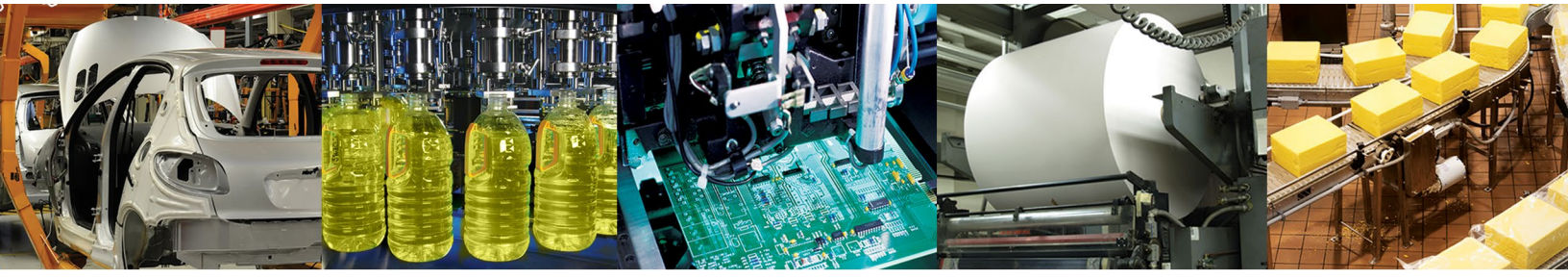
Solenoid Pilot Actuated Valves

501 Series
502 Series | Directional Control Valve
503 Series



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Evolution in Controls

EMERSON

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501 Series – Directional Control Valve Platform

Featuring Higher Flow in a Compact Valve Package

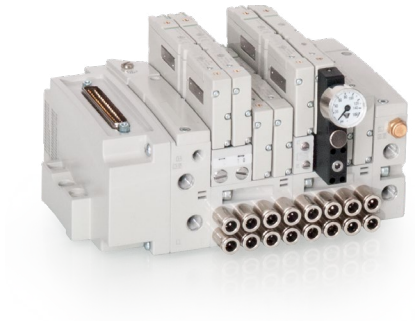
CE

Features

- Solenoid air pilot actuated
- Low wattage 0.8 Watt for DC application
- DC solenoids Polarity insensitive with surge suppression
- Plug together circuit boards eliminate internal wiring
- Integral recessed gaskets
- IN Fittings to accommodate various tube sizes
- Simple conversion from internal to external pilot
- IP65 Certified

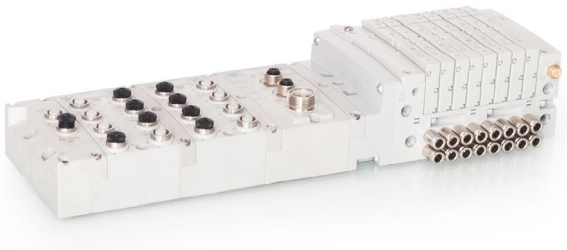
Sandwich and Manifold Accessories

- Pressure Regulators for supply pressure control at individual valve
- Speed control to control exhaust flow allows for control of actuator extend or retract speed
- Shut off block for individual valve to be isolated from pressure supply during operation and repair
- Mid Station Supply Manifold block allows for multiple pressure zones (with blocking discs) or additional air supply to a manifold

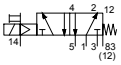
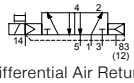
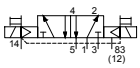
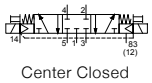
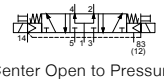
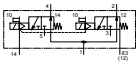
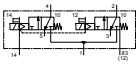


Fieldbus Electronics Compatible

- G3 Fieldbus Electronics
  - Graphic Display for easy commissioning, visual status & diagnostics
  - 128 valve solenoids per manifold
  - Easy distribution of additional manifolds through Sub-bus communication
  - One Node supports up to 16 I/O modules
  - Available with Auto Recovery Module (ARM) which allows configuration information to be saved and reloaded to replacement module automatically
- 580 Fieldbus Electronics
  - Graphic Display for easy commissioning, visual status & diagnostics
  - 128 valve solenoids per manifold



Performance Data

Function Type	Function Code	ISO Symbol Pilot (14) Return (12)	Interface	Rated Flow at 90 PSI Cv (l/min (ANR)) 1 ➡ 2 1 ➡ 4	Rated Flow at 90 PSI Cv (l/min (ANR)) 2 ➡ 3 4 ➡ 5	Response Time (ms) Energize/ De-Energize	Pilot Pressure at 73°F/23°C PSI (bar) min.	Pilot Pressure at 73°F/23°C PSI (bar) max	Operating Pressure Port 1 PSI (bar)/inHg (-bar) min.	Operating Pressure Port 1 PSI (bar)/inHg (-bar) max	 Part Number
Rubber Packed Technology, with Manual Override											
5/2	B1	 Spring Return	Proprietary	0.460 (460)	0.465 (465)	14/29	29 (2)	115 (8)	28 (-0.95)	115 (8)	R501A2B10MA00F1
	BN	 Differential Air Return		0.460 (460)	0.465 (465)	25/21	29 (2)	115 (8)	28 (-0.95)	115 (8)	R501A2BN0MA00F1
	B4	 Solenoid Air Return		0.460 (460)	0.465 (465)	11/11	29 (2)	115 (8)	28 (-0.95)	115 (8)	R501A2B40MA00F1
5/3	B5	 Center Open to Exhaust		0.420 (420)	0.470 (470)	27/12	29 (2)	115 (8)	28 (-0.95)	115 (8)	R501A2B50MA00F1
	B6	 Center Closed		0.460 (460)	0.465 (465)	13/12	29 (2)	115 (8)	28 (-0.95)	115 (8)	R501A2B60MA00F1
	B7	 Center Open to Pressure		0.460 (460)	0.411 (411)	17/38	36 (2.5)	115 (8)	28 (-0.95)	115 (8)	R501A2B70MA00F1
2 x 3/2 NO	BA	 Normally Open		0.450 (450)	0.450 (450)	18/18	0.3 x Operating Pressure + 13 PSI	115 (8)	30 (2)	115 (8)	R501A2BA0MA00F1
2 x 3/2 NC	BD	 Normally Closed		0.460 (460)	0.470 (470)	18/18	0.09 x Operating Pressure + 33.5 PSI	115 (8)	30 (2)	115 (8)	R501A2BD0MA00F1

Construction

Materials in Contact w/Fluid	
Body	Aluminum, E-Coating treatment
Spool	Aluminum or Stainless Steel
Piston	POM
Spring	Steel
Spool Seals	NBR + PUR
Other Seals	NBR + FKM
Other materials	PAM (Polyarylamide) 50% Glass Fiber Reinforced
Valve to Subbase Gasket	NBR
Subbases	Aluminum, E-Coating treatment

Operating Data

All Solenoids Are Continuous Duty Rated	24 VDC
Power (Watts)	0.8
Holding Current (Amps)	0.025
Ambient Temperature Range Min/Max °F (°C)	-14° F (-10° C)/122° F (50° C)

How to Order: **Valve**

R 501 A 2 B 4 0 M A00 F1

Product Series
501 = 11mm Valve

Revision
A = Initial Release

Actuation
2 = Rubber Packed

Valve Type
B = Solenoid Pilot w/ Flush Non-Locking Override

Function
1 = 2 Position 4-Way (5/2), Spring Return
4 = 2 Position 4-Way (5/2), Dual Solenoid
5 = 3 Position 4-Way (5/3), Open Center, Dual Pressure
6 = 3 Position 4-Way (5/3), Blocked Center
7 = 3 Position 4-way (5/3), Open to 2 & 4 in Center
A = Dual 3-Way, 14 Normally Open – 12 Normally Open
D = Dual 3-Way, 14 Normally Closed – 12 Normally Closed
N = 2 Position 4-Way (5/2), Differential Air Return w/o Spring

Port Size
0 = No Port Size

Electrical
M = Plug-in, w/ Light, VDC

Options
A00 = Standard (No Options)
11B = Flush Locking Manual Override
11M = Without Manual Override

Voltage
F1 = 24 DC

How to Order: **Regulator**

R 501 A R S 5 1 J A00 1 0

Product Series
501 = 11mm Valve

Revision
A = Initial Release

Product Type
R = Regulator

Regulator Type
S = Single Reg. - Pressure to Port 1

Pressure Range
5 = 10 – 115 PSIG (0.7 – 8 bar)

Gauge Type
0 = Less Gauge (plugged)
1 = PSI
2 = bar

Wiring Option
J = Plug-in, Receptacle Assembly

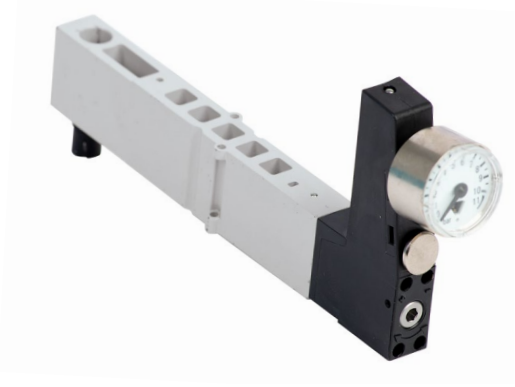
Options
A00 = Standard (No Options)
* 18V = Regulator with Gauge in Offset Port

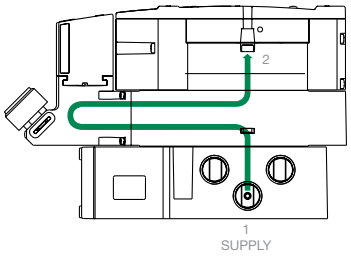
Interface
1 = Proprietary

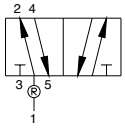
* Regulator gauges must be offset with 18V option on alternating stations to prevent interference.

Sandwich Pressure Regulator Block

Type: RS







Single pressure from a single supply.

How to Order: **Mounting**

K 501 A M S4 2 M A00 1 0

Port Type
H = Metric Thread
K = Push-in Fittings

Product Series
501 = 11mm Valve

Revision
A = Initial Release

Product Type
M = Manifold Subbase
Z = Mid Station Supply
[1] [2 & 3] F = 32+ Solenoid Manifold Block

Mounting
S3 = Manifold Subbase, 3 Stations, Side Ports, Single Z-Board
M3 = Manifold Subbase, 3 Stations, Side Ports, Double Z-Board
S4 = Manifold Subbase, 4 Stations, Side Ports, Single Z-Board
M4 = Manifold Subbase, 4 Stations, Side Ports, Double Z-Board
M8 = 32+ Coil Manifold Subbase, 8 Stations, Side Ports, Double Z-Board

Port Size (Working Ports 2 & 4)
B = M7 (Threaded only)
[6] D = 4mm (5/32) (Push-in Fittings only)
F = 6mm (Push-in Fittings only)
2 = 1/4 (Push-in Fittings only)

Wiring Option
M = Plug-in, Receptacle Assembly
T = 32+ Coil Auxiliary Power

Options
A00 = Standard (No Options)
[4 & 5] 96X = 32+ Coil X32 Manifold Block 4mm (5/32) (Push-in Fittings only)

Interface
1 = Proprietary

[1] Available with M4 mounting only
[2] Product Type F available with Mounting M8 and Wiring Option T for an 8 station manifold block with mid-station supply, auxiliary power, and X32 drivers
[3] Product Type F available with Mounting M4 and Wiring Option M for a 4 station manifold block with X32 drivers
[4] Option 96X is only available when F, M8, and T are selected together
[5] Option 96X overrides the port size for the X32 manifold block only (stations 5-8)
[6] Port Size D is not available when Product Type F, Mounting M8, and Wiring Option T is selected together

How to Order: **Manifold Assembly**

K 501 A V 3 H 2 0 0 V A00

Port Type
[1] 8 = NPTF
[1] G = ISO228/1-G
K = Push-in Fittings

Product Series
501 = 11mm Valve

Revision
A = Initial Release

Product Type
V = Valve Manifold Assembly

Electrical Interface
3 = G3 Series Fieldbus Interface
8 = 580 Series Fieldbus Interface
D = CHARMs Interface
J = 25 Pin Sub-D Interface
M = 37 Pin Sub-D Interface
Q = 19 Pin M23 Interface
R = 26 Pin M27 Interface
T = 1-32 Pin Terminal Strip Interface
[2] Z = Robot End Effector (EE) Connection Interface

Number of Valve Stations

A = NA/33/65/97	L = 12/44/76/108	W = 23/55/87/119
B = NA/34/66/98	M = 13/45/77/109	X = 24/56/88/120
C = 3/35/67/99	N = 14/46/78/110	Y = 25/57/89/121
D = 4/36/68/100	O = 15/47/79/111	Z = 26/58/90/122
E = NA/37/69/101	P = 16/48/80/112	2 = 27/59/91/123
F = 6/38/70/102	Q = 17/49/81/113	3 = 28/60/92/124
G = 7/39/71/103	R = 18/50/82/114	4 = 29/61/93/125
H = 8/40/72/104	S = 19/51/83/115	5 = 30/62/94/126
I = 9/41/73/105	T = 20/52/84/116	6 = 31/63/95/127
J = 10/42/74/106	U = 21/53/85/117	7 = 32/64/96/128
K = 11/43/75/107	V = 22/54/86/118	

Options
A00 = Standard (No Options)
MUF = Muffler in End Plates
DRM = DIN Rail Mount
DWM = DIN Rail with MUF
14X = External Pilot Supply from Port #14
D12 = (14X) External Pilot Supply from Port #14 and (MUF) Muffler in End Plates
D14 = (14X) External Pilot Supply from Port #14 and (DRM) DIN Rail Mount
F06 = (14X) External Pilot Supply from Port #14, (MUF) Muffler in End Plates and (DRM) DIN Rail Mount
A27 = FANUC Robot EE Connection Interface
D28 = FANUC Robot EE Connection + (MUF) Muffler in End Plates

End Plate Style
V = Vertical

Second Valve Series
0 = No Second Valve Series

Valve Station Adder
0 = No Adder
1 = 32+
2 = 64+
3 = 96+

End Plate Port Size (Supply Ports 1, 3/5)
1 = 1/8
2 = 1/4
G = 5/16
H = 8mm

[1] Port Type 8 & G available in Port Size 1/8

[2] FANUC EE Interface (A27 or D28) must be selected under Options

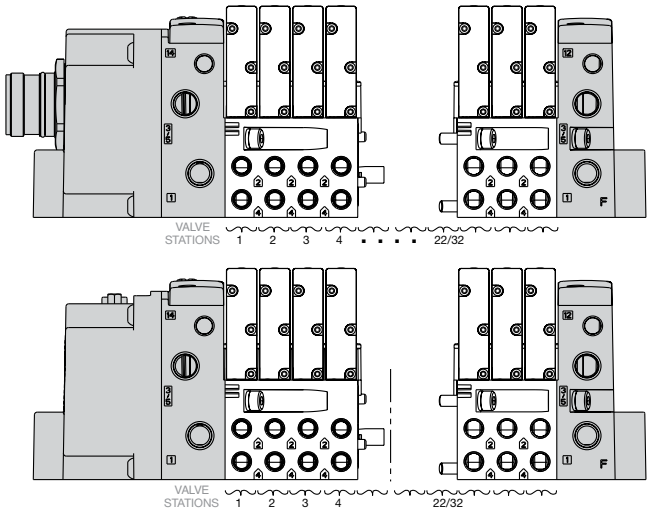
NOTE: See the Multipin Electrical Interface table for Max Solenoid Outputs.

Sub-D, Terminal Strip, Round Interface, and End Effector Interface

- Shaded components described by Assembly Kit model number designation
- Each valve manifold station is listed in sequential order from left to right when facing the port side of the manifold as indicated

Example Order - 501 Shown

25 Pin Sub-D	K501AVJGG00VA00
Valve Station #1	R501A2B10MA00F1
Valve Station #2	R501A2B10MA00F1
Valve Station #3	R501A2B10MA00F1
Valve Station #4	R501A2B10MA00F1
Mounting #1	K501AMS42MA0010
Valve Station #5	R501A2B40MA00F1
Valve Station #6	R501A2B40MA00F1
Valve Station #7	R501A2B40MA00F1
Mounting #2	K501AMM32MA0010
	Assembled



NOTE: Example order for Fieldbus electronics see 580 or G3 Fieldbus catalog.

502 Series – Directional Control Valve Platform

Featuring Higher Flow in a Compact Valve Package

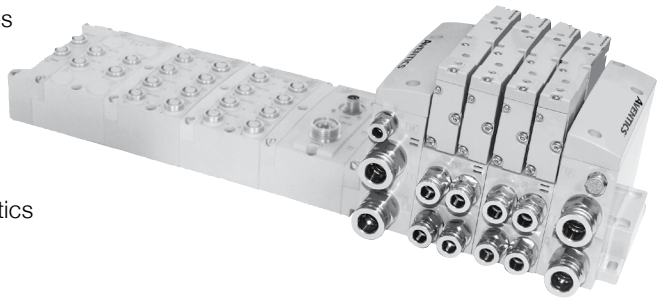
ISO 15407-2 (18mm)
ISO 15407-1 (18mm)

Features

- Solenoid air pilot actuated
- Low wattage 1.3 Watt for DC application
- DC solenoids Polarity insensitive with surge suppression
- Plug together circuit boards eliminate internal wiring
- Integral recessed gaskets
- IN Fittings to accommodate various tube sizes
- Simple conversion from internal to external pilot
- IP65 Certified

Sandwich and Manifold Accessories

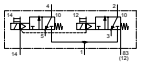
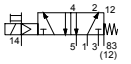
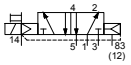
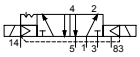
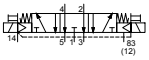
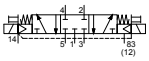
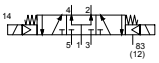
- Pressure Regulators for supply pressure control at individual valve
- Speed control to control exhaust flow allows for control of actuator extend or retract speed
- Shut off block for individual valve to be isolated from pressure supply during operation and repair
- Mid Station Supply Manifold block allows for multiple pressure zones (with blocking discs) or additional air supply to a manifold



Fieldbus Electronics Compatible

- G3 Fieldbus Electronics
  - Graphic Display for easy commissioning, visual status & diagnostics
  - 80 valve solenoids per manifold
  - Easy distribution of additional manifolds through Sub-Bus communication
  - One Node supports up to 16 I/O modules
  - Available with Auto Recovery Module (ARM) which allows configuration information to be saved and reloaded to replacement module automatically
- 580 Fieldbus Electronics
  - Graphic Display for easy commissioning, visual status & diagnostics
  - 80 valve solenoids per manifold

Performance Data

Function Type	Function Code	ISO Symbol Pilot (14) Return (12)	Interface	Rated Flow at 90 PSI Cv (l/min (ANR)) 1 ➡ 2 1 ➡ 4	Rated Flow at 90 PSI Cv (l/min (ANR)) 2 ➡ 3 4 ➡ 5	Response Time (ms) Energize/ De-Energize	Pilot Pressure at 73°F/23°C PSI (bar) min.	Pilot Pressure at 73°F/23°C PSI (bar) max	Operating Pressure Port 1 PSI (bar)/inHg (-bar) min.	Operating Pressure Port 1 PSI (bar)/inHg (-bar) max	 Part Number
Rubber Packed Technology, with Manual Override											
2 x 3/2 NC	BD	 Normally Closed	Proprietary	0.650 (650)	0.600 (600)	36/15	58 (4.0)	115 (8)	36* (2)	115 (8)	R502A2BD0MA00F1
			ISO	0.500 (500)	0.440 (440)						
Spool and Sleeve Technology, with Manual Override											
5/2	B1	 Spring Return	Proprietary	0.470 (470)	0.530 (530)	16/49	29 (2)	115 (8)	28 (-0.95)	115 (8)	R502A1B10MA00F1
			ISO	0.410 (410)	0.390 (390)						
	BN	 Differential Air Return	Proprietary	0.470 (470)	0.530 (530)	11/26	22 (1.5)	115 (8)	28 (-0.95)	115 (8)	R502A1BN0MA00F1
			ISO	0.410 (410)	0.390 (390)						
	B4	 Solenoid Air Return	Proprietary	0.470 (470)	0.530 (530)	12/15	29 (2)	115 (8)	28 (-0.95)	115 (8)	R502A1B40MA00F1
			ISO	0.410 (410)	0.390 (390)						
5/3	B5	 Center Open to Exhaust	Proprietary	0.380 (380)	0.500 (500)	23/13	22 (1.5)	115 (8)	28 (-0.95)	115 (8)	R502A1B50MA00F1
			ISO	0.340 (340)	0.350 (350)						
	B6	 Center Closed	Proprietary	0.420 (420)	0.440 (440)	12/12	22 (1.5)	115 (8)	28 (-0.95)	115 (8)	R502A1B60MA00F1
			ISO	0.360 (360)	0.350 (350)						
	B7	 Center Open to Pressure	Proprietary	0.420 (420)	0.430 (430)	13/23	22 (1.5)	115 (8)	28 (-0.95)	115 (8)	R502A1B70MA00F1
			ISO	0.370 (370)	0.350 (350)						

* Minimum pressure with external piloting

Construction

Materials in Contact w/Fluid	
Body	Aluminum, E-Coating treatment
Spool	Aluminum or Stainless Steel
Piston	POM
Spring	Steel
Spool Seals	NBR + PUR
Other Seals	NBR + FKM
Other materials	PAM (Polyarylamide) 50% Glass Fiber Reinforced
Valve to Subbase Gasket	NBR
Subbases	Aluminum, E-Coating treatment

Operating Data

All Solenoids Are Continuous Duty Rated	24 VDC
Power (Watts)	1.3
Holding Current (Amps)	0.054
Ambient Temperature Range Min/Max °F (°C)	-14 °F (-10 °C)/122 °F (50 °C)

How to Order: **Valve**

R 502 A 1 B 4 0 M A00 F1

Product Series
502 = 18mm Valve

Revision
A = Initial Release

Actuation
[1] 1 = Spool and Sleeve
[2] 2 = Rubber Packed

Valve Type
B = Solenoid Pilot with Flush Non-Locking Override

Function
1 = 2 Position 4-Way (5/2), Spring Return
4 = 2 Position 4-Way (5/2), Dual Solenoid
5 = 3 Position 4-Way (5/3), Open Center, Dual Pressure
6 = 3 Position 4-Way (5/3), Blocked Center
7 = 3 Position 4-way (5/3), Open to 2 & 4 in Center
D = Dual 3-way, 12 Normally Closed - 14 Normally Closed

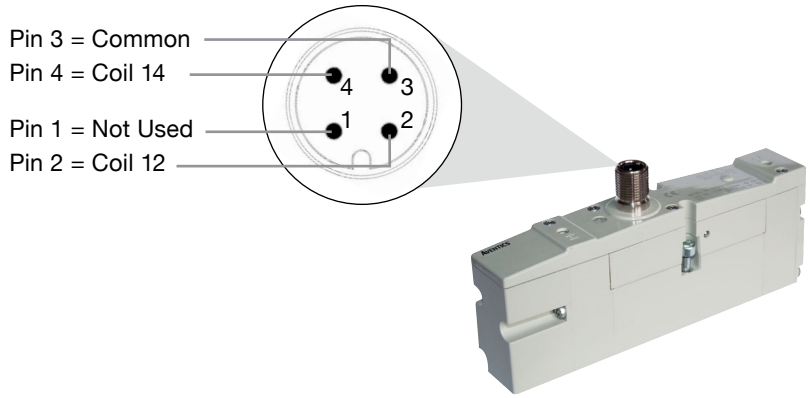
Port Size
0 = No Port Size

Electrical
M = Plug-in, w/Light, VDC
[3] N = M12 Connector
Pin 1 = Not Used; Pin 2 = Coil 12;
Pin 3 = Common; Pin 4 = Coil 14

Options
A00 = Standard (No Options)
11B = Flush Locking Manual Override
11M = Without Manual Override

Voltage
F1 = 24 DC

[1] Not available with Function D
[2] Available with Function D only
[3] See diagram:



How to Order: Regulator

R 502 A R S 1 1 J A00 1 0

Product Series
502 = 18mm Valve

Revision
A = Initial Release

Product Type
R = Regulator

Regulator Type
S = Single Reg. - Pressure to Port 1
D = Double Reg. - Pressure to Ports 5 & 3
E = Double Reg. - Pressure to Ports 4 & 2, w/o Valve
T = Double Reg. - Pressure to Ports 1 & 3, 2 Pressure Selector

Pressure Range
1 = 10 - 130 PSIG (0.7 - 9 bar)
3 = 3 - 30 PSIG (0.2 - 2 bar)
4 = 5 - 60 PSIG (0.3 - 4.1 bar)

Gauge Type
1 = PSI
2 = bar
8 = with 1/8" NPTF adaptor for external gauge
G = with 1/8" G tap adaptor for external gauge

Wiring Option
J = Plug-in, Receptacle Assembly
0 = Non Plug-in

Options
A00 = Standard (No Options)
14M = Temperproof Needle Cartridge Assembly or Regulator
16N = Jumper for Supply Pressure to Valve, 14 End
16P = Jumper for Supply Pressure to Valve, 12 End
* 61Y = Regulator with Gauge Extension Fitting

Interface
1 = Proprietary
2 = ISO 15407-2
3 = ISO 15407-1

* Regulator gauges must be offset with 61Y option on alternating stations to prevent interference.

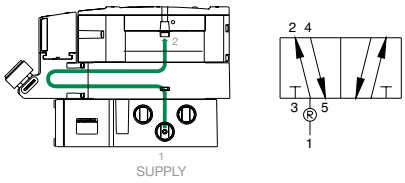
Sandwich Pressure Regulator Block

Types: RS / RD / RE / RT

ISO 15407-2/15407-1 Interface

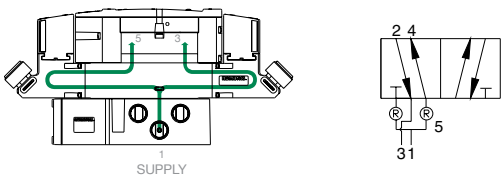
Proprietary Interface

Type RS



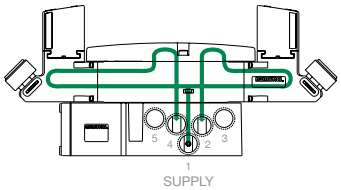
Single pressure from a single supply.

Type RD



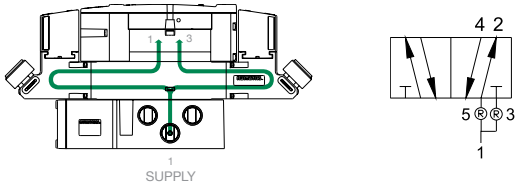
Dual pressure from a single supply.

Type RE



External outlet regulator used with jumper plate for single or dual pressure.

Type RT



Two-pressure selector used for multi-pressure applications.

How to Order: **Mounting**

8 502 A M S2 1 M A00 1 0

Port Type
[1] 8 = NPTF
[1] G = ISO228/1-G
K = Push-in Fittings

Product Series
502 = 18mm Valve

Revision
A = Initial Release

Product Type
M = Manifold Subbase
[2] A = Individual Subbase
[3] Z = Mid Station Supply
[4] F = 32+ Solenoid Manifold Block

Mounting
S2 = Manifold Subbase, 2 Stations, Side Ports, Single Z-Board
M2 = Manifold Subbase, 2 Stations, Side Ports, Double Z-Board
[5] V2 = Manifold Subbase, 2 Stations, Side Ports
[2] 3A = Individual Subbase, Side Ports, Individual Exhaust

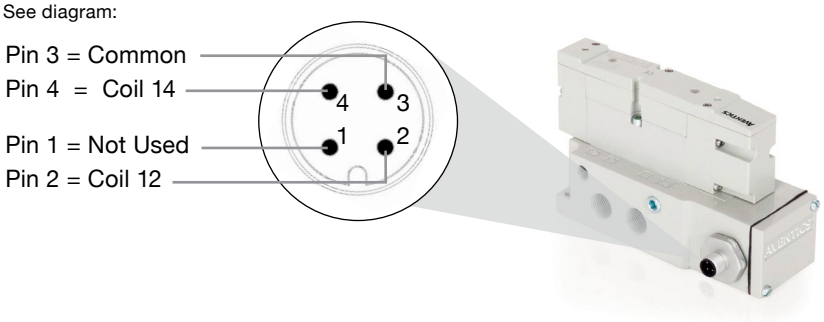
Interface
1 = Proprietary
2 = ISO 15407-2
3 = ISO 15407-1

Options
A00 = Standard (No Options)
[6] 14X = External Pilot Supply from Port # 14
[6 & 8] 56Y = 4-Pin Straight M12 Connector in Mounting Pin 1 = Not Used; Pin 2 = 12+ (B+); Pin 3 = COM; Pin 4 = 14+ (A+)

Wiring Option
[5] 0 = Non Plug-in
[7] M = Plug-in, Receptacle Assembly
[4] T = 32+ Coil Auxiliary Power with X16 Drivers
V = +24 VDC Separation at First Station
W = +24 VDC Separation at Second Station

Port Size (Working Ports 2 & 4 Size)
1 = 1/8
2 = 1/4
G = 5/16 (Push-in Fittings Only)
F = 6mm (Push-in Fittings Only)
H = 8mm (Push-in Fittings Only)

[1] Port Type 8 & G available in 1/8 size for Product Type F, M and Z or 1/4 for Product Type A
[2] Not available with proprietary interface, only available with 1/4 port size
[3] Only available with M2 and V2 mountings
[4] 32+ Coil Rule: Product Type F, Mounting M4, and Wiring Option T must all be selected together
[5] Only available with ISO 15407-1 Interface
[6] Available with 3A mounting only
[7] Not available with V2 Mounting
[8] See diagram:



How to Order: **Manifold Assembly**

8 502 A V 3 B 3 0 0 V A00

Port Type
[1] 8 = NPTF
[1] G = ISO228/1-G
K = Push-in Fittings

Product Series
502 = 18mm Valve

Revision
A = Initial Release

Product Type
V = Valve Manifold Assembly

Electrical Interface
3 = G3 Series Fieldbus Interface
8 = 580 Series Fieldbus Interface
D = CHARMs Interface
J = 25 Pin Sub-D Interface
M = 37 Pin Sub-D Interface
Q = 19 Pin M23 Interface
R = 26 Pin M27 Interface
T = 1-32 Pin Terminal Strip Interface
[2] Z = Robot End Effector (EE) Connection Interface
0 = No Electrical Interface

Number of Valve Stations

B = 2/34/66	N = 14/46/78	Z = 26/58
D = 4/36/68	P = 16/48/80	3 = 28/60
F = 6/38/70	R = 18/50	5 = 30/62
H = 8/40/72	T = 20/52	7 = 32/64
J = 10/42/74	V = 22/54	
L = 12/44/76	X = 24/56	

Options
A00 = Standard (No Options)
MUF = Muffler in End Plates
DRM = DIN Rail Mount
DWM = DIN Rail with (MUF) Muffler in End Plates
14X = External Pilot Supply from Port # 14
D12 = (14X) External Pilot Supply from Port #14 and (MUF) Muffler in End Plates
D14 = (14X) External Pilot Supply from Port #14 and (DRM) DIN Rail Mount
F06 = (14X) External Pilot Supply from Port # 14, (MUF) Muffler in End Plates, and (DRM) DIN Rail Mount
A27 = FANUC Robot EE Connection Interface
D28 = FANUC Robot EE Connection + (MUF) Muffler in End Plates

End Plate Style
V = Vertical
[3] H = Horizontal

Second Valve Series
0 = No Second Valve Series
[4] 1 = 501 Valve Series (11mm)

Valve Station Adder
0 = No Adder
1 = 32+
2 = 64+

End Plate Port Size (Supply Ports 1, 3/5)
3 = 3/8
4 = 1/2
K = 10mm
M = 12mm

[1] Port Type 8 & G available in Port Size 3/8
[2] FANUC EE Interface (A27 or D28) must be selected under Options
[3] Horizontal End Plates available with 0 = No Electrical Interface option
[4] End Plate is NPTF 1/8 or Push-in 8mm
NOTE: See the Multipin Electrical Interface table for Max Solenoid Outputs.

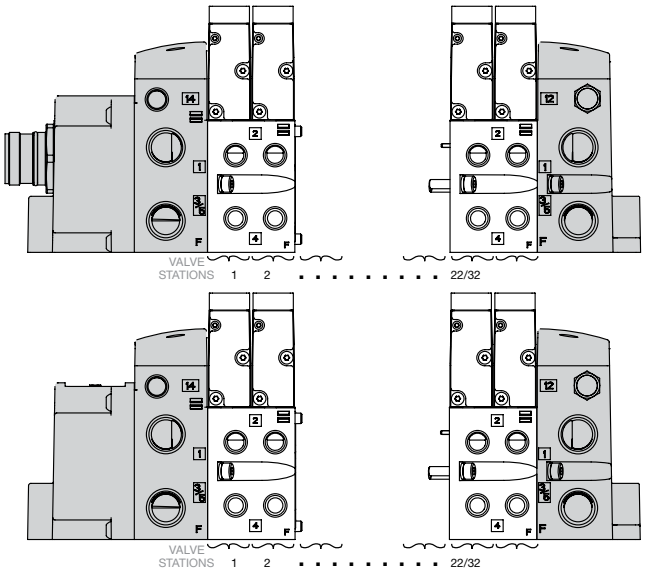
Sub-D, Terminal Strip, Round Interface, and End Effector Interface

- Shaded components described by Assembly Kit model number designation
- Each valve manifold station is listed in sequential order from left to right when facing the port side of the manifold as indicated

Example Order - 502 Shown

25 Pin Sub-D	8502AVJF300VA00
Valve Station #1	R502A2B40MA00F1
Valve Station #2	R502A2B40MA00F1
Mounting #1	8502AMM21MA0010
Valve Station #3	R502A2B60MA00F1
Valve Station #4	R502A2B60MA00F1
Mounting #2	8502AMM21MA0010
Valve Station #5	R502A2B40MA00F1
Valve Station #6	R502A2B40MA00F1
Mounting #3	8502AMM21MA0010
	Assembled

NOTE: Example order for Fieldbus electronics see 580 or G3 Fieldbus catalog.



503 Series – Directional Control Valve Platform

Featuring Higher Flow in a Compact Valve Package

ISO 15407-2 (26mm)
ISO 15407-1 (26mm)

Features

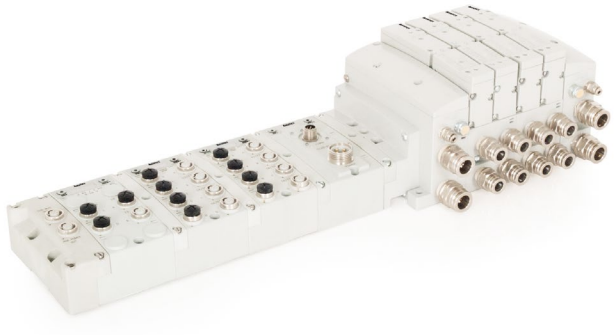
- 5 Ported, 2 and 3 position, 4-way, Spool & Sleeve and Rubber Seal, Cv: 1.2 - 1.4
- Solenoid air pilot actuated
- Low wattage 1.7 Watt for DC application
- DC solenoids Polarity insensitive with surge suppression
- Plug together circuit boards eliminate internal wiring
- Integral recessed gaskets
- IN Fittings to accommodate various tube sizes
- Simple conversion from internal to external pilot
- G3 Fieldbus Electronics
- IP65 Certified

Sandwich and Manifold Accessories

- Pressure Regulators for supply pressure control at individual valve
- Speed control to control exhaust flow allows for control of actuator extend or retract speed
- Shut off block for individual valve to be isolated from pressure supply during operation and repair
- Mid Station Supply Manifold block allows for multiple pressure zones (with blocking discs) or additional air supply to a manifold

Fieldbus Electronics Compatible

- G3 Fieldbus Electronics
  - Graphic Display for easy commissioning, visual status & diagnostics
  - 80 valve solenoids per manifold
  - Easy distribution of additional manifolds through Sub-Bus communication
  - One Node supports up to 16 I/O modules
  - Available with Auto Recovery Module (ARM) which allows configuration information to be saved and reloaded to replacement module automatically
- 580 Fieldbus Electronics
  - Graphic Display for easy commissioning, visual status & diagnostics
  - 80 valve solenoids per manifold



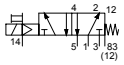
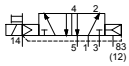
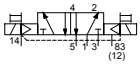
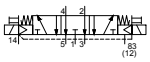
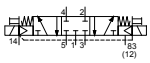
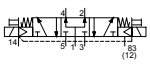
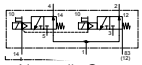
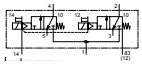
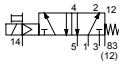
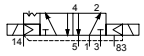
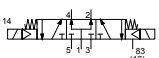
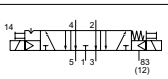
Construction

Materials in Contact w/Fluid	
Body	Aluminum, E-Coating treatment
Spool	Aluminum or Stainless Steel
Piston	POM
Spring	Steel
Spool Seals	NBR + PUR
Other Seals	NBR + FKM
Other materials	PAM (Polyarylamide) 50% Glass Fiber Reinforced
Valve to Subbase Gasket	NBR
Subbases	Aluminum, E-Coating treatment

Operating Data

All Solenoids Are Continuous Duty Rated	24 VDC
Power (Watts)	1.7
Holding Current (Amps)	0.071
Ambient Temperature Range Min/Max °F (°C)	-14° F (-10° C)/122° F (50° C)

Performance Data

Function Type	Function Code	ISO Symbol Pilot (14) Return (12)	Interface	Rated Flow at 90 PSI Cv (l/min (ANR)) 1 → 2 (1 → 4)	Rated Flow at 90 PSI Cv (l/min (ANR)) 2 → 3 (4 → 5)	Response Time (ms) Energize/ De-Energize	Pilot Pressure at 73°F/23°C PSI (bar) min.	Pilot Pressure at 73°F/23°C PSI (bar) max	Operating Pressure Port 1 PSI (bar)/inHg (-bar) min.	Operating Pressure Port 1 PSI (bar)/inHg (-bar) max	 Part Number
Rubber Packed Technology, with Manual Override											
5/2	B1	 Spring Return	Proprietary	1.422 (1400)	1.321 (1300)	20/60	29 (2)	115 (8)	28 (-0.95)	115 (8)	R503A2B10MA00F1
			ISO	1.220 (1200)	1.118 (1100)						
	BN	 Differential Air Return	Proprietary	1.422 (1400)	1.321 (1300)	28/40	44 (3)	115 (8)	28 (-0.95)	115 (8)	R503A2BN0MA00F1
			ISO	1.220 (1200)	1.118 (1100)						
	B4	 Solenoid Air Return	Proprietary	1.422 (1400)	1.321 (1300)	20/20	29 (2)	115 (8)	28 (-0.95)	115 (8)	R503A2B40MA00F1
			ISO	1.220 (1200)	1.118 (1100)						
5/3	B5	 Center Open to Exhaust	Proprietary	0.610 (600)	1.321 (1300)	18/45	44 (3)	115 (8)	28 (-0.95)	115 (8)	R503A2B50MA00F1
			ISO	0.610 (600)	1.118 (1100)						
	B6	 Center Closed	Proprietary	1.422 (1400)	1.321 (1300)	15/20	58 (4)	115 (8)	28 (-0.95)	115 (8)	R503A2B60MA00F1
			ISO	1.220 (1200)	1.118 (1100)						
	B7	 Center Open to Pressure	Proprietary	1.321 (1300)	0.610 (600)	18/45	44 (3)	115 (8)	28 (-0.95)	115 (8)	R503A2B70MA00F1
			ISO	1.118 (1100)	0.610 (600)						
2 NO 2 NC	BA	 Normally Open Normally Closed	Proprietary	0.965 (950)	0.965 (950)	15/20	51 (3.5)	115 (8)	51* (3.5)	115 (8)	R503A2BA0MA00F1
			ISO	0.915 (900)	0.915 (900)						
2 NC 2 NO	BD	 Normally Closed Normally Open	Proprietary	1.016 (1000)	0.813 (800)	15/20	51 (3.5)	115 (8)	51* (3.5)	115 (8)	R503A2BD0MA00F1
			ISO	0.915 (900)	0.813 (800)						
Spool and Sleeve Technology, with Manual Override											
5/2	B1	 Spring Return	Proprietary	1.220 (1200)	1.220 (1200)	20/60	29 (2)	115 (8)	28 (-0.95)	115 (8)	R503A1B10MA00F1
			ISO	1.118 (1100)	1.016 (1000)						
	B4	 Solenoid Air Return	Proprietary	1.220 (1200)	1.220 (1200)	15/15	29 (2)	115 (8)	28 (-0.95)	115 (8)	R503A1B40MA00F1
			ISO	1.118 (1100)	1.016 (1000)						
5/3	B5	 Center Open to Exhaust	Proprietary	1.016 (1000)	1.016 (1000)	20/60	29 (2)	115 (8)	28 (-0.95)	115 (8)	R503A1B50MA00F1
			ISO	0.813 (800)	0.813 (800)						
	B7	 Center Open to Pressure	Proprietary	1.016 (1000)	1.016 (1000)	20/60	29 (2)	115 (8)	28 (-0.95)	115 (8)	R503A1B70MA00F1
			ISO	0.813 (800)	0.813 (800)						
	BT	 Open Center, Spring and Detent	Proprietary	1.016 (1000)	1.016 (1000)	Spring: 20/60 Detent: 15/NA	29 (2)	115 (8)	28 (-0.95)	115 (8)	R503A1BT0MA00F1
			ISO	0.813 (800)	0.813 (800)						

* 51 PSI for a pressure supply (P1) ≤ 109 PSI (if > 109 PSI, Pmin. = P1-58 PSI)

How to Order: **Valve**

R 503 A 2 B 4 0 M A00 F1

Product Series
503 = 26mm Valve

Revision
A = Initial Release

Valve Type
[1] 1 = Spool and Sleeve
2 = Rubber Packed

Actuation
B = Solenoid Pilot w/ Flush Non-Locking Override

Function
1 = 2 Position 4-Way (5/2), Spring Return
4 = 2 Position 4-Way (5/2), Dual Solenoid
5 = 3 Position 4-Way (5/3), Open Center, Dual Pressure
6 = 3 Position 4-Way (5/3), Blocked Center
7 = 3 Position 4-way (5/3), Open to 4 & 2 in Center
A = Dual 3-way (2 x 3/2), 14 Normally Open - 12 Normally Open
D = Dual 3-way (2 x 3/2), 14 Normally Closed - 12 Normally Closed
N = 2 Position 4-Way (5/2), Differential Air Return w/o Spring
T = 5/3 Open to Exhaust, Spring vs Detent,
14 Momentary - 12 Maintain (Operator Shared Station Valve)

Port Size
0 = No Port Size

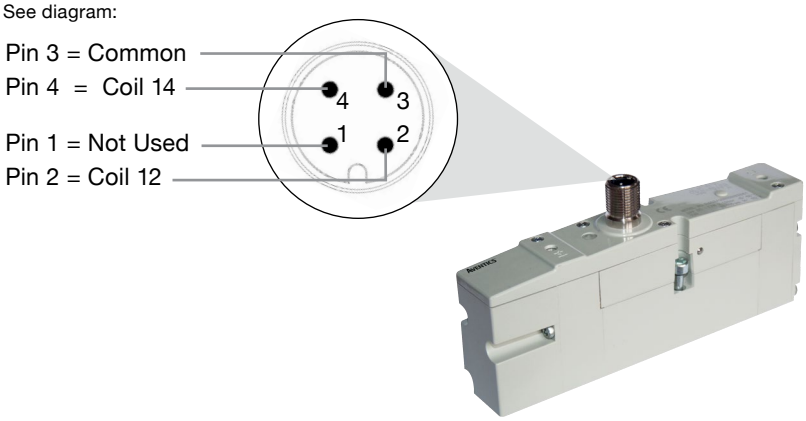
Electrical
M = Plug-in, w/ Light, VDC
[2] N = M12 Connector
Pin 1 = Not Used; Pin 2 = Coil 12;
Pin 3 = Common; Pin 4 = Coil 14

Options
A00 = Standard (No Options)
11B = Flush Locking Manual Override
11M = Without Manual Override

Voltage
F1 = 24 VDC

[1] Available with Functions 1, 4, 5 & 7

[2] See diagram:



How to Order: Regulator

R 503 A R S 1 1 J A00 1 0

Product Series
503 = 26mm Valve

Revision
A = Initial Release

Product Type
R = Regulator

Regulator Type
S = Single Reg. - Pressure to Port 1
D = Double Reg. - Pressure to Ports 5 & 3
* E = Double Reg. - Pressure to Ports 4 & 2, w/o Valve
T = Double Reg. - Pressure to Ports 1 & 3, 2 Pressure Selector

Pressure Range
1 = 10 - 130 PSIG (0.7 – 9 bar)
3 = 3 - 30 PSIG (0.2 – 2 bar)
4 = 5 - 60 PSIG (0.3 – 4.1 bar)

Interface
* 0 = No Valve Interface
1 = Proprietary
2 = ISO 15407-2
3 = ISO 15407-1

Options
A00 = Standard (No Options)
16N = Jumper for Supply Pressure to Valve, 14 End
16P = Jumper for Supply Pressure to Valve, 12 End
** 14M = Tamperproof Needle Cartridge Assembly or Regulator

Wiring Option
J = Plug-in, Receptacle Assembly
* 0 = Non Plug-in

Gauge Type
1 = PSI
2 = bar
8 = with 1/8" NPTF adaptor for external gauge
G = with 1/8" G tap adaptor for external gauge

* For Regulator Type E must select 0 Wiring Option and 0 Interface
** Key lock device not included - M699AY438663001 sold separately

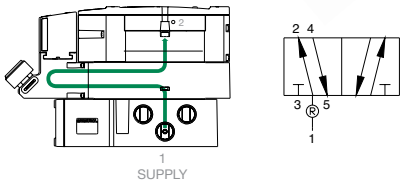
Sandwich Pressure Regulator Block

Types: RS / RD / RE / RT

ISO 15407-2/15407-1 Interface

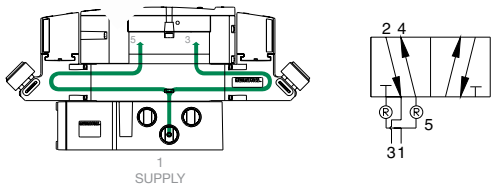
Proprietary Interface

Type RS



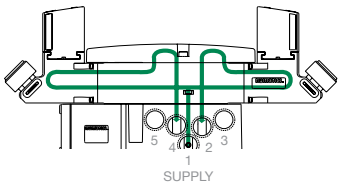
Single pressure from a single supply.

Typ



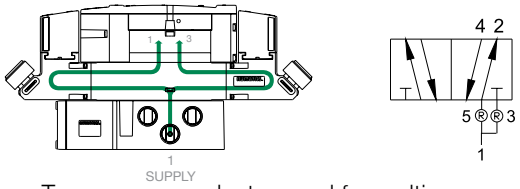
Dual pressure from a single supply.

Type RE



External outlet regulator used with jumper plate for single or dual pressure.

Type RT



Two-pressure selector used for multi-pressure applications.

How to Order: **Mounting**

8 503 A M S2 3 M A00 1 0

Port Type
[1] 8 = NPTF
[1] G = ISO228/1-G
K = Push-in Fittings

Product Series
503 = 26mm Valve

Revision
A = Initial Release

Product Type
M = Manifold Subbase
A = Individual Subbase
[2] Z = Mid-Station Supply
[3] F = 32+ Solenoid Manifold Block

Mounting
S2 = Manifold Subbase, 2 Stations, Side Ports, Single Z-Board
M2 = Manifold Subbase, 2 Stations, Side Ports, Double Z-Board
[4] V2 = Manifold Subbase, 2 Stations, Side Ports
[5] 3A = Individual Subbase, Side Ports, Individual Exhaust
[3] M4 = 32+ Coil Manifold Subbase, 4 Stations, Side Ports, Double Z-Board

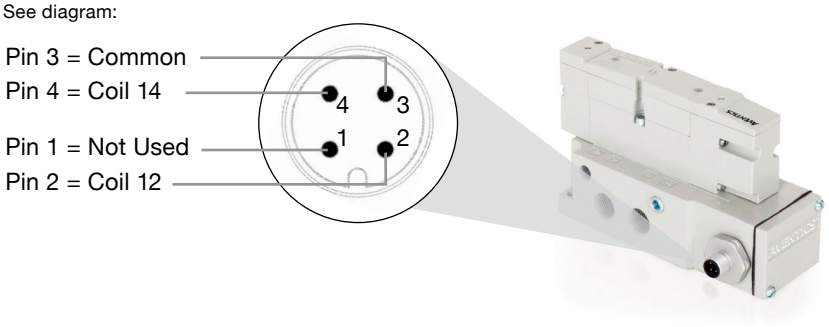
Interface
1 = Proprietary
2 = ISO 15407-2
3 = ISO 15407-1

Options
A00 = Standard (No Options)
[6] 14X = External Pilot Supply from Port #14
[6 & 8] 56Y = 4 Pin Straight M12 Connector in Mounting Pin 1= Not Used; 2= 12+(B+); 3= COM; 4= 14+(A+)
[6 & 8] 59W = 14X + 56Y

Wiring Option
[4] 0 = Non Plug-in
[7] M = Plug-in, Receptacle Assembly
[3] T = 32+ Coil Auxiliary Power with X16 Drivers
V = +24 VDC Separation at First Station
W = +24 VDC Separation at Second Station

Port Size (Working Ports 2, 4)
2 = 1/4
3 = 3/8 (Push-in Fittings Only)
H = 8mm (Push-in Fittings Only)
K = 10mm (Push-in Fittings Only)

[1] Port Type 8 & G available in Port Size 1/4 only
[2] Available with M2 & V2 Mountings only
[3] 32+ Coil Rule: Product Type F, Mounting M4, and Wiring Option T must all be selected together
[4] Available with ISO 15407-1 Interface only
[5] Not available with Proprietary Mounting
[6] Available with 3A Mounting only
[7] Not available with V2 Mounting
[8] See diagram:



How to Order: **Manifold Assembly**

8 503 A V 3 B 3 0 0 V A00

Port Type
[1] 8 = NPTF
[1] G = ISO228/1-G
K = Push-in Fittings

Product Series
503 = 26mm Valve

Revision
A = Initial Release

Product Type
V = Valve Manifold Assembly

Electrical Interface
3 = G3 Series Fieldbus Interface
8 = 580 Series Fieldbus Interface
D = CHARMs Interface
J = 25 Pin Sub-D Interface
M = 37 Pin Sub-D Interface
Q = 19 Pin M23 Interface
R = 26 Pin M27 Interface
T = 1-32 Pin Terminal Strip Interface
[2] Z = Robot End Effector (EE) Connection Interface
0 = No Electrical Interface

Number of Valve Stations

B = 2/34/66	J = 10/42/74	R = 18/50	Z = 26/58
D = 4/36/68	L = 12/44/76	T = 20/52	3 = 28/60
F = 6/38/70	N = 14/46/78	V = 22/54	5 = 30/62
H = 8/40/72	P = 16/48/80	X = 24/56	7 = 32/64

Options
A00 = Standard (No Options)
MUF = Muffler in End Plates
DRM = DIN Rail Mount
DWM = DIN Rail with MUF
14X = External Pilot Supply from Port #14
D12 = (14X) External Pilot Supply from Port #14 and (MUF) Muffler in End Plates
D14 = (14X) External Pilot Supply from Port #14 and (DRM) DIN Rail Mount
F06 = (14X) External Pilot Supply from Port #14, (MUF) Muffler in End Plates and (DRM) DIN Rail Mount
A27 = FANUC Robot EE Connection Interface
D28 = FANUC Robot EE Connection + (MUF) Muffler in End Plates

End Plate Style
V = Vertical
[3] H = Horizontal

Second Valve Series
0 = No Second Valve Series
2 = 502 Valve Series (18mm)

Valve Station Adder
0 = No Adder
1 = 32+
2 = 64+

End Plate Port Size (Supply Ports 1, 3/5)
3 = 3/8
4 = 1/2
K = 10mm
M = 12mm

[1] Port Type 8 & G available in Port Size 3/8 only
[2] FANUC EE Interface (A27 or D28) must be selected under Options
[3] Horizontal End Plates available with 0 = No Electrical Interface option

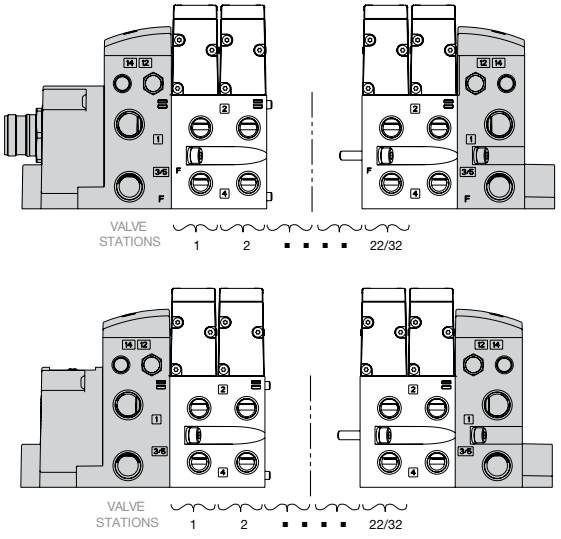
NOTE: See the Multipin Electrical Interface table for Max Solenoid Outputs.

Sub-D, Terminal Strip, Round Interface, and End Effector Interface

- Shaded components described by Assembly Kit model number designation
- Each valve manifold station is listed in sequential order from left to right when facing the port side of the manifold as indicated

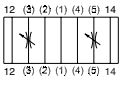
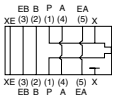
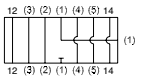
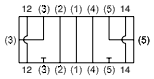
Example Order - 503 Shown

25 Pin Sub-D	8503AVJF300VA00
Valve Station #1	R503A2B40MA00F1
Valve Station #2	R503A2B40MA00F1
Mounting #1	8503AMM22MA0010
Valve Station #5	R503A2B60MA00F1
Valve Station #6	R503A2B60MA00F1
Mounting #2	8503AMM22MA0010
Valve Station #5	R503A2B40MA00F1
Valve Station #6	R503A2B40MA00F1
Mounting #3	8503AMM22MA0010
	Assembled



NOTE: Example order for Fieldbus electronics see 580 or G3 Fieldbus catalog.

Sandwich Option Kit

Valve Series	Type	Speed Control Kit	Shut Off Block Kit	Pressure Block Kit				Exhaust Block Kit	
									
		Inserted between the valve and the mounting. It allows the user to adjust the flow out of the 3 & 5 ports of the valve. This will allow them to adjust the speed of the extend and retract of the cylinder.	Used to shut-off pressure when mounted below valve. It allows for easy maintenance without the need to shut-off pressure to the entire manifold.	Used to supply a separate pressure to a single valve station without needing blocking discs.				Used to isolate the exhaust of a single valve station from the manifold. It allows for faster exhaust response by re-routing exhaust externally from the manifold.	
									
				4mm Push-in	**6mm Push-in**	**1/4 Push-in**	**M7**		
501 Series (11mm)	Proprietary	R501AS428500001	R501AY428501001	K501AW517220004	K501AW517220003	K501AW517220002	H501AW517220001	–	–
				1/8 NPTF		**1/8 G**		**1/8 NPTF**	**1/8 G**
502 Series (18mm)	Proprietary	R502AS429395002	R502AY429409002	8502AW428685004		G502AW428685004		8502AX428685002	G502AX428685002
	ISO 15407-2	R502AS429395001	R502AY429409001	8502AW428685003		G502AW428685003		8502AX428685001	G502AX428685001
	ISO 15407-1	–	–	–		–		–	–
				1/4 NPTF		**1/4 G**		**1/4 NPTF**	**1/4 G**
503 Series (26mm)	Proprietary	R503AS425575002	R503AY426707002	8503AW428300004		G503AW428300004		8503AX428300002	G503AX428300002
	ISO 15407-2	R503AS425575001	R503AY426707001	8503AW428300003		G503AW428300003		8503AX428300001	G503AX428300001
	ISO 15407-1	R503AS432940001	–	–		–		–	–

End Plate Kit

End Plate Kit is used to stack multiple blocks together into a manifold assembly.

Vertical End Plates w/o DIN, w/o Muffler

Vertical End Plates w/o DIN, w/Muffler

Valve Series	Orientation	Port Type	NPTF			G			Push In								
		Port Number	1	3/5	14, 12	1	3/5	14, 12	1	3/5	14, 12	1	3/5	14, 12	1	3/5	14, 12
		Port Size	1/8	1/8	M7	1/8	1/8	M7	1/4			5/16	5/16	1/4	8mm	8mm	6 mm
501 Series (11mm)	Vertical	w/Muffler, w/DIN	8501AK429465006			G501AK429465014			K501AK429465032			K501AK429465008			K501AK429465016		
		w/Muffler, w/o DIN	8501AK429465005			G501AK429465013			K501AK429465031			K501AK429465007			K501AK429465015		
		w/o Muffler, w/DIN	8501AK429465002			G501AK429465010			K501AK429465030			K501AK429465004			K501AK429465012		
		w/o Muffler, w/o DIN	8501AK429465001			G501AK429465009			K501AK429465029			K501AK429465003			K501AK429465011		

Horizontal End Plates w/o DIN

Vertical End Plates w/o DIN, w/o Muffler

Vertical End Plates w/o DIN, w/Muffler

Valve Series	Orientation	Port Type	NPTF			G			Push In												
		Port Number	1	3/5	14, 12	1	3/5	14, 12	1	3/5	14, 12	1	3/5	14, 12	1	3/5	14, 12	1	3/5	14, 12	1	3/5	14, 12
		Port Size	3/8	3/8	1/8	3/8	3/8	1/8	3/8	3/8	1/8	1/2	1/2	1/8	10mm	10mm	6 mm	12mm	12mm	6 mm
502 Series (18mm)	Vertical	w/Muffler, w/DIN	8502AK431477008			G502AK431477020			K502AK431477012			K502AK431477010			K502AK431477024			K502AK431477022		
		w/Muffler, w/o DIN	8502AK431477007			G502AK431477019			K502AK431477011			K502AK431477009			K502AK431477023			K502AK431477021		
		w/o Muffler, w/DIN	8502AK431477002			G502AK431477014			K502AK431477006			K502AK431477004			K502AK431477018			K502AK431477016		
		w/o Muffler, w/o DIN	8502AK431477001			G502AK431477013			K502AK431477005			K502AK431477003			K502AK431477017			K502AK431477015		
	Horizontal	w/o Muffler, w/o DIN	8502AK431478001			G502AK431478004			K502AK431478003			K502AK431478002			K502AK431478006			K502AK431478005		
503 Series (26mm)	Vertical	w/Muffler, w/DIN	8503AK428327008			G503AK428327020			K503AK428327010			K503AK428327012			K503AK428327022			K503AK428327024		
		w/Muffler, w/o DIN	8503AK428327007			G503AK428327019			K503AK428327009			K503AK428327011			K503AK428327021			K503AK428327023		
		w/o Muffler, w/DIN	8503AK428327002			G503AK428327014			K503AK428327004			K503AK428327006			K503AK428327016			K503AK428327018		
		w/o Muffler, w/o DIN	8503AK428327001			G503AK428327013			K503AK428327003			K503AK428327005			K503AK428327015			K503AK428327017		
	Horizontal	w/o Muffler, w/o DIN	8503AK428304001			G503AK428304004			K503AK428304002			K503AK428304003			K503AK428304005			K503AK428304006		

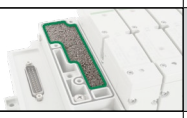
Multipin Electrical Interface

Multipin Electrical Interface	Product Image (Example Only)	Description	Part Number (501, 502 & 503 Valve Series)		Notes	Max. # of Coils*
25 Pin Sub-D Interface		Housing Kit Assembly w/o DIN Rail Clamps	P599AE428441001		External fusing or output protection recommended.	22
		Housing Kit Assembly w/DIN Rail Clamps	P599AE428441002			
		Female Cable 22 AWG – Unshielded, Standard	2m	SC2502MCX0000000	–	
			5m	SC2505MCX0000000		
			10m	SC2510MCX0000000		
		Female Cable 22 AWG - Unshielded IP65	2m	NDB25F22U02MSB4	–	
			5m	NDB25F22U05MSB4		
			10m	NDB25F22U10MSB4		
37 Pin Sub-D Interface		Housing Kit Assembly w/o DIN Rail Clamps	P599AE428442001		External fusing or output protection recommended.	32
		Housing Kit Assembly w/DIN Rail Clamps	P599AE428442002			
		Female Cable 22 AWG – Unshielded, Standard	2m	SC3702MCX0000000	–	
			5m	SC3705MCX0000000		
			10m	SC3710MCX0000000		
		Female Cable 22 AWG - Unshielded IP65	2m	NDB37F22U02MSB4	–	
			5m	NDB37F22U05MSB4		
			10m	NDB37F22U10MSB4		
19 Pin M23 Interface		Housing Kit Assembly w/o DIN Rail Clamps	P599AE428436001		External fusing or output protection recommended.	16
		Housing Kit Assembly w/DIN Rail Clamps	P599AE428436002			
		M23 Female Cable	5m	CC1905MI00000000	–	
			10m	CC1910MI00000000		
26 Pin M27 Interface		Housing Kit Assembly w/o DIN Rail Clamps	P599AE502625001		External fusing or output protection recommended.	22
		Housing Kit Assembly w/DIN Rail Clamps	P599AE502625002			
		M27 Female Cable	5m	CC2605MI00000000	–	
			10m	CC2610MI00000000		
1-32 Pin Terminal Strip Interface		Housing Kit Assembly w/o DIN Rail Clamps	P599AE428444001		1) External fusing or output protection recommended. 2) Min. Wire AWG 26, Max. Wire AWG 18.	32
		Housing Kit Assembly w/DIN Rail Clamps	P599AE428444002			
Robot End Effector (EE) Interface		FANUC Housing Kit Assembly for PNP I/O	P599AE509838001		Internal cable available from FANUC.	8

* Maximum number of valve stations is determined by:

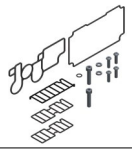
- The electrical connection type.
- The valve type - single solenoid valves up to the maximum solenoid outputs allowed by the electrical connection type (see chart above) or a combination of single and/or double solenoid valves not to exceed the maximum number of solenoid outputs allowed.
- Combination of all stations cannot exceed 32 solenoids.

Accessories Kit

Accessories Kit	Product Image (Example Only)	Description	Port Number	Part Number		
				501 Series (11mm)	**502 Series** (18mm)	**503 Series** (26mm)
Blank Station Plate Kit		Used to block off a manifold station for future use.	–	P501AB429685001	P502AB431813001	P503AB428359001
DIN Rail Clamp Kit		Used to mount manifold assembly to a machine via DIN Rail. Kit includes hardware for each end of the manifold. NOTE: DIN Rail not included.	–	239-980		
Blocking Disc Kit		Used to isolate 1, 3 & 5 galleries of the manifold internally. NOTE: Includes tag to label ports blocked.	1	P501AD431915001	P502AD431914001	P503AD431191001
			3	P501AD431915002	P502AD431914002	P503AD431191002
			5	P501AD431915003	P502AD431914003	P503AD431191003
			1 + 3	P501AD431915004	P502AD431914004	P503AD431191004
			1 + 5	P501AD431915005	P502AD431914005	P503AD431191005
			3 + 5	P501AD431915006	P502AD431914006	P503AD431191006
			1, 3, 5	P501AD431915007	P502AD431914007	P503AD431191007
Internal Muffler Element		Muffler element	–	427991-001	429372-001	426186-001
External Gauge Adaptor Kit		1/8" NPTF and G adaptor for external gauge	–	–	239-1561	

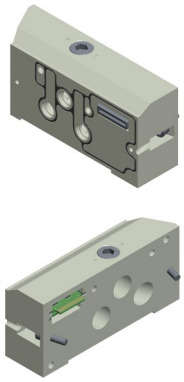
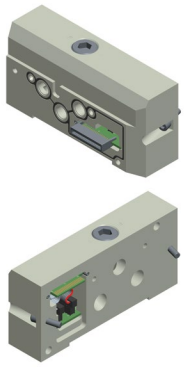
		Thread Type	Tube Size	Quantity	501 Series (11mm)	502 Series (18mm)	503 Series (26mm)
Fittings		M7	4mm	10	H850A104B004N10	See Fittings Catalog	See Fittings Catalog
		M7	6mm	10	H850A104B006N10		
		M7	1/4	10	H850A104B104N10		

Replacement Parts Kit

Replacement Parts Kit	Product Image (Example Only)	Description	Parts Included	Part Number		
				501 Series (11mm)	**502 Series** (18mm)	**503 Series** (26mm)
Interface Mounting Kit		Includes Mounting Gaskets {(1) valve to base, (2) Accessories to valve or base, (1) Manifold block, (1) End-Plate to electrical housing}, (1) Body to base O-ring, (2) Manifold block mounting screws and lock washers, (4) Electrical housing mounting screws		M501AU521771001	M502AU521772001	M503AU521773001
Regulator Replacement Kit		3 – 30 PSIG Regulator Kit	Includes regulator assembly, gaskets, screws.	–	M502AR427995001	M503AR428759001
		5 – 60 PSIG Regulator Kit		–	M502AR427995002	M503AR428759002
		10 – 130 PSIG Regulator Kit		–	M502AR427995003	M503AR428759003
		0.2 – 2.0 bar Regulator Kit		–	M502AR427995004	M503AR428759004
		0.3 – 4.0 bar Regulator Kit		–	M502AR427995005	M503AR428759005
		0.7 – 9.0 bar Regulator Kit		–	M502AR427995006	M503AR428759006
Regulator Gauge Replacement Kit		0 – 160 PSIG Regulator Gauge Head Extended	Includes gauge head, o-ring, and hitch-pin.	–	M502AG521734001	–
		0 – 160 PSIG Regulator Gauge Head		M501AG504541001	M502AG521734002	M503AG521734009
		0 – 60 PSIG Regulator Gauge Head Extended		–	M502AG521734003	–
		0 – 60 PSIG Regulator Gauge Head		–	M502AG521734004	M503AG521734010
		0 – 11 bar Regulator Gauge Head Extended		–	M502AG521734005	–
		0 – 11 bar Regulator Gauge Head		M501AG504540001	M502AG521734006	M503AG521734011
		0 – 4 bar Regulator Gauge Head Extended		–	M502AG521734007	–
		0 – 4 bar Regulator Gauge Head		–	M502AG521734008	M503AG521734012

Adaptor Plate Kit

The adaptor plate allows the transition from 503 Series to 502 Series and 502 Series to 501 Series in a single manifold assembly. Includes the adapter plate, transfer board, gasket, screws.

Valve Series	Product Image (Example Only)	Description	Interface	Thread Type	Supply Port 1 Size	Part Number
503 Series (26mm) **to 502 Series** (18mm)		503 to 502 Adaptor Plate w/PCB	Proprietary/ ISO 15407-2	NPTF	3/8"	8503AT429964001
		503 to 502 Adaptor Plate w/o PCB (for ISO 15407-1 Mounting)	ISO 15407-1			8503AT429964002
		503 to 502 Adaptor Plate w/PCB	Proprietary/ ISO 15407-2	G Tap		G503AT429964003
		503 to 502 Adaptor Plate w/o PCB (for ISO 15407-1 Mounting)	ISO 15407-1			G503AT429964004
502 Series (18mm) **to 501 Series** (11mm)		502 to 501 Adaptor Plate w/PCB	Proprietary	NPTF		8502AT429963001
		502 to 501 Adaptor Plate w/PCB	Proprietary	G Tap		G502AT429963002

Ordering Adaptor Plate Kit

Example Order - 502 & 501 Manifold Shown

25 Pin Sub-D	8502AVJH301VA00
Valve Station #1	R502A2B40MA00F1
Valve Station #2	R502A2B40MA00F1
Mounting #1	8502AMM21MA0010
Valve Station #3	R502A2B40MA00F1
Valve Station #4	R502A2B40MA00F1
Mounting #2	8502AMM21MA0010
Valve Station #5	R501A2B40MA00F1
Valve Station #6	R501A2B40MA00F1
Valve Station #7	R501A2B40MA00F1
Valve Station #8	R501A2B40MA00F1
Mounting #3	H501AMM4BMA0010
	Assembled

* Example purposes only. 502 Series to 501 Series Manifold shown.

NOTE: When looking at Cylinder Ports, Adaptor Plate can only be used to transition from 503 Series to 502 Series or 502 Series to 501 Series valves starting from the left side of a Manifold Assembly.

Mid-Station Supply Manifold Block Kit

Valve Series	Product Image (Example Only)	Description	Interface	Thread Type	Supply Port 1 Size	Part Number
501 Series (11mm)		Add additional supply and exhaust capacity to large manifold assemblies.	Proprietary	Metric Thread	M7	H501AZM8BTA0010
					M7	H501AZM4BMA0010
				Push-in Fittings	1/4	K501AZM82TA0010
					6mm	K501AZM8FTA0010
					1/4	K501AZM42MA0010
					6mm	K501AZM4FMA0010
					4mm (5/32)	K501AZM4DMA0010
502 Series (18mm)			ISO 15407-2	NPTF	1/8	8502AZM21TA0020
				G Tap	1/8	G502AZM21TA0020
			Proprietary	NPTF	1/8	8502AZM21TA0010
				G Tap	1/8	G502AZM21TA0010
			ISO 15407-2	Push-in Fittings	1/4	K502AZM22TA0020
					5/16	K502AZM2GTA0020
					6mm	K502AZM2FTA0020
					8mm	K502AZM2HTA0020
			Proprietary		1/4	K502AZM22TA0010
					5/16	K502AZM2GTA0010
					6mm	K502AZM2FTA0010
					8mm	K502AZM2HTA0010
503 Series (26mm)			ISO 15407-2	NPTF	1/4	8503AZM22TA0020
				G Tap	1/4	G503AZM22TA0020
			Proprietary	NPTF	1/4	8503AZM22TA0010
				G Tap	1/4	G503AZM22TA0010
			ISO 15407-2	Push-in Fittings	1/4	K503AZM22TA0020
					3/8	K503AZM23TA0020
					8mm	K503AZM2HTA0020
					10mm	K503AZM2KTA0020
			Proprietary		1/4	K503AZM22TA0010
					3/8	K503AZM23TA0010
					8mm	K503AZM2HTA0010
					10mm	K503AZM2KTA0010

Up to 128 Solenoid Coils with 500 Series Manifold Blocks

Valve Series	Product Image (Example Only)	Description	Maximum Solenoid Capacity	Mid-Station Supply & Auxiliary Power Requirements	Interface	Thread Type	Supply Port 1 Size	Part Number
501 Series (11mm)		501 32+ Solenoid 4-Station Manifold Block w/ X32 Valve Drivers	64	Not Required	Proprietary	Metric Thread	M7	H501AFM4BMA0010
						Push-in Fittings	1/4	K501AFM42MA0010
							6mm	K501AFM4FMA0010
							4mm (5/32)	K501AFM4DMA0010
		501 32+ Solenoid Mid-Station Supply & Auxiliary Power 8-Station Manifold Block w/ X32 Valve Drivers	128	32+ Solenoid Manifolds/ Islands	Proprietary	Metric Thread	M7	H501AFM8BTA0010
						Push-in Fittings	1/4	K501AFM82TA0010
							6mm	K501AFM8FTA0010
							4mm (5/32)	K501AFM8FT96X10*
502 Series (18mm)		502 32+ Solenoid Mid-Station Supply & Auxiliary Power 4-Station Manifold Block w/ X16 Valve Drivers	80	32+ Solenoid Manifolds/ Islands	ISO 15407-2	NPTF	1/8	8502AFM41TA0020
						G Tap	1/8	G502AFM41TA0020
					Proprietary	NPTF	1/8	8502AFM41TA0010
						G Tap	1/8	G502AFM41TA0010
					ISO 15407-2	Push-in Fittings	1/4	K502AFM42TA0020
							5/16	K502AFM4GTA0020
							6mm	K502AFM4FTA0020
							8mm	K502AFM4HTA0020
					Proprietary		1/4	K502AFM42TA0010
							5/16	K502AFM4GTA0010
							6mm	K502AFM4FTA0010
							8mm	K502AFM4HTA0010
503 Series (26mm)		503 32+ Solenoid Mid-Station Supply & Auxiliary Power 4-Station Manifold Block w/ X16 Valve Drivers	80	32+ Solenoid Manifolds/ Islands	ISO 15407-2	NPTF	1/4	8503AFM42TA0020
						G Tap	1/4	G503AFM42TA0020
					Proprietary	NPTF	1/4	8503AFM42TA0010
						G Tap	1/4	G503AFM42TA0010
					ISO 15407-2	Push-in Fittings	1/4	K503AFM42TA0020
							3/8	K503AFM43TA0020
							8mm	K503AFM4HTA0020
							10mm	K503AFM4KTA0020
					Proprietary		1/4	K503AFM42TA0010
							3/8	K503AFM43TA0010
							8mm	K503AFM4HTA0010
							10mm	K503AFM4KTA0010

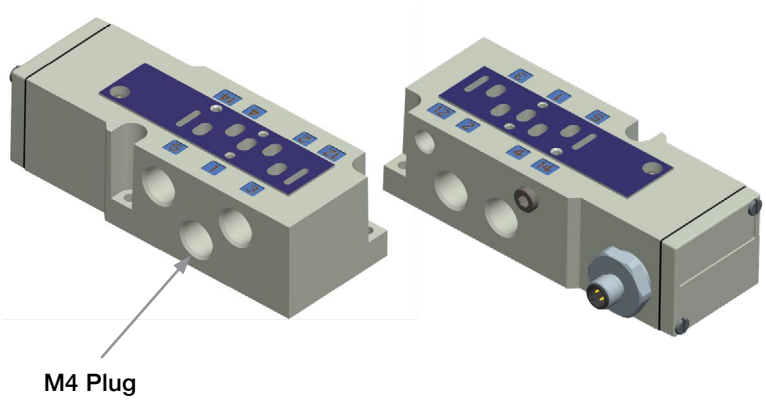
* Option 96X overrides the port size for stations 5 – 8 of the X32 manifold block with 4mm (5/32) Push-in fittings.

NOTE: The Up to 128 Solenoid Coil blocks are required for valve manifolds/islands with more than 32 solenoid coils. It is highly recommended that the online DPM configurator is used when configuring extended solenoid coil manifolds/islands to eliminate errors and to save time.

Supported Protocols	580 Communication Node	G3 Communication Node and I/O
CC-Link IE Field™	-	√
EtherCAT®	√	√
Ethernet POWERLINK®	√	√
EtherNet/IP™ DLR	√	√
Modbus® TCP/IP	-	√
PROFIBUS® DP	√	√
PROFINET®	√	√
Valve Sub-bus	√	√

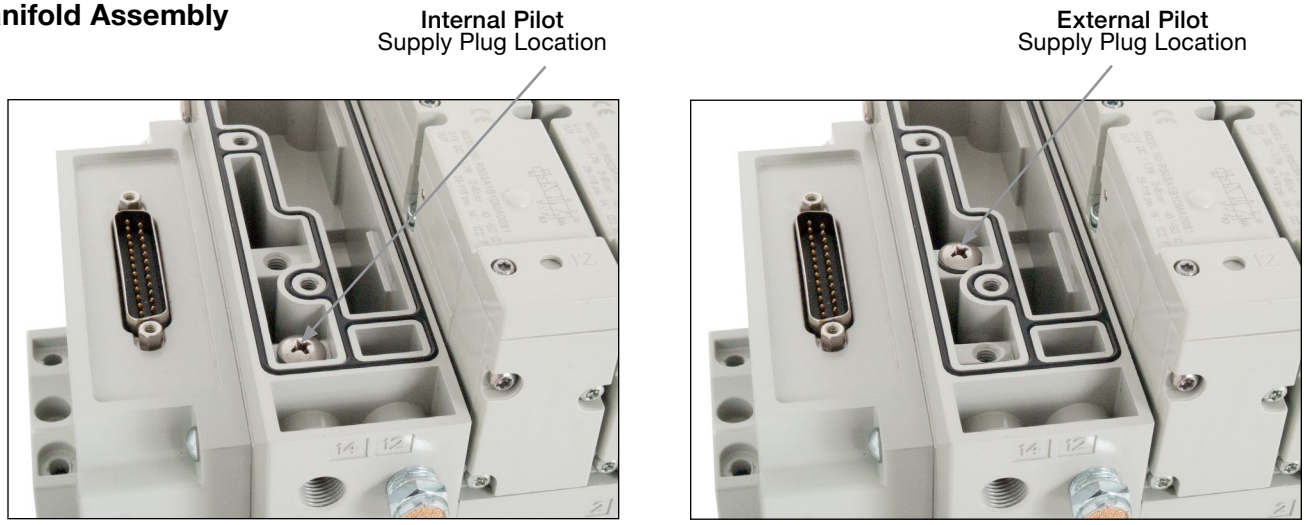
Internal/External Pilot Selection

Individual Subbase



NOTE: Individual Subbases are factory set for internal pilot supply. To convert to external pilot supply install M4 plug P.N. 129-216 (sold separately) down inside in the pressure port (1). Remove the 1/8 pipe plug from port 14 to supply pilot pressure.

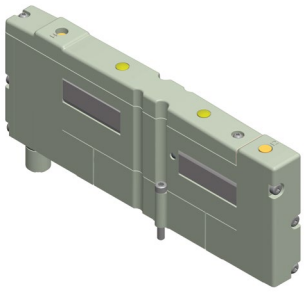
Manifold Assembly

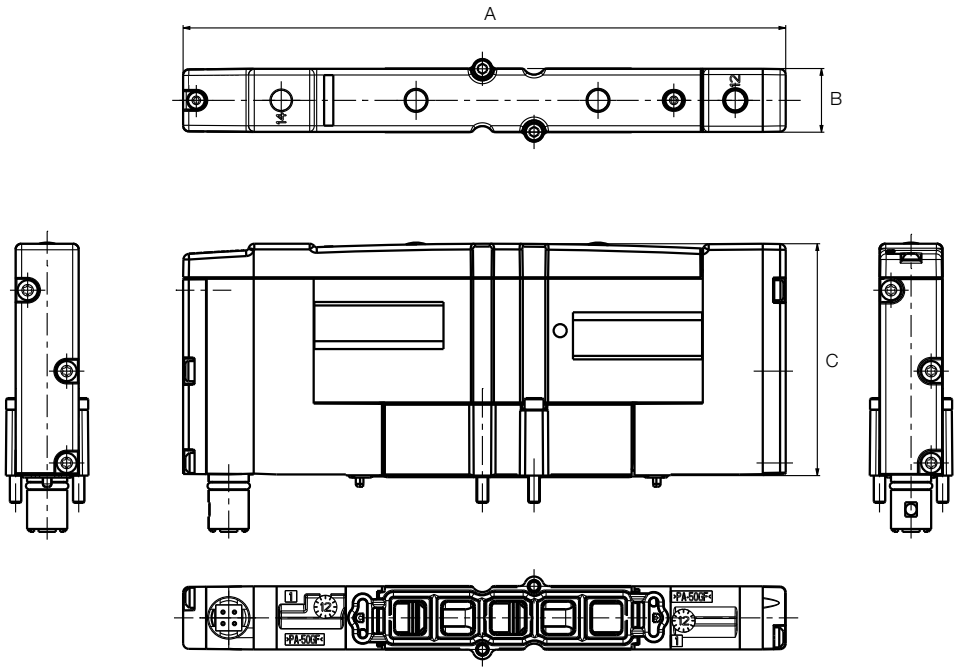


NOTE: Manifold Assemblies are factory set for internal pilot supply. To convert to external pilot supply install pilot supply seal screws 501 Series: 127-803, 502 & 503 Series: 426188-001, as shown in the pictures.

Dimensions: mm (inches)

501 Series Plug-in Valve





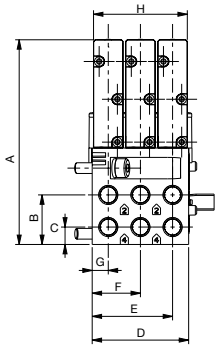
Weight	Valve Body	Manifold Block		End Plates
		3-Station	4-Station	
lbs (kg)	0.205 (0.093)	0.50 (0.23)	0.60 (0.27)	1.20 (0.54)

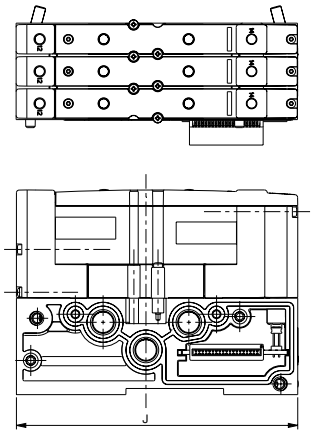
A	B	C
105 (4.13)	11 (0.43)	40.4 (1.59)

Dimensions: mm (inches)

Plug-in Valve Mounted

3-Station Manifold Block



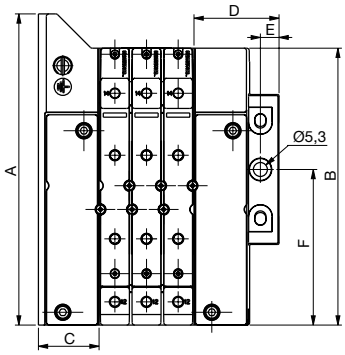


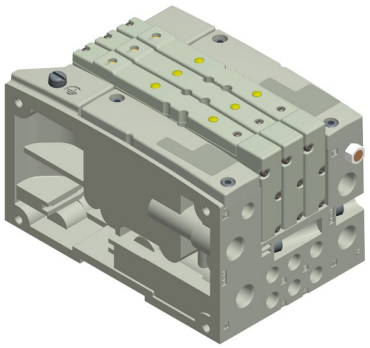
A	B	C	D	E	F	G	H	J
76.4 (3.008)	18.5 (0.728)	6.5 (0.26)	36 (1.42)	30 (1.18)	18 (0.71)	6 (0.236)	35 (1.38)	105 (4.13)

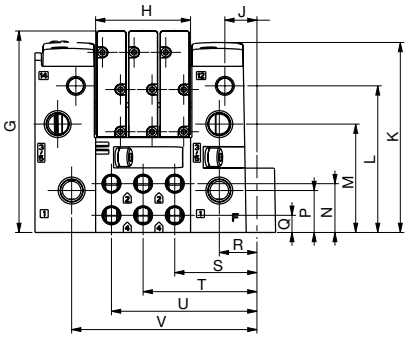
Dimensions: mm (inches)

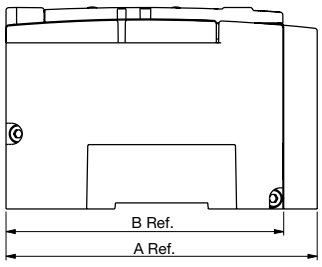
Plug-in Valve Mounted

3-Station Manifold Assembly





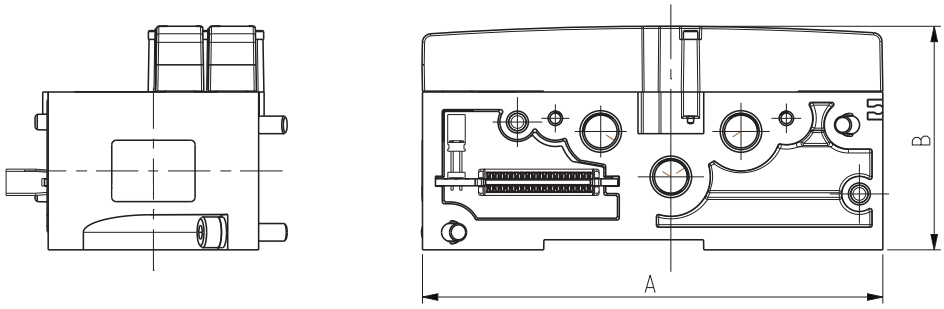




A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V
118 (4.646)	105 (4.134)	23 (0.91)	32.3 (1.27)	7.1 (0.28)	59 (2.32)	76.4 (3.008)	36 (1.42)	12.2 (0.48)	72 (2.84)	55.6 (2.19)	41.1 (1.618)	18.5 (0.73)	15.9 (0.626)	6.5 (0.26)	14.3 (0.56)	31.2 (1.23)	43.2 (1.7)	55.2 (2.173)	70.3 (2.768)

Dimensions: mm (inches)

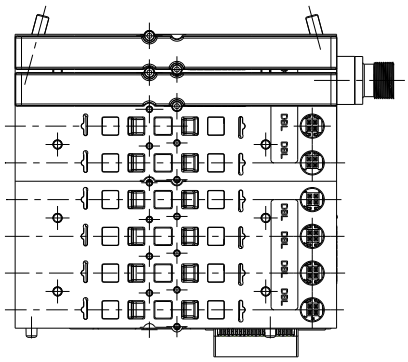
501 Series Mid-Station Supply Block

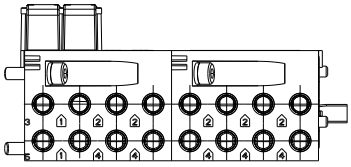


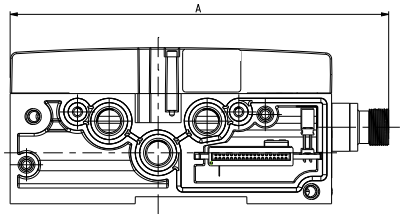
A	B	C
105 (4.13)	51 (2.01)	48 (1.89)

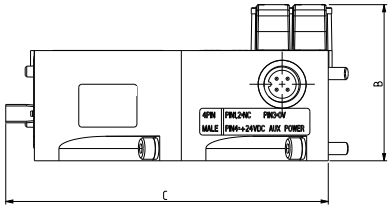
Dimensions: mm (inches)

501 Series 32+ Solenoid Mid-Station & Auxiliary Power 8-Station Manifold Block with X32 Valve Drivers









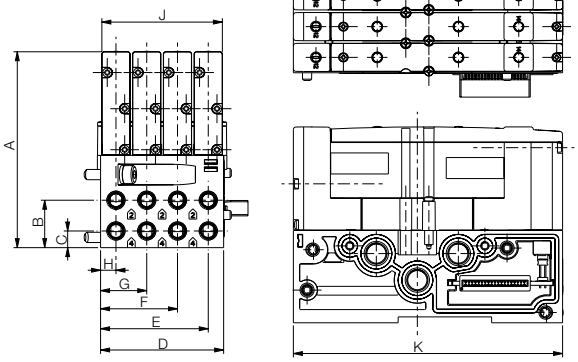
Weight
lbs (kg)
1.45 (0.66)

A	B	C
123.6 (4.87)	51 (2.01)	105.3 (4.15)

Dimensions: mm (inches)

Plug-in Valve Mounted

4-Station Manifold Block

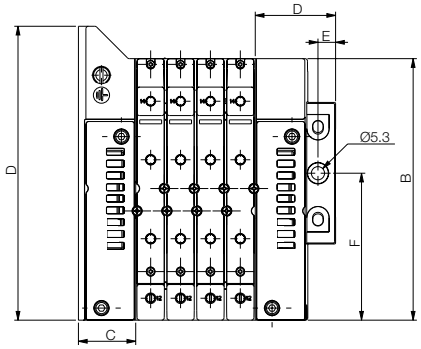


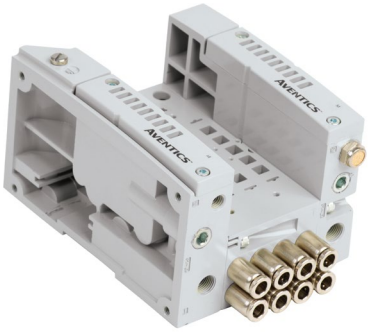
A	B	C	D	E	F	G	H	J	K
76.4 (3.008)	18.5 (0.728)	6.5 (0.256)	48 (1.890)	42 (1.653)	30 (1.181)	18 (0.709)	6 (0.236)	47 (1.850)	105 (4.134)

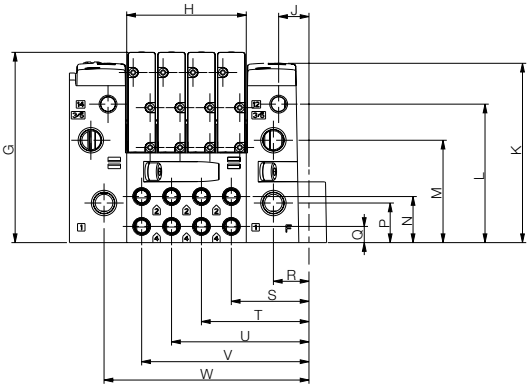
Dimensions: mm (inches)

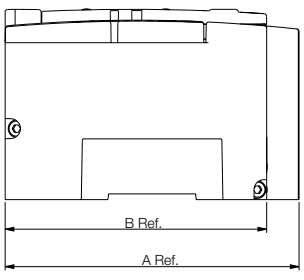
Plug-in Valve Mounted

4-Station Manifold Assembly







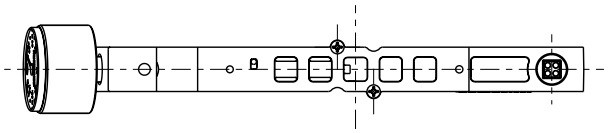


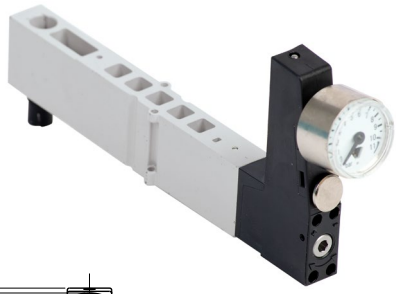
A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W
118 (4.65)	105 (4.13)	23 (0.90)	32.3 (1.27)	7.1 (0.28)	59 (2.32)	76.4 (3.01)	48 (1.89)	12.2 (0.48)	72 (2.83)	55.6 (2.19)	41.1 (1.62)	18.5 (0.73)	15.9 (0.63)	6.5 (0.26)	14.3 (0.56)	31.2 (1.23)	43.2 (1.70)	55.2 (2.17)	67.2 (2.65)	82.3 (3.24)

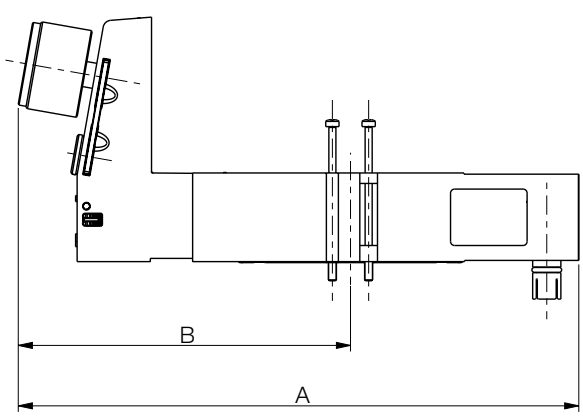
Dimensions: mm (inches)

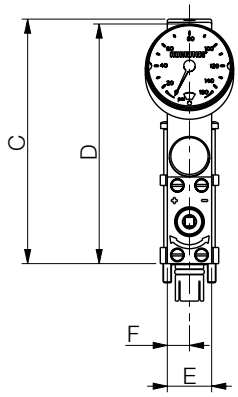
Sandwich Pressure Regulator

Single Regulator







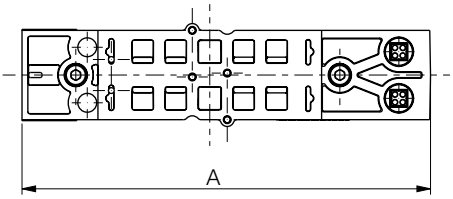


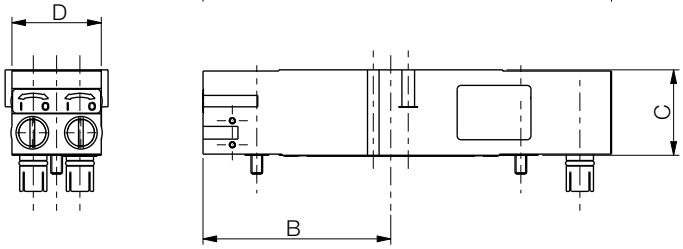
Weight
lbs (kg)
0.20 (0.09)

A	B	C	D	E	F
139.1 (5.476)	82.5 (3.248)	60.7 (2.390)	59.5 (2.342)	11 (0.433)	5.5 (0.216)

Dimensions: mm (inches)

Sandwich Shut Off Block Kit



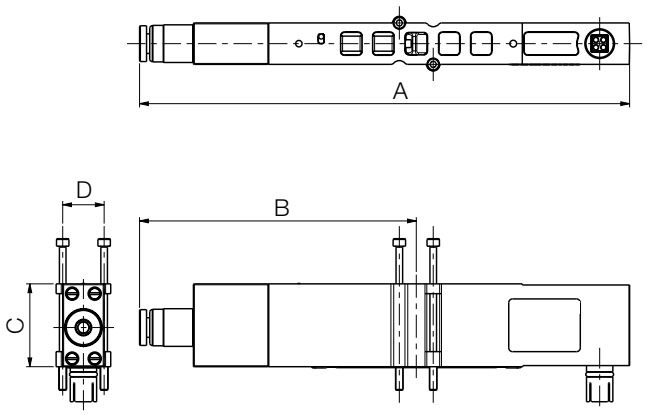


Weight
lbs (kg)
0.25 (0.11)

A	B	C	D
105.2 (4.142)	48.4 (1.905)	22 (0.866)	23 (0.905)

Dimensions: mm (inches)

Sandwich Pressure Block Kit

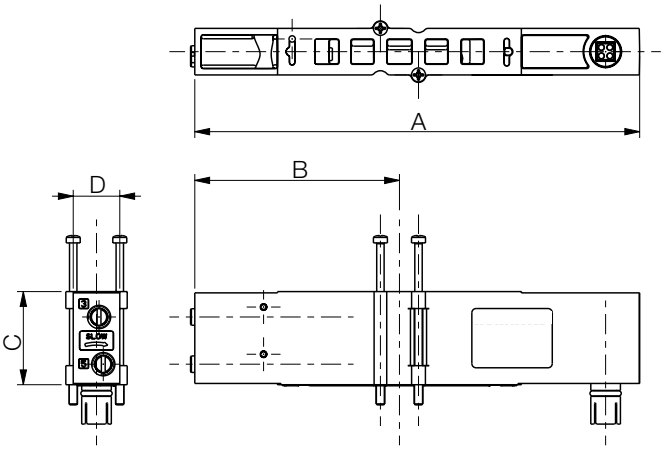


Weight
lbs (kg)
0.15 (0.07)

A	B	C	D
130.1 (5.12)	73.5 (2.89)	22.0 (0.87)	11.0 (0.43)

Dimensions: mm (inches)

Sandwich Speed Control Kit

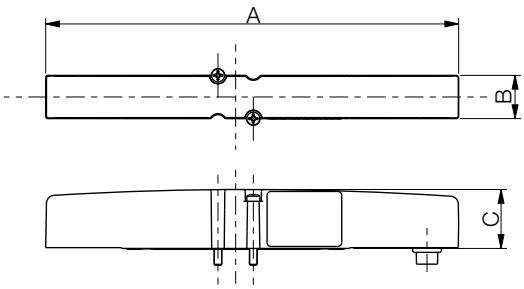


Weight
lbs (kg)
0.15 (0.07)

A	B	C	D
105.1 (4.137)	48.4 (1.905)	22 (0.866)	11 (0.433)

Dimensions: mm (inches)

Blank Station Plate Kit

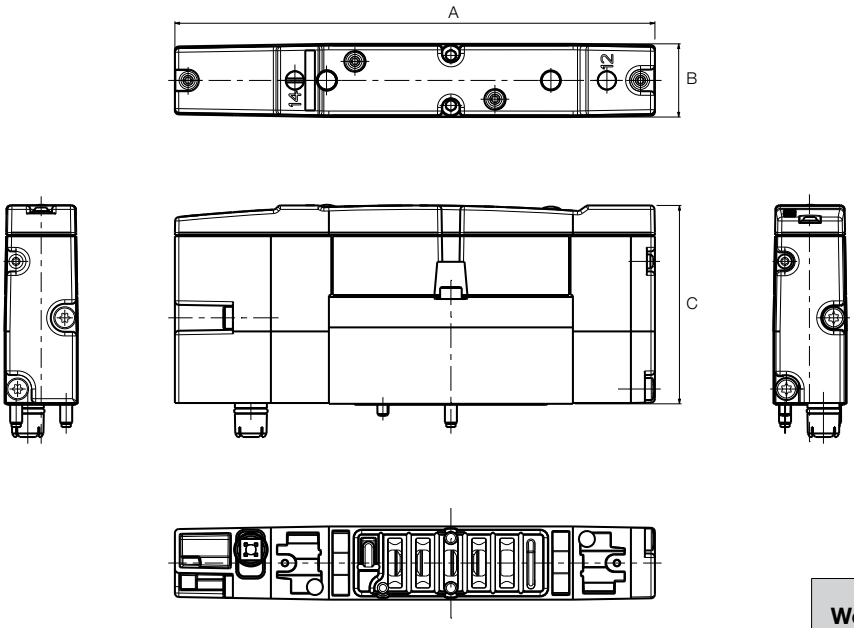


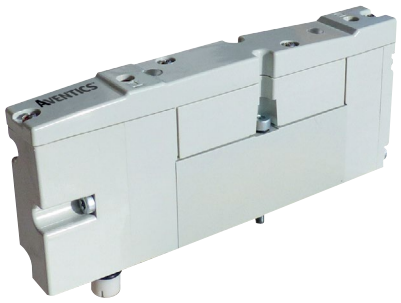
Weight
lbs (kg)
0.10 (0.05)

A	B	C
105.1 (4.138)	11 (0.433)	15 (0.591)

Dimensions: mm (inches)

502 Series Plug-in Valve





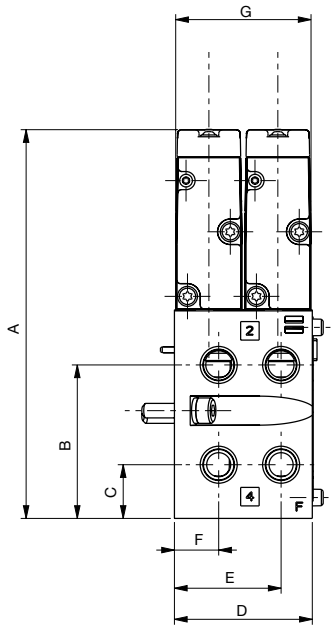
Weight	Valve Body	Manifold Block	End Plates
lbs (kg)	0.372 (0.169)	0.75 (0.34)	3.30 (0.45)

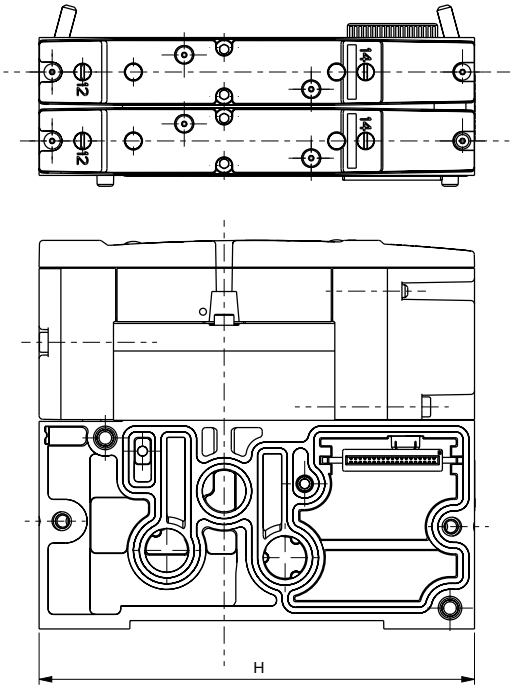
A	B	C
120 (4.72)	18 (0.71)	49.6 (1.95)

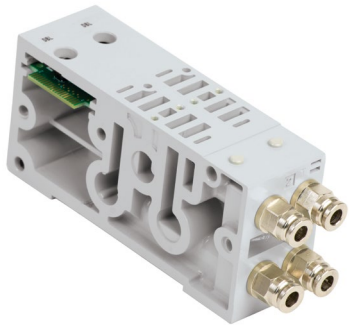
Dimensions: mm (inches)

Plug-in Valve Mounted

Plug-in Manifold Block





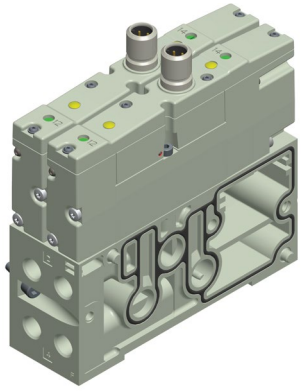


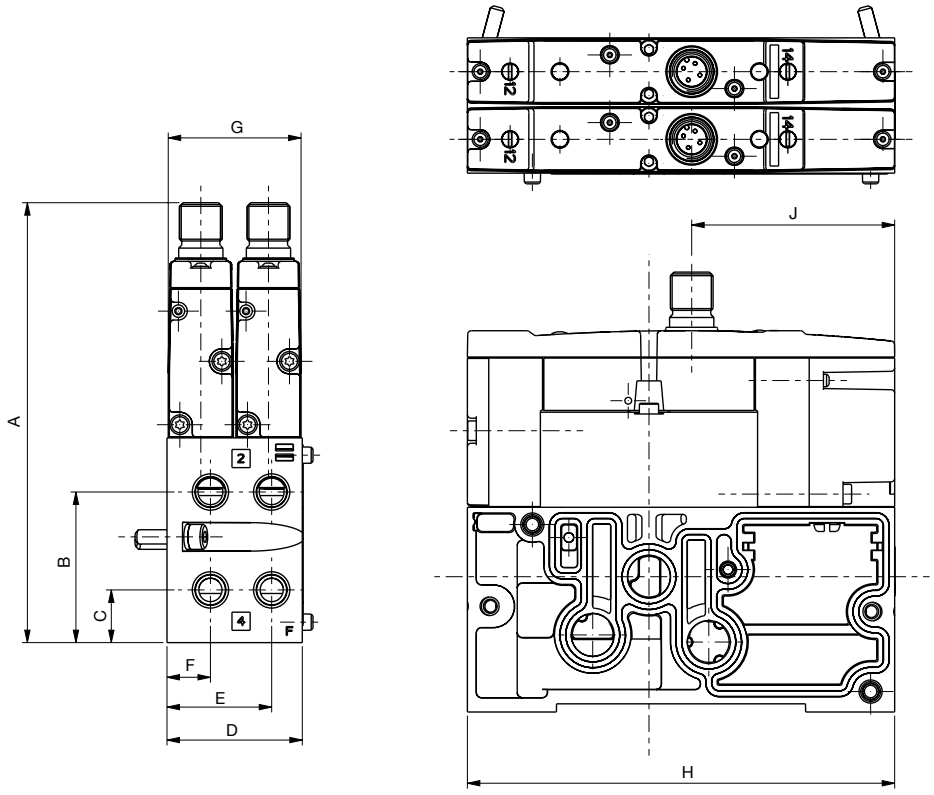
A	B	C	D	E	F	G	H
107.1 (4.217)	42.3 (1.665)	14.8 (0.583)	38 (1.496)	29.4 (1.157)	12.2 (0.48)	37.3 (1.469)	120 (4.724)

Dimensions: mm (inches)

M12 Valve Mounted

Non Plug-in Manifold Block (ISO 15407-1)



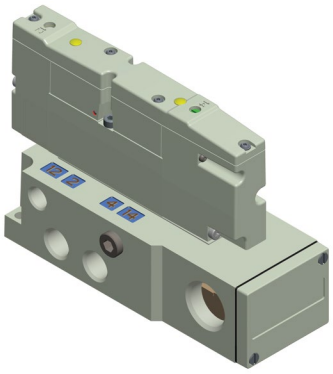


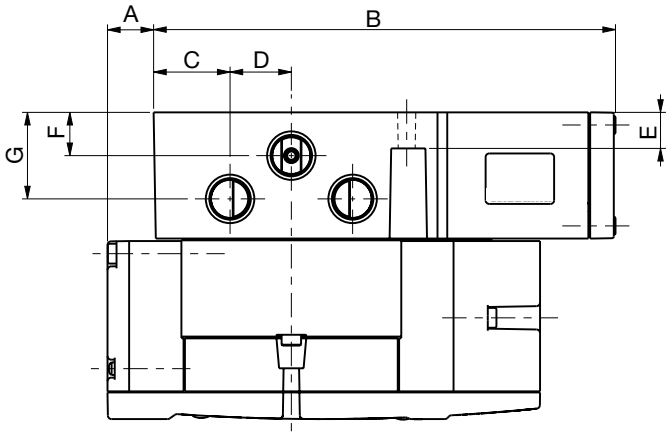
A	B	C	D	E	F	G	H	J
123.6 (4.866)	42.3 (1.665)	14.8 (0.583)	38 (1.496)	29.4 (1.157)	12.2 (0.48)	37.3 (1.469)	120 (4.724)	57 (2.244)

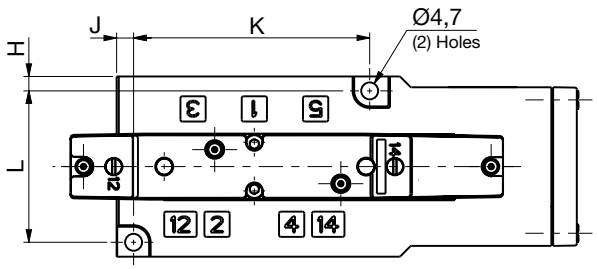
Dimensions: mm (inches)

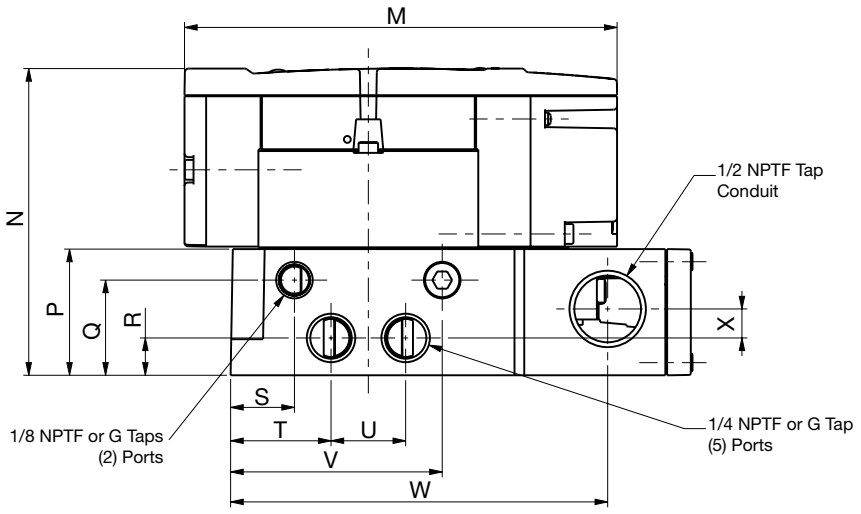
Plug-in Valve on Individual Subbase

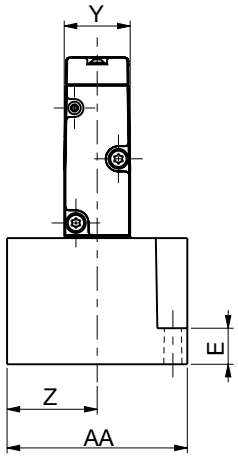
Plug-in Individual Subbase











A	B	C	D	E	F	G	H	J	K	L	M	N
12.8 (0.504)	128.1 (5.043)	21.2 (0.835)	17 (0.669)	10 (0.394)	12 (0.472)	24 (0.945)	4 (0.157)	4.7 (0.185)	65.5 (2.579)	42 (1.654)	120 (4.724)	85.1 (3.35)

P	Q	R	S	T	U	V	W	X	Y	Z	AA
35 (1.378)	26.4 (1.039)	10.4 (0.409)	17.7 (0.697)	27.9 (1.098)	20.7 (0.815)	58.7 (2.311)	104.6 (4.118)	8.1 (0.319)	18.3 (0.72)	25 (0.984)	50 (1.969)

Dimensions: mm (inches)

Plug-in Valve on Individual Subbase

M12 Individual Subbase (ISO 15407-2)

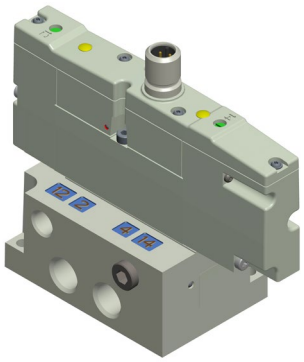
A	B	C	D	E	F	G	H	J	K	L	M	N
12.8 (0.504)	128.1 (5.043)	21.2 (0.835)	17 (0.669)	10 (0.394)	12 (0.472)	24 (0.945)	4 (0.157)	4.7 (0.185)	65.5 (2.579)	42 (1.654)	70 (2.756)	120 (4.724)

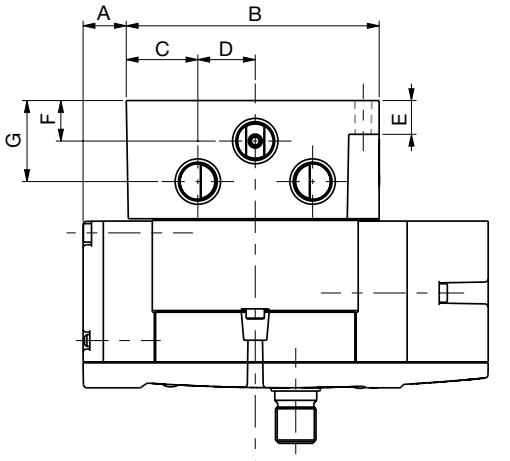
P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
85.1 (3.35)	35 (1.378)	26.4 (1.039)	10.4 (0.409)	17.7 (0.697)	27.9 (1.098)	20.7 (0.815)	58.7 (2.311)	104.6 (4.118)	8.1 (0.319)	18.3 (0.72)	25 (0.984)	50 (1.969)

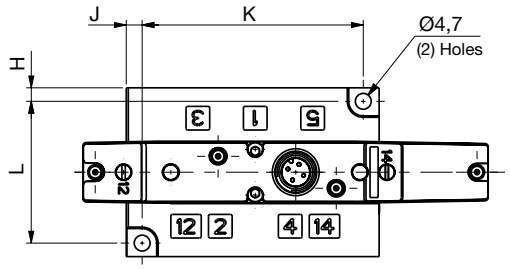
Dimensions: mm (inches)

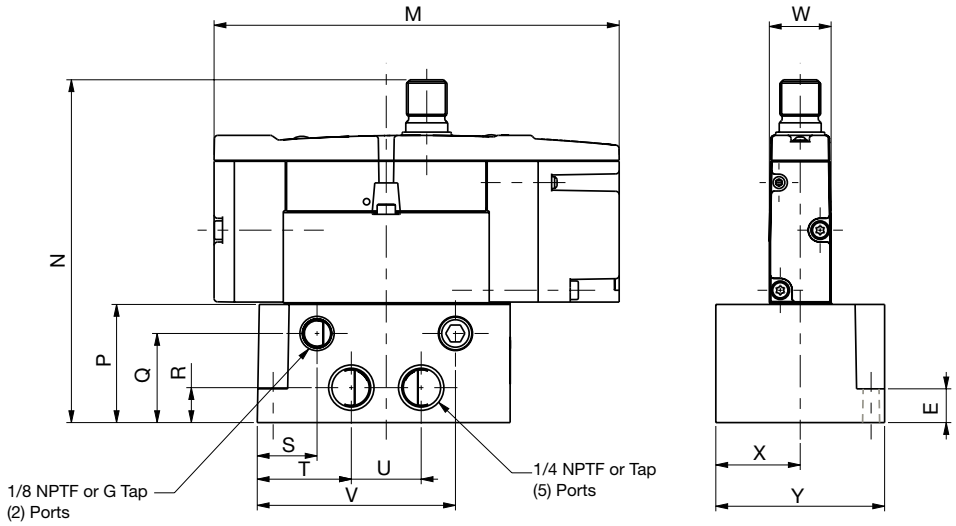
Non Plug-in Valve on Individual Subbase

Non Plug-in Individual Subbase (ISO 15407-1)







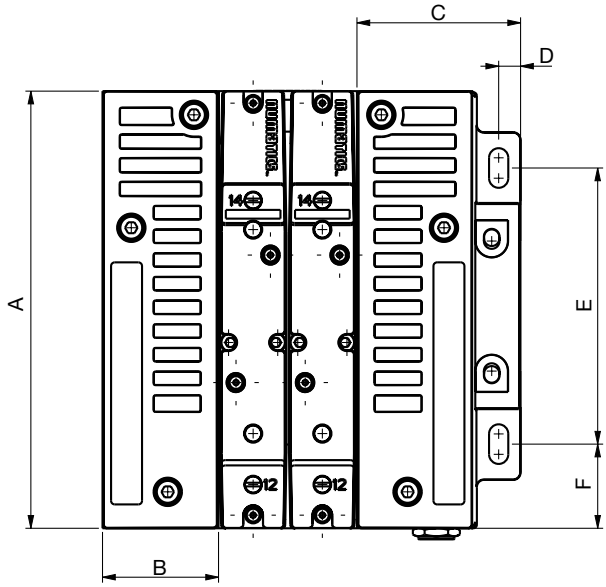


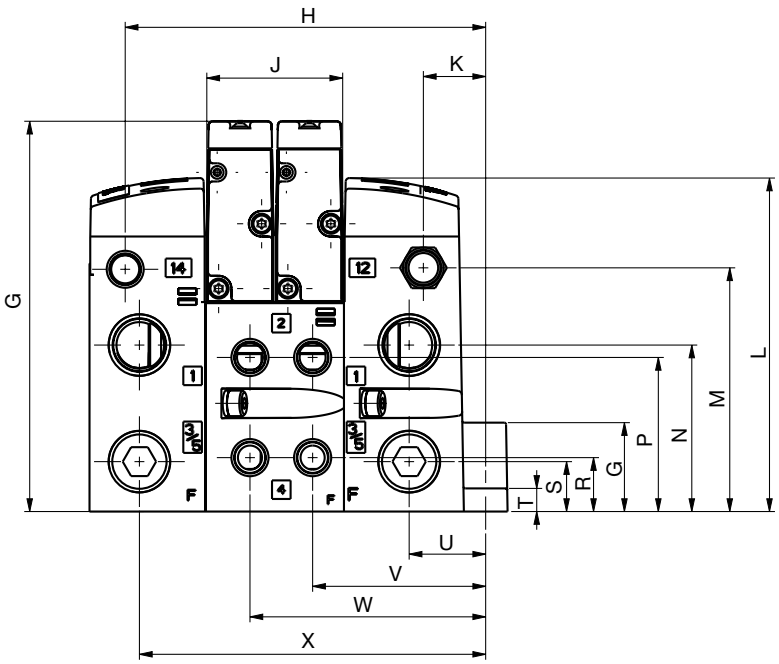
A	B	C	D	E	F	G	H	J	K	L	M	N
12.8 (0.504)	74.9 (2.949)	21.2 (0.835)	17 (0.669)	10 (0.394)	12 (0.472)	24 (0.945)	4 (0.157)	4.7 (0.185)	65.5 (2.579)	42 (1.654)	120 (4.724)	101.6 (4)

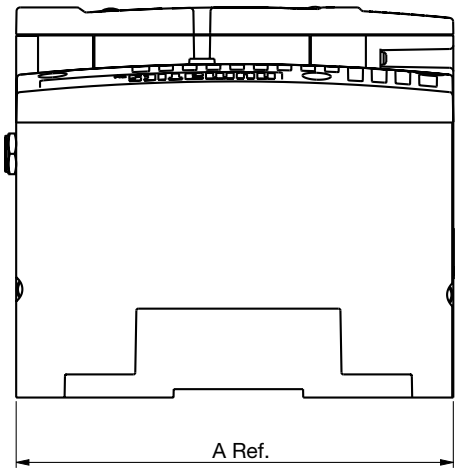
P	Q	R	S	T	U	V	W	X	Y
35 (1.378)	26.4 (1.039)	10.4 (0.409)	17.7 (0.697)	27.9 (1.098)	20.7 (0.815)	58.7 (2.311)	18.3 (0.72)	25 (0.984)	50 (1.969)

Dimensions: mm (inches)

Manifold Assembly with Vertical End Plates





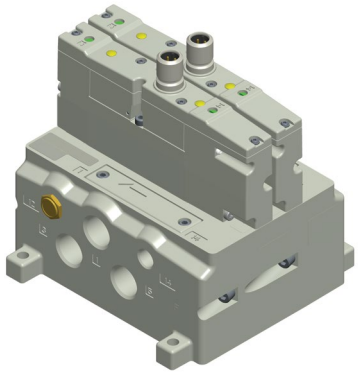


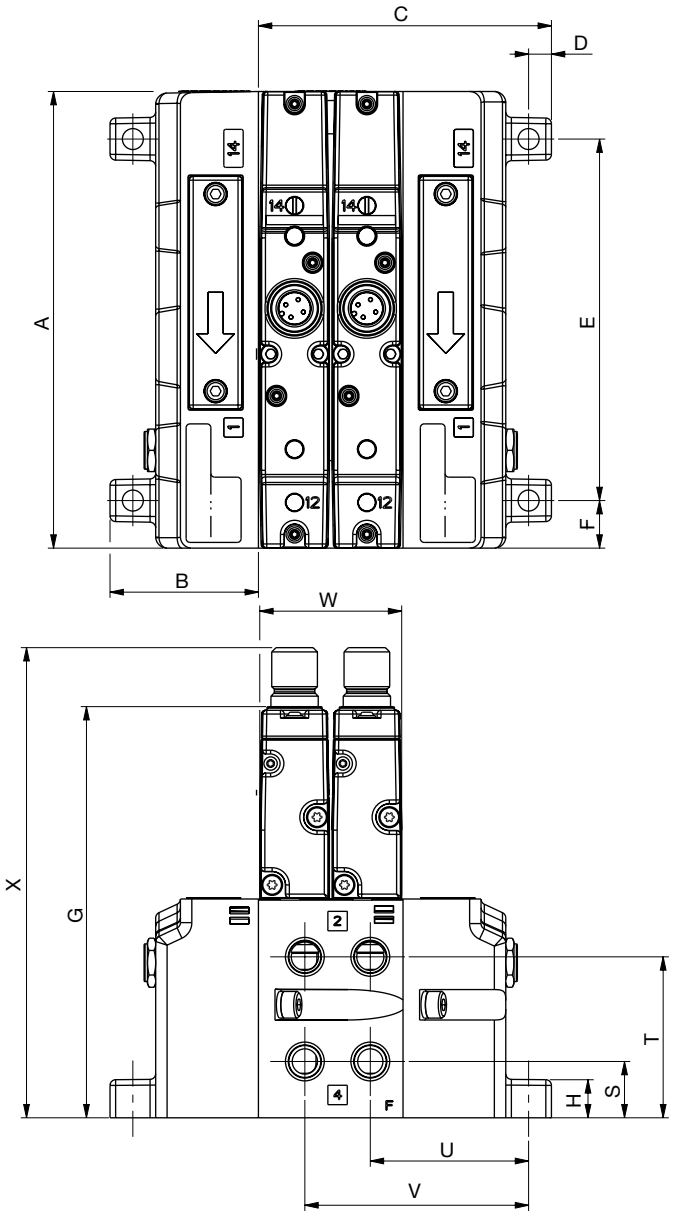
A	B	C	D	E	F	G	H	J	K	L
120 (4.724)	31.9 (1.256)	44.9 (1.768)	6 (0.236)	75.8 (2.984)	23.1 (0.909)	107.1 (4.217)	98.9 (3.894)	37.3 (1.469)	17.1 (0.673)	91.6 (3.606)

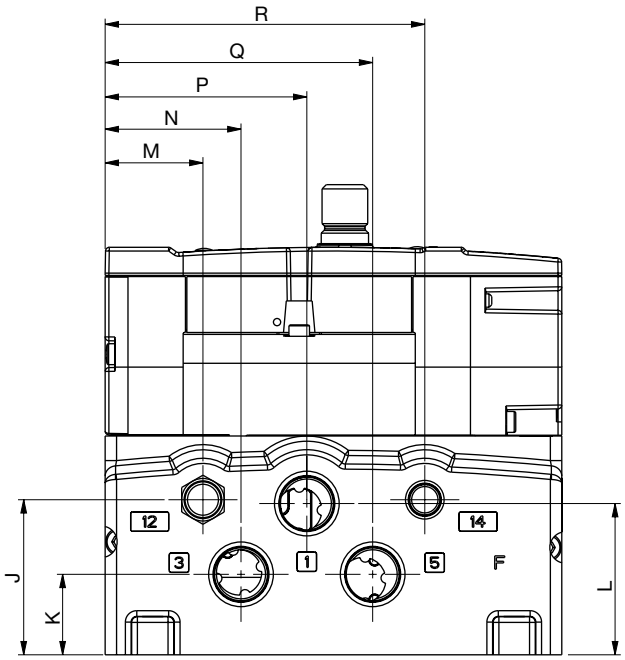
M	N	P	Q	R	S	T	U	V	W	X
66.9 (2.634)	45.7 (1.799)	42.3 (1.665)	24.4 (0.961)	14.8 (0.583)	13.7 (0.539)	6.35 (0.25)	21 (0.827)	47.5 (1.87)	64.7 (2.547)	95 (3.74)

Dimensions: mm (inches)

Manifold Assembly with Horizontal End Plates





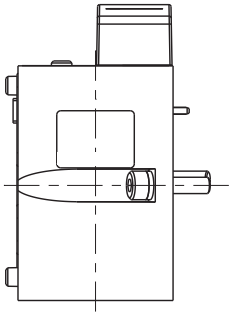


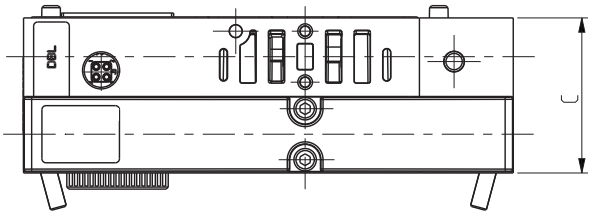
A	B	C	D	E	F	G	H	J	K	L
120.0 (4.72)	39.0 (1.54)	39.0 (1.54)	6.0 (0.24)	95.0 (3.74)	12.5 (0.49)	108.1 (4.26)	10.0 (0.39)	40.8 (1.61)	21.2 (0.83)	39.8 (1.57)

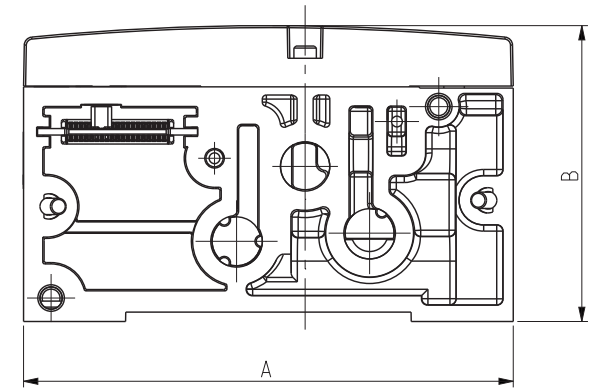
M	N	P	Q	R	S	T	U	V	W	X
25.7 (1.01)	35.7 (1.41)	53.0 (2.09)	70.3 (2.77)	84.0 (3.31)	14.8 (0.58)	42.3 (1.67)	41.6 (1.64)	58.8 (2.31)	37.3 (1.47)	123.6 (4.87)

Dimensions: mm (inches)

502 Series Mid-Station Supply Block



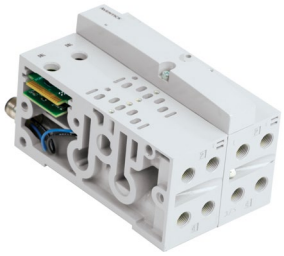


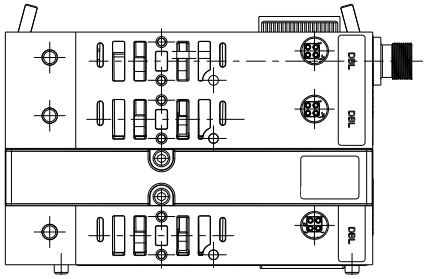


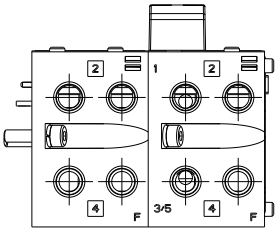
A	B	C
120 (4.72)	72.5 (2.85)	38 (1.50)

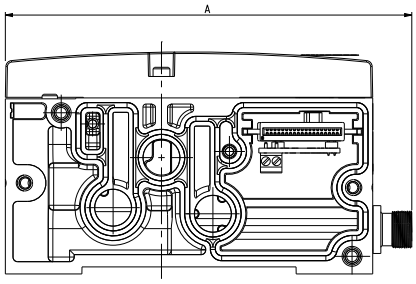
Dimensions: mm (inches)

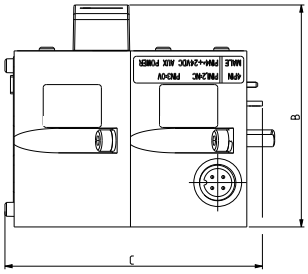
502 Series Mid-Station Supply/Auxiliary Power Manifold Block with X32 Solenoid Coils Kit











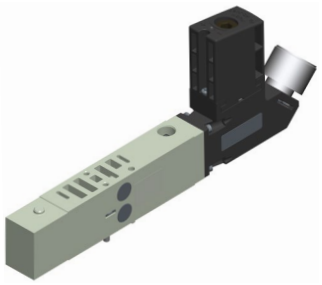
Weight
lbs (kg)
1.70 (0.77)

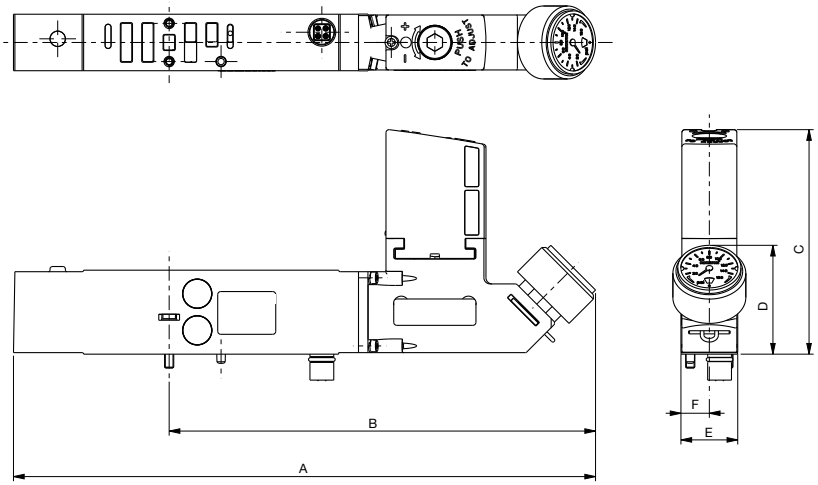
A	B	C
132.7 (5.22)	72.5 (2.85)	84 (3.31)

Dimensions: mm (inches)

Sandwich Pressure Regulator

Single Regulator



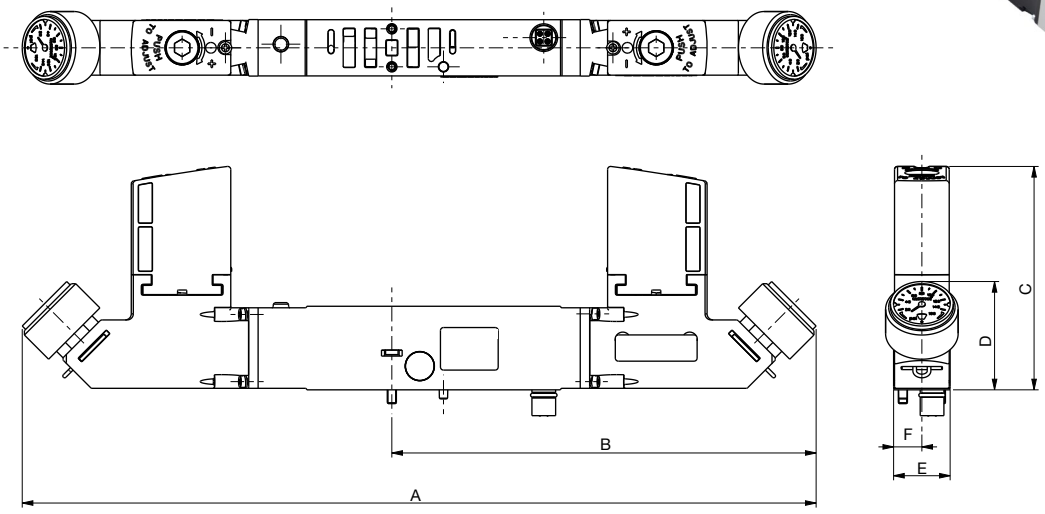


Weight
lbs (kg)
0.65 (0.30)

A	B	C	D	E	F
190.6 (7.504)	139.6 (5.496)	73.5 (2.894)	35.6 (1.402)	18.6 (0.732)	9.3 (0.366)

Dimensions: mm (inches)

Double Regulator

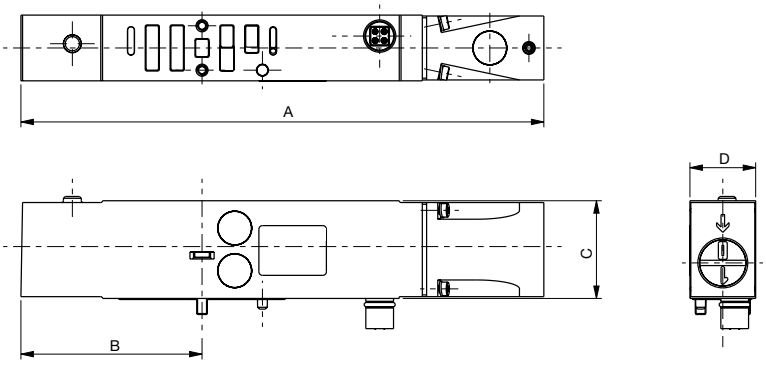


Weight
lbs (kg)
1.05 (0.48)

A	B	C	D	E	F
261.2 (10.283)	139.6 (5.496)	73.5 (2.894)	35.6 (1.402)	18.6 (0.732)	9.3 (0.366)

Dimensions: mm (inches)

Sandwich Shut Off Block Kit

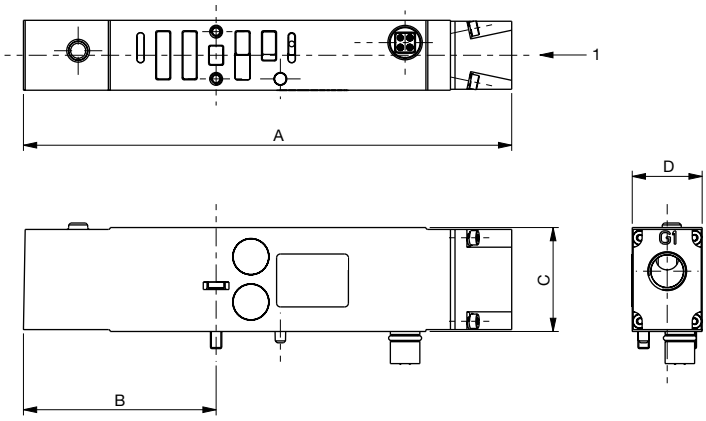


Weight
lbs (kg)
0.30 (0.14)

A	B	C	D
147.2 (5.795)	51 (2.008)	27.5 (1.083)	18.5 (0.728)

Dimensions: mm (inches)

Sandwich Pressure Block Kit

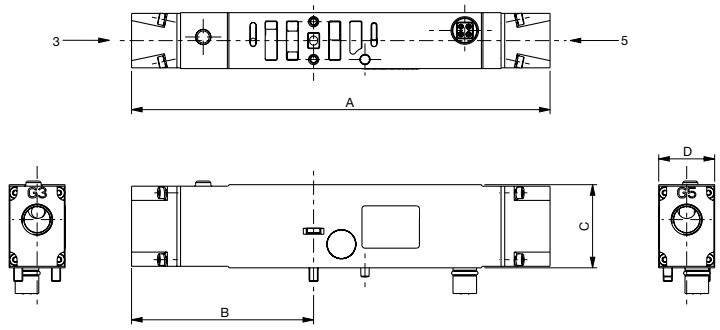


Weight
lbs (kg)
0.50 (0.23)

A	B	C	D
129.2 (5.087)	51 (2.008)	27.5 (1.083)	18.5 (0.728)

Dimensions: mm (inches)

Sandwich Exhaust Block Kit

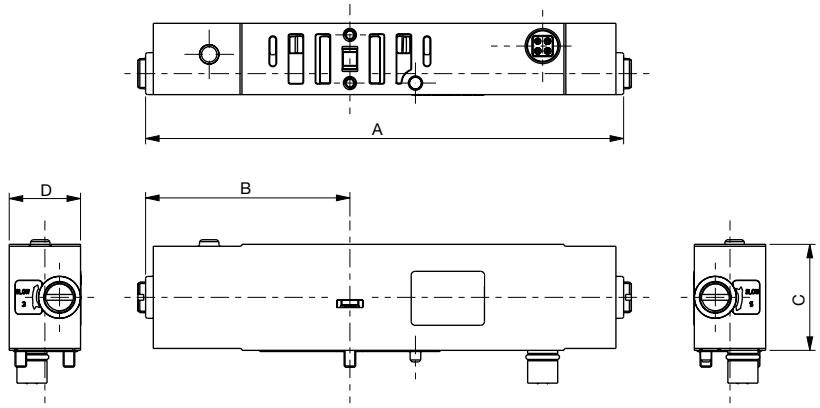


Weight
lbs (kg)
0.30 (0.14)

A	B	C	D
138.4 (5.449)	60.2 (2.37)	27.5 (1.083)	18.5 (0.728)

Dimensions: mm (inches)

Sandwich Speed Control Kit

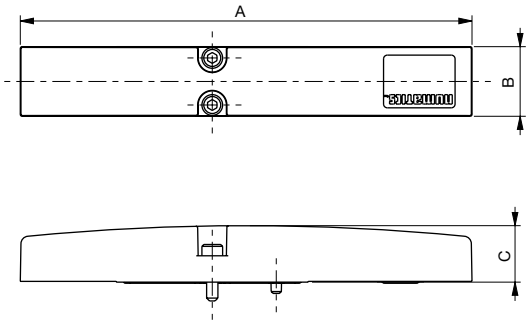


Weight
lbs (kg)
0.30 (0.14)

A	B	C	D
124 (4.882)	53 (2.087)	27.5 (1.083)	18.5 (0.728)

Dimensions: mm (inches)

Blank Station Plate Kit

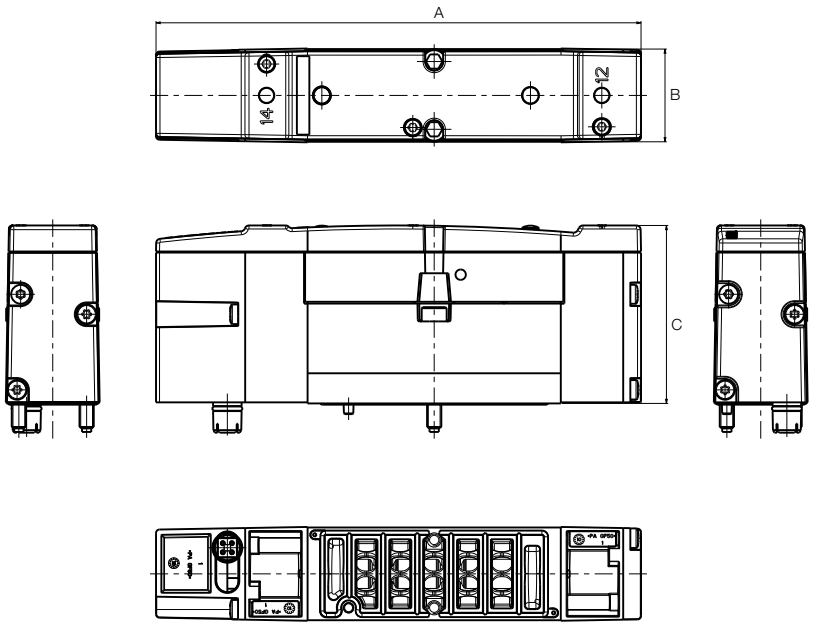


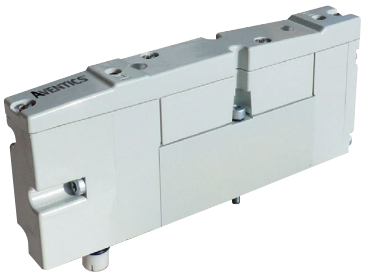
Weight
lbs (kg)
0.10 (0.05)

A	B	C
120 (4.724)	18.5 (0.728)	15 (0.591)

Dimensions: mm (inches)

503 Series Plug-in Valve





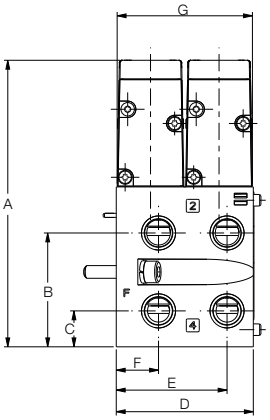
Weight	Valve Body	Manifold Block	End Plates
lbs (kg)	0.520 (0.236)	3.00 (1.36)	1.15 (0.52)

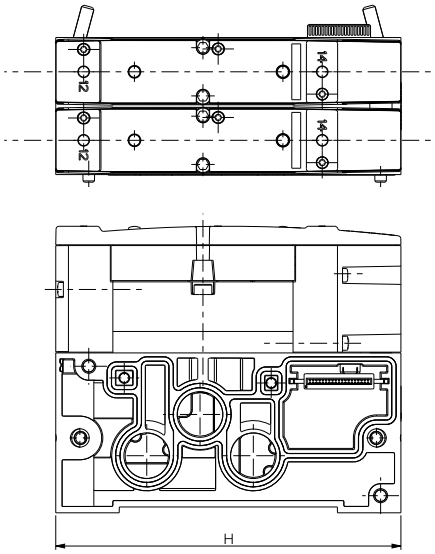
A	B	C
136 (5.35)	26 (1.02)	50 (1.97)

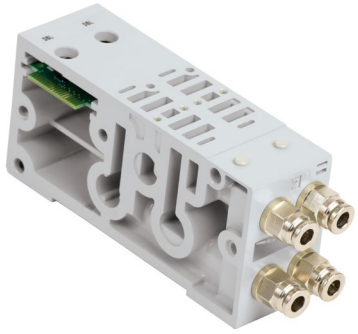
Dimensions: mm (inches)

Plug-in Valve Mounted

Plug-in Manifold Block





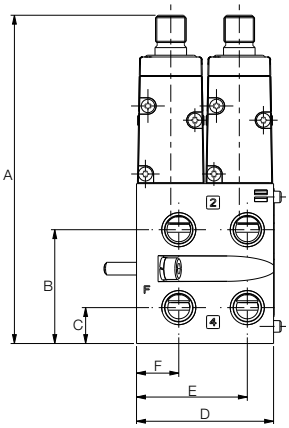


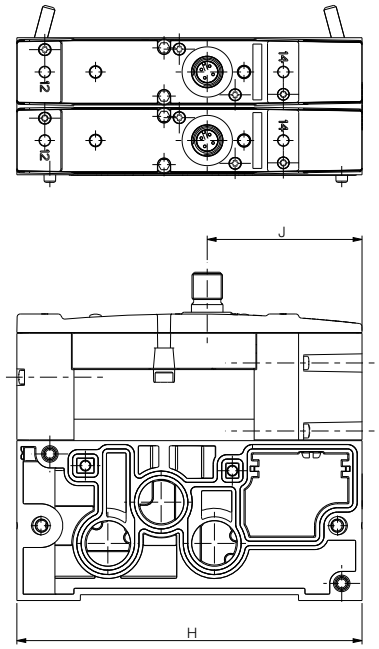
A	B	C	D	E	F	G	H
112.9 (4.445)	44.9 (1.768)	14.2 (0.56)	54 (2.13)	43.7 (1.72)	16.7 (0.66)	53.3 (2.098)	136 (5.35)

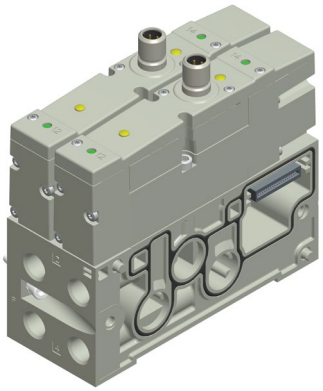
Dimensions: mm (inches)

M12 Valve Mounted (ISO 15407-1)

2-Station Plug-in Manifold Block



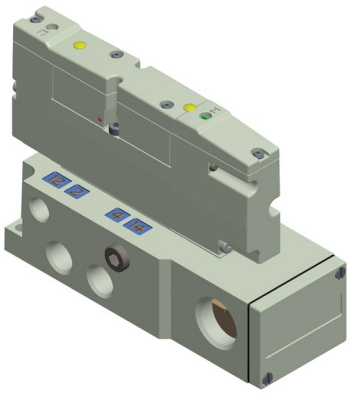




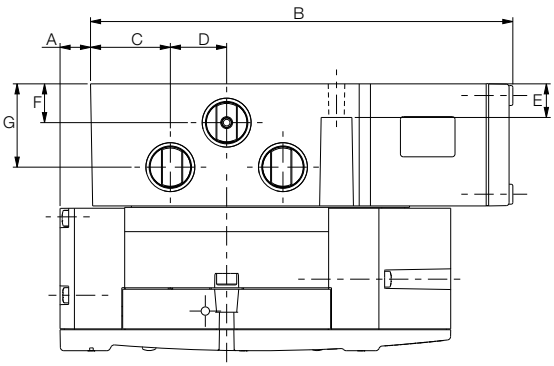
A	B	C	D	E	F	G	H	J
129.4 (5.094)	44.9 (1.768)	14.2 (0.56)	54 (2.13)	43.7 (1.72)	16.7 (0.66)	53.3 (2.098)	136 (5.35)	61 (2.4)

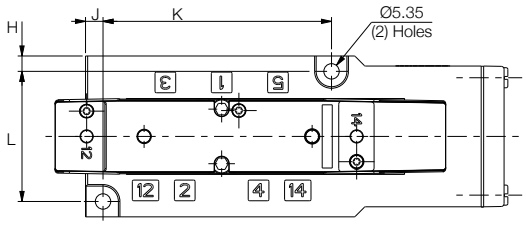
Dimensions: mm (inches)

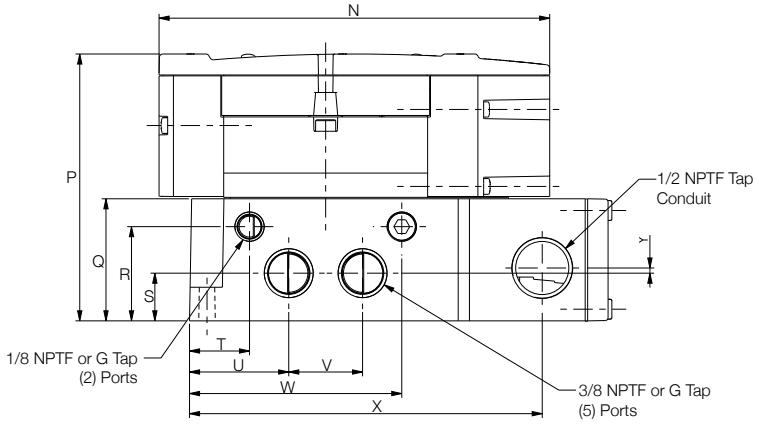
Plug-in Valve Mounted on Individual Subbase

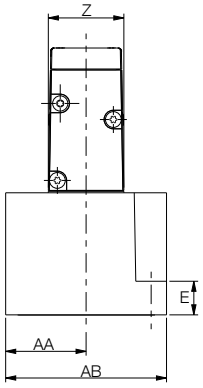


Plug-in Individual Subbase









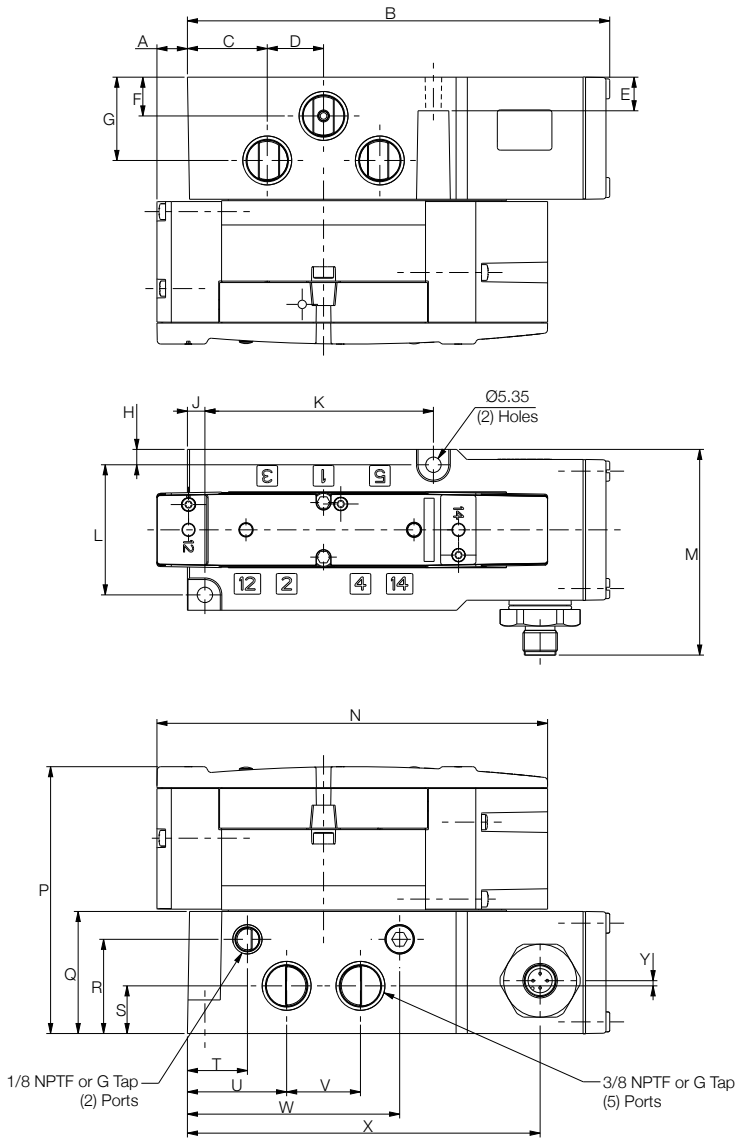
A	B	C	D	E	F	G	H	J	K	L	N	P
10.6 (0.417)	147 (5.787)	27.8 (1.09)	19.6 (0.77)	11.7 (0.46)	13.5 (0.53)	29 (1.142)	5.4 (0.21)	6.1 (0.24)	79.6 (3.13)	45.3 (1.78)	136 (5.35)	92.9 (3.657)

Q	R	S	T	U	V	W	X	Y	Z	AA	AB
42.5 (1.67)	32.8 (1.29)	16.6 (0.65)	20.9 (0.82)	34.5 (1.36)	25.7 (1.01)	73.9 (2.91)	1.8 (0.071)	26.3 (1.04)	28 (1.1)	28 (1.1)	56 (2.2)

Dimensions: mm (inches)

Plug-in Valve Mounted on Individual Subbase

M12 Individual Subbase (ISO 15407-2)



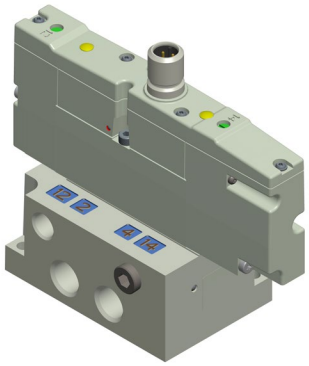
A	B	C	D	E	F	G	H	J	K	L	M	N
10.6 (0.417)	147 (5.787)	27.8 (1.09)	19.6 (0.77)	11.7 (0.46)	13.5 (0.53)	29 (1.142)	5.4 (0.21)	6.1 (0.24)	79.6 (3.13)	45.3 (1.78)	71.6 (2.819)	136 (5.35)

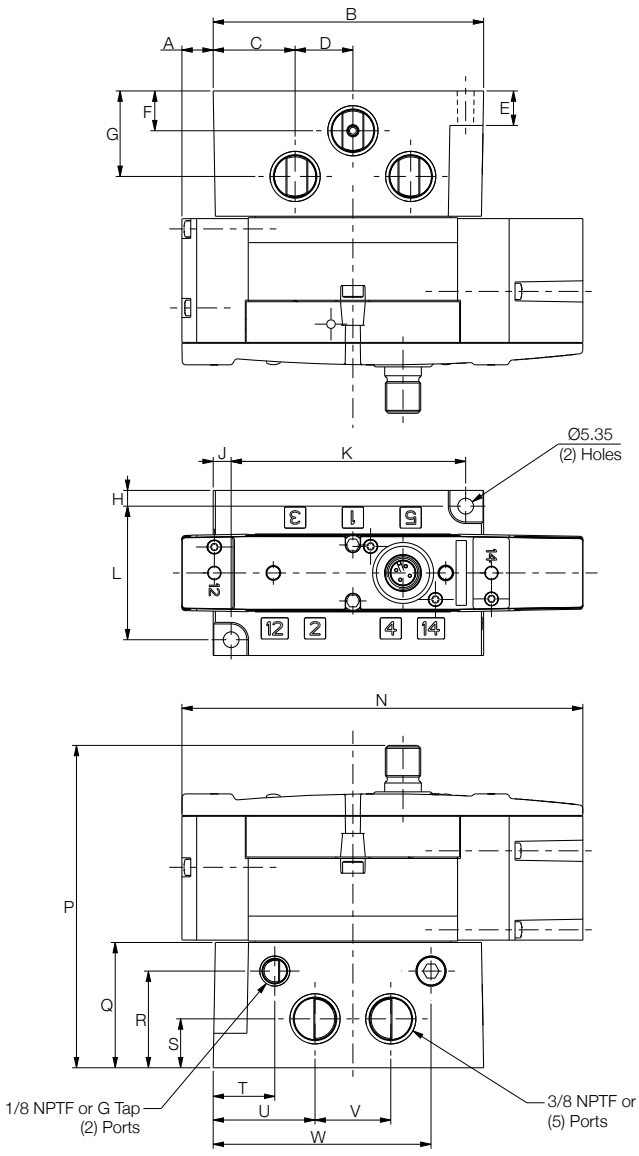
P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
92.9 (3.657)	42.5 (1.67)	32.8 (1.29)	16.6 (0.65)	20.9 (0.82)	34.5 (1.36)	25.7 (1.01)	73.9 (2.91)	122.8 (4.835)	1.8 (0.071)	26.3 (1.04)	28 (1.1)	56 (2.2)

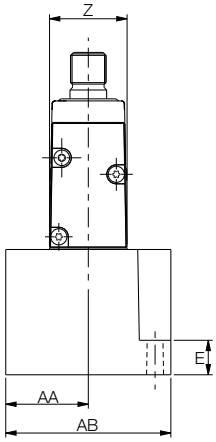
Dimensions: mm (inches)

M12 Valve Mounted on Individual Subbase

Non Plug-in Individual Subbase (ISO 15407-1)





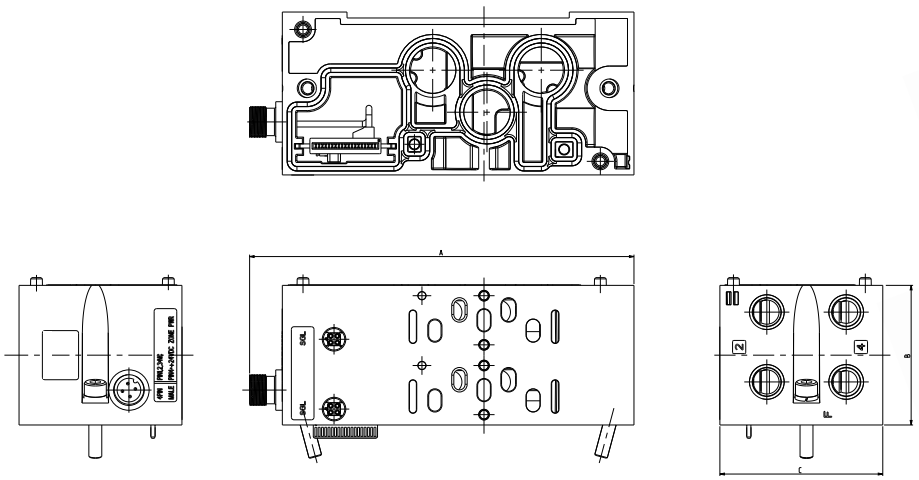


A	B	C	D	E	F	G	H	J	K	L	N	P
10.6 (0.417)	91.7 (3.61)	27.8 (1.09)	19.6 (0.77)	11.7 (0.46)	13.5 (0.53)	29 (1.142)	5.4 (0.21)	6.1 (0.24)	79.6 (3.13)	45.3 (1.78)	136 (5.35)	109.4 (4.307)

Q	R	S	T	U	V	W	X	Y	Z	AA	AB
42.5 (1.67)	32.8 (1.29)	16.6 (0.65)	20.9 (0.82)	34.5 (1.36)	25.7 (1.01)	73.9 (2.91)	26.3 (1.04)	28 (1.1)	56 (2.2)	28 (1.1)	56 (2.2)

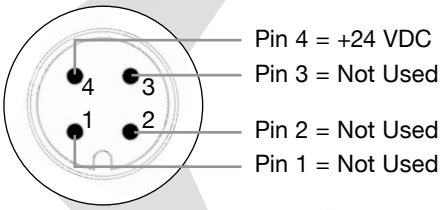
Dimensions: mm (inches)

Plug-in V Wiring



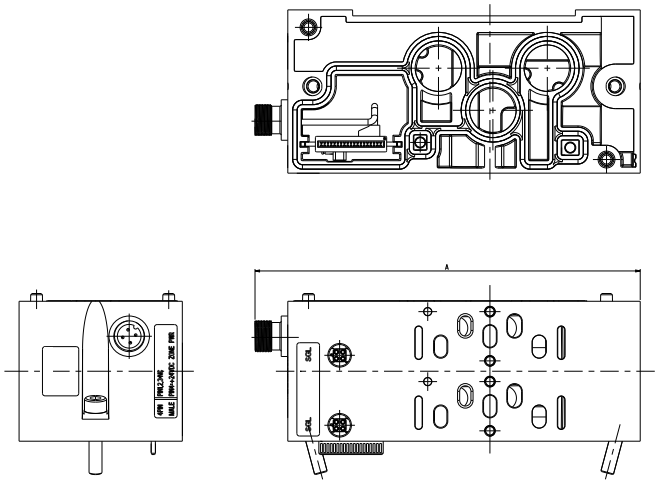
A	B	C
148.7 (5.85)	54 (2.13)	63 (2.48)

V & W Wiring Options



Dimensions: mm (inches)

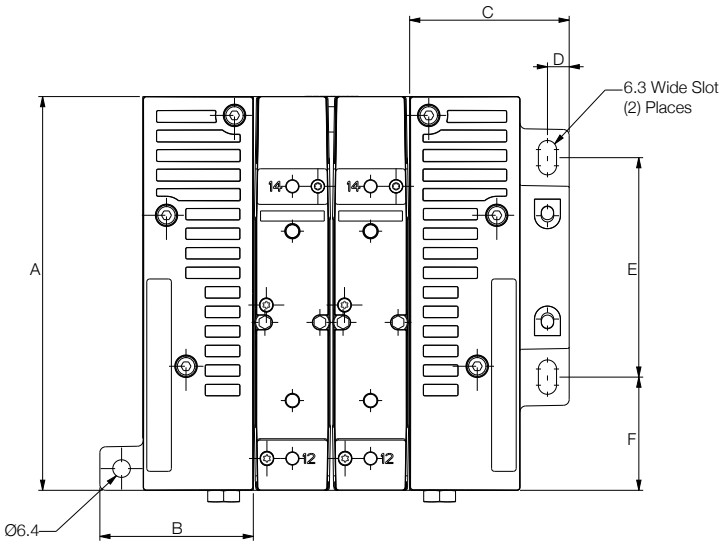
Plug-in W Wiring

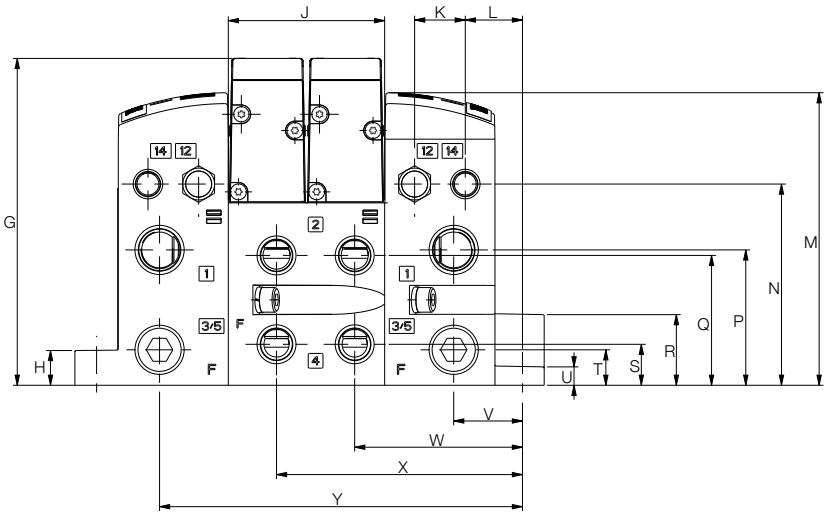


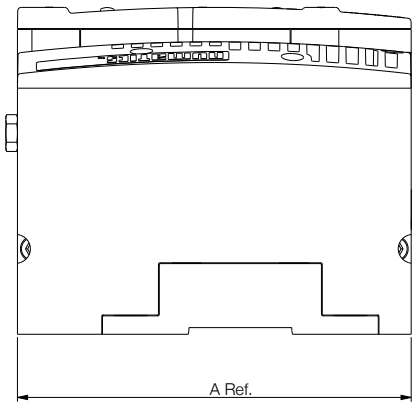
A	B	C
148.7 (5.85)	54 (2.13)	63 (2.48)

Dimensions: mm (inches)

Manifold Assembly with Vertical End Plates





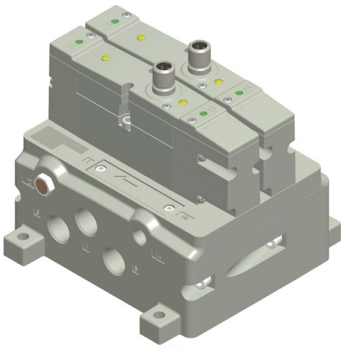


A	B	C	D	E	F	G	H	J	K	L	M
136 (5.354)	53 (2.087)	55.1 (2.17)	7.5 (0.3)	75.8 (2.98)	39.1 (1.54)	112.9 (4.445)	12 (0.47)	54 (2.13)	17.5 (0.69)	19.8 (0.78)	101.1 (3.98)

N	P	Q	R	S	T	U	V	W	X	Y
69.5 (2.74)	46.8 (1.843)	44.9 (1.77)	24.4 (0.96)	14.2 (0.56)	12.3 (0.48)	6.4 (0.25)	23.8 (0.94)	58 (2.28)	85 (3.346)	125.4 (4.937)

Dimensions: mm (inches)

Manifold Assembly with Horizontal End Plates

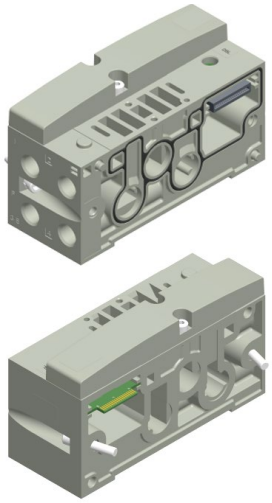


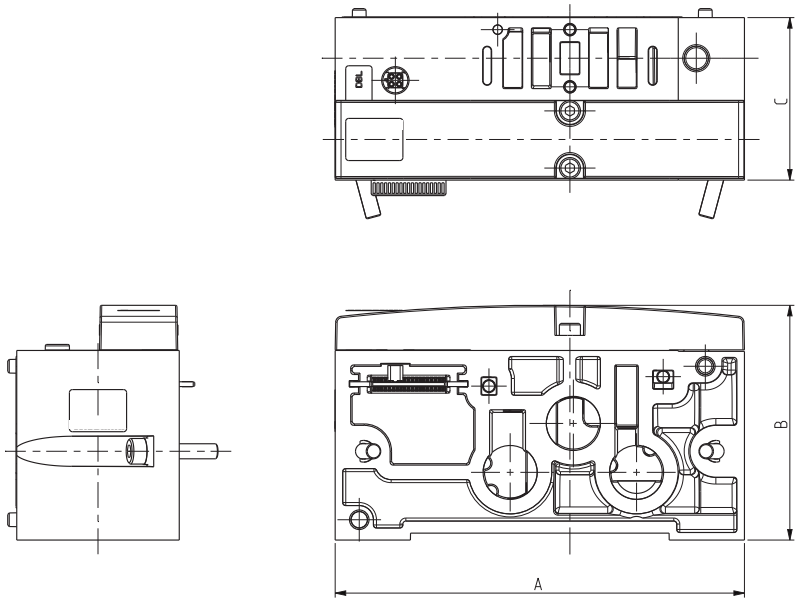
A	B	C	D	E	F	G	H	J	K	L
136.0 (5.35)	42.0 (1.65)	42.0 (1.65)	7.5 (0.30)	103.0 (4.06)	16.5 (0.65)	113.6 (4.47)	12.0 (0.47)	48.3 (1.90)	22.5 (0.89)	37.8 (1.49)

M	N	P	Q	R	S	T	U	V	W	X
27.0 (1.06)	35.9 (1.41)	56.9 (2.24)	77.9 (3.07)	97.3 (3.83)	14.2 (0.56)	44.9 (1.77)	44.9 (1.77)	71.9 (2.83)	53.3 (2.10)	129.4 (5.09)

Dimensions: mm (inches)

503 Series Mid-Station Supply Block

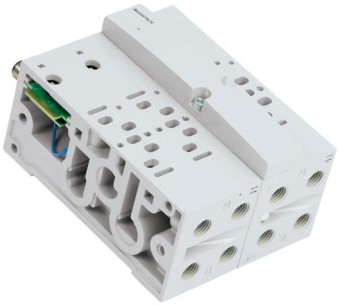


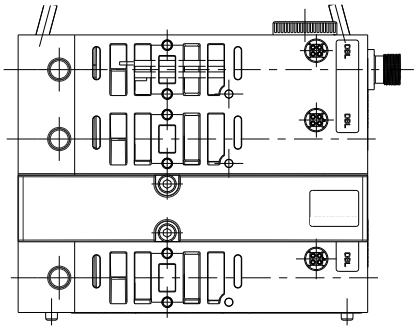


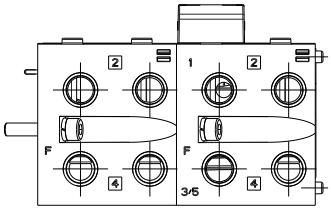
A	B	C
136 (5.35)	78 (3.07)	54 (2.13)

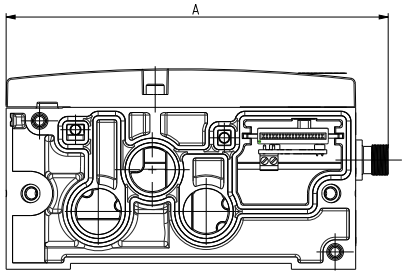
Dimensions: mm (inches)

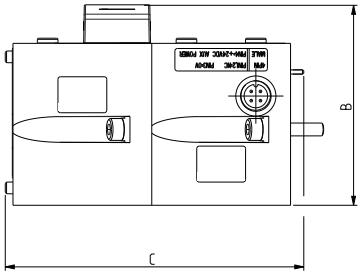
503 Series Mid-Station Supply/Auxiliary Power Manifold Block with X32 Solenoid Coils Kit











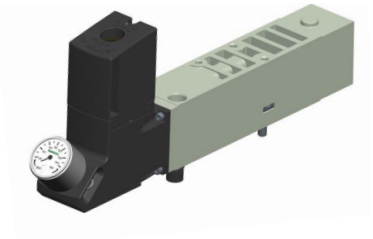
Weight
lbs (kg)
2.60 (1.18)

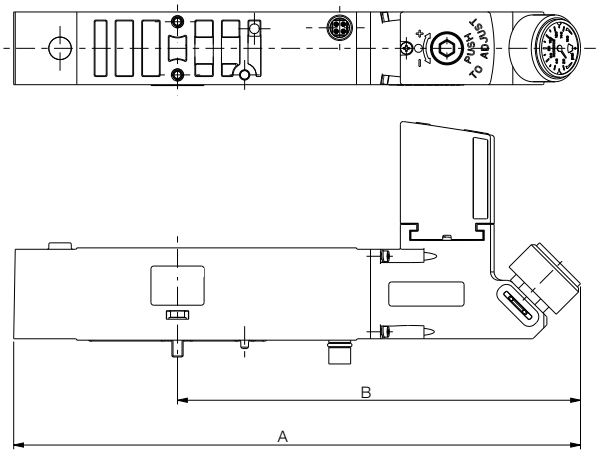
A	B	C
148.6 (5.85)	77.8 (3.06)	116.1 (4.57)

Dimensions: mm (inches)

Sandwich Pressure Regulator

Single Regulator



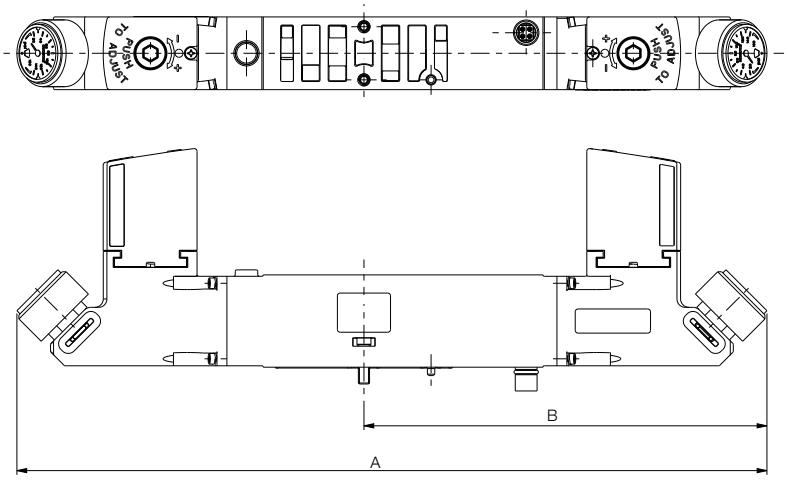


Weight
lbs (kg)
0.95 (0.43)

A	B	C	D	E	F
202.7 (7.98)	144.1 (5.673)	78.2 (3.08)	34.8 (1.37)	26 (1.02)	13 (0.51)

Dimensions: mm (inches)

Double Regulator

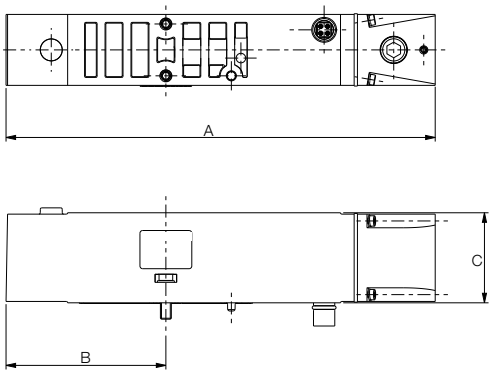


Weight
lbs (kg)
1.45 (0.66)

A	B	C	D	E	F
268.2 (10.56)	144.1 (5.673)	78.2 (3.08)	34.8 (1.37)	26 (1.02)	13 (0.51)

Dimensions: mm (inches)

Sandwich Shut Off Block Kit

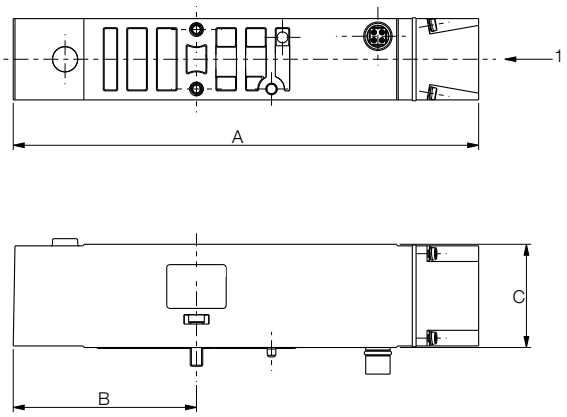


Weight
lbs (kg)
0.45 (0.20)

A	B	C	D
157.3 (6.193)	58.6 (2.307)	33 (1.3)	26.5 (1.04)

Dimensions: mm (inches)

Sandwich Pressure Block Kit

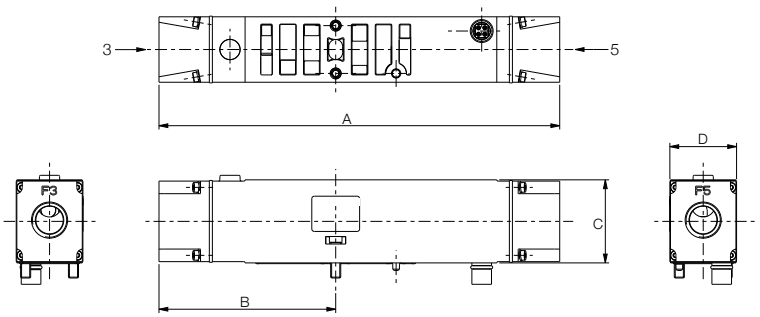


Weight
lbs (kg)
0.45 (0.20)

A	B	C	D
148.8 (5.858)	58.6 (2.307)	33 (1.3)	26.5 (1.04)

Dimensions: mm (inches)

Sandwich Exhaust Block Kit

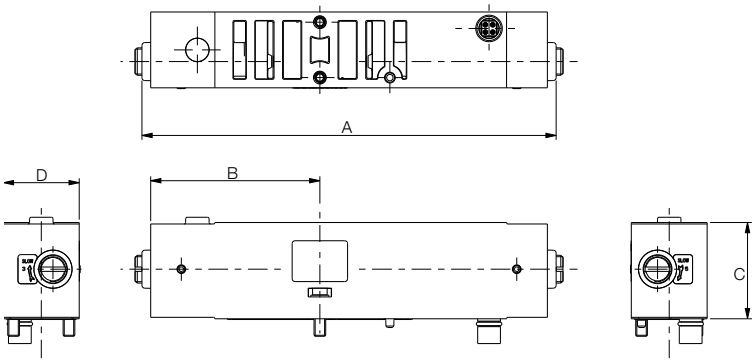


Weight
lbs (kg)
0.50 (0.23)

A	B	C	D
159.2 (6.268)	70.2 (2.764)	33 (1.3)	26.5 (1.04)

Dimensions: mm (inches)

Sandwich Speed Control Kit

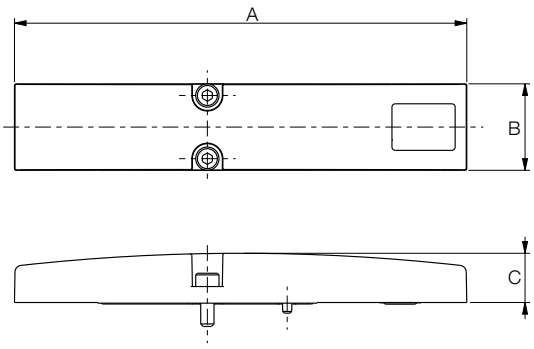


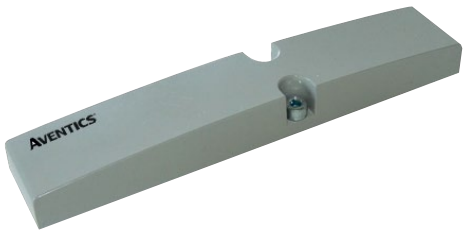
Weight
lbs (kg)
0.55 (0.25)

A	B	C	D
142 (5.591)	58 (2.283)	33 (1.3)	26 (1.02)

Dimensions: mm (inches)

Blank Station Plate Kit





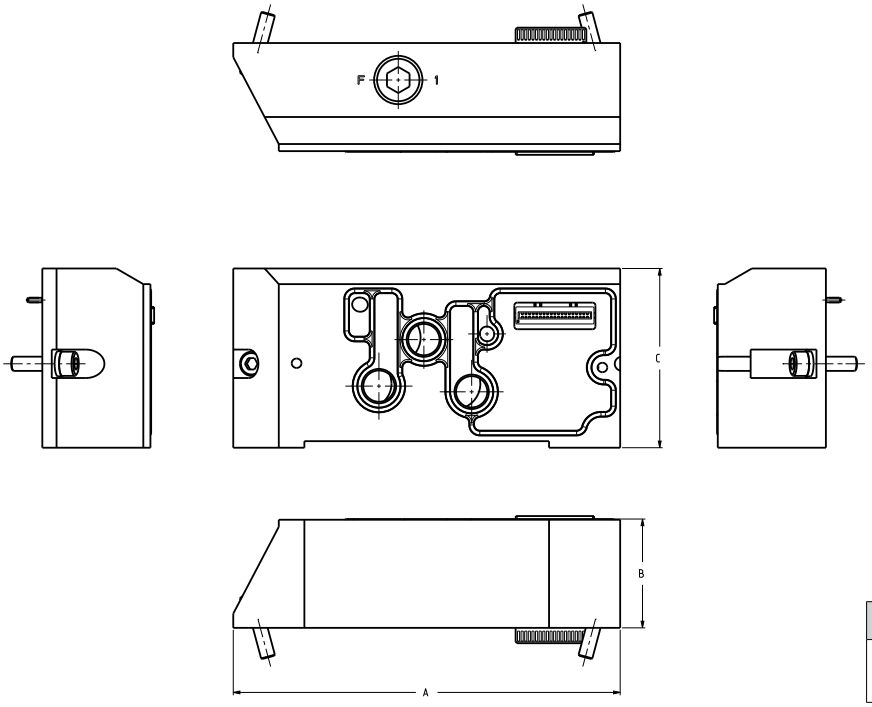
Weight
lbs (kg)
0.20 (0.09)

A	B	C
136 (5.354)	26 (1.024)	14.8 (0.58)

Dimensions: mm (inches)

Adaptor Plate Kit

503 Valve Series to 502 Valve Series



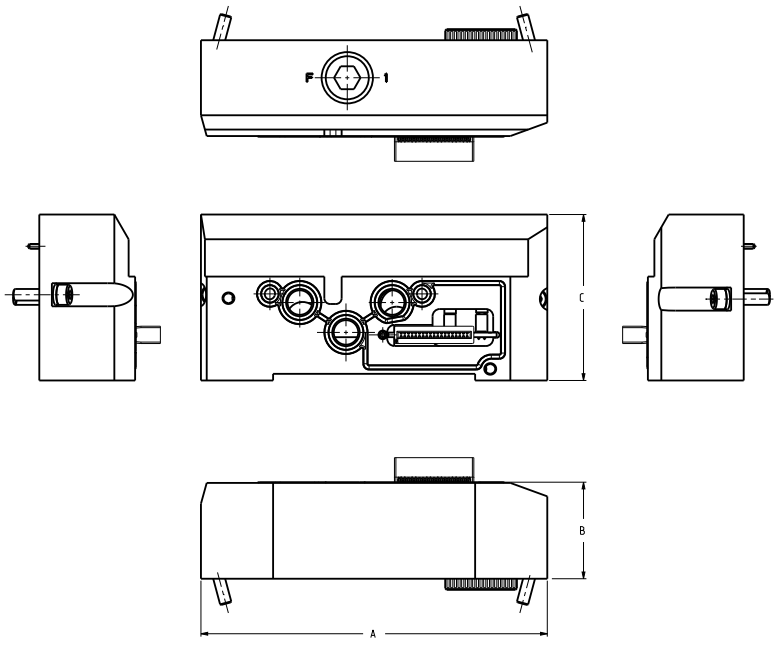
Weight
lbs (kg)
1.50 (0.68)

A	B	C
136 (5.35)	38.25 (1.51)	63 (2.48)

Dimensions: mm (inches)

Adaptor Plate Kit

502 Valve Series to 501 Valve Series

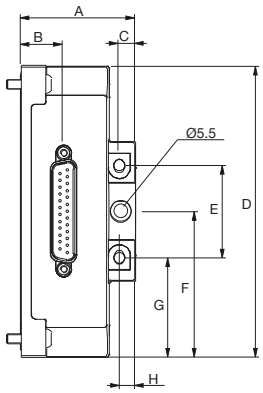


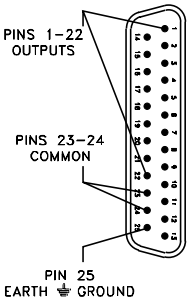
Weight
lbs (kg)
1.05 (0.48)

A	B	C
120 (4.72)	33.5 (1.32)	57.5 (2.26)

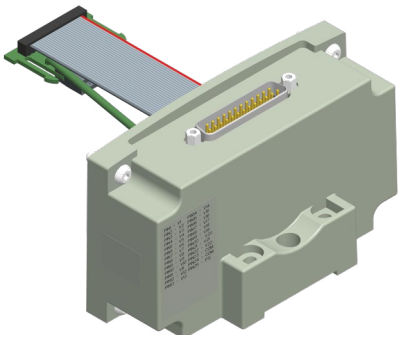
Dimensions: mm (inches)

25 Pin Sub-D Connector Kit

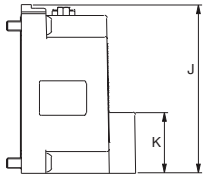




PIN1 = V1	PIN14 = V14
PIN2 = V2	PIN15 = V15
PIN3 = V3	PIN16 = V16
PIN4 = V4	PIN17 = V17
PIN5 = V5	PIN18 = V18
PIN6 = V6	PIN19 = V19
PIN7 = V7	PIN20 = V20
PIN8 = V8	PIN21 = V21
PIN9 = V9	PIN22 = V22
PIN10 = V10	PIN23 = COM
PIN11 = V11	PIN24 = COM
PIN12 = V12	PIN25 = P.E.
PIN13 = V13	



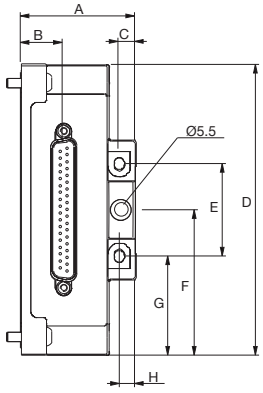
Weight
lbs (kg)
0.70 (0.32)

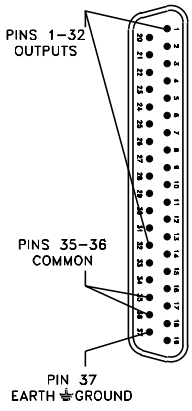


A	B	C	D	E	F	G	H	J	K
46.4 (1.827)	17 (0.669)	6.7 (0.26)	118 (4.65)	37.5 (1.48)	59 (2.32)	40.2 (1.58)	6.7 (0.26)	68.1 (2.68)	24.4 (0.96)

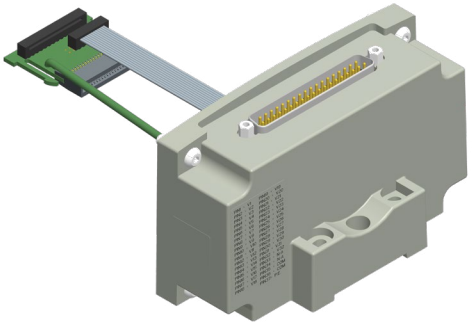
Dimensions: mm (inches)

37 Pin Sub-D Connector Kit

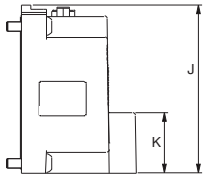




PIN1 = V1	PIN19 = V19
PIN2 = V2	PIN20 = V20
PIN3 = V3	PIN21 = V21
PIN4 = V4	PIN22 = V22
PIN5 = V5	PIN23 = V23
PIN6 = V6	PIN24 = V24
PIN7 = V7	PIN25 = V25
PIN8 = V8	PIN26 = V26
PIN9 = V9	PIN27 = V27
PIN10 = V10	PIN28 = V28
PIN11 = V11	PIN29 = V29
PIN12 = V12	PIN30 = V30
PIN13 = V13	PIN31 = V31
PIN14 = V14	PIN32 = V32
PIN15 = V15	PIN33 = N/A
PIN16 = V16	PIN34 = N/A
PIN17 = V17	PIN35 = COM
PIN18 = V18	PIN36 = COM
	PIN37 = P.E.



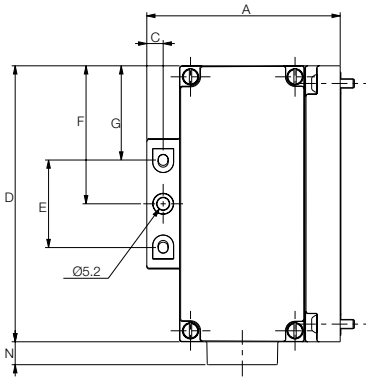
Weight
lbs (kg)
0.70 (0.32)



A	B	C	D	E	F	G	H	J	K
46.4 (1.827)	17 (0.669)	6.7 (0.26)	118 (4.65)	37.5 (1.48)	59 (2.32)	40.2 (1.58)	6.7 (0.26)	68.1 (2.68)	24.4 (0.96)

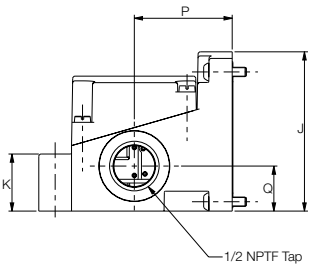
Dimensions: mm (inches)

1-32 Terminal Strip Kit



PIN18 = V18	PIN17 = V17	PIN16 = V16	PIN15 = V15
PIN14 = V14	PIN13 = V13	PIN12 = V12	PIN11 = V11
PIN10 = V10	PIN9 = V9	PIN8 = V8	PIN7 = V7
PIN6 = V6	PIN5 = V5	PIN4 = V4	PIN3 = V3
PIN2 = V2	PIN1 = V1		

PIN18 = P.E.	PIN17 = COM	PIN16 = COM	PIN15 = N/A
PIN14 = V32	PIN13 = V31	PIN12 = V30	PIN11 = V29
PIN10 = V28	PIN9 = V27	PIN8 = V26	PIN7 = V25
PIN6 = V24	PIN5 = V23	PIN4 = V22	PIN3 = V21
PIN2 = V20	PIN1 = V19		

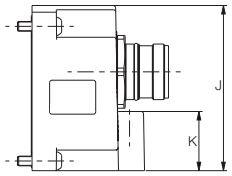


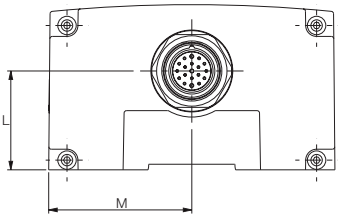
Weight
lbs (kg)
1.20 (0.54)

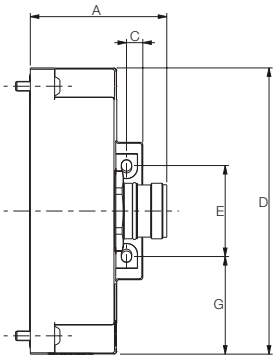
A	C	D	E	F	G	J	K	N	P	Q
82.7 (3.256)	7 (0.28)	118 (4.65)	37.5 (1.48)	59 (2.32)	40.2 (1.583)	68.1 (2.68)	24.4 (0.96)	9.8 (0.39)	41.9 (1.65)	19.3 (0.76)

Dimensions: mm (inches)

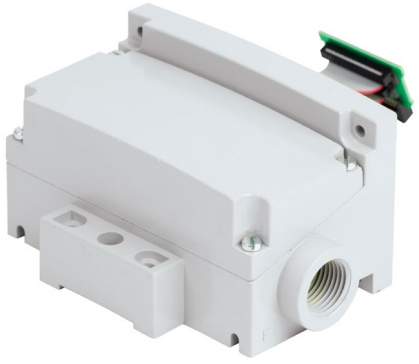
19 Pin M23 Connector Kit







PIN1 = V15	PIN2 = V11	PIN3 = V7	PIN4 = V4
PIN5 = V3	PIN6 = COM	PIN7 = V2	PIN8 = V6
PIN9 = V10	PIN10 = V14	PIN11 = V13	PIN12 = P.E.
PIN13 = V12	PIN14 = V8	PIN15 = V1	PIN16 = V5
PIN17 = V9	PIN18 = V16	PIN19 = N/A	

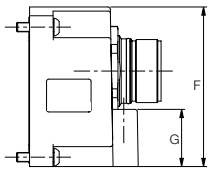


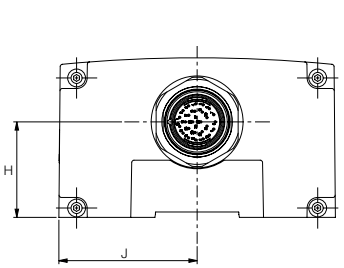
Weight
lbs (kg)
0.70 (0.32)

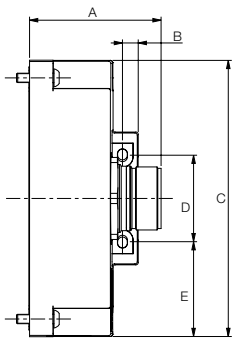
A	C	D	E	G	J	K	L	M
56.3 (2.217)	6.7 (0.26)	118 (4.65)	37.5 (1.48)	40.2 (1.583)	68.1 (2.68)	24.4 (0.96)	40.8 (1.61)	59 (2.323)

Dimensions: mm (inches)

26 Pin M27 Connector Kit







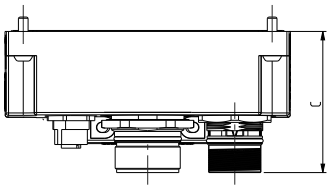
PIN19 = V18	PIN18 = P.E.
PIN17 = V17	PIN17 = COM
PIN16 = V16	PIN16 = COM
PIN15 = V15	PIN15 = N/A
PIN14 = V14	PIN14 = V32
PIN13 = V13	PIN13 = V31
PIN12 = V12	PIN12 = V30
PIN11 = V11	PIN11 = V29
PIN10 = V10	PIN10 = V28
PIN9 = V9	PIN9 = V27
PIN8 = V8	PIN8 = V26
PIN7 = V7	PIN7 = V25
PIN6 = V6	PIN6 = V24
PIN5 = V5	PIN5 = V23
PIN4 = V4	PIN4 = V22
PIN3 = V3	PIN3 = V21
PIN2 = V2	PIN2 = V20
PIN1 = V1	PIN1 = V19

Weight
lbs (kg)
0.70 (0.32)

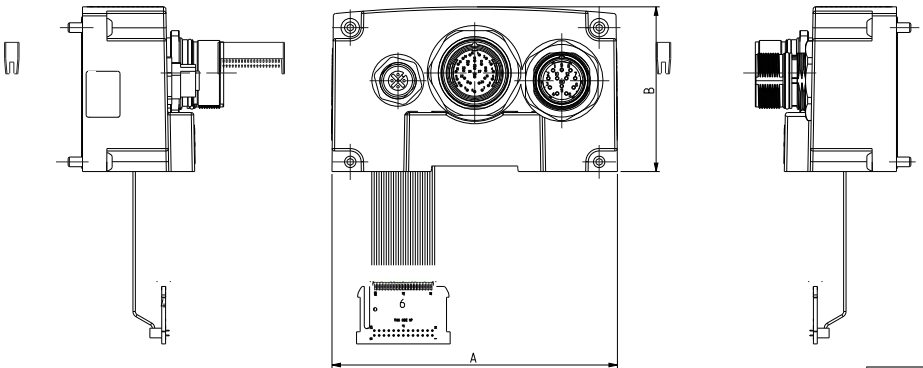
A	B	C	D	E	F	G	H	J
56.1 (2.209)	6.7 (0.264)	118 (4.65)	37.5 (1.48)	40.2 (1.58)	68.1 (2.68)	24.4 (0.961)	40.8 (1.61)	59 (2.32)

Dimensions: mm (inches)

Robot FANUC End Effector (EE) Interface



P1 - EE INTERFACE			
PIN 1 = OUTPUT 1	PIN 14 = INPUT 6
PIN 2 = OUTPUT 2	PIN 15 = INPUT 7
PIN 3 = OUTPUT 3	PIN16 = INPUT 8
PIN 4 = OUTPUT 4	PIN 17 = +24VDC
PIN 5 = OUTPUT 5	PIN 18 = +24VDC
PIN 6 = OUTPUT 6	PIN 19 = +24VDC
PIN 7 = OUTPUT 7	PIN 20 = +24VDC
PIN 8 = OUTPUT 8	PIN 21 = 0VDC
PIN 9 = INPUT 1	PIN 22 = HBKD
PIN 10 = INPUT 2	PIN 23 = PPABN
PIN 11 = INPUT 3	PIN 24 = 0VDC
PIN 12 = INPUT 4	PIN 25 = N.C.
PIN 13 = INPUT 5	PIN 26 = N.C.



Weight
lbs (kg)
0.90 (0.41)

A	B	C
118 (4.65)	68.1 (2.68)	58.4 (2.30)

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