

# AVENTICS™ Series 502 Pneumatic Valve System

## 502 Series – Directional Control Valve Platform

### Featuring Higher Flow in a Compact Valve Package



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

#### Features

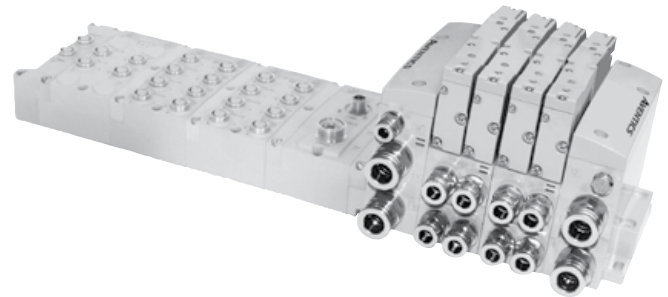
- Solenoid air pilot actuated
- Low wattage 1.3 Watt for DC application
- DC solenoids Polarity insensitive with surge suppression
- Plug together circuit boards eliminate internal wiring
- Integral recessed gaskets
- IN Fittings to accommodate various tube sizes
- Simple conversion from internal to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

#### 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 (with blocking discs) or additional air supply to a 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)<br>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) |

# AVENTICS™ Series 502 Pneumatic Valve System

## Performance Data

| Function Type | Function Code | ISO Symbol<br>Pilot (14)<br>Return (12) | Interface | Rated Flow                       |                | Response Time (ms)       | Pilot Pressure at 73°F/23°C<br>PSI (bar) |     | Operating Pressure Port 1<br>PSI (bar)/inHg (-bar) |     | <br>Part Number |
|---------------|---------------|---|-----------|----------------------------------|----------------|--------------------------|--|-----|--|-----|--|
|               |               |   |           | at 90 PSI<br>Cv<br>(l/min (ANR)) |                |                          | min.                                     | max | min.   | max |  |
|               |               |   |           | 1 → 2<br>1 → 4                   | 2 → 3<br>4 → 5 | Energize/<br>De-Energize |  |     |  |     |  |

| Rubber Packed Technology, with Manual Override |    |  |             |                |                |         |             |            |               |            |                 |
|--|----|--|-------------|----------------|----------------|---------|-------------|------------|---------------|------------|-----------------|
| 5/2  | B1 | <br>Spring Return             | Proprietary | 0.630<br>(630) | 0.660<br>(660) | 17 / 38 | 43<br>(3)   | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A2B10MA00F1 |
|  |    |  | ISO         | 0.510<br>(510) | 0.510<br>(510) |         |             |            |               |            |                 |
|  | BN | <br>Differential Air Return   | Proprietary | 0.630<br>(630) | 0.660<br>(660) | 17 / 44 | 29<br>(2)   | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A2BN0MA00F1 |
|  |    |  | ISO         | 0.510<br>(510) | 0.510<br>(510) |         |             |            |               |            |                 |
|  | B4 | <br>Solenoid Air Return       | Proprietary | 0.630<br>(630) | 0.660<br>(660) | 14 / 14 | 29<br>(2)   | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A2B40MA00F1 |
|  |    |  | ISO         | 0.510<br>(510) | 0.510<br>(510) |         |             |            |               |            |                 |
| 5/3  | B5 | <br>Center Open to Exhaust    | Proprietary | 0.430<br>(430) | 0.530<br>(530) | 36 / 21 | 43<br>(3)   | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A2B50MA00F1 |
|  |    |  | ISO         | 0.390<br>(390) | 0.470<br>(470) |         |             |            |               |            |                 |
|  | B6 | <br>Center Closed            | Proprietary | 0.560<br>(560) | 0.610<br>(610) | 18 / 18 | 43<br>(3)   | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A2B60MA00F1 |
|  |    |  | ISO         | 0.490<br>(490) | 0.490<br>(490) |         |             |            |               |            |                 |
|  | B7 | <br>Center Open to Pressure | Proprietary | 0.490<br>(490) | 0.390<br>(390) | 21 / 27 | 43<br>(3)   | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A2B70MA00F1 |
|  |    |  | ISO         | 0.390<br>(390) | 0.390<br>(390) |         |             |            |               |            |                 |
| 2 x 3/2<br>NO                                  | BA | <br>Normally Open          | Proprietary | 0.580<br>(580) | 0.570<br>(570) | 19 / 26 | 29<br>(2)   | 115<br>(8) | 36*<br>(2)    | 115<br>(8) | R502A2BA0MA00F1 |
|  |    |  | ISO         | 0.500<br>(500) | 0.470<br>(470) |         |             |            |               |            |                 |
| 2 x 3/2<br>NC                                  | BD | <br>Normally Closed       | Proprietary | 0.650<br>(650) | 0.600<br>(600) | 36/15   | 58<br>(4.0) | 115<br>(8) | 36*<br>(2)    | 115<br>(8) | R502A2BD0MA00F1 |
|  |    |  | ISO         | 0.500<br>(500) | 0.440<br>(440) |         |             |            |               |            |                 |

| Spool and Sleeve Technology, with Manual Override |    |  |             |                |                |       |             |            |               |            |                 |
|---|----|--|-------------|----------------|----------------|-------|-------------|------------|---------------|------------|-----------------|
| 5/2   | B1 | <br>Spring Return            | Proprietary | 0.470<br>(470) | 0.530<br>(530) | 16/49 | 29<br>(2)   | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A1B10MA00F1 |
|   |    |  | ISO         | 0.410<br>(410) | 0.390<br>(390) |       |             |            |               |            |                 |
|   | BN | <br>Differential Air Return | Proprietary | 0.470<br>(470) | 0.530<br>(530) | 11/26 | 22<br>(1.5) | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A1BN0MA00F1 |
|   |    |  | ISO         | 0.410<br>(410) | 0.390<br>(390) |       |             |            |               |            |                 |
|   | B4 | <br>Solenoid Air Return     | Proprietary | 0.470<br>(470) | 0.530<br>(530) | 12/15 | 29<br>(2)   | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A1B40MA00F1 |
|   |    |  | ISO         | 0.410<br>(410) | 0.390<br>(390) |       |             |            |               |            |                 |
| 5/3   | B5 | <br>Center Open to Exhaust  | Proprietary | 0.380<br>(380) | 0.500<br>(500) | 23/13 | 22<br>(1.5) | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A1B50MA00F1 |
|   |    |  | ISO         | 0.340<br>(340) | 0.350<br>(350) |       |             |            |               |            |                 |
|   | B6 | <br>Center Closed           | Proprietary | 0.420<br>(420) | 0.440<br>(440) | 12/12 | 22<br>(1.5) | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A1B60MA00F1 |
|   |    |  | ISO         | 0.360<br>(360) | 0.350<br>(350) |       |             |            |               |            |                 |
|   | B7 | <br>Center Open to Pressure | Proprietary | 0.420<br>(420) | 0.430<br>(430) | 13/23 | 22<br>(1.5) | 115<br>(8) | 28<br>(-0.95) | 115<br>(8) | R502A1B70MA00F1 |
|   |    |  | ISO         | 0.370<br>(370) | 0.350<br>(350) |       |             |            |               |            |                 |

\* Minimum pressure with external piloting

# AVENTICS™ Series 502 Pneumatic Valve System

## How to Order: Valve

R 502 A 1 B 4 0 M A00 F1

### Product Series

502 = 18mm Valve

### Revision

A = Initial Release

### Actuation

- <sup>1</sup> 1 = Spool and Sleeve
- 2 = Rubber Packed

### Valve Type

B = Solenoid Pilot with Flush Non-Locking Override

### Function

- 1 = 5/2, Spring Return
- N = 5/2, Differential Air Return
- 4 = 5/2, Solenoid Air Return
- 5 = 5/3, Open Center to Exhaust
- 6 = 5/3, Center Closed
- 7 = 5/3, Open Center to Pressure
- A = 2x3/2 NO, dual 3-way (Rubber packed only)
- D = 2x3/2 NC, dual 3-way (Rubber packed only)

<sup>1</sup> Not available with Functions A and D

<sup>2</sup> See diagram:

### Voltage

F1 = 24 DC

### Options

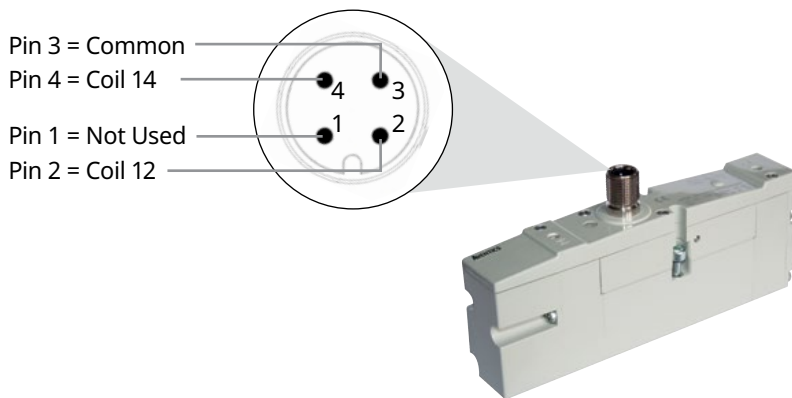
- A00 = Standard (No Options)
- 11B = Flush Locking Manual Override
- 11M = Without Manual Override

### Electrical

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

### Port Size

0 = No Port Size



# AVENTICS™ Series 502 Pneumatic Valve System

## 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)

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

**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

**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

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

## Sandwich Pressure Regulator Block

Types: RS / RD / RE / RT

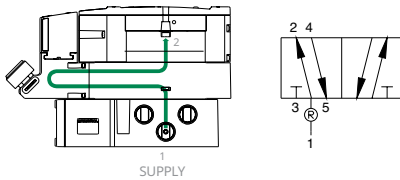


ISO 15407-2/15407-1 Interface



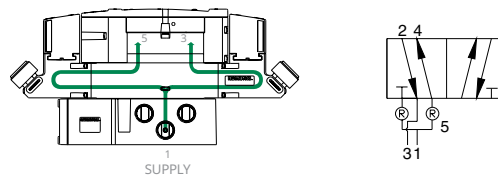
Proprietary Interface

### Type RS



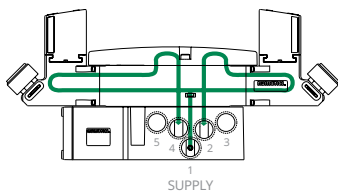
Single pressure from a single supply.

### Type RD



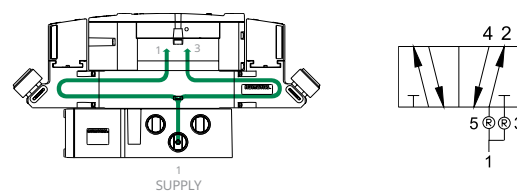
Dual pressure from a single supply.

### Type RE



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

### Type RT



Two-pressure selector used for multi-pressure applications.

# AVENTICS™ Series 502 Pneumatic Valve System

## How to Order: Mounting

**8 502 A M S2 1 M A00 1 0**

|  |   |
|--|---|
| <p><b>Port Type</b></p> <p><sup>1</sup> 8 = NPTF<br/> <sup>1</sup> G = ISO228/1-G<br/>         K = Push-in Fittings</p> <p><b>Product Series</b></p> <p>502 = 18mm Valve</p> <p><b>Revision</b></p> <p>A = Initial Release</p> <p><b>Product Type</b></p> <p>M = Manifold Subbase<br/> <sup>2</sup> A = Individual Subbase<br/> <sup>3</sup> Z = Mid Station Supply<br/> <sup>4</sup> F = 32+ Solenoid Manifold Block</p> <p><b>Mounting</b></p> <p>S2 = Manifold Subbase, 2 Stations, Side Ports, Single Z-Board<br/>         M2 = Manifold Subbase, 2 Stations, Side Ports, Double Z-Board<br/> <sup>5</sup> V2 = Manifold Subbase, 2 Stations, Side Ports<br/> <sup>2</sup> 3A = Individual Subbase, Side Ports, Individual Exhaust</p> | <p><b>Interface</b></p> <p>1 = Proprietary<br/>         2 = ISO 15407-2<br/>         3 = ISO 15407-1</p> <p><b>Options</b></p> <p>A00 = Standard (No Options)<br/> <sup>6</sup> 14X = External Pilot Supply from Port # 14<br/> <sup>6 &amp; 8</sup> 56Y = 4-Pin Straight M12 Connector in Mounting<br/>         Pin 1 = Not Used;<br/>         Pin 2 = 12+ (B+); Pin 3 = COM;<br/>         Pin 4 = 14+ (A+)</p> <p><b>Wiring Option</b></p> <p><sup>5</sup> 0 = Non Plug-in<br/> <sup>7</sup> M = Plug-in, Receptacle Assembly<br/> <sup>4</sup> T = 32+ Coil Auxiliary Power with X16 Drivers<br/>         V = +24 VDC Separation at First Station<br/>         W = +24 VDC Separation at Second Station</p> <p><b>Port Size (Working Ports 2 &amp; 4 Size)</b></p> <p>1 = 1/8<br/>         2 = 1/4<br/>         G = 5/16 (Push-in Fittings Only)<br/>         F = 6mm (Push-in Fittings Only)<br/>         H = 8mm (Push-in Fittings Only)</p> |
|--|---|

<sup>1</sup> Port Type 8 & G available in 1/8 size for Product Type F, M and Z or 1/4 for Product Type A

<sup>2</sup> Not available with proprietary interface, only available with 1/4 port size

<sup>3</sup> Only available with M2 and V2 mountings

<sup>4</sup> 32+ Coil Rule: Product Type F, Mounting M4, and Wiring Option T must all be selected together

<sup>5</sup> Only available with ISO 15407-1 Interface

<sup>6</sup> Available with 3A mounting only

<sup>7</sup> Not available with V2 Mounting

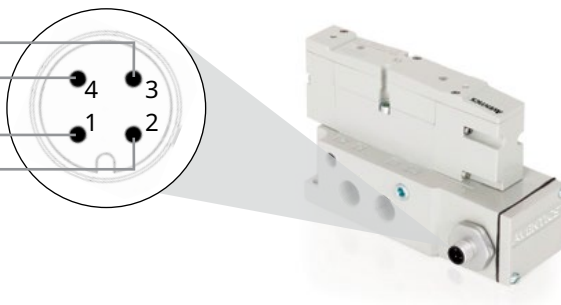
<sup>8</sup> See diagram:

Pin 3 = Common

Pin 4 = Coil 14

Pin 1 = Not Used

Pin 2 = Coil 12



# AVENTICS™ Series 502 Pneumatic Valve System

## How to Order: Manifold Assembly

**8 502 A V 3 B 3 0 0 V A00**

**Port Type**  
<sup>1</sup> 8 = NPTF  
<sup>1</sup> 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  
<sup>2</sup> 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  
<sup>3</sup> H = Horizontal

**Second Valve Series**  
 0 = No Second Valve Series  
<sup>4</sup> 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

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

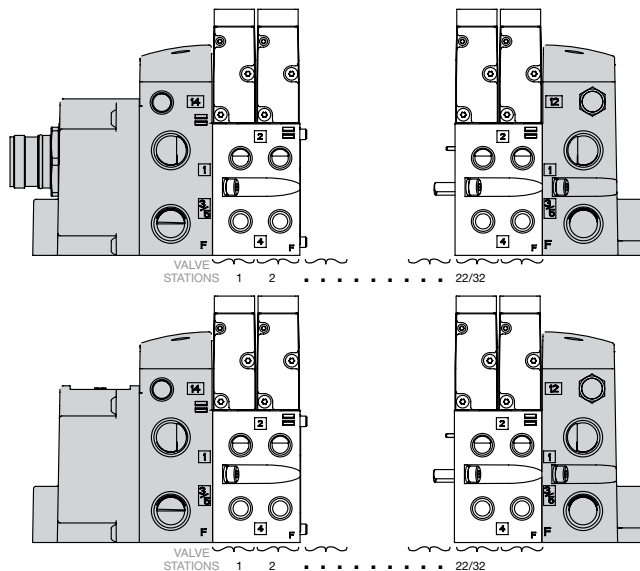
## Sub-D, Terminal Strip, Round Interface, and End Effector Interface

- 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





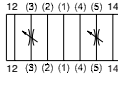
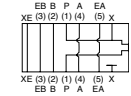
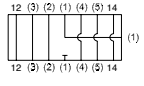
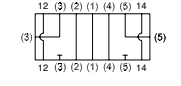
|                  |                 |
|------------------|-----------------|
| 25 Pin Sub-D     | 8502AVJF300VA00 |
| Valve Station #1 | R502A2B40MA00F1 |
| Valve Station #2 | R502A2B40MA00F1 |
| Mounting #1      | 8502AMM21MA0010 |
| Valve Station #3 | R502A2B60MA00F1 |
| Valve Station #4 | R502A2B60MA00F1 |
| 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.



# AVENTICS™ Series 502 Pneumatic Valve System

## Sandwich Option Kit

| Valve Series                | Type        | Speed Control Kit  | Shut Off Block Kit  | Pressure Block Kit  |   | Exhaust Block Kit |                 |
|-----------------------------|-------------|--|---|---|---|-------------------|-----------------|
|                             |             | <br>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. | <br>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. | <br>Used to supply a separate pressure to a single valve station without needing blocking discs. | <br>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. |                   |                 |
|                             |             |   |    |    |    |                   |                 |
|                             |             |  |   | 1/8 NPTF  | 1/8 G   | 1/8 NPTF          | 1/8 G           |
| <b>502 Series</b><br>(18mm) | Proprietary | R502AS429395002  | R502AY429409002   | 8502AW428685004   | G502AW428685004   | 8502AX428685002   | G502AX428685002 |
|                             | ISO 15407-2 | R502AS429395001  | R502AY429409001   | 8502AW428685003   | G502AW428685003   | 8502AX428685001   | G502AX428685001 |

# AVENTICS™ Series 502 Pneumatic Valve System

## End Plate Kit

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



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          |      |      |
|                      |             | 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<br>(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 |      |      |



# AVENTICS™ Series 502 Pneumatic Valve System

## Multipin Electrical Interface

| Multipin Electrical Interface     | Product Image (Example Only)  | Description                                | Part Number                 |                  | Notes  | Max. # of Coils* |
|-----------------------------------|---|--|-----------------------------|------------------|--|------------------|
|                                   |   |  | 501, 502 & 503 Valve Series |                  |  |                  |
| 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                          | CC1905MI0000000  | -  |                  |
|                                   |   |  | 10m                         | CC1910MI0000000  |  |                  |
| 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                          | CC2605MI0000000  | -  |                  |
|                                   |   |  | 10m                         | CC2610MI0000000  |  |                  |
| 1-32 Pin Terminal Strip Interface |  | Housing Kit Assembly w/o DIN Rail Clamps   | P599AE428444001             |                  | 1) External fusing or output protection recommended.<br>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:

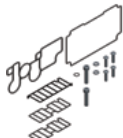


- The electrical connection type.
- The valve type - single solenoid valves up to the maximum solenoid outputs allowed by the electrical connection type (see chart above) or a combination of single and/or double solenoid valves not to exceed the maximum number of solenoid outputs allowed.
- Combination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

# AVENTICS™ Series 502 Pneumatic Valve System

## Accessories Kit

| Accessories Kit            | Product Image<br>(Example Only)   | Description  | Port<br>Number   | Part Number       |                          |
|----------------------------|---|--|------------------|-------------------|--------------------------|
|                            |   |  |                  | 502 Series (18mm) |                          |
| Blank Station Plate Kit    |    | Used to block off a manifold station for future use.   | -                | P502AB431813001   |                          |
| DIN Rail Clamp Kit         |    | Used to mount manifold assembly to a machine via DIN Rail. Kit includes hardware for each end of the manifold.<br>NOTE: DIN Rail not included. | -                | 239-980           |                          |
| Blocking Disc Kit          |    | Used to isolate 1, 3 & 5 galleries of the manifold internally.<br>NOTE: Includes tag to label ports blocked.                                   | 1                | P502AD431914001   |                          |
|                            |   |  | 3                | P502AD431914002   |                          |
|                            |   |  | 5                | P502AD431914003   |                          |
|                            |   |  | 1 + 3            | P502AD431914004   |                          |
|                            |   |  | 1 + 5            | P502AD431914005   |                          |
|                            |   |  | 3 + 5            | P502AD431914006   |                          |
| Internal Muffler Element   |    | Muffler element  | -                | 429372-001        |                          |
|                            |   |  | -                | 429372-001        |                          |
| External Gauge Adaptor Kit |    | 1/8" NPTF and G adaptor for external gauge   | -                | 239-1561          |                          |
|                            |   | <b>Thread Type</b>   | <b>Tube Size</b> | <b>Quantity</b>   | <b>502 Series (18mm)</b> |
| Fittings                   |  | M7   | 4mm              | 10                | See Fittings Catalog     |
|                            |   | M7   | 6mm              | 10                |                          |
|                            |   | M7   | 1/4              | 10                |                          |

## Replacement Parts Kit

| Replacement Parts Kit           | Product Image<br>(Example Only)   | Description  | Parts Included                                | Part Number       |
|---------------------------------|---|--|---|-------------------|
|                                 |   |  |   | 502 Series (18mm) |
| 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 |   | M502AU521772001   |
| Regulator Replacement Kit       |  | 3 – 30 PSIG Regulator Kit  | Includes regulator assembly, gaskets, screws. | M502AR427995001   |
|                                 |   | 5 – 60 PSIG Regulator Kit  |   | M502AR427995002   |
|                                 |   | 10 – 130 PSIG Regulator Kit  |   | M502AR427995003   |
|                                 |   | 0.2 – 2.0 bar Regulator Kit  |   | M502AR427995004   |
|                                 |   | 0.3 – 4.0 bar Regulator Kit  |   | M502AR427995005   |
|                                 |   | 0.7 – 9.0 bar Regulator Kit  |   | M502AR427995006   |
| 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  |   | M502AG521734002   |
|                                 |   | 0 – 60 PSIG Regulator Gauge Head Extended  |   | M502AG521734003   |
|                                 |   | 0 – 60 PSIG Regulator Gauge Head   |   | M502AG521734004   |
|                                 |   | 0 – 11 bar Regulator Gauge Head Extended   |   | M502AG521734005   |
|                                 |   | 0 – 11 bar Regulator Gauge Head  |   | M502AG521734006   |
|                                 |   | 0 – 4 bar Regulator Gauge Head Extended  |   | M502AG521734007   |
|                                 |   | 0 – 4 bar Regulator Gauge Head   |   | M502AG521734008   |

# AVENTICS™ Series 502 Pneumatic Valve System

## 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     |
|--|------------------------------|---|-----------------------------|-------------|--------------------|-----------------|
| <b>503 Series</b><br>(26mm)<br>to<br><b>502 Series</b><br>(18mm) |                              | 503 to 502 Adaptor Plate w/PCB                              | Proprietary/<br>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/<br>ISO 15407-2 | G Tap       |                    | G503AT429964003 |
|  |                              | 503 to 502 Adaptor Plate w/o PCB (for ISO 15407-1 Mounting) | ISO 15407-1                 |             |                    | G503AT429964004 |
| <b>502 Series</b><br>(18mm)<br>to<br><b>501 Series</b><br>(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.

# AVENTICS™ Series 502 Pneumatic Valve System

## Mid-Station Supply Manifold Block Kit

| Valve Series         | Product Image (Example Only)  | Description  | Interface   | Thread Type      | Supply Port 1 Size | Part Number      |
|----------------------|---|--|-------------|------------------|--------------------|------------------|
| 502 Series<br>(18mm) |  | Add additional supply and exhaust capacity to large manifold assemblies. | 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               | K502AZM22GTA0020 |
|                      |   |  |             |                  | 6mm                | K502AZM22FTA0020 |
|                      |   |  |             |                  | 8mm                | K502AZM22HTA0020 |
|                      |   |  | Proprietary | Push-in Fittings | 1/4                | K502AZM22TA0010  |
|                      |   |  |             |                  | 5/16               | K502AZM22GTA0010 |
| 6mm                  | K502AZM22FTA0010  |  |             |                  |                    |                  |
| 8mm                  | K502AZM22HTA0010  |  |             |                  |                    |                  |

## Up to 80 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      |
|----------------------|---|---|---------------------------|---|-------------|------------------|--------------------|------------------|
| 502 Series<br>(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               | K502AFM42GTA0020 |
|                      |   |   |                           |   |             |                  | 6mm                | K502AFM42FTA0020 |
|                      |   |   |                           |   |             |                  | 8mm                | K502AFM42HTA0020 |
|                      |   |   |                           |   | Proprietary | Push-in Fittings | 1/4                | K502AFM42TA0010  |
|                      |   |   |                           |   |             |                  | 5/16               | K502AFM42GTA0010 |
| 6mm                  | K502AFM42FTA0010  |   |                           |   |             |                  |                    |                  |
| 8mm                  | K502AFM42HTA0010  |   |                           |   |             |                  |                    |                  |

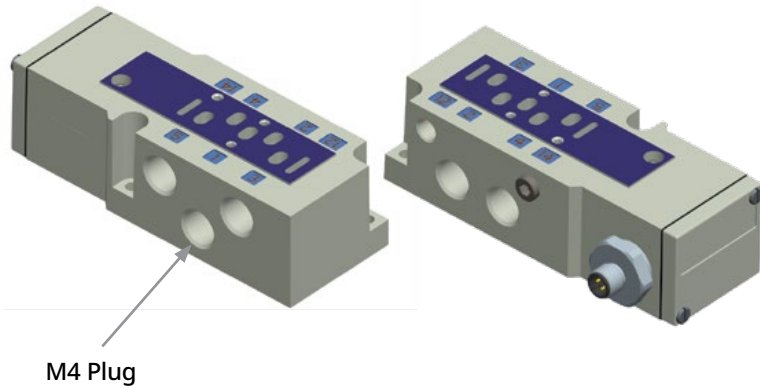
\* Option 96X overrides the port size for stations 5 – 8 of the X32 manifold block with 4mm (5/32) Push-in fittings.

NOTE: The Up to 80 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       | √                      | √                             |

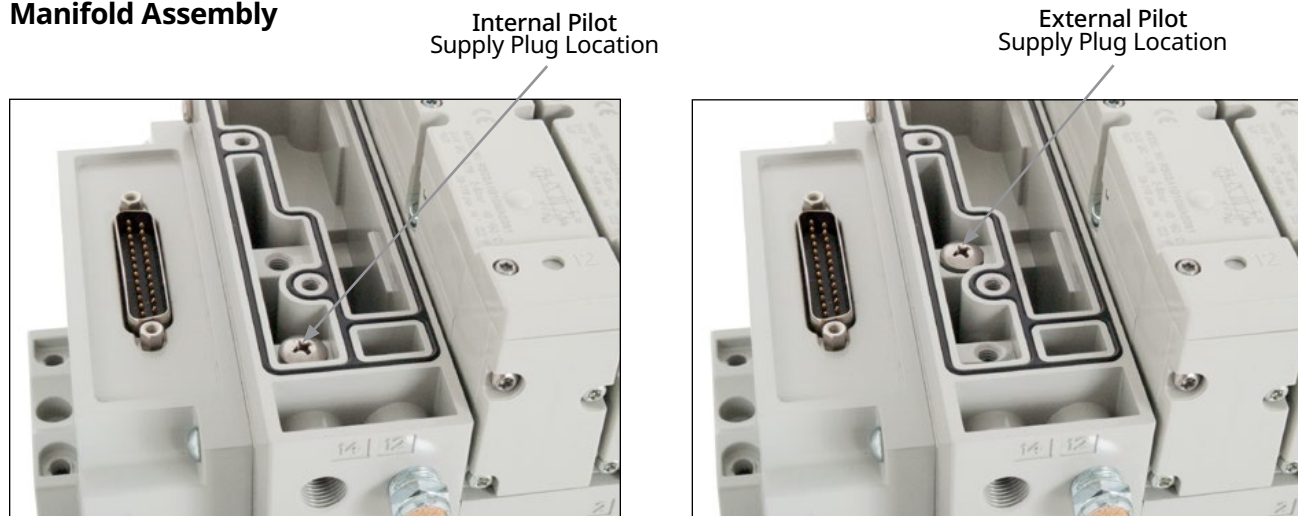
# AVENTICS™ Series 502 Pneumatic Valve System

## 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

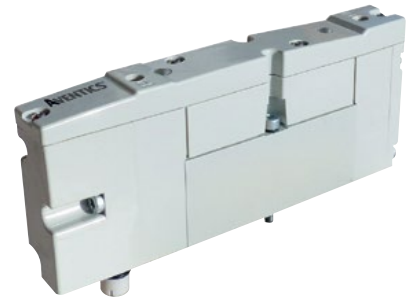
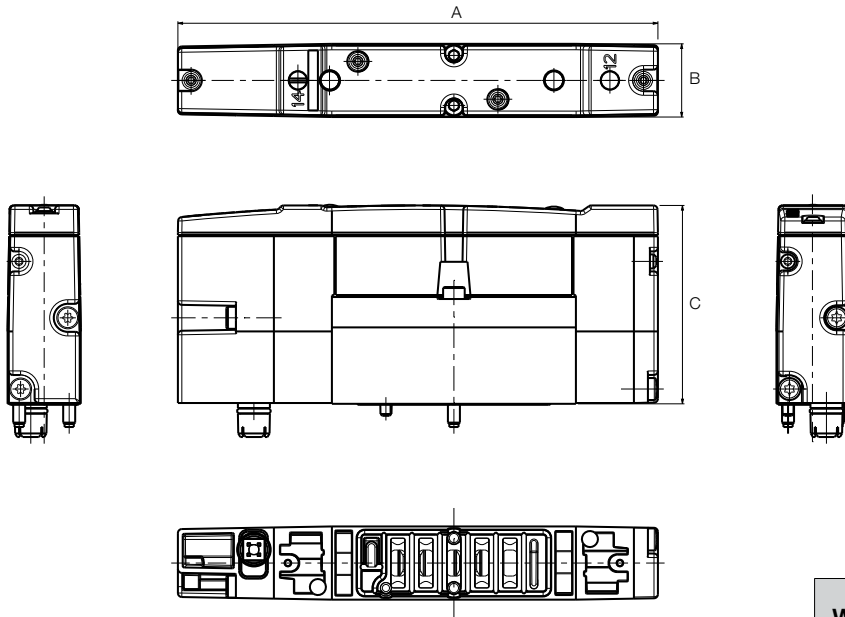


NOTE: Manifold Assemblies are factory set for internal pilot supply. To convert to external pilot supply install pilot supply seal screws 502 Series: 426188-001, as shown in the pictures.

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## 502 Series Plug-in Valve



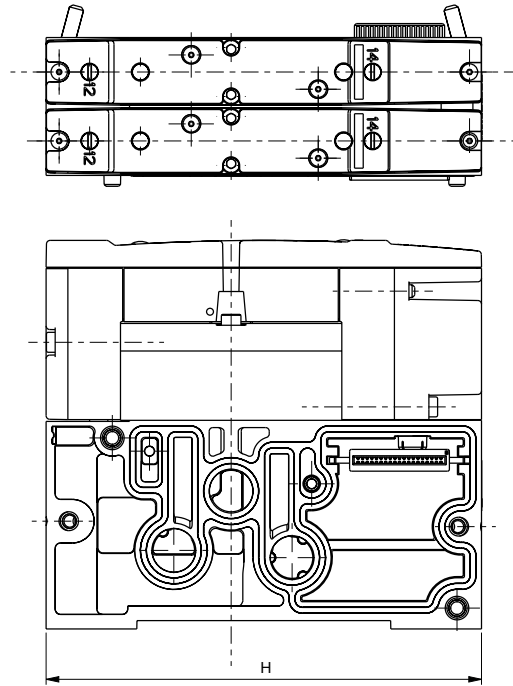
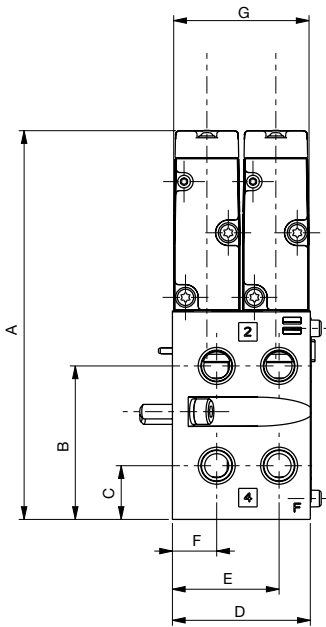
| Weight      | Valve Body       | Manifold Block | End Plates     |
|-------------|------------------|----------------|----------------|
| lbs<br>(kg) | 0.372<br>(0.169) | 0.75<br>(0.34) | 3.30<br>(0.45) |

| A             | B            | C              |
|---------------|--------------|----------------|
| 120<br>(4.72) | 18<br>(0.71) | 49.6<br>(1.95) |

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Plug-in Valve Mounted Plug-in Manifold Block

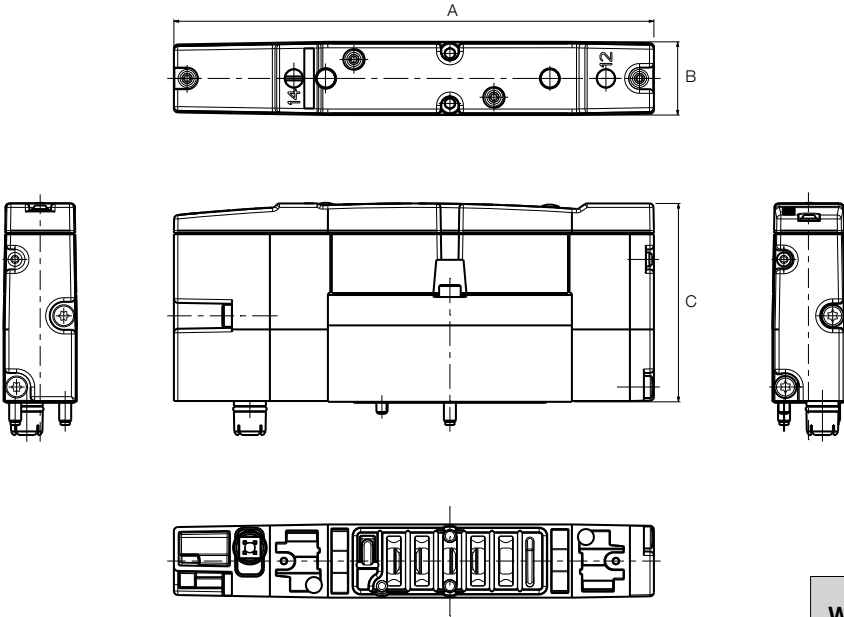


| A                | B               | C               | D             | E               | F              | G               | H              |
|------------------|-----------------|-----------------|---------------|-----------------|----------------|-----------------|----------------|
| 107.1<br>(4.217)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

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## 502 Series Plug-in Valve



| Weight      | Valve Body       | Manifold Block | End Plates     |
|-------------|------------------|----------------|----------------|
| lbs<br>(kg) | 0.372<br>(0.169) | 0.75<br>(0.34) | 3.30<br>(0.45) |

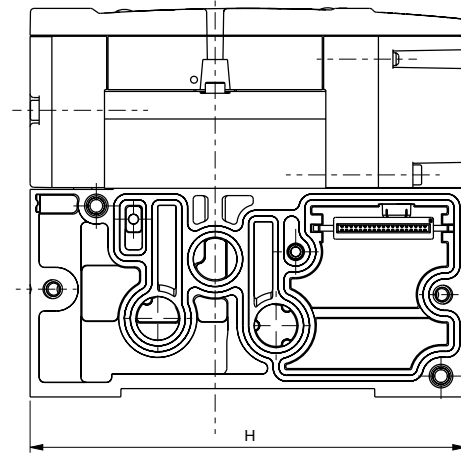
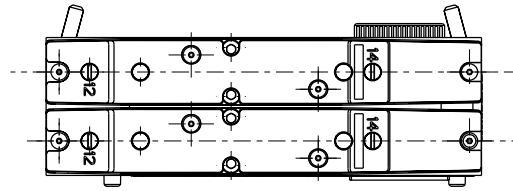
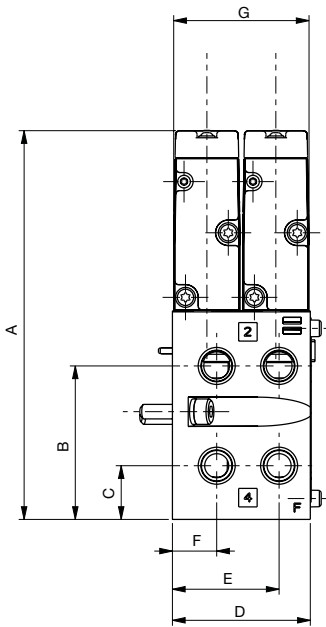
| A             | B            | C              |
|---------------|--------------|----------------|
| 120<br>(4.72) | 18<br>(0.71) | 49.6<br>(1.95) |



# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Plug-in Valve Mounted Plug-in Manifold Block



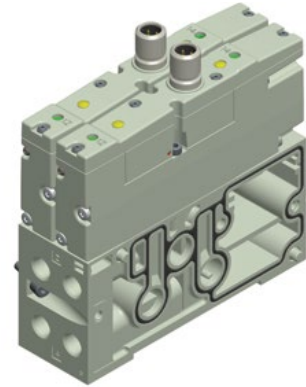
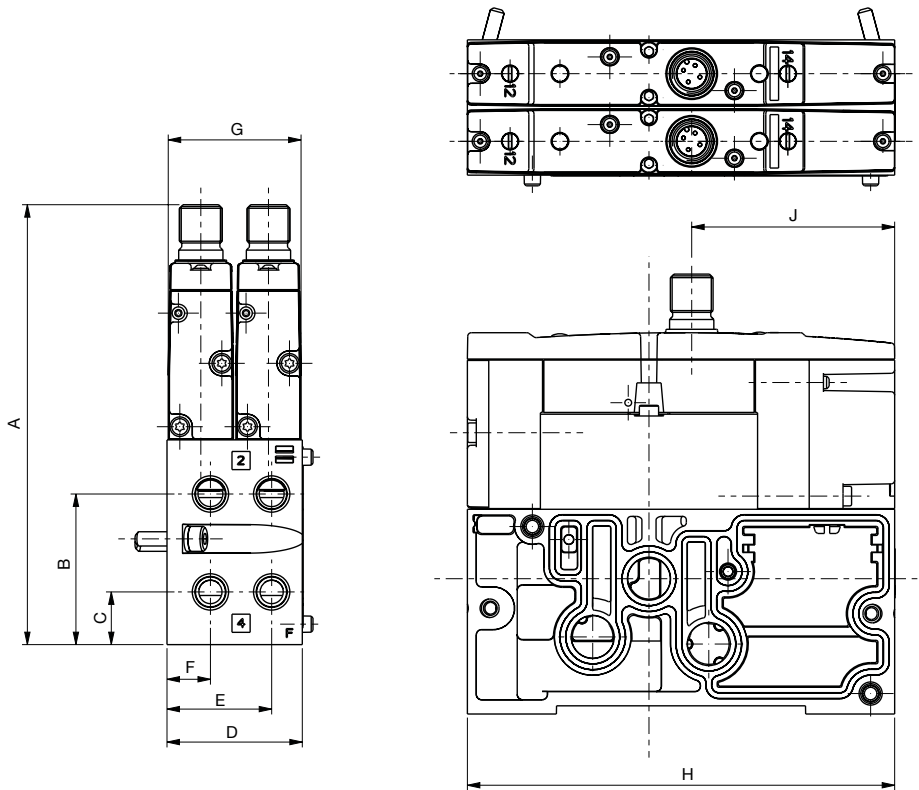
| A                | B               | C               | D             | E               | F              | G               | H              |
|------------------|-----------------|-----------------|---------------|-----------------|----------------|-----------------|----------------|
| 107.1<br>(4.217)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

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

M12 Valve Mounted

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



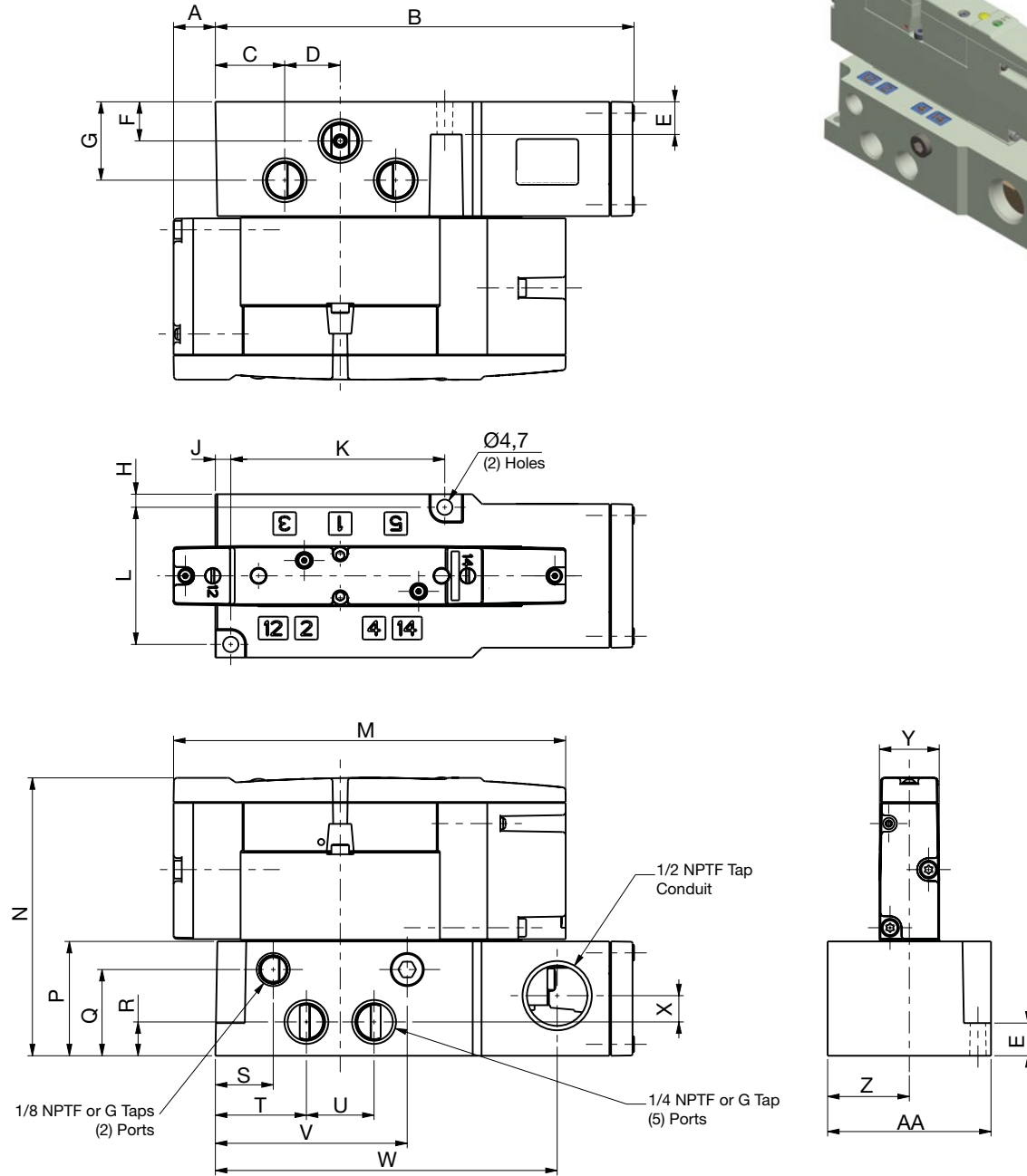
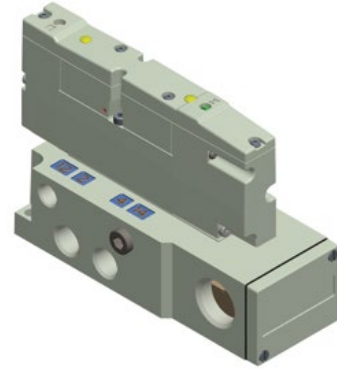
| A                | B               | C               | D             | E               | F              | G               | H              | J             |
|------------------|-----------------|-----------------|---------------|-----------------|----------------|-----------------|----------------|---------------|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

# AVENTICS™ Series 502 Pneumatic Valve System

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<br>(0.504) | 128.1<br>(5.043) | 21.2<br>(0.835) | 17<br>(0.669) | 10<br>(0.394) | 12<br>(0.472) | 24<br>(0.945) | 4<br>(0.157) | 4.7<br>(0.185) | 65.5<br>(2.579) | 42<br>(1.654) | 120<br>(4.724) | 85.1<br>(3.35) |

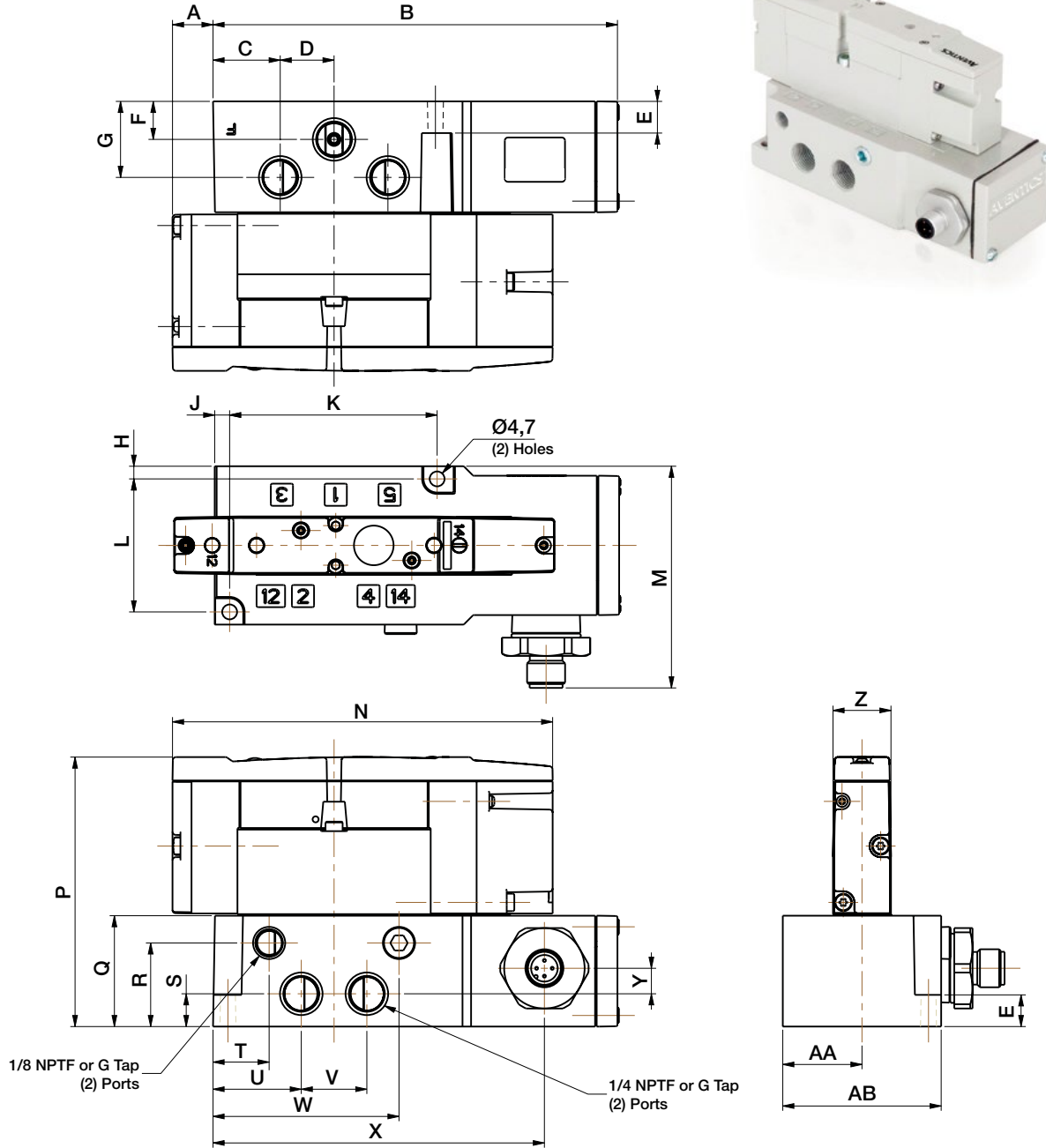
| P             | Q               | R               | S               | T               | U               | V               | W                | X              | Y              | Z             | AA            |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|---------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

# AVENTICS™ Series 502 Pneumatic Valve System

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<br>(0.504) | 128.1<br>(5.043) | 21.2<br>(0.835) | 17<br>(0.669) | 10<br>(0.394) | 12<br>(0.472) | 24<br>(0.945) | 4<br>(0.157) | 4.7<br>(0.185) | 65.5<br>(2.579) | 42<br>(1.654) | 70<br>(2.756) | 120<br>(4.724) |

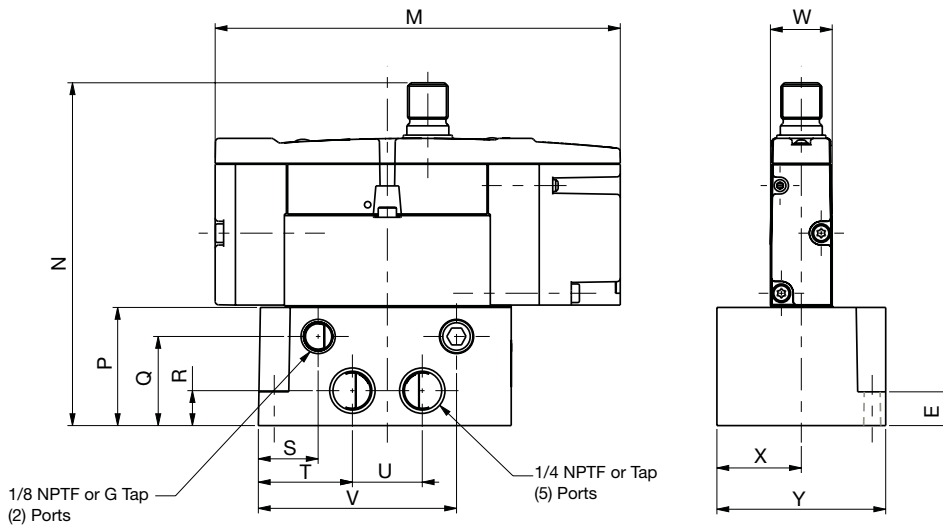
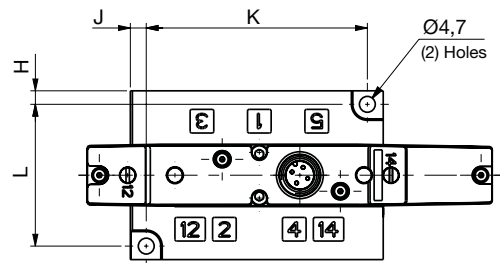
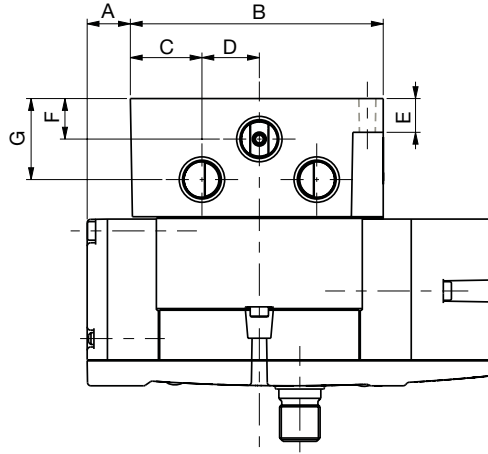
| P              | Q             | R               | S               | T               | U               | V               | W               | X                | Y              | Z              | AA            | AB            |
|----------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------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

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Non Plug-in Valve on Individual Subbase

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



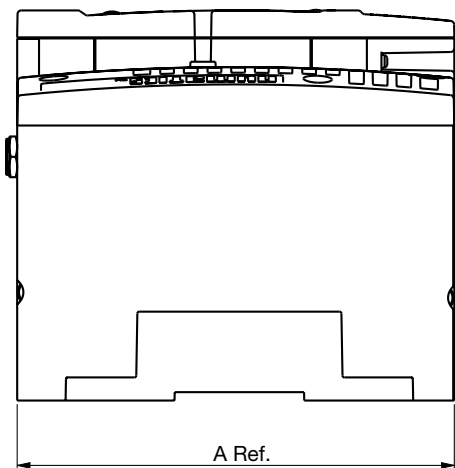
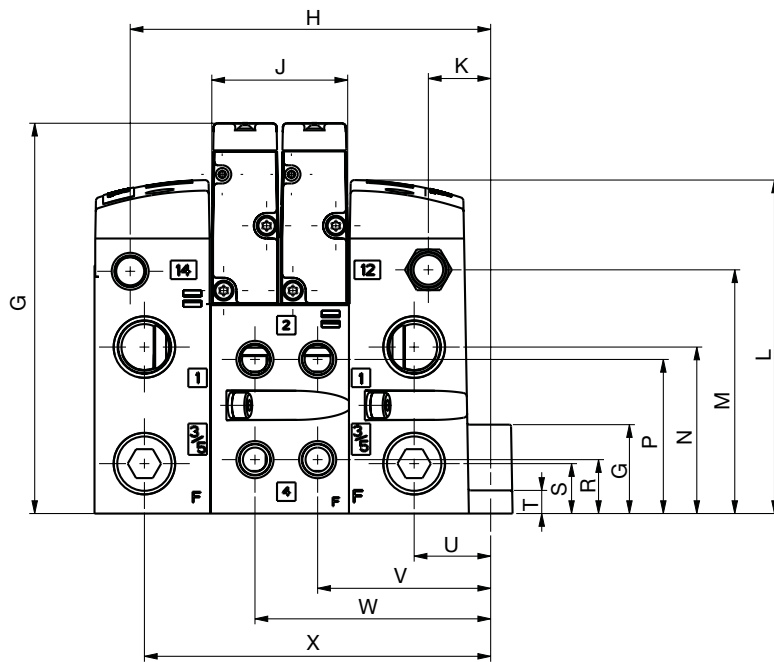
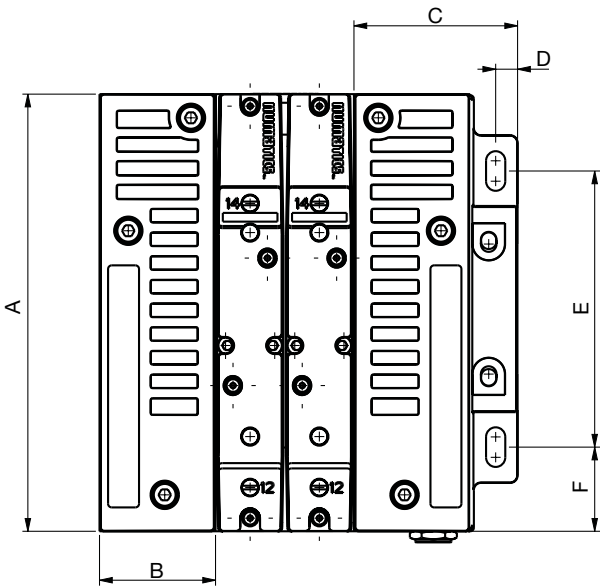
| A               | B               | C               | D             | E             | F             | G             | H            | J              | K               | L             | M              | N            |
|-----------------|-----------------|-----------------|---------------|---------------|---------------|---------------|--------------|------------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

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

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Manifold Assembly with Vertical End Plates

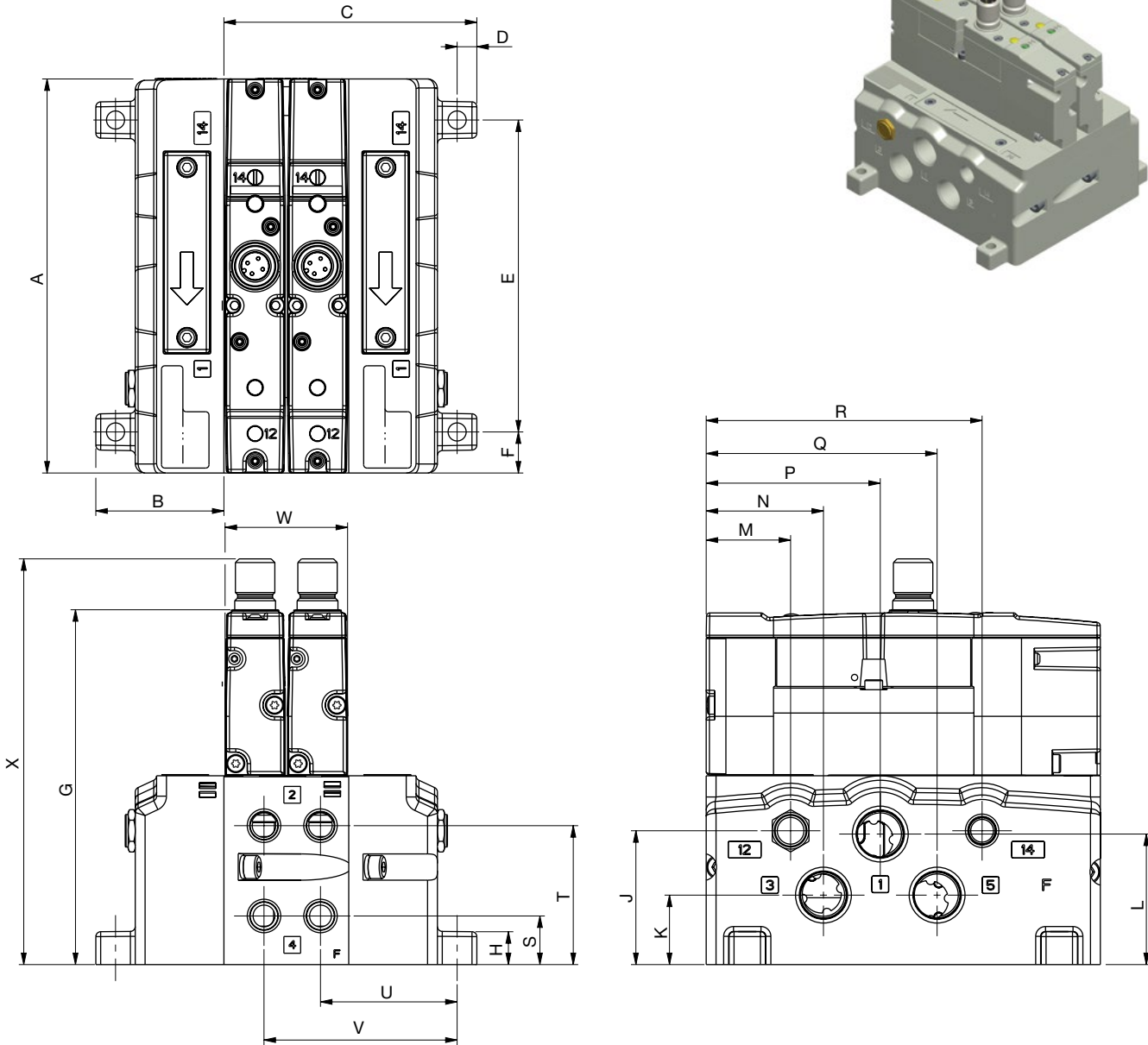


| A               | B               | C               | D               | E               | F               | G                | H               | J               | K               | L               |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|-----------------|-----------------|-----------------|-----------------|
| 120<br>(4.724)  | 31.9<br>(1.256) | 44.9<br>(1.768) | 6<br>(0.236)    | 75.8<br>(2.984) | 23.1<br>(0.909) | 107.1<br>(4.217) | 98.9<br>(3.894) | 37.3<br>(1.469) | 17.1<br>(0.673) | 91.6<br>(3.606) |
| M               | N               | P               | Q               | R               | S               | T                | U               | V               | W               | X               |
| 66.9<br>(2.634) | 45.7<br>(1.799) | 42.3<br>(1.665) | 24.4<br>(0.961) | 14.8<br>(0.583) | 13.7<br>(0.539) | 6.35<br>(0.25)   | 21<br>(0.827)   | 47.5<br>(1.87)  | 64.7<br>(2.547) | 95<br>(3.74)    |

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Manifold Assembly with Horizontal End Plates

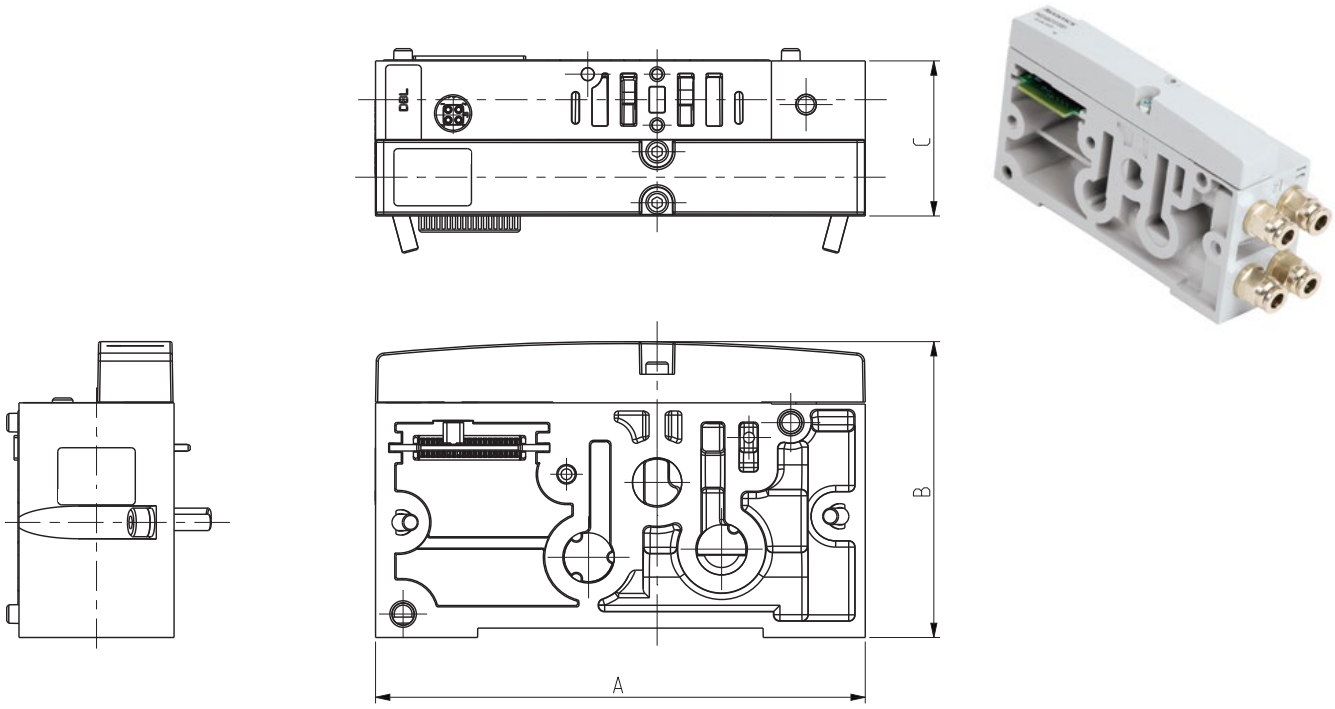


| A               | B              | C              | D              | E              | F              | G               | H              | J              | K              | L               |
|-----------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|-----------------|
| 120.0<br>(4.72) | 39.0<br>(1.54) | 39.0<br>(1.54) | 6.0<br>(0.24)  | 95.0<br>(3.74) | 12.5<br>(0.49) | 108.1<br>(4.26) | 10.0<br>(0.39) | 40.8<br>(1.61) | 21.2<br>(0.83) | 39.8<br>(1.57)  |
| M               | N              | P              | Q              | R              | S              | T               | U              | V              | W              | X               |
| 25.7<br>(1.01)  | 35.7<br>(1.41) | 53.0<br>(2.09) | 70.3<br>(2.77) | 84.0<br>(3.31) | 14.8<br>(0.58) | 42.3<br>(1.67)  | 41.6<br>(1.64) | 58.8<br>(2.31) | 37.3<br>(1.47) | 123.6<br>(4.87) |

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## 502 Series Mid-Station Supply Block



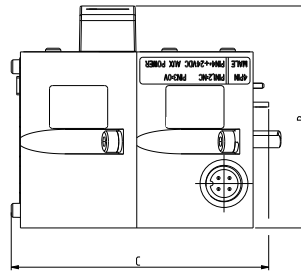
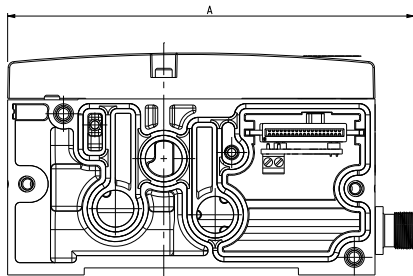
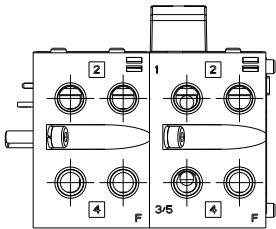
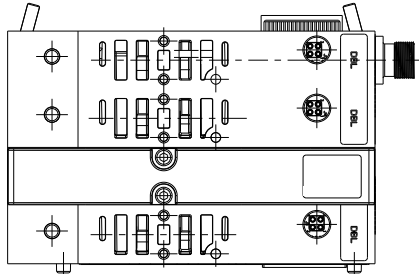
| A             | B              | C            |
|---------------|----------------|--------------|
| 120<br>(4.72) | 72.5<br>(2.85) | 38<br>(1.50) |



# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

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



| Weight         |
|----------------|
| lbs (kg)       |
| 1.70<br>(0.77) |

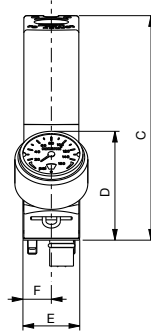
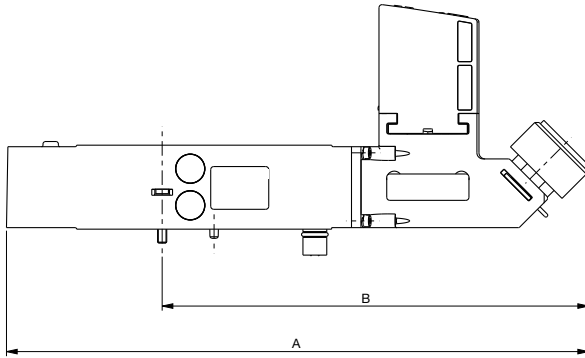
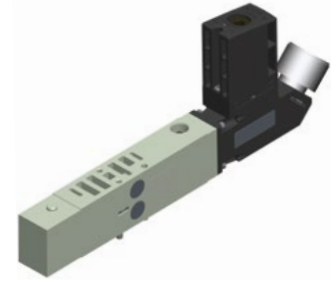
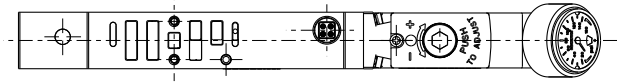
| A               | B              | C            |
|-----------------|----------------|--------------|
| 132.7<br>(5.22) | 72.5<br>(2.85) | 84<br>(3.31) |

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Sandwich Pressure Regulator

### Single Regulator

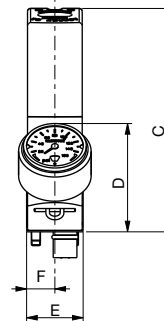
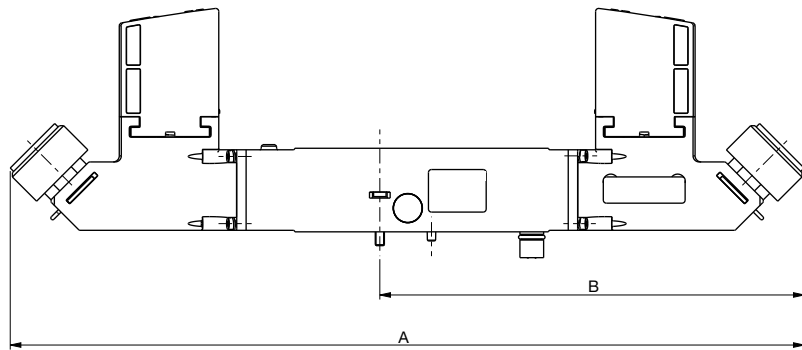
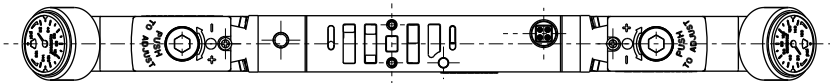


| Weight         |
|----------------|
| lbs (kg)       |
| 0.65<br>(0.30) |

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

Dimensions: mm (inches)

### Double Regulator



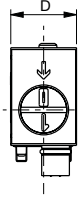
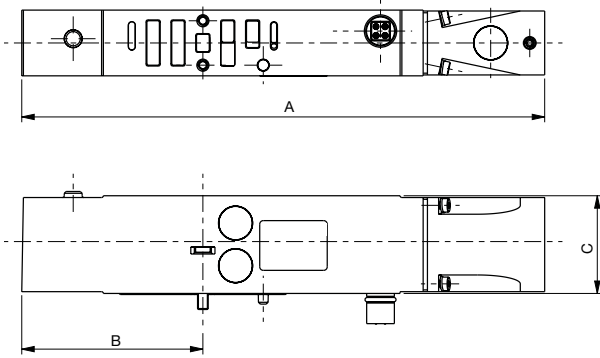
| Weight         |
|----------------|
| lbs (kg)       |
| 1.05<br>(0.48) |

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

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Sandwich Shut Off Block Kit

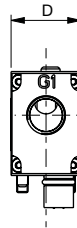
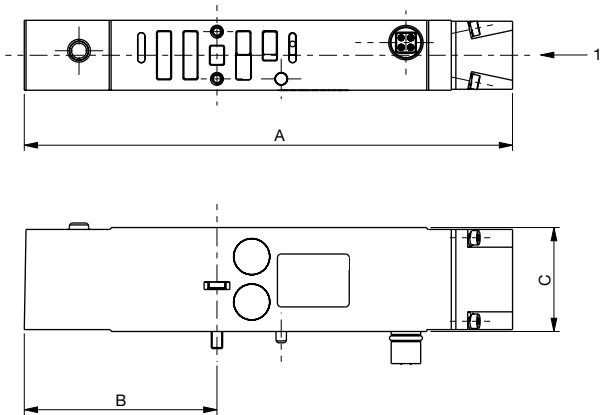


| Weight         |
|----------------|
| lbs (kg)       |
| 0.30<br>(0.14) |

| A                | B             | C               | D               |
|------------------|---------------|-----------------|-----------------|
| 147.2<br>(5.795) | 51<br>(2.008) | 27.5<br>(1.083) | 18.5<br>(0.728) |

Dimensions: mm (inches)

## Sandwich Pressure Block Kit



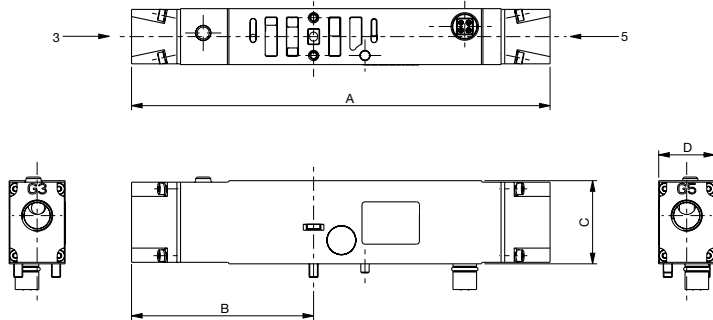
| Weight         |
|----------------|
| lbs (kg)       |
| 0.50<br>(0.23) |

| A                | B             | C               | D               |
|------------------|---------------|-----------------|-----------------|
| 129.2<br>(5.087) | 51<br>(2.008) | 27.5<br>(1.083) | 18.5<br>(0.728) |

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Sandwich Exhaust Block Kit

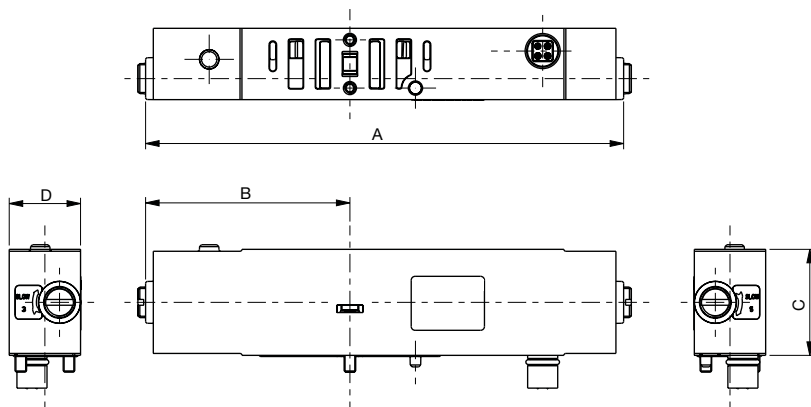


| Weight         |
|----------------|
| lbs (kg)       |
| 0.30<br>(0.14) |

| A                | B              | C               | D               |
|------------------|----------------|-----------------|-----------------|
| 138.4<br>(5.449) | 60.2<br>(2.37) | 27.5<br>(1.083) | 18.5<br>(0.728) |

Dimensions: mm (inches)

## Sandwich Speed Control Kit



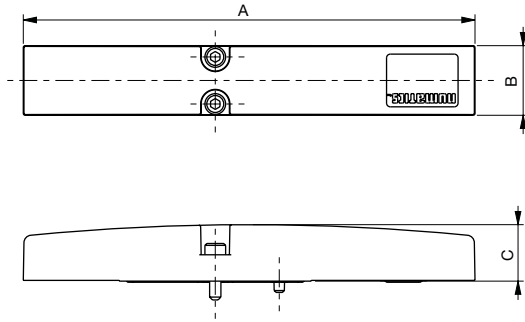
| Weight         |
|----------------|
| lbs (kg)       |
| 0.30<br>(0.14) |

| A              | B             | C               | D               |
|----------------|---------------|-----------------|-----------------|
| 124<br>(4.882) | 53<br>(2.087) | 27.5<br>(1.083) | 18.5<br>(0.728) |

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Blank Station Plate Kit



| Weight         |
|----------------|
| lbs (kg)       |
| 0.10<br>(0.05) |

| A              | B               | C             |
|----------------|-----------------|---------------|
| 120<br>(4.724) | 18.5<br>(0.728) | 15<br>(0.591) |

# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## Adaptor Plate Kit

### 503 Valve Series to 502 Valve Series

| Weight   |        |
|----------|--------|
| lbs (kg) |        |
| 1.50     | (0.68) |

| A             | B               | C            |
|---------------|-----------------|--------------|
| 136<br>(5.35) | 38.25<br>(1.51) | 63<br>(2.48) |

Dimensions: mm (inches)

## Adaptor Plate Kit

### 502 Valve Series to 501 Valve Series

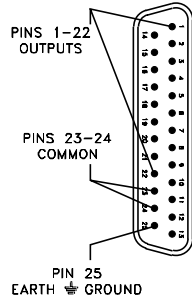
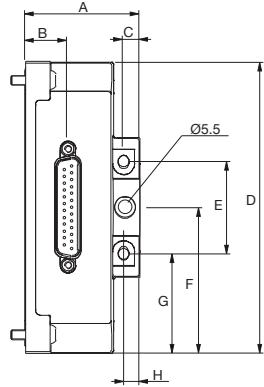
| Weight   |        |
|----------|--------|
| lbs (kg) |        |
| 1.05     | (0.48) |

| A             | B              | C              |
|---------------|----------------|----------------|
| 120<br>(4.72) | 33.5<br>(1.32) | 57.5<br>(2.26) |

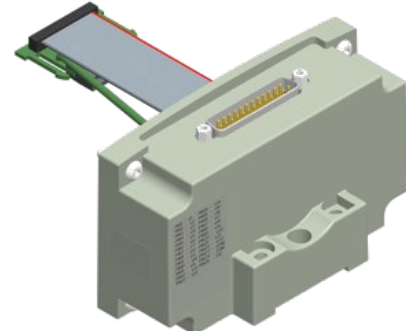
# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## 25 Pin Sub-D Connector Kit

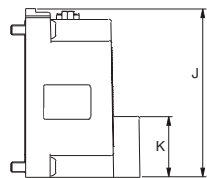


|       |   |     |       |   |      |
|-------|---|-----|-------|---|------|
| PIN1  | = | V1  | PIN14 | = | V14  |
| PIN2  | = | V2  | PIN15 | = | V15  |
| PIN3  | = | V3  | PIN16 | = | V16  |
| PIN4  | = | V4  | PIN17 | = | V17  |
| PIN5  | = | V5  | PIN18 | = | V18  |
| PIN6  | = | V6  | PIN19 | = | 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 |       |   |      |



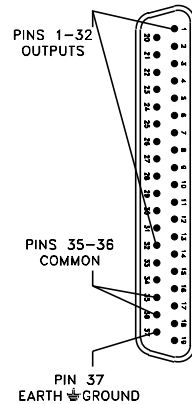
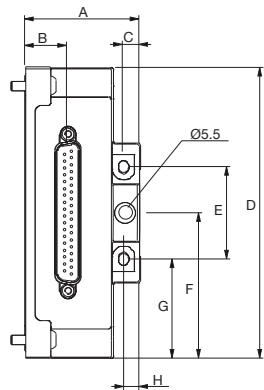
| Weight |        |
|--------|--------|
| lbs    | (kg)   |
| 0.70   | (0.32) |

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

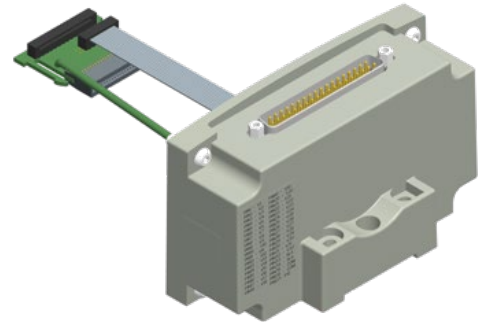


Dimensions: mm (inches)

## 37 Pin Sub-D Connector Kit

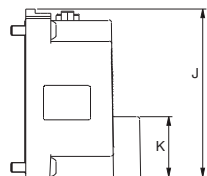


|       |   |     |       |   |      |
|-------|---|-----|-------|---|------|
| PIN1  | = | V1  | PIN19 | = | V19  |
| PIN2  | = | V2  | PIN20 | = | V20  |
| PIN3  | = | V3  | PIN21 | = | V21  |
| PIN4  | = | V4  | PIN22 | = | V22  |
| PIN5  | = | V5  | PIN23 | = | V23  |
| PIN6  | = | V6  | PIN24 | = | 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) |

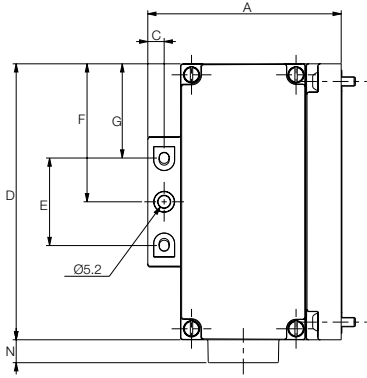
| A               | B             | C             | D             | E              | F            | G              | H             | J              | K              |
|-----------------|---------------|---------------|---------------|----------------|--------------|----------------|---------------|----------------|----------------|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



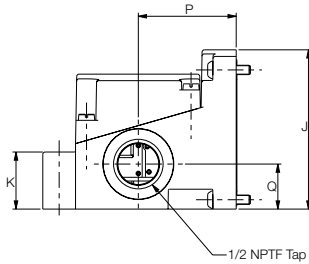
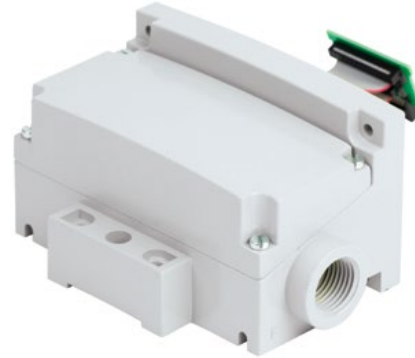
# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## 1-32 Terminal Strip Kit



|             |             |
|-------------|-------------|
| PIN6 = V18  | PIN6 = P.E. |
| PIN7 = V17  | PIN7 = COM  |
| PIN8 = V16  | PIN8 = COM  |
| PIN9 = V15  | PIN9 = N/A  |
| PIN10 = V14 | PIN10 = V32 |
| PIN11 = V13 | PIN11 = V31 |
| PIN12 = V12 | PIN12 = V30 |
| PIN13 = V11 | PIN13 = V29 |
| PIN14 = V10 | PIN14 = V28 |
| PIN15 = V9  | PIN15 = V27 |
| PIN16 = V8  | PIN16 = V26 |
| PIN17 = V7  | PIN17 = V25 |
| PIN18 = V6  | PIN18 = V24 |
| PIN19 = V5  | PIN19 = V23 |
| PIN20 = V4  | PIN20 = V22 |
| PIN21 = V3  | PIN21 = V21 |
| PIN22 = V2  | PIN22 = V20 |
| PIN23 = V1  | PIN23 = V19 |

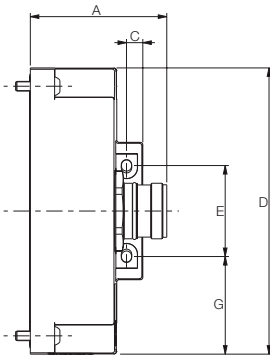
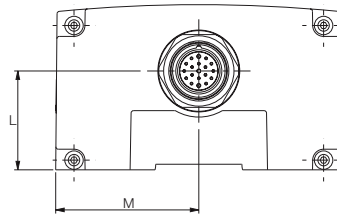
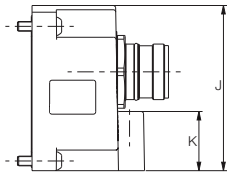


| Weight         |
|----------------|
| lbs (kg)       |
| 1.20<br>(0.54) |

| A               | C           | D             | E              | F            | G               | J              | K              | N             | P              | Q              |
|-----------------|-------------|---------------|----------------|--------------|-----------------|----------------|----------------|---------------|----------------|----------------|
| 82.7<br>(3.256) | 7<br>(0.28) | 118<br>(4.65) | 37.5<br>(1.48) | 59<br>(2.32) | 40.2<br>(1.583) | 68.1<br>(2.68) | 24.4<br>(0.96) | 9.8<br>(0.39) | 41.9<br>(1.65) | 19.3<br>(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 = V8    |
| 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<br>(0.32) |

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

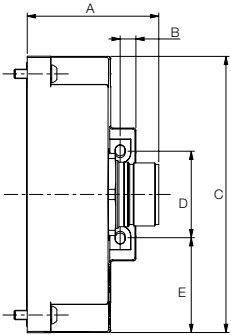
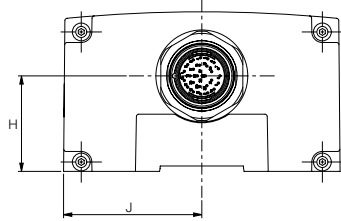
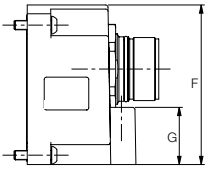


# AVENTICS™ Series 502 Pneumatic Valve System

Dimensions: mm (inches)

## 26 Pin M27 Connector Kit

S



|      |     |      |      |
|------|-----|------|------|
| PIN8 | V18 | PIN9 | P.E. |
| PIN7 | V17 | PIN7 | COM  |
| PIN6 | V16 | PIN6 | COM  |
| PIN5 | V15 | PIN5 | N/A  |
| PIN4 | V14 | PIN4 | V32  |
| PIN3 | V13 | PIN3 | V31  |
| PIN2 | V12 | PIN2 | V30  |
| PIN1 | V11 | PIN1 | V29  |
| PIN0 | V10 | PIN0 | 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  |

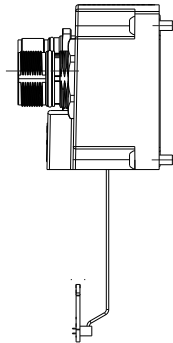
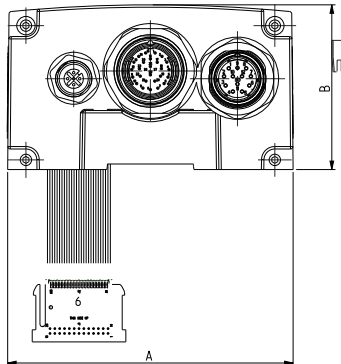
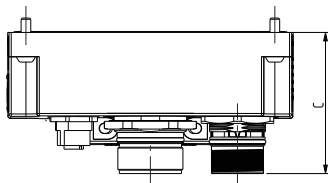
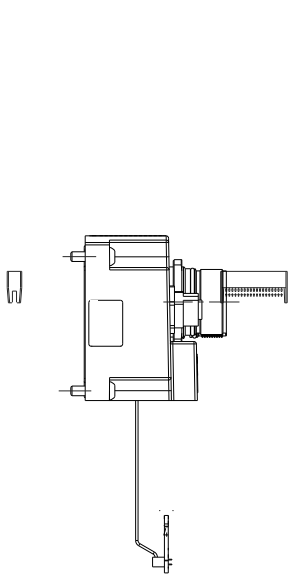


| Weight         |
|----------------|
| lbs (kg)       |
| 0.70<br>(0.32) |

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

Dimensions: mm (inches)

## Robot FANUC End Effector (EE) Interface



| PI - 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 | OVDC    |
| PIN 9             | INPUT 1  | PIN 22 | HEKD    |
| PIN 10            | INPUT 2  | PIN 23 | PPABN   |
| PIN 11            | INPUT 3  | PIN 24 | OVDC    |
| PIN 12            | INPUT 4  | PIN 25 | N.C.    |
| PIN 13            | INPUT 5  | PIN 26 | N.C.    |



| Weight         |
|----------------|
| lbs (kg)       |
| 0.90<br>(0.41) |

| A             | B              | C              |
|---------------|----------------|----------------|
| 118<br>(4.65) | 68.1<br>(2.68) | 58.4<br>(2.30) |