Plug-in 5 Port Solenoid Valve

Terminal Block Box (Spring Type)

SY3000/5000/7000 Series

■ Compact

● Installation area of the terminal block box
    - Reduced by approx. 40%

Height
- 6.7 mm shorter (Approx. 9% reduction)
- 23.4 mm shorter (Approx. 19% reduction)
- 21.3 mm shorter (Approx. 24% reduction)

■ Reduced work-hours!

● Spring type terminal block adopted.
● Crimping work using Y-terminals is not necessary.
● No need to tighten any retaining screws. (Torque control is not necessary.)
● Screwless construction. No tightening of retaining screws required.

■ Number of outputs: 32
■ Enclosure: IP67

Connector Connecting Base Variations

<table>
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<tr>
<th>D-sub Connector</th>
<th>Flat Ribbon Cable</th>
<th>PC Wiring</th>
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<td>IP67</td>
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<th>Terminal Block Box</th>
<th>Lead Wire</th>
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Serial Transmission

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<th>EX500 (64 points)</th>
<th>EX600</th>
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<th>EX126</th>
<th>EX120</th>
</tr>
</thead>
</table>
How to Order Manifold

**SY3000/5000/7000 Series**

**Plug-in Connector Connecting Base**

**Terminal Block Box (Spring Type)**

**How to Order Manifold**

**SS5Y 3 - 10 TC - 05 D - C6**

1. **Series**
   - 3: SY3000
   - 5: SY5000
   - 7: SY7000

2. **Type**
   - 10: Side ported
   - 11: Bottom ported

3. **Valve stations**
   - TC: Spring type terminal block box
   - Symbol: Stations
   - Note:
     - Double wiring: 2-position, 3-position, and 4-position valves can be used on all manifold stations.
     - Specified layout: Indicate the wiring specifications with the manifold specification sheet.
     - 1 Double wiring: 2-position single, double, 3-position, and 4-position valves can be used on all manifold stations.
     - 16 stations
     - 2 stations
     - Specified layout (Up to 32 solenoids available)

4. **P, E port entry**
   - U: U side (2 to 10 stations)
   - D: D side (2 to 10 stations)
   - B: Both sides (2 to 24 stations)

5. **SUP/EXH block assembly**
   - Nil: Internal pilot
   - S: Internal pilot, Built-in silencer
   - R: External pilot

6. **Mounting and Option**
   - DIN Rail Option
   - Symbol: Mounting Option
   - DIN rail mounting (with DIN rail)
   - DIN rail mounting (without DIN rail)

7. **A, B port size (Metric/One-touch fitting)**
   - Symbol: A, B port
   - Type 10/Side ported
   - Type 11/Bottom ported

**Example (SS5Y3-10TC-□)**

- 2-position double (24 VDC)
  - SY3200-5U1 (1 set)
- 2-position single (24 VDC)
  - SY3100-5U1 (3 sets)
- 3-position closed center (24 VDC)
  - SY3300-5U1 (1 set)

**Mounting and Option**

- DIN rail mounting (with DIN rail)
- DIN rail mounting (without DIN rail)

**Symbol and Option**

- C2: ø2
- C3: ø3.2
- C4: ø4
- C5: ø6
- C6: ø8
- C7: ø10
- C8: ø12
- CM: Straight port, mixed sizes
- L4: ø4
- L6: ø6
- L8: ø8
- L10: ø10
- L12: ø12
- B4: ø4
- B6: ø6
- B8: ø8
- B10: ø10
- B12: ø12

**A, B port size (Inch/One-touch fitting)**

- Symbol: A, B port
- Type 10/Side ported
- Type 11/Bottom ported

- N1: 1/8" 
- N3: 5/32"
- N5: 1/4"
- N7: 5/16"
- N9: 3/8"
- CM: Straight port, mixed sizes
- LN3: 5/32"
- LN7: 1/4"
- LN9: 5/16"
- LN11: 3/8"
- BN3: ø5/32"
- BN7: ø1/4"
- BN9: ø5/16"
- BN11: ø3/8"

**Enter the number of stations inside □.**

**Prefix it to the part numbers of the valve etc.**

**The asterisk denotes the symbol for assembly.**

**The direction of P, E port fittings is the same as for the A, B port.**

**Only direct mounting is available for Type 11 (Bottom ported).**

**I} The SY5000 manifold base is used for the bottom ported SY3000. When ordering, refer to the "Plug-in Mixed Mounting Type Manifold" (Web Catalog).**

**When the built-in silencer type is used, keep the exhaust port from coming in direct contact with water or other liquids.**

**The valve arrangement is numbered as the 1st station from the D side.**

**Under the manifold part number, state the valves to be mounted in order from the 1st station as shown in the figure above. If the arrangement becomes complicated, specify on a manifold specification sheet.**

**Only direct mounting is available for Type 11 (Bottom ported).**
SY3000/5000/7000 Series

How to Order Valves (With mounting screw)

Refer to the Web Catalog for valve specifications.

**Base mounted**

1. **Series**
   - 3: SY3000
   - 5: SY5000
   - 7: SY7000

2. **Type of actuation**
   - 1: 2-position
     - Single
     - Double
   - 2: 3-position
     - Closed center
     - Exhaust center
   - 4: Pressure center
   - 5: 4-position dual 3-port
     - N.C./N.C.
   - 6: N.O./N.O.
   - 7: N.C./N.O.

*Only the rubber seal type is available for the 4-position dual 3-port valve.

3. **Seal type**
   - 0: Rubber seal
   - 1: Metal seal

4. **Pilot type**
   - Nil: Internal pilot
   - R: External pilot

5. **Back pressure check valve (Built-in valve type)**
   - Nil: None
   - H: Built-in

*Only the rubber seal type. The manifold installed type is available if the back pressure check valve is required for a valve with a metal seal. Refer to the Web Catalog for ordering example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.

*The built-in valve type back pressure check valve is not available for the 3-position type and the SY7000.

6. **Pilot valve option**
   - Nil: Standard (0.7 MPa)
   - B: Quick response type (0.7 MPa)
   - K: High pressure type (1.0 MPa)

*Only the metal seal type is available for the high pressure type.

7. **Coil type**
   - Nil: Standard
   - T: With power saving circuit (Continuous duty type)

*Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.

*Be careful of the energizing time when the power saving circuit is selected. Refer to the Web Catalog for details.

8. **Rated voltage**
   - 5: 24 VDC
   - 6: 12 VDC

9. **Light/surge voltage suppressor and common specification**
   - Symbol: With light Surge voltage suppressor Common specification
     - Nil: — — Non-polar
     - R: — — Non-polar
     - U: ● ● Positive common
     - S: — ● Negative common
     - Z: ● ● Positive common
     - NS: — — Non-polar
     - NZ: ● ● Positive common

*Only “Z” and “NZ” types are available with the power saving circuit.

10. **Manual override**
    - Nil: Non-locking push type
    - D: Push-turn locking slotted type
    - E: Push-turn locking lever type
    - F: Slide locking type

*Refer to the Web Catalog for the safety slide locking manual override.

11. **Type of mounting screw**
    - Nil: Round head combination screw
    - B: Hexagon socket head cap screw
    - K: Round head combination screw (Fall-out prevention type)
    - H: Hexagon socket head cap screw (Fall-out prevention type)

*For “K” and “H,” the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.

*When ordering a valve individually, the base gasket is not included.

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service. Refer to the Web Catalog for base gasket and mounting screw part numbers.

*“B” and “H” cannot be selected for the individual SUP/EXH spacer assembly, interface regulator, or double check spacer assembly with residual pressure release valve.
SY3000/5000/7000 Series

Dimensions: SY3000 Series

SS5Y3-10TC-[Stations] U □ C2 R C3, N1 (D) C6, N7 (D)

Plug-in Connector Connecting Base Type 10/Side Ported Terminal Block Box

One-touch fitting
1(P), 3/5(E) port
Applicable tubing O.D. C8: ø8 (SMC)
N9: ø5/16" (SMC)
C4: ø4 (SMC)
C6: ø6 (SMC)
N3: ø5/32" (SMC)
N7: ø1/4" (SMC)

Manifold block internal wiring specifications
N1: Double wiring
S: Single wiring

Silencer (Exhaust port)
(Built-in silencer specification)

DIN rail holding screw
(For DIN rail mounting)

Manual override
(Push-turn locking slotted type)
Press, then rotate it.
4(A) port side: Blue (For rubber seal)
2(B) port side: Yellow

One-touch fitting
4(A), 2(B) port
Applicable tubing O.D. C2: ø2 (SMC)
C3: ø3.2 (SMC)
C4: ø4 (SMC)
C6: ø6 (SMC)
N1: ø1/8" (SMC)
N3: ø5/32" (SMC)
N7: ø1/4" (SMC)

P = 10.5

(Station 1) ---- (Station n)

Manifold block internal wiring specifications
Nil: Double wiring
S: Single wiring

2 x M20 x 1.5 thread depth 13
(Conduit port)

Terminal Block Box
Type 10/Side Ported

Plug-in Base

Conduit port
Dimensions: **SY7000 Series**

**SS5Y7-10TC-[Stations]**

<table>
<thead>
<tr>
<th>[U]</th>
<th>[B]</th>
<th>[C6]</th>
<th>[C12]</th>
<th>[N7]</th>
<th>[N11] (D)</th>
</tr>
</thead>
</table>

**SY3000/5000/7000 Series**

- **Plug-in Connector Connecting Base**
- **Type 10/Side Ported**
- **Terminal Block Box**

**Manifold block internal wiring specifications**
- **N**: Double wiring
- **S**: Single wiring

**Applicable tubing O.D.**
- **C6**: ø6 (SMC)
- **C8**: ø8 (SMC)
- **C10**: ø10 (SMC)
- **C12**: ø12 (SMC)
- **N7**: ø1/4" (SMC)
- **N9**: ø5/16" (SMC)
- **N11**: ø3/8" (SMC)

**One-touch fitting**
- [1P], [3/5(E) port]
- Applicable tubing O.D. C12: ø12 (SMC)
- N13: ø1/2" (SMC)

**Light/surge voltage suppressor**
- Manual override
  - Push-turn locking slotted type:
    - Press, then rotate it.
- 4(A) port side: Blue (For rubber seal)
- 2(B) port side: Yellow

**Silencer (Exhaust port)**
- Built-in silencer specification

**DIN rail holding screw**
- (For DIN rail mounting)

**DIN rail holding screw**
- DIN rail holding screw (For DIN rail mounting)

**Manual override**
- Push-turn locking slotted type:
  - Press, then rotate it.
- 4(A) port side: Blue (For rubber seal)
- 2(B) port side: Yellow

**2 x M20 x 1.5 thread depth 13**
- (Conduit port)
### Dimensions: SY5000 Series

**SS5Y5-11TC-**

**Connector Connecting Base**
- **SY3000/5000/7000 Series**
- **Plug-in Connector Connecting Base**
- **Type 11/Bottom Ported**
- **Terminal Block Box**

#### External Pilot
- **Panel Fitting Dimensions**
  - **Station n**
  - **Station 1**
  - **Station 89.8 (20°)**
  - **Station 59.8**
  - **Station 31.7**

#### One-touch Fitting
- **[PE: Pilot EXH port]**
- **[X: External pilot port]**
- **Applicable tubing O.D. C4: ø4 (SMC)**
- **N3: ø5/32" (SMC)**

#### Manifold Block Internal Wiring Specifications
- **Nil: Double wiring**
- **S: Single wiring**
- **2 x M20 x 1.5 thread depth 13 (Conduit port)**

#### Manual Override
- **Push-turn locking slotted type:**
  - **Press, then rotate it.**
  - **4(A) port side: Blue (For rubber seal)**
  - **Gray (For metal seal)**
  - **2(B) port side: Yellow**

#### Silencer (Exhaust port)
- **Built-in silencer specification**

#### Fitting Dimensions for Panel Mounting
- **Refer to panel fitting dimensions for details.**

---

### Connector Connecting Base SY5000 Series

**Symmetric SMC Plug-in**

**SS5Y5-11TC-**

**D Side**
- **L1**
- **U Side**
- **Manual Override**
  - **(Push-turn locking slotted type):**
  - **Press, then rotate it.**
  - **4(A) port side: Blue (For rubber seal)**
  - **Gray (For metal seal)**
  - **2(B) port side: Yellow**

**Silencer (Exhaust port)**
- **(Built-in silencer specification)**

**Manifold Block Internal Wiring Specifications**
- **Nil: Double wiring**
- **S: Single wiring**
- **2 x M20 x 1.5 thread depth 13 (Conduit port)**

**Fitting Dimensions for Panel Mounting**
- **Refer to panel fitting dimensions for details.**

---

### Terminal Block Box

**Symmetric SMC Plug-in**

**SS5Y5-11TC-**

**D Side**
- **L1**
- **U Side**
- **Manual Override**
  - **(Push-turn locking slotted type):**
  - **Press, then rotate it.**
  - **4(A) port side: Blue (For rubber seal)**
  - **Gray (For metal seal)**
  - **2(B) port side: Yellow**

**Silencer (Exhaust port)**
- **(Built-in silencer specification)**

**Manifold Block Internal Wiring Specifications**
- **Nil: Double wiring**
- **S: Single wiring**
- **2 x M20 x 1.5 thread depth 13 (Conduit port)**

**Fitting Dimensions for Panel Mounting**
- **Refer to panel fitting dimensions for details.**

---

### Table

<table>
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<th>7</th>
<th>8</th>
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<td>432</td>
<td>448</td>
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<td>144</td>
<td>160</td>
<td>176</td>
<td>192</td>
<td>208</td>
<td>224</td>
<td>240</td>
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<td>272</td>
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<td>368</td>
<td>384</td>
<td>400</td>
<td>416</td>
<td>432</td>
</tr>
</tbody>
</table>

---

**Refer to panel fitting dimensions for details.**
SY3000/5000/7000 Series

Dimensions: SY7000 Series

SS5Y7-11TC-[Stations] U B C6 N7 C8 N9 C10 N11 (D)

Panel fitting dimensions

- External pilot

- One-touch fitting

- Manifold block internal wiring specifications

- Plug-in

- Type 11/Bottom Ported

- Terminal Block Box

- Connector Connecting Base

- Manual override

- Push-turn locking slotted type:
  - Press, then rotate it.
  - 4(A) port side: Blue (For rubber seal)
  - 2(B) port side: Yellow

- Fitting dimensions for panel mounting

- Refer to panel fitting dimensions for details.

- Fitting dimensions for panel mounting

- Applicable tubing O.D.
  - C6: ø6 (SMC)
  - N7: ø1/4" (SMC)
  - C8: ø8 (SMC)
  - N9: ø5/16" (SMC)
  - C10: ø10 (SMC)
  - N11: ø3/8" (SMC)
  - C12: ø12 (SMC)

- L1
- L2

- (Station 1)...........(Station n)

- Silencer (Exhaust port)
  - (Built-in silencer specification)

- (Light/surge voltage suppressor)

- 2 x M20 x 1.5 thread depth 13
  - (Conduit port)

- N: Double wiring
  - S: Single wiring

- One-touch fitting
  - [4(A), 2(B) port]
  - Applicable tubing O.D.
    - C6: ø6 (SMC)
    - C8: ø8 (SMC)
    - C10: ø10 (SMC)
    - C12: ø12 (SMC)
    - N7: ø1/4" (SMC)
    - N9: ø5/16" (SMC)
    - N11: ø3/8" (SMC)

- SY3000/5000/7000 Series

- n Stations:
  - L1: 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
  - L2: 94 113 132 151 170 189 208 227 246 265 284 303 322 341 360 379 398 417 436 455 474 493 512
**How to Order Manifold**

**SS5Y 3 – 12 TC – 05 D –**

1. **Series**
   - 3: SY3000
   - 5: SY5000
   - 7: SY7000

2. **Type**
   - 12: Top ported

3. **Valve stations**
   - TC: Spring type terminal block box
   - Symbol Stations | Note
   - 02 2 stations | Double wiring *1
   - 16 16 stations
   - 02 2 stations | Specified layout *2
   - 24 24 stations

*1 Double wiring: 2-position single, double, 3-position, and 4-position valves can be used on all manifold stations. Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

*2 Specified layout: Indicate the wiring specifications with the manifold specification sheet. (Note that 2-position double, 3-position, and 4-position valves cannot be used where single wiring has been specified.)

This also includes the number of blanking plate assembly.

**How to Order Manifold Assembly**

**Example (SS5Y3-12TC-□)**

- 2-position double (24 VDC) SY3230-5U1-C6 (1 set)
- 3-position closed center (24 VDC) SY3330-5U1-C6 (1 set)
- 2-position single (24 VDC) SY3130-5U1-C6 (3 sets)

**Symbol Stations | Note**
- 02 2 stations | Double wiring *1
- 16 16 stations
- 02 2 stations | Specified layout *2
- 24 24 stations

* For N, sizes are in inches.

**Mounting**

- Nil: Direct mounting
- D: DIN rail mounting (with DIN rail)
- D0: DIN rail mounting (without DIN rail)
- D3: For 3 stations Specify a longer rail than the standard length.
- D24: For 24 stations

* Refer to the Web Catalog (SY3000/5000/7000 series: Specific product precautions 6) for instructions on fastening the DIN rail mounting type manifold.

---

**RoHS**

**Plug-in Connector Connecting Base**

*Type 12 Top Ported*

**SY3000/5000/7000 Series**

---

**How to Order Manifold**

1. **Series**
   - 3: SY3000
   - 5: SY5000
   - 7: SY7000

2. **Type**
   - 12: Top ported

3. **Valve stations**
   - TC: Spring type terminal block box
   - Symbol Stations | Note
   - 02 2 stations | Double wiring *1
   - 16 16 stations
   - 02 2 stations | Specified layout *2
   - 24 24 stations

*1 Double wiring: 2-position single, double, 3-position, and 4-position valves can be used on all manifold stations. Use of a 2-position single solenoid will result in an unused control signal. If this is not desired, order with a specified layout.

*2 Specified layout: Indicate the wiring specifications with the manifold specification sheet. (Note that 2-position double, 3-position, and 4-position valves cannot be used where single wiring has been specified.)

This also includes the number of blanking plate assembly.

**How to Order Manifold Assembly**

**Example (SS5Y3-12TC-□)**

- 2-position double (24 VDC) SY3230-5U1-C6 (1 set)
- 3-position closed center (24 VDC) SY3330-5U1-C6 (1 set)
- 2-position single (24 VDC) SY3130-5U1-C6 (3 sets)

**Symbol Stations | Note**
- 02 2 stations | Double wiring *1
- 16 16 stations
- 02 2 stations | Specified layout *2
- 24 24 stations

* For N, sizes are in inches.

**Mounting**

- Nil: Direct mounting
- D: DIN rail mounting (with DIN rail)
- D0: DIN rail mounting (without DIN rail)
- D3: For 3 stations Specify a longer rail than the standard length.
- D24: For 24 stations

* Refer to the Web Catalog (SY3000/5000/7000 series: Specific product precautions 6) for instructions on fastening the DIN rail mounting type manifold.
How to Order Valves (With mounting screw)

Refer to the Web Catalog for valve specifications.

SY3000/5000/7000 Series

**Series**

3 SY3000  
5 SY5000  
7 SY7000

**Type of actuation**

1 2-position  
2 Single  
3 Double  
4 3-position  
5 Exhaust center  
6 Pressure center  
7 A**†** 4-position  
8 Double  
9 Closed center  
10 Pilot type  
11 Internal pilot  
12 External pilot  
13 Built-in

**Seal type**

0 Rubber seal  
1 Metal seal

**Pilot valve option**

Nil Standard (0.7 MPa)  
B Quick response type (0.7 MPa)  
K High pressure type (1.0 MPa)  
* Only the metal seal type is available for the high pressure type.

**Coil type**

Nil Standard  
T With power saving circuit (Continuous duty type)  
* Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.  
* Be careful of the energizing time when the power saving circuit is selected. Refer to the Web Catalog for details.

**Rated voltage**

5 24 VDC  
6 12 VDC

**Light/surge voltage suppressor and common specification**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>With light</th>
<th>Surge voltage suppressor</th>
<th>Common specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>—</td>
<td>—</td>
<td>Non-polar</td>
</tr>
<tr>
<td>R</td>
<td>—</td>
<td>—</td>
<td>Non-polar</td>
</tr>
<tr>
<td>U</td>
<td>●</td>
<td>—</td>
<td>Positive common</td>
</tr>
<tr>
<td>S</td>
<td>—</td>
<td>●</td>
<td>Negative common</td>
</tr>
<tr>
<td>Z</td>
<td>●</td>
<td>—</td>
<td>Positive common</td>
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<tr>
<td>NS</td>
<td>—</td>
<td>—</td>
<td>Positive common</td>
</tr>
<tr>
<td>NZ</td>
<td>●</td>
<td>—</td>
<td>Negative common</td>
</tr>
</tbody>
</table>

* Only “Z” and “NZ” types are available with the power saving circuit.

**Thread type**

Nil Rc  
F G  
N NPT  
T NPTF  
* Only Nil is available for M5.

**Type of mounting screw**

Nil Round head combination screw  
B Hexagon socket head cap screw  
K Round head combination screw (Fall-out prevention type)  
H Hexagon socket head cap screw (Fall-out prevention type)  
* For “K” and “H,” the valve body cover has a drop prevention construction to stop the mounting screws from falling out when the valve is removed for maintenance etc.  
* When ordering a valve individually, the base gasket is not included.

Since the base gasket is attached to the manifold, please order the base gasket separately if it is needed for maintenance service. Refer to the Web Catalog for base gasket and mounting screw part numbers.

* “B” and “H” cannot be selected for the individual SUP/EXH spacer assembly or interface regulator.

![Protective class (Mark)](Mark)

SY3000 5000 7000 Series

**A, B port size**

<table>
<thead>
<tr>
<th>Thread piping</th>
<th>Applicable series</th>
</tr>
</thead>
</table>
| M5 1/8" NPTF | SY3000  
| M5 3/8" NPTF | SY5000  
| M5 1/2" NPTF | SY7000

**One-touch fitting (Metric)**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>A, B port</th>
<th>SY3000</th>
<th>SY5000</th>
<th>SY7000</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>ø2</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>N</td>
<td>ø3.2</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C</td>
<td>ø4</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C</td>
<td>ø6</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C</td>
<td>ø8</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C</td>
<td>ø10</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>C</td>
<td>ø12</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

**One-touch fitting (Inch)**

<table>
<thead>
<tr>
<th>Symbol</th>
<th>A, B port</th>
<th>SY3000</th>
<th>SY5000</th>
<th>SY7000</th>
</tr>
</thead>
<tbody>
<tr>
<td>M</td>
<td>1/8&quot;</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>N</td>
<td>5/32&quot;</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>N</td>
<td>1/4&quot;</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>N</td>
<td>5/16&quot;</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>N</td>
<td>3/8&quot;</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

**Back pressure check valve (Built-in valve type)**

Nil None  
H Built-in  
* Only the rubber seal type. The manifold installed type is available if the back pressure check valve is required for a valve with a metal seal. Refer to the Web Catalog for ordering example. However, it is not recommended to use the built-in valve type and the manifold installed type at the same time because it will reduce the flow.  
* Be sure to select the power saving circuit type when the valve is continuously energized for long periods of time.  
* Be careful of the energizing time when the power saving circuit is selected. Refer to the Web Catalog for details.

**Manual override**

Nil Non-locking push type  
D Push-turn locking slotted type  
E Push-turn locking lever type  
F Slide locking type  
* Refer to the Web Catalog for the safety slide locking manual override.
### Dimensions: SY3000 Series

**SY3000/5000/7000 Series**

**Plug-in Connector Connecting Base**

**Type 12/Top Ported**

**Terminal Block Box**

#### SS5Y3-12TC

- **Stations**: U, B, C2, C3, C6, N7 (D)

### External Pilot

- One-touch fitting
  - [PE: Pilot EXH port]
  - [X: External pilot port]
- Applicable tubing O.D.: C4: ø4 (SMC)
- N3: ø5/32" (SMC)

### One-touch Fitting

- (DIN rail)
- DIN rail holding screw (For DIN rail mounting)
- One-touch fitting
  - (1(P), 3/5(E) port)
  - Applicable tubing O.D.: C4: ø4 (SMC)
  - N3: ø5/32" (SMC)

### Light / Surge Voltage Suppressor

- Manual override
  - Push-turn locking slotted type:
  - Press, then rotate it.
  - 4(A) port side: Blue (For rubber seal)
  - 2(B) port side: Yellow

### Silencer (Exhaust Port)

- (Built-in silencer specification)

### One-touch Fitting

- (4(A), 2(B) port)
- Applicable tubing O.D.: C2: ø2 (SMC)
- C3: ø3.2 (SMC)
- C4: ø4 (SMC)
- C6: ø6 (SMC)
- N1: ø1/8" (SMC)
- N3: ø5/32" (SMC)
- N7: ø1/4" (SMC)

### Applicable Tubing O.D.

- C8: ø8 (SMC)
- N9: ø5/16" (SMC)

### Manifold Block Internal Wiring Specifications

- Nil: Double wiring
- S: Single wiring

### Conduit Port Dimensions

- 2 x M20 x 1.5 thread depth 13

### Terminal Block Box

- Type 12/Top Ported

### Additional Information

- Plug-in
- SY3000/5000/7000 Series

---

**Dimensions Table**

| Stations | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L1       | 143 | 153.5 | 164 | 174.5 | 185 | 195.5 | 206 | 216.5 | 227 | 237.5 | 248 | 258.5 | 269 | 279.5 | 290 | 300.5 | 311 | 321.5 | 332 | 342.5 | 353 | 363.5 | 374 |
| L2       | 63  | 73.5  | 84  | 94.5 | 105 | 115.5 | 126 | 136.5 | 147 | 157.5 | 168 | 178.5 | 189 | 199.5 | 210 | 220.5 | 231 | 241.5 | 252 | 262.5 | 273 | 283.5 | 294 |
| L3       | 173 | 185.5 | 198 | 210.5 | 223 | 235.5 | 239.5 | 248 | 260.5 | 273 | 285.5 | 298 | 308.5 | 312 | 323 | 334 | 345 | 356 | 367 | 378 | 389 | 399 |
| L4       | 162.5 | 175 | 187.5 | 200 | 212.5 | 225 | 237.5 | 250 | 262.5 | 275 | 287.5 | 297.5 | 300 | 312 | 325 | 337.5 | 350 | 360 | 372 | 383 | 395 | 407 |
| L5       | 17.5 | 18.5  | 19.5 | 20.5 | 21.5 | 22.5 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |

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**Connector Connecting Base**

- SY3000 Series

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**DIN Rail Mounting Hole Pitch:** 12.5

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**Manual Override**

- Push-turn locking slotted type:
  - Press, then rotate it.
- 4(A) port side: Blue (For rubber seal)
- 2(B) port side: Yellow
### Dimensions: SY7000 Series

#### SS5Y7-12TC

| Stations | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  | 22  | 23  | 24  |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| L1       | 174.2 | 193.2 | 212.2 | 231.2 | 250.2 | 269.2 | 288.2 | 307.2 | 326.2 | 345.2 | 364.2 | 382.2 | 402.2 | 421.2 | 440.2 | 458.2 | 477.2 | 497.2 | 516.2 | 535.2 | 554.2 | 573.2 | 592.2 |
| L2       | 94  | 113  | 132  | 151  | 170  | 189  | 208  | 227  | 246  | 265  | 284  | 303  | 322  | 341  | 360  | 379  | 398  | 417  | 436  | 455  | 474  | 493  | 512  |
| L3       | 210.5 | 223  | 246  | 260.5 | 265.5 | 298  | 323  | 335.5 | 360.5 | 373  | 398  | 423  | 435.5 | 460.5 | 473  | 498  | 510.5 | 535.5 | 548  | 573  | 585.5 | 610.5 | 623  |
| L4       | 200  | 212.5 | 237.5 | 250  | 275  | 287.5 | 312.5 | 325  | 350  | 362.5 | 367.5 | 387.5 | 412.5 | 425  | 450  | 462.5 | 487.5 | 500  | 525  | 537.5 | 562.5 | 575  | 600  | 612.5 |
| L5       | 20.5  | 17   | 20   | 17   | 17   | 16.5 | 19.5 | 16.5 | 19.5 | 16   | 19   | 22   | 22   | 22   | 18.5 | 21.5 | 18.5 | 21.5 | 18   | 21   | 21   | 17.5 |

#### Plug-in Connector Connecting Base

- **Type 12/Top Ported Terminal Block Box**

#### Extra Features

- **Manual override**
  - Push-turn locking slotted type: Press, then rotate it.
  - 4(A) port side: Blue (For rubber seal)
  - 2(B) port side: Yellow

- **Silencer (Exhaust port)**
  - Built-in silencer specification

- **Manifold block internal wiring specifications**
  - Nil: Double wiring
  - S: Single wiring

- **Applicable tubing O.D.**
  - C6: ø6 (SMC)
  - C8: ø8 (SMC)
  - C10: ø10 (SMC)
  - C12: ø12 (SMC)
  - N7: ø1/4" (SMC)
  - N9: ø5/16" (SMC)
  - N11: ø3/8" (SMC)

- **One-touch fitting**
  - [PE: Pilot EXH port]
  - [X : External pilot port]
  - Applicable tubing O.D. C6: ø6 (SMC)
  - N7: ø1/4" (SMC)

- **Plug-in Connector Connecting Base**

#### SY3000/5000/7000 Series

- **Connector Connecting Base**
  - SY3000/5000/7000 Series

#### External Pilot

- **(Station 1) (Station n)**

#### DIN Rail Holding Screw

- DIN rail holding screw
  - For DIN rail mounting

#### Terminal Block Box

- **Type 12/Top Ported**
**Terminal Block Connection**

**Step 1. Remove the terminal block cover**
Loosen the 4 mounting screws (M3) to remove the terminal block cover.

**Step 2. The diagram below shows the terminal block wiring.**
All stations are provided with double wiring regardless of the mounted valves.
Connect each wire to the power supply side, according to the markings provided inside the terminal block.
Be sure to connect the wire with the push button pressed down.

**Step 3. Mount the terminal block cover**
Securely tighten the mounting screws (M3) to the torque shown in the table below only after confirming that the gasket is installed correctly.

### Proper tightening torque [N·m]

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.54 to 0.66</td>
<td></td>
</tr>
</tbody>
</table>

### Specifications

**Applicable wire range:** Conductor diameter ø0.5 to ø1.2 mm, Stranded wire AWG24 to 16

**Drip-proof plug:** SY30M-133-1 (Tightening torque: 0.75 to 0.85 N·m)

**Polarity**

- Positive common
- Negative common

**Standard wiring**

<table>
<thead>
<tr>
<th>Terminal no.</th>
<th>Polarity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>2B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>3B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>4B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>5A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>6B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>7A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>8B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>9A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>10B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>11A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>12B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>13A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>14B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>15A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>16B</td>
<td>(−) (+)</td>
</tr>
</tbody>
</table>

**Complementary terminal block wiring**

<table>
<thead>
<tr>
<th>Terminal no.</th>
<th>Polarity</th>
</tr>
</thead>
<tbody>
<tr>
<td>1B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>2B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>3B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>4B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>5A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>6B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>7A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>8B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>9A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>10B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>11A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>12B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>13A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>14B</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>15A</td>
<td>(−) (+)</td>
</tr>
<tr>
<td>16B</td>
<td>(−) (+)</td>
</tr>
</tbody>
</table>

**Positive**

- COM (+)
- COM (+)

**Negative**

- (+)
- (+)

*When using a valve with no polarity, either positive common or negative common can be used.*

**Specified Layout**

A mixture of single and double wiring can be specified on the manifold specification sheet. The maximum number of stations is determined according to the number of solenoids. The total number of solenoids should be 32 or less. 1 solenoid is required for the 2-position single, and 2 solenoids for the 2-position double, 3-position, and 4-position.
⚠️ Safety Instructions ⚠️ Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.