High reliability
100 million cycles or more (By SMC life test data)

Available in vacuum applications
(Up to –100 kPa)

Copper-free
No copper used for sections in contact with fluids.

Bright color tone and neat design
A bright gray concept has been adopted for this product to compliment the surrounding operational environment.

SY100/Application Example (Pneumatic JIS symbols shown are typical examples.)

1. For blowing off
2. For vacuum control
3. For driving single acting cylinders
4. For driving air operated valves for fluid control

The characteristic values shown in the catalog are representative values, not warranting the performance.
**Manual Override Operation**

**Warning**
Since connected equipment will be actuated when the manual override is operated, first confirm that conditions are safe.

- **Non-locking push type [Standard type]**

  Press in the direction of the arrow.

- **Locking slotted type [B]**

  Turn in the direction of arrow.

- **Push-turn locking slotted type [D]**

- **Push-turn locking lever type [E]**

  (SY1/4, SY1/4A)

**Caution**
When operating the lock with the driver, use a watchmakers’ screwdriver and turn lightly. [Torque: 0.1 N·m or less]

**How to Use Plug Connector**

**Caution**
1. **Attaching and detaching connectors**
   - To attach a connector, hold the lever and connector unit between your fingers and insert straight onto the pins of the solenoid valve so that the lever’s pawl is pushed into the groove and locks.
   - To detach a connector, remove the pawl from the groove by pushing the lever downward with your thumb, and pull the connector straight out.

2. **Crimping of lead wires and sockets**

   Peel 3.2 to 3.7 mm of the tip of lead wire, enter the core wires neatly into a socket and crimp it with a special crimper. Be careful so that the cover of lead wire does not enter into the crimping part. (For special crimping tool, please contact SMC.)

   - **Core wire crimping area**
     - Crimping area
     - Core wire
     - Lead wire (0.2 to 0.33 mm²)
     - Insulation (Max. cover diameter: ø1.7 mm)

3. **Attaching and detaching lead wires with sockets**

   - **Attaching**
     - Insert the sockets into the square holes of the connector (with and indication) and, continue to push the sockets all the way in until the lock by hooking into the seats in the connector. (When they are pushed in, their hooks open and they are locked automatically.) Then confirm that they are locked by pulling lightly on the lead wires.

   - **Detaching**
     - To detach a socket from a connector, pull out the lead wire while pressing the socket’s hook with a stick having a thin tip (approx. 1 mm). If the socket will be used again, first spread the hook outward.

**Plug Connector Lead Wire Length**

Standard length is 300 mm, but the following length is also available.

**How to Order Connector Assembly**

- **For DC:** SY100-30-4A
- **For 100 VAC:** SY100-30-1A
- **For 200 VAC:** SY100-30-2A
- **For other voltages of AC:** SY100-30-3A
- **Without lead wire:** SY100-30-A

(With connector and 2 pcs. of socket)

*Lead wire length*

<table>
<thead>
<tr>
<th>Length (mm)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>300 mm</td>
</tr>
<tr>
<td>6</td>
<td>600 mm</td>
</tr>
<tr>
<td>10</td>
<td>1000 mm</td>
</tr>
<tr>
<td>15</td>
<td>1500 mm</td>
</tr>
<tr>
<td>20</td>
<td>2000 mm</td>
</tr>
<tr>
<td>25</td>
<td>2500 mm</td>
</tr>
<tr>
<td>30</td>
<td>3000 mm</td>
</tr>
<tr>
<td>50</td>
<td>5000 mm</td>
</tr>
</tbody>
</table>

*How to Order*

Include the connector assembly part number together with the part number for the plug connector’s solenoid valve without connector.

- For DC (+COM)
  - SY114-SLO
  - SY100-30-4A-20
- For AC
  - SY114-ILO
  - SY100-30-1A-20
**Surge Voltage Suppressor**

*For DC*

Grommet, L/M Plug Connector Type

- **Standard type (With polarity)**
  - With surge voltage suppressor (□S)
  - Diode to prevent reverse current
  - Red (+)
  - Black (–)

- **Non-polar type**
  - With surge voltage suppressor (□R)
  - Zener diode
  - (+) (–)
  - (–) (+)

**Light/Surge voltage suppressor (□Z)**

- Diode to prevent reverse current
- Red (+)
- Black (–)

**Light/Surge voltage suppressor (□U)**

- Zener diode
- Red (+)
- Black (–)

*Caution*

- Please connect correctly the lead wires to + (positive) and – (negative) indications on the connector.
  (For non-polar type, the lead wires can be connected to either one.)
- For DC voltages other than 12 and 24 VDC, incorrect wiring will cause damage to the surge voltage suppressor circuit. (Wrong polarity will cause trouble.)
- Solenoids, whose lead wires have been pre-wired: positive side red and negative side black.

*For AC*

("S" option is not available since voltage surge is suppressed by the converter.)

**Grommet, L/M Plug Connector Type**

With indicator light (□Z)

**Connector Assembly with Protective Cover**

Connector assembly with a protective cover which’s taken countermeasures against dusttight.
- Effective to prevent short circuit accidents caused by invasion of foreign matters into the connector section, etc.
- Cover material adopts the chloroprene rubber which is excellent in weatherability and electric insulation properties. However, use caution not to allow contact with cutting oil, etc.
- Simple and unencumbered appearance by adopting round-shaped cord.

**How to Order**

**SY100-68-A**

- **SY100-68-A**
  - Lead wire length (L)
  - Nil 300 mm
  - 6 600 mm
  - 10 1000 mm
  - 15 1500 mm
  - 20 2000 mm
  - 25 2500 mm
  - 30 3000 mm
  - 50 5000 mm

**Dimensions: Connector Assembly with Cover**

- How to Order
  - Include the connector assembly part number together with the part number for the plug connector’s solenoid valve without connector.
  - *Example 1* For lead wire length: 2000 mm
    - SY114-5LOZ-M3
    - SY100-68-A-20
  - *Example 2* For lead wire length: 300 mm (Standard)
    - SY114-5LPZ-M3
- Symbol of connector assembly with protective cover

*No part numbers of connector assembly with cover are needed to be indicated in this case.*
3 Port Direct Operated Solenoid Valve
Rubber Seal

**Series SY100**

### Specifications

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambient and fluid temperature (°C)</td>
<td>–10 to 50°C (No freezing. Refer to page 4-18-4.)</td>
</tr>
<tr>
<td>Response time (ms)</td>
<td>10 or less</td>
</tr>
<tr>
<td>Max. operating frequency (Hz)</td>
<td>20</td>
</tr>
</tbody>
</table>

**Manual override**
- Non-locking push type
- Locking slotted type
- Push-turn locking slotted type
- Push-turn locking lever type + [SY12A, SY124A only]

**Lubrication**
- Not required

**Mounting position**
- Unrestricted

**Impact/Vibration resistance (m/s²)**
- 150/30

**Enclosure**
- Dustproof

**Series**

<table>
<thead>
<tr>
<th>Electrical entry</th>
<th>Grommet (G)/(H), L plug connector (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Coil rated voltage (V)</strong></td>
<td>M plug connector (M)</td>
</tr>
<tr>
<td>DC</td>
<td>24, 12, 6, 5, 3</td>
</tr>
<tr>
<td>AC 50/60 Hz</td>
<td>100, 110, 200, 220</td>
</tr>
</tbody>
</table>

**Power consumption (W)**
- DC: 0.5 (With indicator light: 0.55)
- AC: 0.75 W (With indicator light: 0.8 W)
- 110 V: 1.0 (With indicator light: 1.1)
- 220 V: 1.9 (With indicator light: 2.0)

**Apparent power (VA)**
- DC: 0.9 (With indicator light: 1.0)
- AC: 2.2 (With indicator light: 2.3)

**Surge voltage suppressor**
- Diode

**Indicator light**
- LED

### Made to Order Specifications

(For details, refer to page 4-3-17.)

---

**Model**

<table>
<thead>
<tr>
<th>Function</th>
<th>Valve model</th>
<th>Type</th>
<th>Operating pressure range (MPa)</th>
<th>Vacuum specifications (MPa)</th>
<th>Port size</th>
<th>Effective area (mm²)</th>
<th>Weight (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.C.</td>
<td>SY111 2</td>
<td>Standard</td>
<td>0 to 0.7</td>
<td>–100 kPA to 0.6</td>
<td>–100 kPA to 0</td>
<td>M3 x 0.5</td>
<td>M3 x 0.5</td>
</tr>
<tr>
<td>N.C.</td>
<td>SY111 2A</td>
<td>Large flow</td>
<td>0 to 0.7</td>
<td>–100 kPA to 0.6</td>
<td>–100 kPA to 0</td>
<td>M3 x 0.5</td>
<td>M3 x 0.5</td>
</tr>
<tr>
<td>N.O.</td>
<td>SY121 (1)</td>
<td>Standard</td>
<td>0 to 0.7</td>
<td>–100 kPA to 0</td>
<td>–100 kPA to 0.6</td>
<td>M3 x 0.5</td>
<td>M3 x 0.5</td>
</tr>
<tr>
<td>N.O.</td>
<td>SY121 (2)</td>
<td>Large flow</td>
<td>0 to 0.7</td>
<td>–100 kPA to 0</td>
<td>–100 kPA to 0.6</td>
<td>M3 x 0.5</td>
<td>M3 x 0.5</td>
</tr>
</tbody>
</table>

**Note 1)** SY113/SY112 and SY123/SY124: Supply pressure to 1(R) port and exhaust air from 3(P) port.

**Note 2)** Value for DC. Add 1 g for AC. ( ): Without sub-plate.

---

*It is in common between 110 VAC and 115 VAC, and between 220 VAC and 230 VAC. [Low wattage [0.45 W] is available, too. For details, refer to catalog on page 4-18-4.]

---

For details about certified products conforming to international standards, visit us at www.smcworld.com.
**How to Order**

**Standard type**
(Cv0.008)

3 port

For manifold type 30, 31

**Type of actuation**

1. Normally closed
2. Normally open

**Rated voltage**

For DC:
- 5: 24 VDC
- 6: 12 VDC
- V: 6 VDC
- S: 5 VDC
- R: 3 VDC

For AC (50/60 Hz):
- 1: 100 VAC
- 2: 200 VAC
- 3: 110 VAC (115 VAC)
- 4: 220 VAC (230 VAC)

**Electrical entry**

<table>
<thead>
<tr>
<th>G</th>
<th>300 mm lead wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>600 mm lead wire</td>
</tr>
<tr>
<td>L</td>
<td>With lead wire (Length 300 mm)</td>
</tr>
<tr>
<td>LN</td>
<td>Without lead wire</td>
</tr>
<tr>
<td>MO</td>
<td>Without connector</td>
</tr>
<tr>
<td>M</td>
<td>With lead wire (Length 300 mm)</td>
</tr>
<tr>
<td>L plug connector</td>
<td>M plug connector</td>
</tr>
</tbody>
</table>

**Light/Surge voltage suppressor**

- Nil: Without light/surge voltage suppressor
- S: With surge voltage suppressor
- Z: With light/surge voltage suppressor
- R: With surge voltage suppressor (Non-polar type)
- U: With light/surge voltage suppressor (Non-polar type)

- For AC voltage valves there is no "S" option. It is already built into the rectifier circuit.
- For "R" and "U", DC voltage is only available.

**Porting specifications**

- Nil: For manifold
- P: For body ported type to P, R, A port

**Bracket**

- Nil: Without bracket
- F: With bracket

**Port size**

- Nil: Without sub-plate
- M3: With sub-plate (With gasket and screws)

**Manual override**

- Nil: Non-locking push type
- E: Push-turn locking lever type
- D: Push-turn locking slotted type
- B: Locking slotted type

**For manifold type 30, 31**

3 port

Sub-plate style
For manifold type S41

**For manifold type S41**

3 port

Sub-plate style
For manifold type S41

**Series SY100**

V100
SY
SYJ
VK
VZ
VT
VP
VG
VQ
VVF
VQZ
VZ
VS
VF

4-3-5

* "LN" and "MN" types are with 2 sockets.*
Series SY100

How to Order

Large flow type
(Cv: 0.012)

Type of actuation
1 Normally closed
2 Normally open

Light/Surge voltage suppressor
Nil Without light/surge voltage suppressor
S With surge voltage suppressor
Z With light/surge voltage suppressor
R With surge voltage suppressor (Non-polar type)
U With light/surge voltage suppressor (Non-polar type)

Porting specifications
Nil: For manifold
P: For body ported type to P, R, A port

Bracket
Nil: Without bracket
F: With bracket

3 port
For manifold type 30, 31

For manifold type S41

Rated voltage
5 24 VDC
6 12 VDC
V 6 VDC
S 5 VDC
R 3 VDC

Electrical entry
Grommet L plug connector M plug connector
G: 300 mm lead wire L: With lead wire (Length 300 mm) M: With lead wire (Length 300 mm) MN: Without lead wire
H: 600 mm lead wire LN: Without lead wire LO: Without connector MO: Without connector

Manual override
Nil: Non-locking push type
D: Push-turn locking slotted type
B: Locking slotted type
E: Push-turn locking lever type

SY1 1 3 A 5 L M3

SY1 1 4 A 5 M

Large flow type
(Cv: 0.012) Body ported

Sub-plate type

Port size
Nil: Without sub-plate
M3: With sub-plate

(With gasket and screws)

Bracket
Nil: Without bracket
F: With bracket

3 port
For manifold type S41

SY1 1 4 A 5 M

SY1 1 3 A 5 L M3

“LN” and “MN” types are with 2 sockets.
**Construction**

**SY114, SY114A**

---

**Component Parts**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Resin</td>
<td>Gray</td>
</tr>
<tr>
<td>2</td>
<td>Cover</td>
<td>Resin</td>
<td>Gray</td>
</tr>
<tr>
<td>3</td>
<td>Push rod</td>
<td>Resin</td>
<td>—</td>
</tr>
<tr>
<td>4</td>
<td>Movable iron core assembly</td>
<td>HNBR/Stainless steel</td>
<td>—</td>
</tr>
<tr>
<td>5</td>
<td>Fixed iron core</td>
<td>Stainless steel</td>
<td>—</td>
</tr>
<tr>
<td>6</td>
<td>Exhaust poppet</td>
<td>HNBR</td>
<td>—</td>
</tr>
<tr>
<td>7</td>
<td>Return spring</td>
<td>Stainless steel</td>
<td>—</td>
</tr>
<tr>
<td>8</td>
<td>Poppet spring</td>
<td>Stainless steel</td>
<td>—</td>
</tr>
<tr>
<td>9</td>
<td>Coil assembly</td>
<td>—</td>
<td>—</td>
</tr>
</tbody>
</table>

---

**Replacement Parts**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Part no.</th>
<th>Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Sub-plate</td>
<td>SY100-74-1</td>
<td>Zinc die-casted</td>
</tr>
<tr>
<td>11</td>
<td>Gasket</td>
<td>VJ100-6-8</td>
<td>HNBR</td>
</tr>
</tbody>
</table>

---

**How to Order Connector Assembly**

- **For DC:** SY100 – 30 – 4A
- **For 100 VAC:** SY100 – 30 – 1A
- **For 200 VAC:** SY100 – 30 – 2A
- **For other voltages of AC:** SY100 – 30 – 3A
- **Without lead wire:** SY100 – 30 – A

---

**Lead wire length**

<table>
<thead>
<tr>
<th>Nil</th>
<th>300 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>600 mm</td>
</tr>
<tr>
<td>10</td>
<td>1000 mm</td>
</tr>
<tr>
<td>15</td>
<td>1500 mm</td>
</tr>
<tr>
<td>20</td>
<td>2000 mm</td>
</tr>
<tr>
<td>25</td>
<td>2500 mm</td>
</tr>
<tr>
<td>30</td>
<td>3000 mm</td>
</tr>
<tr>
<td>50</td>
<td>5000 mm</td>
</tr>
</tbody>
</table>
Series SY100

Body Ported

Grommet (G), (H): SY1\textsubscript{1/3} (A)-\text{G}\textsubscript{H}-PM3(-F)

*L Other dimensions are same as grommet type.

L plug connector (L): SY1\textsubscript{1/3} (A)-\text{L}\textsubscript{□□}-PM3(F)

M plug connector (M): SY1\textsubscript{1/3} (A)-\text{M}\textsubscript{□□}-PM3(-F)

* Other dimensions are same as grommet type.
Base Mounted (With sub-plate)

Grommet (G), (H): SY1\textsubscript{1/2}(A)-\textsubscript{G} \textsubscript{H}-M3

L plug connector (L): SY1\textsubscript{1/2}(A)-\textsubscript{L}-M3

M plug connector (M): SY1\textsubscript{1/2}(A)-\textsubscript{M}-M3

* Other dimensions are same as grommet type.
Series SY100

Manifold Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>Type 30 Type 31 Type S41</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manifold</td>
<td>Single base/B mount</td>
</tr>
<tr>
<td>P(SUP)/R(EXH)</td>
<td>Common SUP/Common EXH</td>
</tr>
<tr>
<td>Valve stations</td>
<td>2 to 10 stations</td>
</tr>
<tr>
<td>A port</td>
<td>2 to 20 stations</td>
</tr>
<tr>
<td>Porting specifications</td>
<td></td>
</tr>
<tr>
<td>Position</td>
<td>Valve</td>
</tr>
<tr>
<td>Direction</td>
<td>Base</td>
</tr>
<tr>
<td>P, R ports</td>
<td>Top</td>
</tr>
<tr>
<td>A port</td>
<td>M3 x 0.5</td>
</tr>
<tr>
<td>Port size</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>A port</td>
<td>M3 x 0.5, M5 x 0.8</td>
</tr>
</tbody>
</table>

Note 1) SY114(A) and SY124(A) can not be mounted on the same manifold.
Note 2) Supply to R port and exhaust from P port for SY124(A).
Note 3) Type 30 is applicable only for SY113 and SY113A. Piping to exhaust port is not possible.

Flow Characteristics

<table>
<thead>
<tr>
<th>Manifold</th>
<th>Port size</th>
<th>Effective area (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SS3Y1-30</td>
<td>M5 x 0.8</td>
<td>0.14</td>
</tr>
<tr>
<td>SY1EB</td>
<td>M3 x 0.5</td>
<td>0.21</td>
</tr>
<tr>
<td>SS3Y1-31</td>
<td>M5 x 0.8</td>
<td>0.14</td>
</tr>
<tr>
<td>SY1EB(A)</td>
<td>M3 x 0.5</td>
<td>0.21</td>
</tr>
<tr>
<td>SS3Y1-S41</td>
<td>M5 x 0.8</td>
<td>0.14</td>
</tr>
<tr>
<td>SY1EB</td>
<td>M3 x 0.5</td>
<td>0.21</td>
</tr>
<tr>
<td>SY1EB(A)</td>
<td>M5 x 0.8</td>
<td>0.14</td>
</tr>
<tr>
<td>SY1EB</td>
<td>M5 x 0.8</td>
<td>0.21</td>
</tr>
</tbody>
</table>

Note) Value at manifold base mounted

How to Order Valve Manifold Assembly

Example

Valve (N.C.)
SY114-5GZ
Blanking plate assembly
SY100-77-1A
Manifold base (5 stations)
SS3Y1-S41-05-M5

SS3Y1-S41-05-M5 ---- 1 set (Type S41, 5 station manifold part number)
SY100-77-1A -------- 1 set (Blanking plate assembly part number)
SY114-5GZ .......... 4 sets (Valve)

The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

List part numbers of the installed valve and option in required station location separately under manifold part no.
**Common SUP/Common EXH**

**Type 30**

How to Order

SS3Y1 – 30 – 05 – F

- Stations
  - 02: 2 stations
  - 10: 10 stations

<table>
<thead>
<tr>
<th>Components</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>P port</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>R port</td>
<td>M5 x 0.8</td>
</tr>
</tbody>
</table>

Note) Piping to exhaust port not possible.

**Type 31**

How to Order

SS3Y1 – 31 – 05

- Stations
  - 02: 2 stations
  - 20: 20 stations

**Applicable base**

- Sub-plate (For body ported type)
- Type SS3Y1-30
- Type SS3Y1-31

**Applicable solenoid valve**

SY113-□□□□-M3
SY113A-□□□□-M3

**Applicable blanking plate assembly**

SY100-77-1A

**Type S41**

How to Order

SS3Y1 – S41 – 05 – M3

- Stations
  - 02: 2 stations
  - 20: 20 stations

- A port side
  - M3: M3 x 0.5
  - M5: M5 x 0.8

**Applicable base**

- Sub-plate
- Type SS3Y1-30
- Type SS3Y1-31

**Applicable solenoid valve**

SY114-□□□□-□□
SY114A-□□□□-□□
SY124-□□□□-□□
SY124A-□□□□-□□

**Applicable blanking plate assembly**

SY100-77-1A

Note) SY114(A) and SY124(A) cannot be mounted on the same manifold.

---

**Combination with Solenoid Valve and Gasket Manifold Base**

**Body ported**

- Round head combination screw SY100-33-1 (M1.7 x 13, matt nickel plated)
- Gasket VJ100-6-10

**Base mounted**

- Round head combination screw SY100-33-2 (M1.7 x 7, matt nickel plated)
- Blanking plate SY100-77-1
- Gasket VJ100-20-2

**Blanking Plate Assembly**

- Part no.: SY100-77-1A

**Applicable base**

- Sub-plate
  - Type SS3Y1-30
  - Type SS3Y1-31

**Caution**

Mounting Screw Tightening Torques M1.7: 0.12 N·m
**Series SY100**

**Type 30 Manifold: Top Ported/SS3Y1-30-[Stations]-F**

Grommet (G), (H)

- **2 ø3.5** (Mounting hole)
- n-M3 x 0.5 (A port)
- Manual override (Light/Surge voltage suppressor)
- L plug connector (L)
- M plug connector (M)

<table>
<thead>
<tr>
<th>Station</th>
<th>L (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>20.5</td>
</tr>
<tr>
<td>3</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>41.5</td>
</tr>
<tr>
<td>5</td>
<td>52</td>
</tr>
<tr>
<td>6</td>
<td>62.5</td>
</tr>
<tr>
<td>7</td>
<td>73</td>
</tr>
<tr>
<td>8</td>
<td>83.5</td>
</tr>
<tr>
<td>9</td>
<td>94</td>
</tr>
<tr>
<td>10</td>
<td>104.5</td>
</tr>
</tbody>
</table>

- Other dimensions are same as grommet type.

- No bracket is assembled prior to delivery. Mount one to the appropriate position. (Attach two brackets if more than five stations.)

- Given dimensions are for DC and AC applications:
  - G: ≅ 300
  - H: ≅ 600
  - G: 27.3
  - H: 28

- G, H (mm):
  - For DC: 27.3
  - For AC: 28

- Lead wire length:
  - G: 300
  - H: 600

- Pitch (P): 10.5

- Other dimensions are same as grommet type.
**Type 31 Manifold: Top Ported/SS3Y1-31**

Grommet (G), (H)

- **Grommet (G), (H)**
  - Other dimensions are same as grommet type.

**Stations**

<table>
<thead>
<tr>
<th>Station</th>
<th>L1</th>
<th>L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>33.5</td>
<td>27.5</td>
</tr>
<tr>
<td>3</td>
<td>44</td>
<td>38</td>
</tr>
<tr>
<td>4</td>
<td>54.5</td>
<td>48.5</td>
</tr>
<tr>
<td>5</td>
<td>65</td>
<td>59</td>
</tr>
<tr>
<td>6</td>
<td>75.5</td>
<td>69.5</td>
</tr>
<tr>
<td>7</td>
<td>86</td>
<td>80</td>
</tr>
<tr>
<td>8</td>
<td>96.5</td>
<td>90.5</td>
</tr>
<tr>
<td>9</td>
<td>107</td>
<td>101</td>
</tr>
<tr>
<td>10</td>
<td>117.5</td>
<td>111.5</td>
</tr>
<tr>
<td>11</td>
<td>128</td>
<td>122</td>
</tr>
<tr>
<td>12</td>
<td>138.5</td>
<td>132.5</td>
</tr>
<tr>
<td>13</td>
<td>149</td>
<td>143</td>
</tr>
<tr>
<td>14</td>
<td>159.5</td>
<td>153.5</td>
</tr>
<tr>
<td>15</td>
<td>170</td>
<td>164</td>
</tr>
<tr>
<td>16</td>
<td>180.5</td>
<td>174.5</td>
</tr>
<tr>
<td>17</td>
<td>191</td>
<td>185</td>
</tr>
<tr>
<td>18</td>
<td>201.5</td>
<td>195.5</td>
</tr>
<tr>
<td>19</td>
<td>212</td>
<td>206</td>
</tr>
<tr>
<td>20</td>
<td>222.5</td>
<td>216.5</td>
</tr>
</tbody>
</table>

**L plug connector (L)**

- **Manual override**
- **P = 10.5**
- **(Pitch)**

**M plug connector (M)**

- **4-M5 x 0.8**
- **(P/R port)**
- **G, H: 30.1**
- **G, H: 30.8**

- **Other dimensions are same as grommet type.**

**Series SY100**
**Series SY100**

**Type S41 Manifold: Side Ported/SS3Y1-S41-[stations]-M3/M5**

Grommet (G), (H)

---

**L plug connector (L)**

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

- Manual override

- (Pitch) P = 10.5

- (Light/Surge voltage suppressor)

- 2ø3.5 (Mounting hole)

<table>
<thead>
<tr>
<th>Station</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>33.5</td>
<td>44</td>
<td>54.5</td>
<td>65</td>
<td>75.5</td>
<td>86</td>
<td>96.5</td>
<td>107</td>
<td>117.5</td>
<td>128</td>
<td>138.5</td>
<td>149</td>
<td>159.5</td>
<td>170</td>
<td>180.5</td>
<td>191</td>
<td>201.5</td>
<td>212</td>
<td>222.5</td>
</tr>
<tr>
<td>L2</td>
<td>27.5</td>
<td>38</td>
<td>48.5</td>
<td>59</td>
<td>69.5</td>
<td>80</td>
<td>90.5</td>
<td>101</td>
<td>111.5</td>
<td>122</td>
<td>132.5</td>
<td>143</td>
<td>153.5</td>
<td>164</td>
<td>174.5</td>
<td>185</td>
<td>195.5</td>
<td>206</td>
<td>216.5</td>
</tr>
</tbody>
</table>

---

**M plug connector (M)**

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

- (Pitch) P = 10.5

- (Light/Surge voltage suppressor)

- 4-M5 x 0.8 (P/R port)

- G: 300
  - H: 600

- Lead wire length

- G: H: 30.1
  - G: H: 30.8
  - (For DC)

- 4-M5 x 0.8 (P/R port)

- 31.8 (For AC)

---

* Other dimensions are same as grommet type.

4-3-14 SMC
Series SY
Made to Order Specifications:
Please contact SMC for detailed specifications, delivery and pricing.

Energy-saving Type

Power consumption is decreased by 1/3 by reducing the wattage required to hold the valve in an energized state. (Effective energizing time is over 62 ms at 24 VDC.)

Specifications

<table>
<thead>
<tr>
<th>Specifications</th>
<th>SY1(\frac{3}{4}T)</th>
<th>SY1(\frac{3}{4}AT)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coil rated voltage (V)</td>
<td>24 DC, 12 DC</td>
<td>24 DC, 12 DC</td>
</tr>
<tr>
<td>Power consumption (W)</td>
<td>Inrush 0.55, Holding 0.22</td>
<td>Inrush 0.8, Holding 0.3</td>
</tr>
</tbody>
</table>

Specifications other than above are the same as standard models.

How to Order

**Body ported**

SY1 1 3 T 5 L Z M3

**Base mounted**

SY1 1 4 T 5 M Z

Type of actuation

1 Normally closed
2 Normally open

Entry is the same as standard products.

Body option

Nil Standard A Large flow capacity

Rated voltage

5 24 VDC
6 12 VDC

Working Principle

The circuit shown below reduces current consumption at holding which reduces the overall power consumption. Refer to electrical power waveform as shown below.

Low Wattage Specifications (0.45 W)

How to Order

SY1 X200

Entry is the same as standard products.