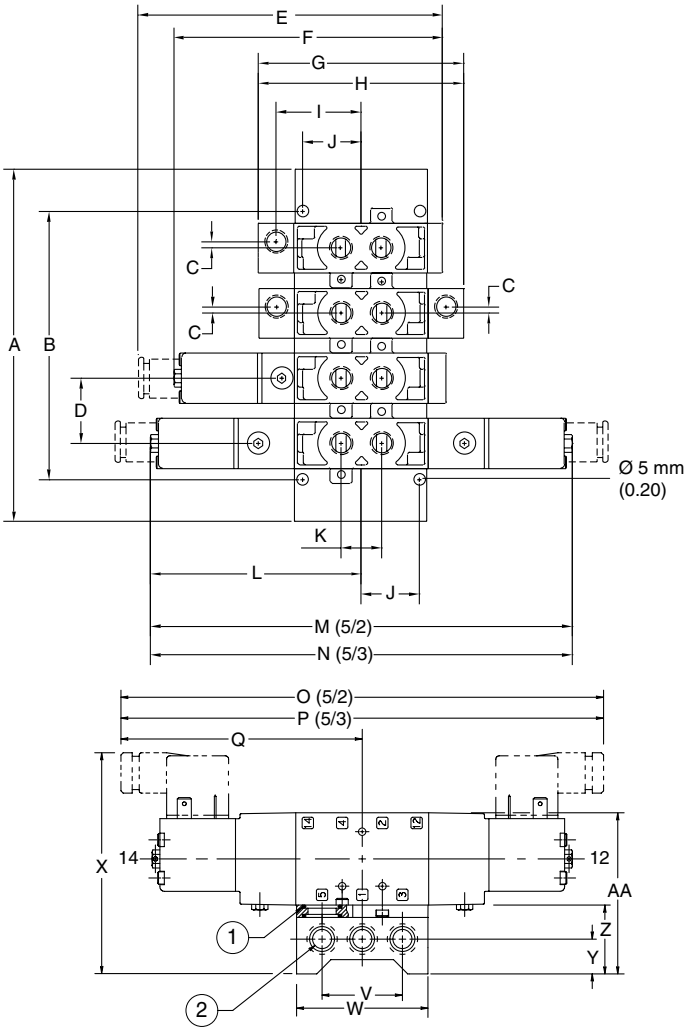


A	B	C	D	E	F	G	H	I	J	K	L	M
64.0 (2.52)	54.9 (2.16)	45.7 (1.80)	36.8 (1.45)	27.7 (1.09)	15.7 (0.62)	91.6 (3.61)	24.4 (0.96)	41.1 (1.62)	3.3 (0.13)	2.2 (0.09)	37.9 (1.49)	22.4 (0.88)

AVENTICS™ Spool and Sleeve Valves

Dimensions mm (inches)

Manifold assembly / Valve with adaptor plate (valve mounting = 52)



1. O-ring seal, (x 6) seals/station (Part number **126-203**)
2. ISO 228/1 (G 1/4") or 1/4" NPTF type - Both ends

	Manifold kit number	Dimensions	
	1/4" NPTF	A	B
2 stations	**106-1063**	99.1 (3.90)	61.7 (2.43)
3 stations	**106-1064**	127.8 (5.03)	90.4 (3.56)
4 stations	**106-1065**	156.7 (6.17)	119.4 (4.70)
5 stations	**106-1066**	185.7 (7.31)	148.3 (5.84)
6 stations	**106-1067**	214.6 (8.45)	177.0 (6.97)

	Manifold kit number	Dimensions	
	1/4" NPTF	A	B
8 stations	**106-1069**	272.3 (10.72)	234.9 (9.25)
10 stations	**106-1071**	329.9 (12.99)	292.6 (11.52)
12 stations	**106-1073**	387.9 (15.27)	350.5 (13.80)
Adaptor Kit	**239-311**	Order (x 1) adaptor kit for each station on the manifold. Includes all seals and screw	

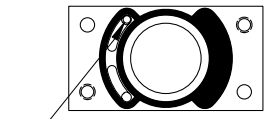
C	D	E	F	G	H	I	J	K	L	M	N	O	P
2.3 (0.09)	29.0 (1.14)	136.1 (5.36)	122.2 (4.81)	91.7 (3.61)	45.7 (1.80)	37.8 (1.49)	26.2 (1.031)	18.0 (0.71)	94.2 (3.71)	178.6 (7.03)	189.2 (7.45)	206.8 (8.14)	217.2 (8.55)

Q	R	S	T	U	V	W	X	Y	Z	AA
108.5 (4.27)	88.1 (3.47)	15.5 (0.61)	25.1 (0.99)	66.5 (2.62)	36.1 (1.42)	59.2 (2.33)	98.8 (3.89)	15.5 (0.61)	30.7 (1.21)	72.1 (2.84)

AVENTICS™ Spool and Sleeve Valves

Internal / External pilot supply

Internal pilot supply



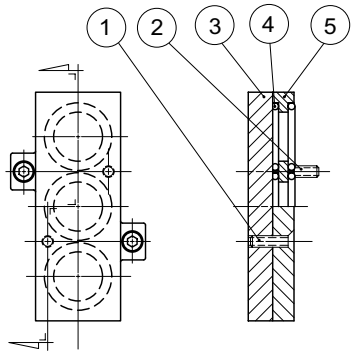
Pilot supply hole must be visible both ends.

External pilot supply



Rotate gasket to cover pilot supply hole.
Remove pipe plug from adapter assy both ends.
(Part No. 127-588)

Blank station plate kit (Part number: 239-288)

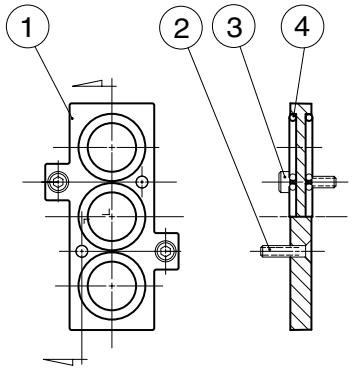


Parts list

	Quantity	Part name	Part number
1 *	2	Screw	127-622
2 *	2	Screw	127-570
3 *	1	Blank station plate	119-352
4 *	6	O-ring	126-203
5 *	1	Adaptor	119-353

* Indicates parts included in kit

Adaptor kit (Part number: 239-311)

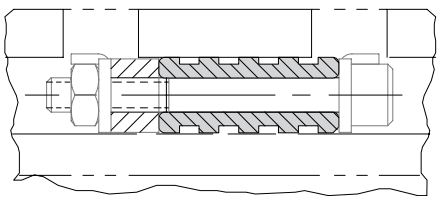


Parts list

	Quantity	Part name	Part number
1 *	1	Adaptor	119-353
2 *	2	Screw	127-622
3 *	2	Screw	127-570
4 *	6	O-ring	126-203

* Indicates parts included in kit

Blocking plug kit (Part number: 239-309)



Solenoid assemblies

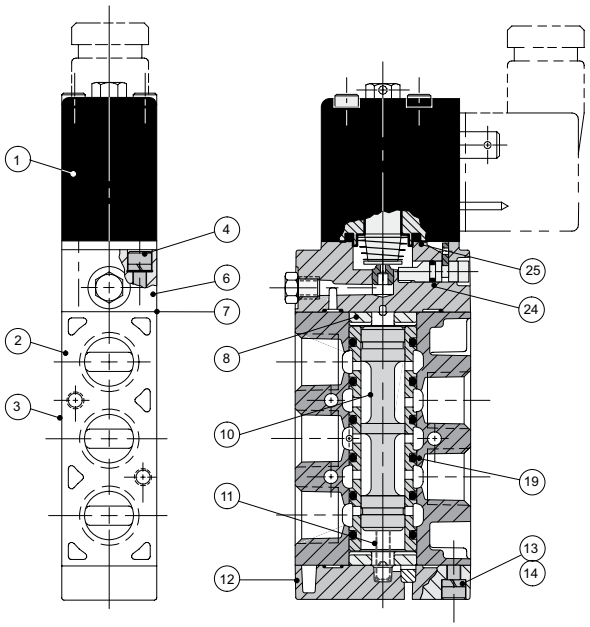
	Standard voltages				
	100-115 V/50 Hz 115-120 V/60 Hz	200-240 V/50 Hz 220-240 V/60 Hz	24 V/50-60 Hz	12 VDC	24 VDC
Part number	237-569	237-570	237-568	226-737	226-749

AVENTICS™ Spool and Sleeve Valves

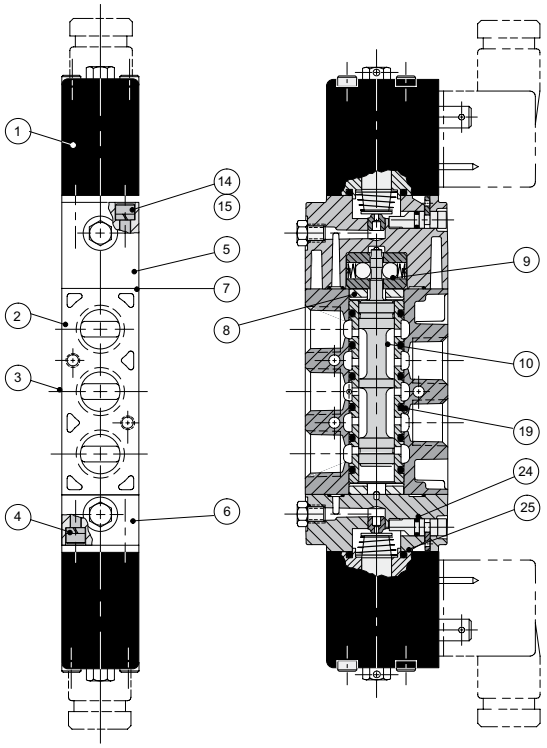
Valve service Kits and parts - 2 positions

Solenoid-pilot actuated

Kit No. L1-K1 (For models L11BA4, L12BA4)

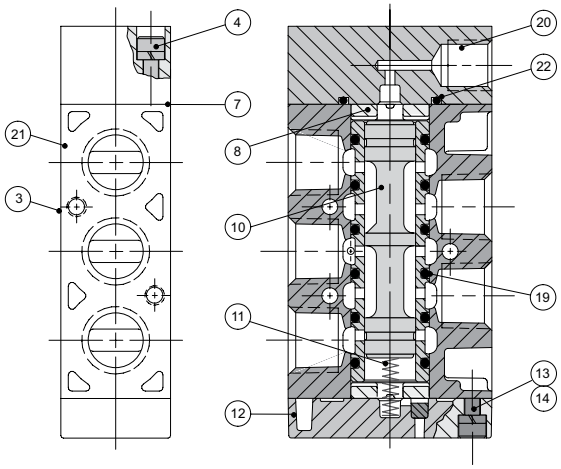


Kit No. L1_K2 (For models L11BB4, L12BB4)

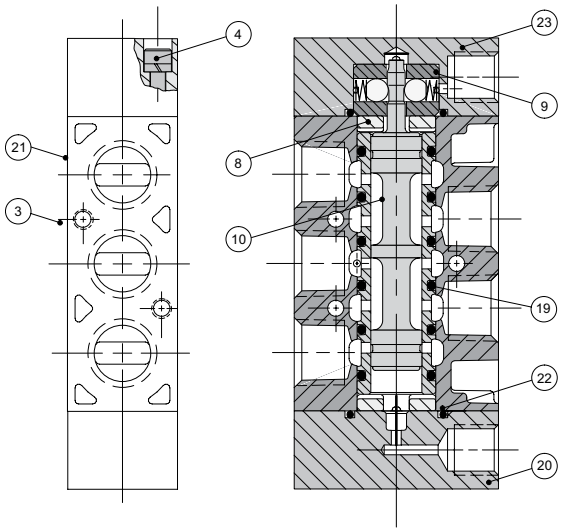


Air-pilot actuated

Kit No. L1-K1
(For models L11PA4, L12PA4, L11PM4, L12PM4)



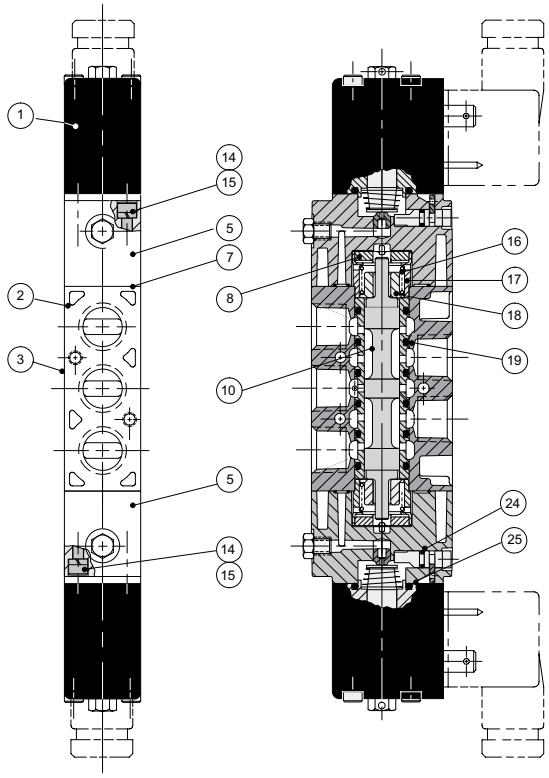
Kit No. L1-K2
(For models L11PP4, L12PP4)



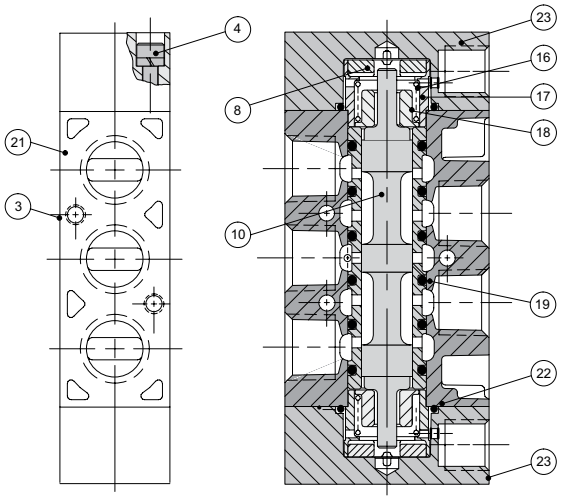
AVENTICS™ Spool and Sleeve Valves

Valve service Kits and parts - 3 positions

Solenoid-pilot actuated
Kit No. L1-K3 (For models L1_BB5, L1_BB6, L1_BB7)



Air-pilot actuated
Kit No. L1-K3
(For models L1_PP5, L1_PP6, L1_PP7)



Parts list

	Quantity	Part Name	Part Number
1	1	Solenoid assembly	See page 8
2	1	Solenoid-pilot body (not sold separately)	
3	1	Nameplate	122-943
4	2	Screw assembly	127-392
5		Adaptor assembly	219-175
6	1	Adaptor assembly	219-177
7 *	2	Gasket	113-401
8 *	2	Bumper	114-172
9 **	1	Detented assembly	210-118
10	1	Sleeve assembly w/Seals for models: L1-BA4, L1PA4 L1-BB4, L1PP4 L1-BB5, L1PP5 L1-BB6, L1PP6 L1-BB7, L1PP7	 209-377 209-378 209-379 209-380 209-381
11	1	Spring	115-293
12	1	Spring cover assembly	204-469
13	2	Screw	127-564
14		Lockwasher	128-239
15	2	Screw	127-563
16 ***	2	Spring	115-225
17 ***	2	Spacer	116-398
18	2	Spring retainer	116-399
19 *	6	O-ring seal	126-202
20	1	Pilot cap	104-411
21	1	Air-pilot body (not sold separately)	
22 *		O-ring seal	126-205
23		Pilot cap	104-413
24 *	2	Seal (override)	126-203
25 *	2	Seal (solenoid pilot)	126-163

* indicates parts in L1-K1, L1-K2, and L1-K3
** indicates part in L1-K2 only
*** indicates part in L1-K3 only

AVENTICS™ Solenoid Pilot, Air Pilot or Hand Lever Actuated Valves

5-way, 5 ported, 2 and 3 positions, Spool and Sleeve
1/4" and 3/8" tapped

5/2-5/3
Series
L2

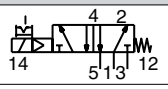
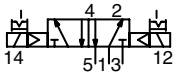
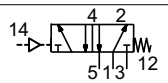
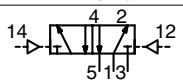
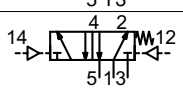
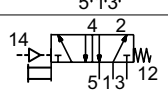
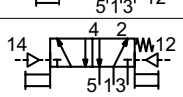
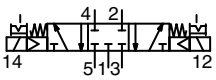
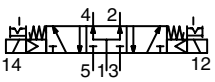
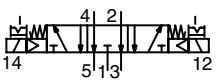
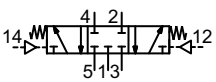
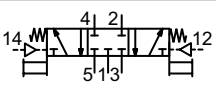
Features and Benefits

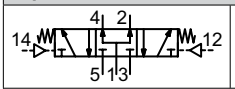
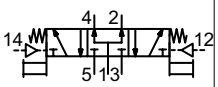
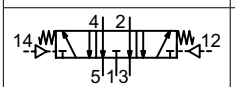
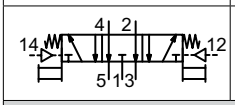
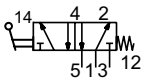
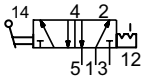
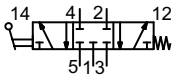
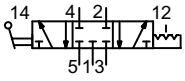
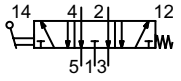
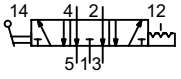
- *Solenoid air pilot or air pilot actuated*
- *Hand-lever valves available*
- *DIN plug-in solenoid and plug connector with indicator light*
- *Unlubricated or lubricated service*
- *In-line or manifold mounted*
- *Reliability: steel spool & sleeve technology with long service life*
- *Robust valve design, particularly recommended for use in harsh environments*
- *Integral speed control available*



Technical data

Flow capacity	Cv 1.7 (1/4" or 3/8")
Operating pressure	-0.95 to 10 bar (28"Hg Vacuum to 150 PSIG)
Pilot pressure	1 to 10 bar (14.5 to 150 PSIG) [internal and external]
Flow rate	1674 Nl/min (6 bar upstream/5 bar downstream) 79 SCFM (Upstream pressure to atmosphere at 80 PSIG)
Fluids	Air or neutral gas, filtered at 40 µm, lubricated or not
Sealing	Spool and sleeve metal-to-metal
Ambient temperature	
Solenoid pilot	-23°C to +46°C (-10°F to +115°F)
Air pilot	-23°C to +66°C (-10°F to +150°F)

	Valve type	Operators	
		Pilot (14)	Return (12)
5/2			
	**BA4**	solenoid air	spring
	**BB4**	solenoid air	solenoid air
	**PA4**	air	spring
	**PP4**	air	air
	**PM4**	air	air + spring
	**JA4**	air impulse manual operator	air
	**JJ4**	impulse manual operator	air + spring impulse manual operator
5/3			
	**BB6**	**W1** closed centre position solenoid air, spring return to centre position	
	**BB7**	**W2** centre open to pressure solenoid air, spring return to centre position	
	**BB5**	**W3** centre open to exhaust solenoid air, spring return to centre position	
	**PP6**	**W1** closed centre position air operated	
	**JJ6**	**W2** centre open to pressure air operated impulse operator	

	Valve type	Operators	
		Pilot (14)	Return (12)
5/3			
	**PP7**	**W2** centre open to pressure air operated	
	**JJ7**	**W2** centre open to pressure air operated impulse operator	
	**PP5**	**W3** centre open to exhaust air operated	
	**JJ5**	**W3** centre open to exhaust air operated impulse operator	
5/2 - Hand lever operated			
	**LA4**	hand lever	spring
	**LD4**	hand lever	with detent
5/3 - Hand lever operated			
	**LA6**	**W1** closed centre position lever controlled with spring return	
	**LD6**	**W1** closed centre position lever controlled with detent	
	**LA5**	**W3** centre open to exhaust lever controlled with spring return	
	**LD5**	**W3** centre open to exhaust lever controlled with detent	

AVENTICS™ Spool and Sleeve Valves

Operating data

All solenoids are continuous duty rated		12 VDC	24 VDC	24 VAC 50 Hz	24 VAC 60 Hz	115 VAC 50 Hz	120 VAC 60 Hz	230 VAC 50 Hz	240 VAC 60 Hz
Power (Watts)		3.5	1.4	4.8	3.3	4.8	4.0	5.0	3.5
Holding current (A)		0.30	0.06	0.380	0.280	0.064	0.054	0.030	0.023
Inrush current (A)		-	-	0.500	0.420	0.087	0.082	0.042	0.036
Energize in seconds	2-Position, single, spring return	0.010	0.023	0.007	0.007	0.007	0.007	0.007	0.007
	2-Position, double, detented	0.010	-	0.007	0.007	0.007	0.007	0.007	0.007
	3-Position, spring centered	0.010	-	0.007	0.007	0.007	0.007	0.007	0.007
De-energize in seconds	2-Position, single, spring return	0.035	0.024	0.035	0.035	0.035	0.035	0.035	0.035
	2-Position, double, detented	-	-	-	-	-	-	-	-
	3-Position, spring centered	0.030	-	0.035	0.035	0.035	0.035	0.035	0.035

*A 1.4 Watt DC solenoid is available. Add "17G" to the model number. Example: L22BA452B017G61.
Maximum pilot pressure is reduced to 116 PSIG (8 bar).

How to order

In-line valves

PRODUCT CODE

L22 JA 4 52 O 0 000 00

Valve series and port size
L22 = 1/4"
L23 = 3/8"

Valve type
BA = Single solenoid air pilot, spring return with maintained manual operator
BB = Double solenoid air pilot with maintained manual operator
PA = Single air pilot, spring return
PP = Double air pilot
PM = Double air pilot with spring offset
JA = Single air pilot with impulse manual operator and spring return
JJ = Double air pilot with impulse manual operator
LA = Hand lever with spring return
LD = Hand lever with detent

Function
4 = 2 position, 5-way
5 = 3 position, 5-way exhausted center
6 = 3 position, 5-way closed center
7 = 3 position, 5-way pressurized center
Open to 4 and 2 in center

Enclosure type
52 = In-line valve

Voltage
20 = 24 V / 50-60 Hz
30 = 110 -120 VAC / 50-60 Hz
40 = 220-240 VAC / 50-60 Hz
60 = 12 V DC
61 = 24 V DC
00 = Non applicable
(Used with air pilot or hand lever)

Options
Without manual operator
14A = External pilot supply
17G = Low Watt solenoid 1.42 Watt
17P = Impulse manual operator
18D = Side port (page 5)

Port type
G = ISO 228/1
0 = NPTF (ANSI B.1.20.3)

Wiring option
B = DIN plug-in DC solenoid
O[1] = DIN plug-in AC solenoid or air pilot or hand lever

[1] Letter "O"

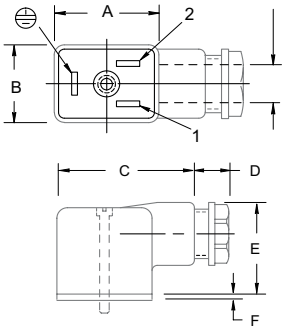
AVENTICS™ Spool and Sleeve Valves

Plug connector assemblies

NOTE: Plug connector is NOT included with DIN solenoid. Order plug-in connector assembly separately
EN 175301-803, industry standard form B (11 mm) / IP65

Plug connector description	Part No.
Grey (14 end solenoid) Plug Assembly	230-363
Black (12 end solenoid) Plug Assembly	230-364
Plug Assembly with 24 V Light	230-365
Plug Assembly with 110 V Light	230-366
Plug Assembly with 220 V Light	230-367

Dimensions mm (inches), **Weight** kg (Lbs)



Normal polarity:
1 = (+) Positive, high
2 = (-) Negative, neutral
= Chassis ground

A	B	C	D	E	F	weight	
28.4	21.1	39.9)	10.2	27.9	1.5	0.025	kg
(1.12)	(0.83)	(1.57)	(0.40)	(1.10)	(0.06)	0.055	(Lbs)

How to order

Manifold Assembly

PRODUCT CODE

AK 0 3 D 0000 3 N STD

Electrical / electronics type and location
0 = Standard

Product series
3 = L2

Number of valve stations
B = 2 **F** = 6
C = 3 **H** = 8
D = 4 **J** = 10
E = 5 **L** = 12

Options
STD = Standard (Common supply and exhaust)
A19 = Common supply, individual exhaust

Port type
N = NPTF (ANSI B 1.20.3)

End plate port size
3 = 3/8”

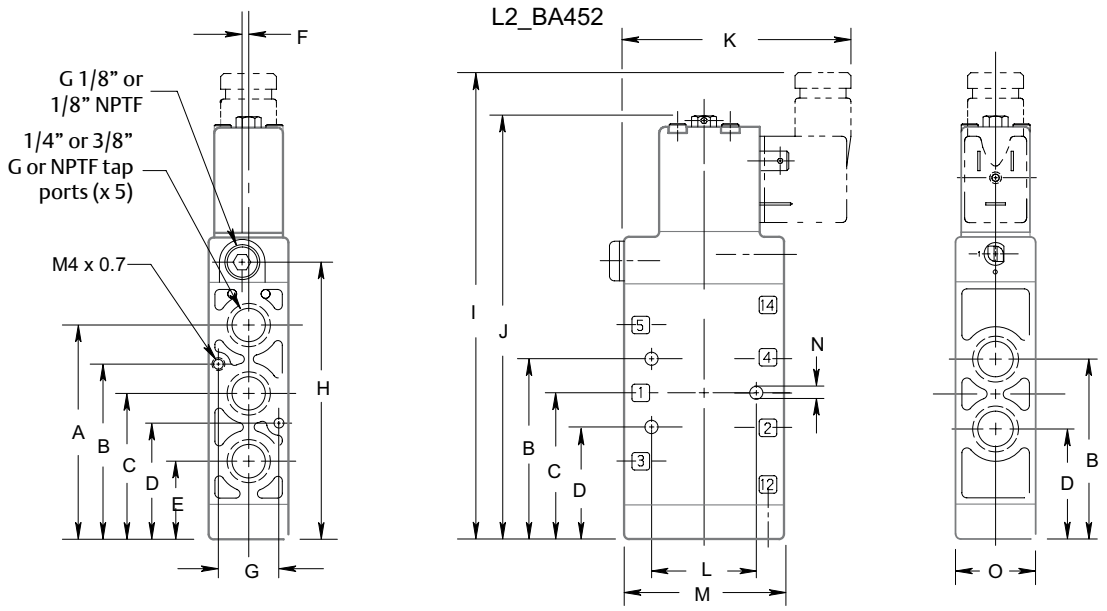
Example order: (Assembled)

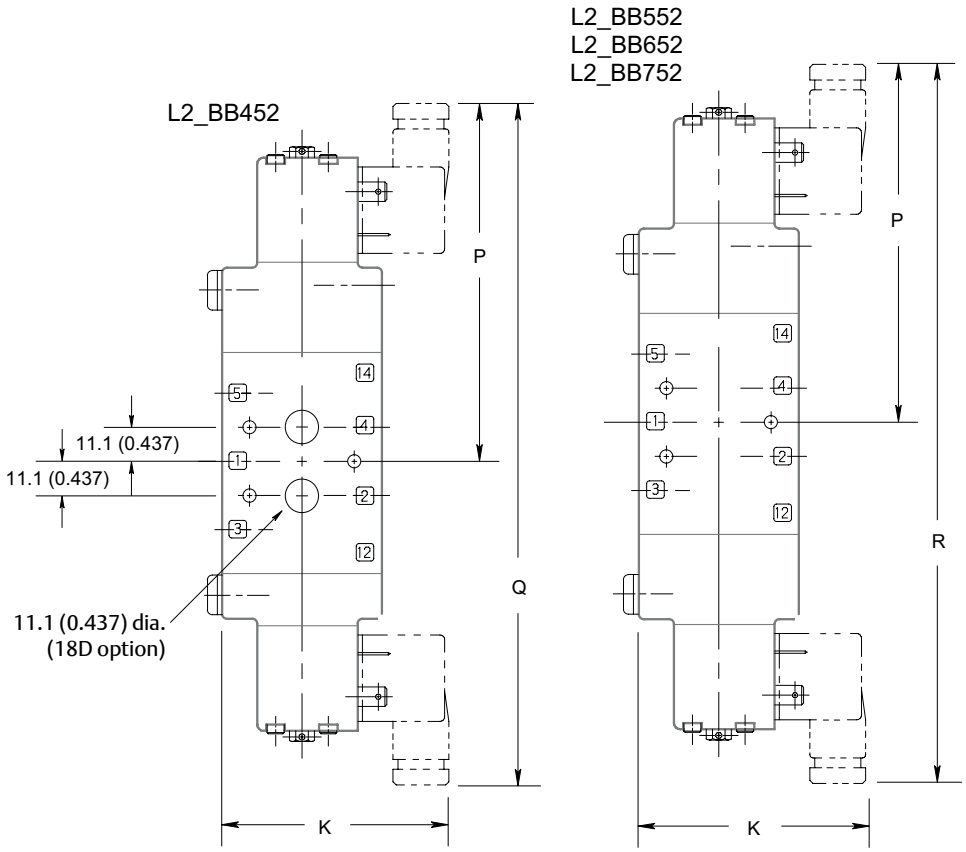
Assembly Kit:	AK03D00003NSTD
Station 1:	L23BB552O000030
Station 2:	L23BA452O000030
Station 3:	L23PP452O000000
Station 4:	L23PA452O000000

AVENTICS™ Spool and Sleeve Valves

Dimensions mm (inches)

Solenoid-pilot valve



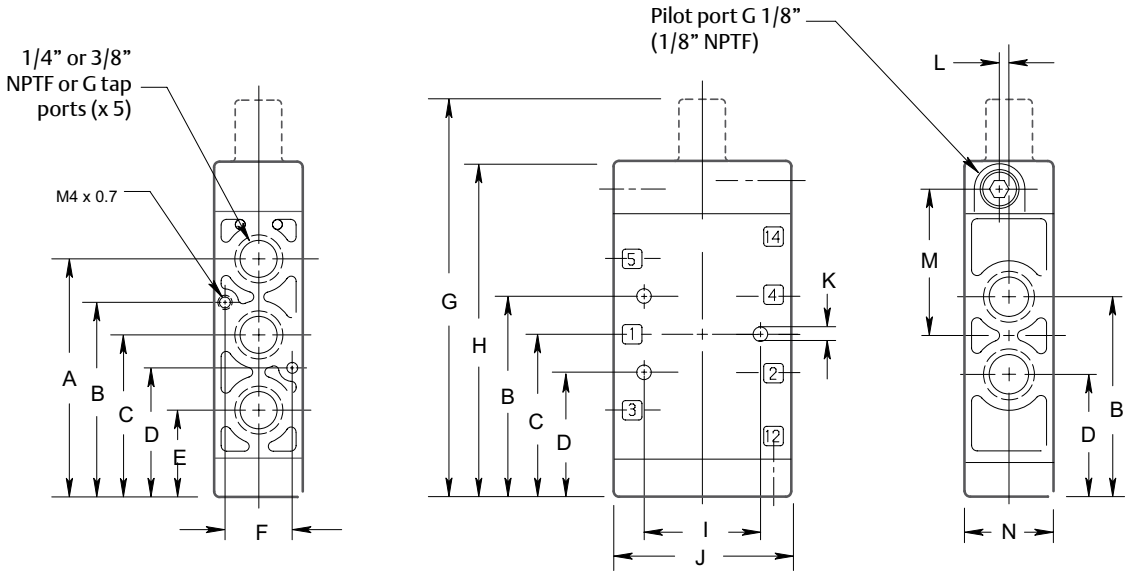


A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
69.1 (2.72)	57.9 (2.28)	47.0 (1.85)	35.8 (1.41)	24.6 (0.97)	2.0 (0.08)	19.1 (0.75)	89.7 (3.53)	152.1 (5.99)	136.7 (5.38)	72.9 (2.89)	32.3 (1.27)	50.8 (2.00)	4.3 (0.17)	25.4 (1.00)	118.4 (4.66)	223.0 (8.78)	236.7 (9.32)

AVENTICS™ Spool and Sleeve Valves

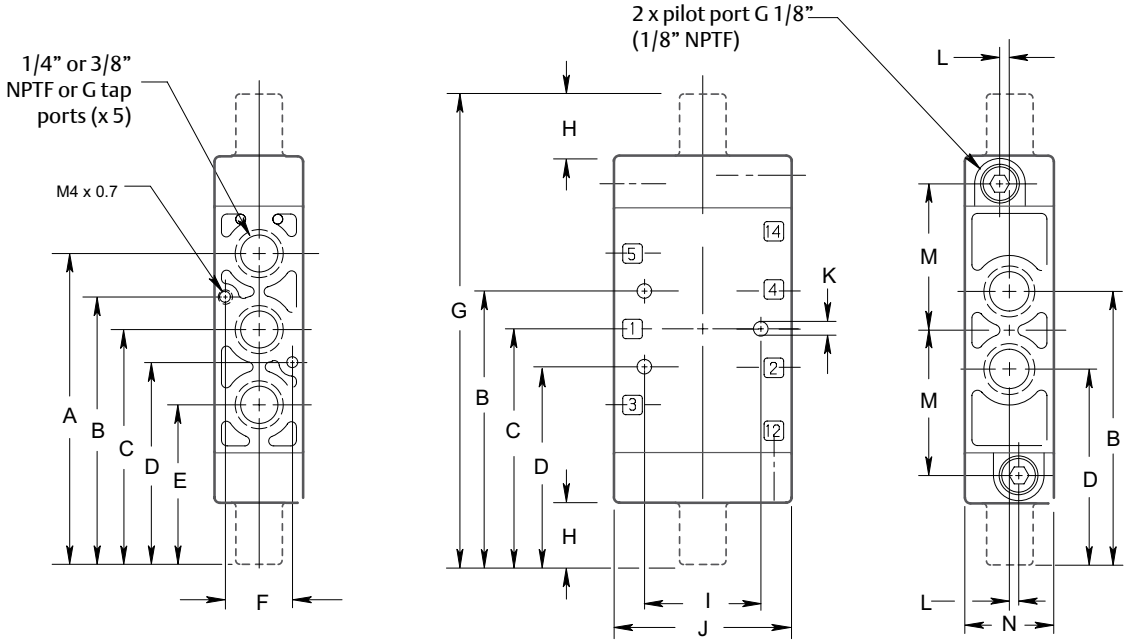
Dimensions mm (inches)

Air-pilot valve - 2 position **L2_PA425, L2_JA452**



A	B	C	D	E	F	G	H	I	J	K	L	M	N
69.1 (2.72)	57.9 (2.28)	47.0 (1.85)	35.8 (1.41)	24.6 (0.97)	19.1 (0.75)	115.8 (4.56)	89.7 (3.53)	32.3 (1.27)	50.8 (2.00)	4.3 (0.17)	2.1 (0.08)	42.9 (1.69)	25.4 (1.00)

Air-pilot valve **L2_PP452, L2_PP552, L2_PP652**
L2_PP752, L2_PM452, L2_JJ452
L2_JJ552, L2_JJ652, L2_JJ752

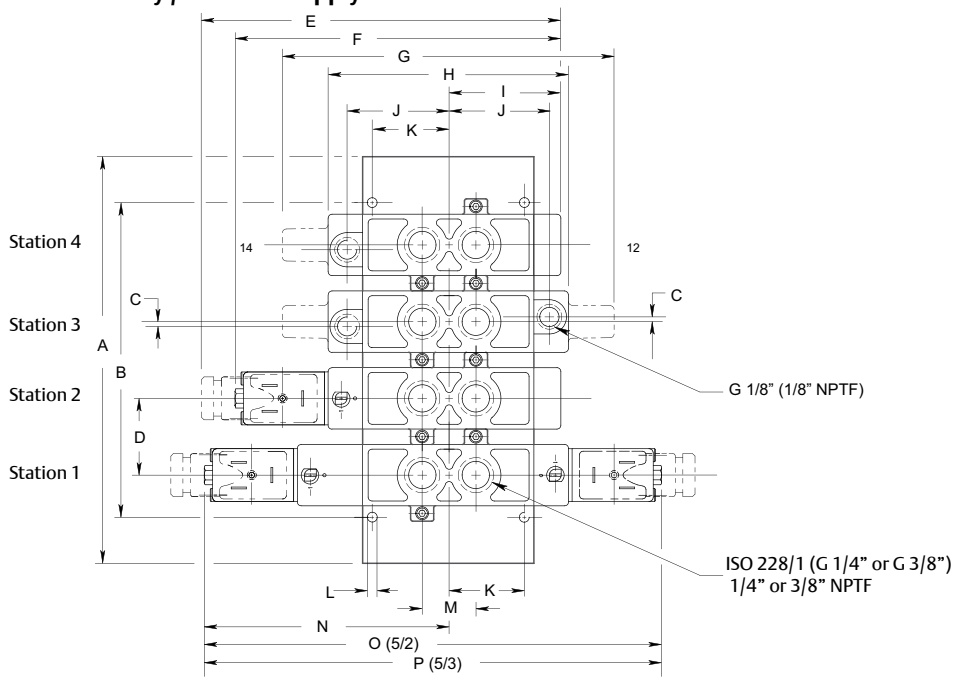


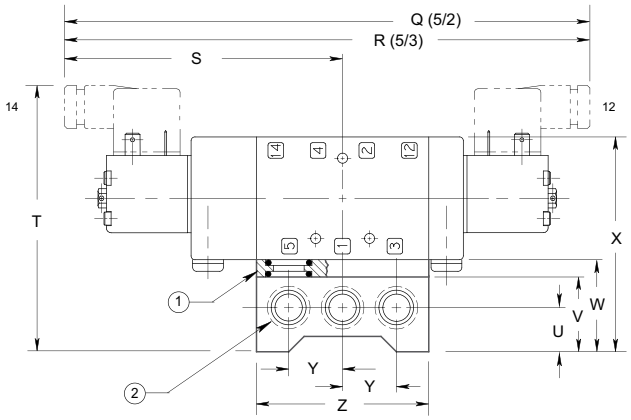
A	B	C	D	E	F	G	H	I	J	K	L	M	N
91.2 (3.59)	79.9 (3.15)	68.8 (2.71)	57.8 (2.28)	46.6 (1.84)	19.1 (0.75)	137.9 (5.43)	18.0 (0.71)	1.27 (32.3)	50.8 (2.00)	4.3 (0.17)	2.1 (0.08)	42.9 (1.69)	25.4 (1.00)

AVENTICS™ Spool and Sleeve Valves

Dimensions mm (inches)

Manifold assembly / Common supply and exhaust





1. O-ring seal, (x 6) seals/station (Part number **126-129**)
2. ISO 228/1 (G 3/8") or 3/8" NPTF type - Both ends

	Manifold kit number	Dimensions	
	3/8" NPTF	A	B
2 stations	**106-704**	105.7 (4.16)	67.1 (2.64)
3 stations	**106-705**	137.7 (5.42)	99.1 (3.90)
4 stations	**106-706**	169.7 (6.68)	131.1 (5.16)
5 stations	**106-707**	201.7 (7.94)	163.1 (6.42)
6 stations	**106-708**	233.7 (9.20)	195.1 (7.68)

	Manifold kit number	Dimensions	
	3/8" NPTF	A	B
8 stations	**106-710**	329.7 (11.72)	259.1 (10.20)
10 stations	**106-712**	361.7 (14.24)	323.1 (12.72)
12 stations	**106-714**	425.7 (16.76)	387.1 (15.24)
Adaptor Kit	**239-312**	Order (1) adaptor kit for each station on the manifold. Includes all seals and screw	

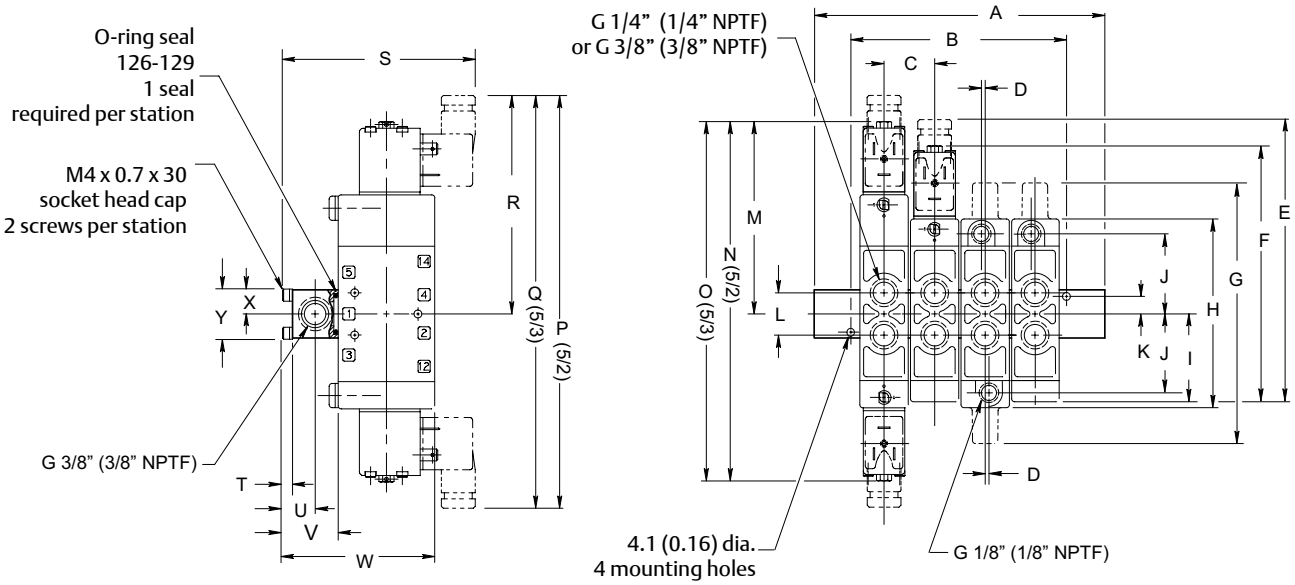
C	D	E	F	G	H	I	J	K	L	M	N	O	P
2.0 (0.08)	32.0 (1.26)	152.1 (5.99)	136.6 (5.38)	137.9 (5.43)	101.9 (4.01)	47.0 (1.85)	42.9 (1.69)	31.8 (1.25)	4.1 (0.16)	22.4 (0.88)	102.9 (4.05)	192.5 (7.58)	205.7 (8.10)

Q	R	S	T	U	V	W	X	Y	Z
223.0 (8.78)	236.7 (9.32)	118.4 (4.66)	110.5 (4.35)	18.3 (0.72)	30.5 (1.20)	37.6 (1.48)	88.4 (3.48)	22.4 (0.88)	70.6 (2.78)

AVENTICS™ Spool and Sleeve Valves

Dimensions mm (inches)

Common supply and individual exhaust



	A	B	3/8 NPTF Part number
2 stations	99.2 (3.92)	60.9 (2.40)	**229-946**
3 stations	125.7 (4.95)	87.1 (3.43)	**229-947**
4 stations	151.9 (5.98)	113.3 (4.46)	**229-948**
5 stations	178.1 (7.01)	139.5 (5.49)	**229-949**
6 stations	204.2 (8.04)	165.6 (6.52)	**229-950**
8 stations	256.5 (10.10)	217.9 (8.58)	**229-952**

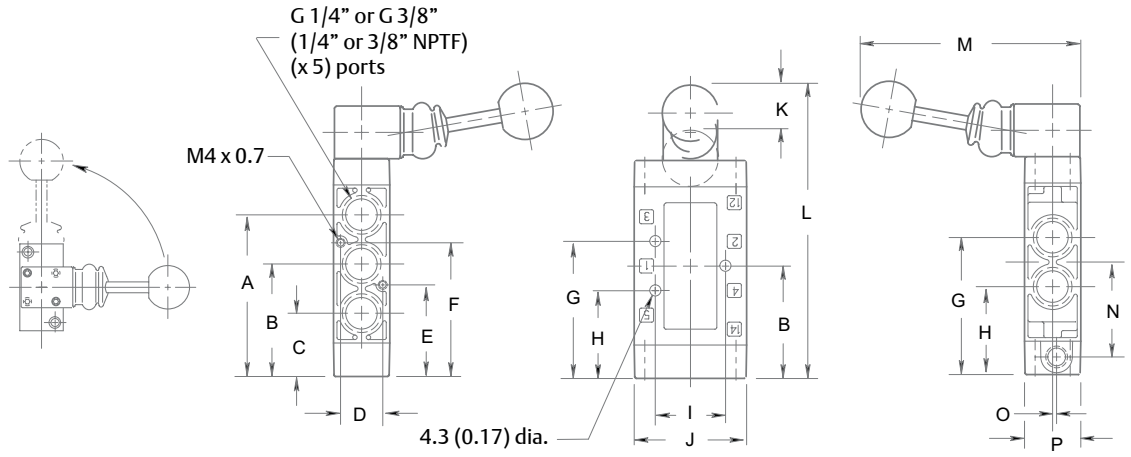
C	D	E	F	G	H	I	J	K	L	M	N	O	P
26.2 (1.03)	2.1 (0.08)	152.1 (5.99)	136.6 (5.38)	137.9 (5.43)	101.9 (4.01)	46.9 (1.85)	42.9 (1.69)	9.5 (0.38)	22.2 (0.88)	102.9 (4.05)	192.6 (7.58)	205.7 (8.10)	223.0 (8.78)

Q	R	S	T	U	V	W	X	Y
236.7 (9.32)	118.4 (4.66)	95.8 (3.77)	5.2 (0.20)	11.4 (0.45)	22.9 (0.90)	78.9 (3.10)	12.3 (0.48)	24.6 (0.97)

AVENTICS™ Spool and Sleeve Valves

Dimensions mm (inches)

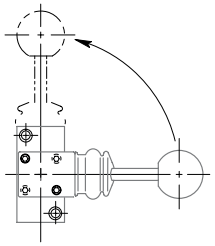
Hand lever valve



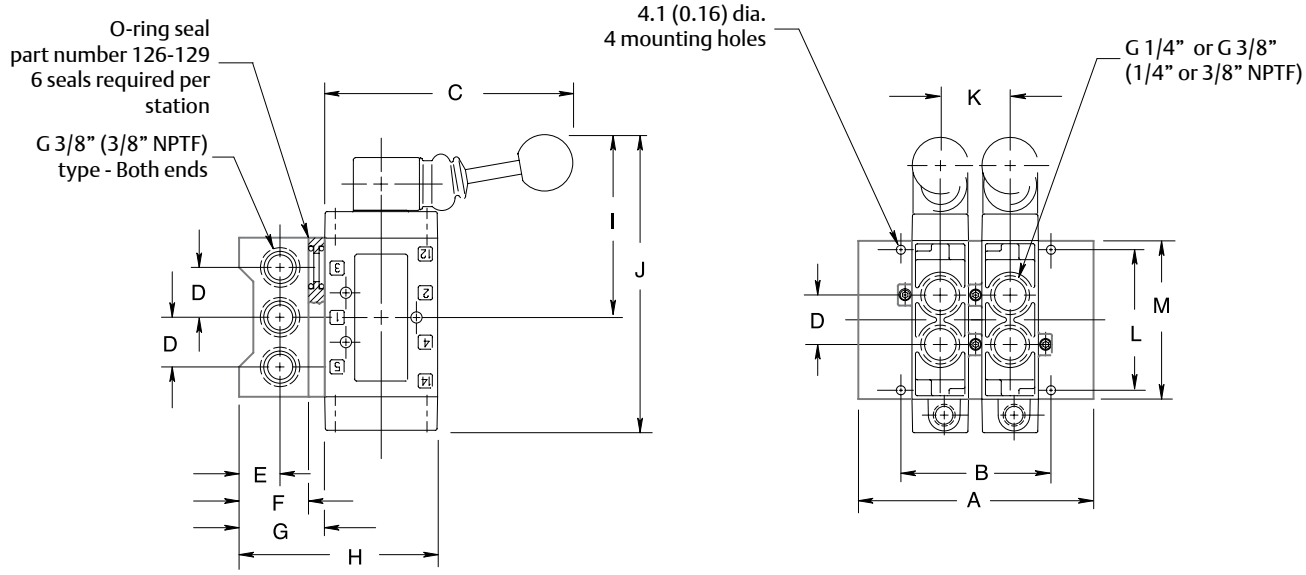
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
73.2) (2.88)	50.8 (2.00)	28.7 (1.13)	19.1 (0.75)	41.4 (1.63)	60.5 (2.38)	62.0 (2.44)	39.9 (1.57)	32.3 (1.27)	50.8 (2.00)	18.3 (0.72)	131.6 (5.18)	99.8 (3.93)	42.7 (1.68)	2.0 (0.08)	25.4 (1.00)

Lever rotation procedure

The L22 and L23 hand lever series allows for the rotation of the lever 90° to become parallel with the valve cylinder ports.
Remove (x 2) M3 socket head screws from lever bracket and rotate 90° in either direction.
Re-assemble screws and tighten securely.



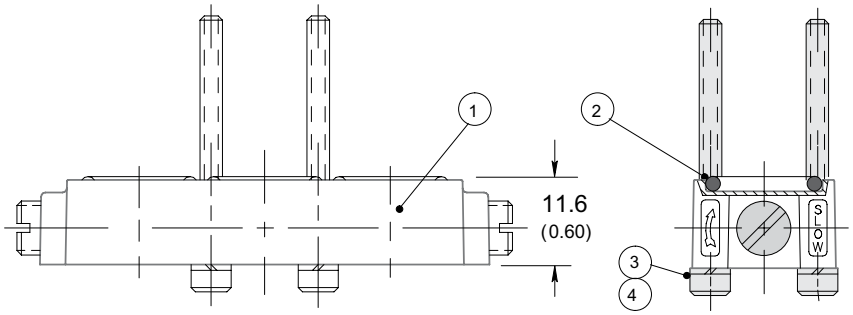
Hand lever valve manifold assembly

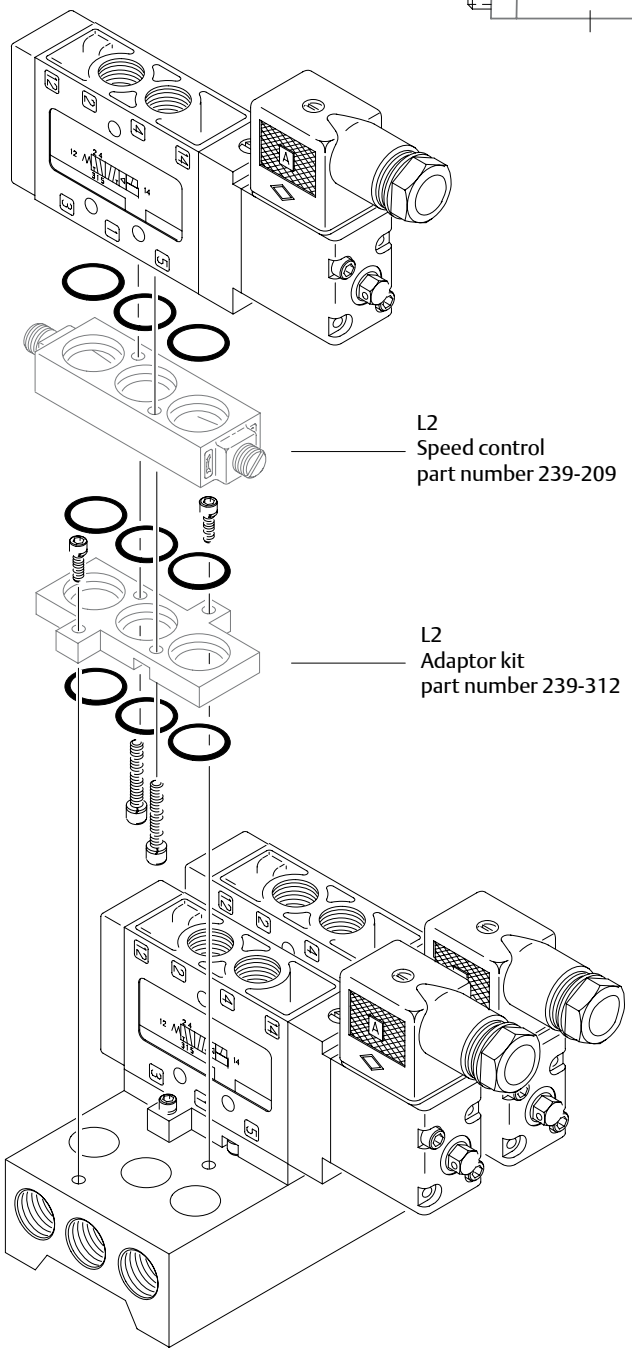


A	B	C	D	E	F	G	H	I	J	K	L	M
See page 16		112.5 (4.43)	22.4 (0.88)	18.3 (0.72)	30.5 (1.20)	37.6 (1.48)	88.4 (3.48)	80.8 (3.18)	131.6 (5.18)	32.0 (1.26)	63.2 (2.49)	70.6 (2.78)

Speed control kit - Side mounted (Part number: **239-209**)

The L2 speed control mounts between any L2 Series valve and die cast adaptor using (x 3) O-rings from the speed control kit and (x 3) O-rings and (x 2) screws from the adaptor kit. This assembly then mounts to and 3-station manifold by using the remaining (x 3) O-rings and (x 2) screws from the adaptor kit.





Parts list

	Quantity	Part name	Part Number
1 *	1	Speed control kit (not sold separately)	
2 *	2	O-ring	**126-129**
3 *	1	Lockwasher	**128-188**
4 *	2	Screw	**127-403**

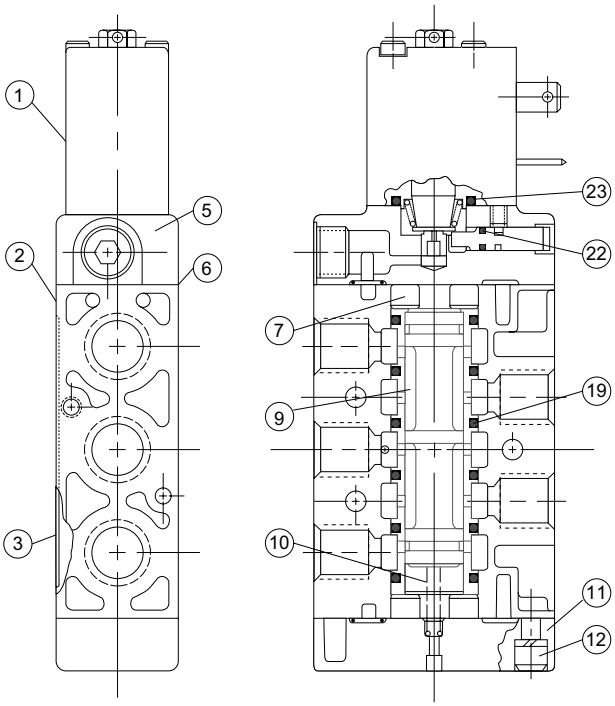
*Indicates parts included in kit

AVENTICS™ Spool and Sleeve Valves

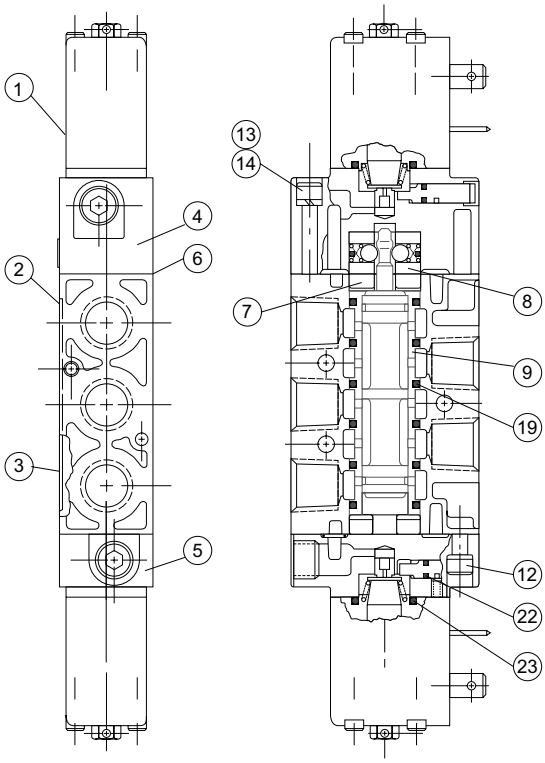
Valve service kits and parts - 2 positions

Solenoid-pilot actuated

Kit No. L2-K1 (For models L22BA4, L23BA4)

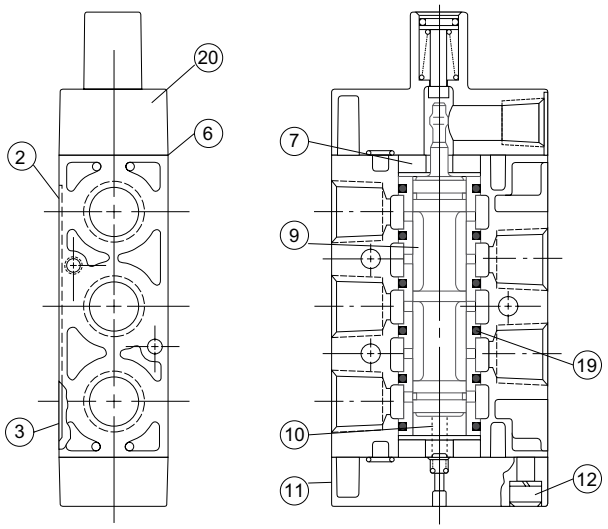


Kit No. L2-K2 (For models L22BB4, L23BB4)

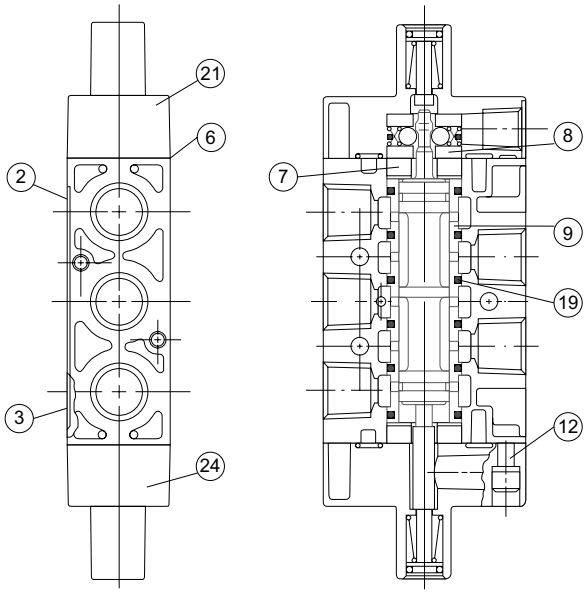


Air-pilot actuated

Kit No. L2-K1
(For models L2_PA4, L2_JJ4)



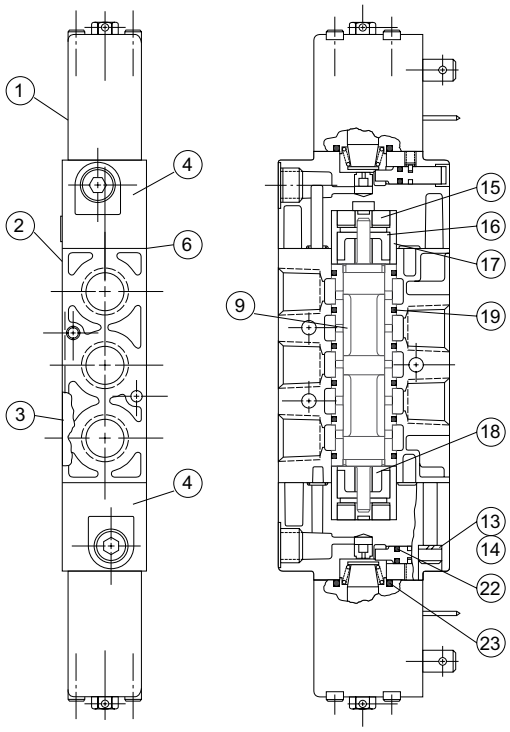
Kit No. L2-K2
(For models L2_PP4, L2_JJ4)



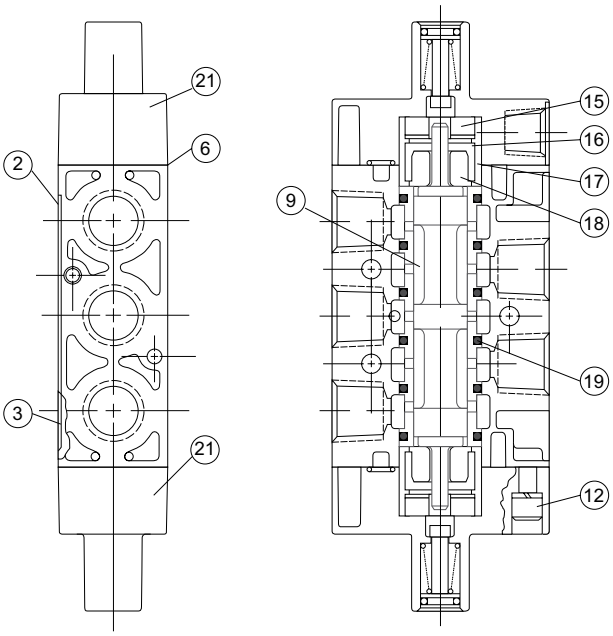
AVENTICS™ Spool and Sleeve Valves

Valve service kits and parts - 3 positions

Solenoid-pilot actuated
Kit No. L2-K3 (For models L2_BB5, L2_BB6, L2_BB7)



Air-pilot actuated
Kit No. L2-K3 (For models L2_PP5, L2_PP6, L2_PP7, L2_JJ5, L2_JJ6, L2_JJ7)



Parts list

	Quantity	Part name	Part Number
1	1	Solenoid assembly	See page 22
2	1	Valve body (not sold separately)	
3	1	Nameplate	**122-940**
4	>	Adaptor assembly	**219-129**
5	1	Adaptor assembly	**219-127**
6 *	2	Gasket	**113-313**
7 ~	2	Bumper	**114-147**
8 ***	1	Detent assembly	**210-116**
9	1	Sleeve assembly w/seals ‡ for models: L2-BA4 L2-BB4, JA4, PA4 L2-BB5, JJ5, PP5 L2-BB6, JJ6, PP6 L2-BB7, JJ7, PP7	 **209-323** **209-327** **209-370** **209-371** **209-372**
10 **	1	Spring	**115-248**
11	1	Spring cover assembly	**204-393**
12	<	Screw assembly	**127-396**
13	•	Lockwasher	**128-190**
14	2	Screw	**127-400**
15 ****	2	Bumper	**114-148**
16 ****	2	Spring	**115-247**
17 ****	2	Spacer	**116-341**
18 ****	2	Spring retainer	**116-340**
19 *	6	O-ring seal	**126-204**
20	1	Pilot cap assembly	**204-404**
21	>	Pilot cap assembly	**204-408**
22 *	2	Seal (override)	**126-163**
23	2	Seal (solenoid-pilot)	**126-203**
24	1	Pilot cap assembly	**204-406**

* indicates parts in L2-K1, L2-K2, and L2-K3
** indicates part in L2-K1 only
*** indicates part in L2-K2 only
**** indicates part in L2-K3 only
~ indicates part in L2-K1 and L2-K2 only

‡ Spool & sleeve assemblies are precision matched sets and include (6) 126-204 seals; spools are not interchangeable.
> (1) for 2-position models; (2) for 3-position models
< (4) for L2-BA4, (2) for L2-BB4
• (2) for 2-position models; (4) for 3-position models

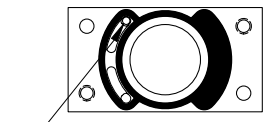
AVENTICS™ Spool and Sleeve Valves

Internal / external pilot supply

NOTE:
On double solenoid-pilot valves, both ends must be converted.

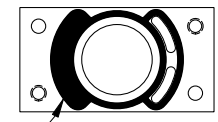
External pilot supply must be used if pressure is supplied to any port except No.1.

Internal pilot supply



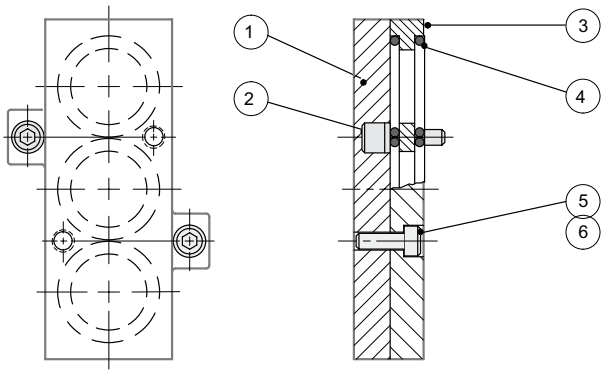
Pilot supply hole must be visible both ends.

External pilot supply



Rotate gasket to cover pilot supply hole. Remove pipe plug from adapter assy both ends. (Part No. 129-100)

Blank station plate kit



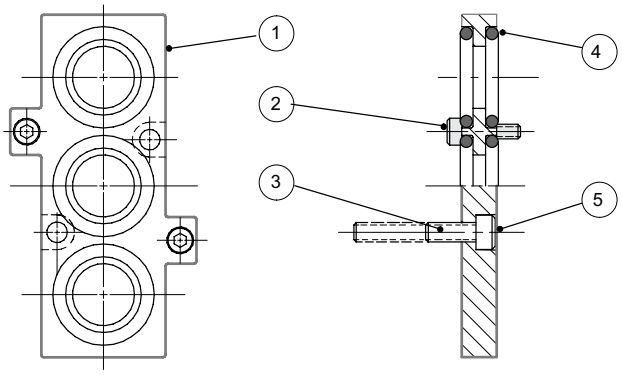
Manifold type	Part number
Common supply, common exhaust (shown)	239-471
Common supply, individual exhaust (not shown)	229-990

Parts list

	Quantity	Part name	239-471 Part number	229-990 Part number
1 *	1	Blank station plate (not sold separately)		
2 *	2	Screw assembly	127-570	-
3 *	1	Adaptor (not sold separately)		
4 *	6	O-ring	126-129	126-129
5 *	2	Screw	127-710	127-361
6 *	2	Lockwasher	128-190	128-188

* Indicates parts included in kit

Adaptor kit (Part number: 239-312)

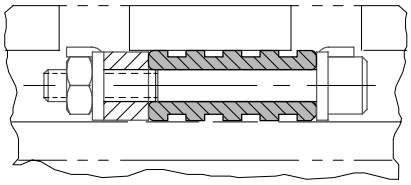


Parts list

	Quantity	Part name	Part number
1 *	2	Adaptor (not sold separately)	
2 *	2	Screw	127-577
3 *	2	Screw	127-570
4 *	6	O-ring	126-129
5 *	2	Screw (shipped loose)	127-400

* Indicates parts included in kit

Blocking plug kit



Manifold Type	Part No.
Common supply, common exhaust (shown)	239-516
Common supply, individual exhaust (not shown)	239-250

Kit includes (2) blocking plug spacer, rubber spacer, nut and screw

Solenoid assemblies

	Standard voltages				
	100-115 V/50 Hz 115-120 V/60 Hz	200-240 V/50 Hz 220-240 V/60 Hz	24 V/50-60 Hz	12 VDC	24 VDC
Part number	237-569	237-570	237-568	226-737	226-749

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