Miniature Regulator

**ARJ310 Series**

- Compact and lightweight
- Allows smaller mounting pitch
  - (Main body 65 g)

**Improved flow rate characteristics**

- **Flow rate (L/min (ANR))**
  - 0.0
  - 0.1
  - 0.2
  - 0.3
  - 0.4
  - 0.5
  - 0.6
  - 0.7

- **Outlet pressure (MPa)**

**Panel mounting type**

- ø4, ø6 (Metric size)
- ø5/32", ø1/4" (Inch size)

**Accommodates two types of threads**

- Inside: Female thread (M5 x 0.8)
- Outside: Male thread (1/8)

**Built-in One-touch fitting**

- ARJ210-M5
- ARJ310-01
- ARJ310-M5

**Inlet pressure:** 0.7 MPa
**Miniature Regulator**

**ARJ310 Series**

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### Standard Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure gauge port size</td>
<td>Rc 1/8, NPT 1/8 (Female thread)</td>
</tr>
<tr>
<td>Fluid</td>
<td>Air</td>
</tr>
<tr>
<td>Proof pressure</td>
<td>1.2 MPa</td>
</tr>
<tr>
<td>Maximum operating pressure</td>
<td>0.8 MPa</td>
</tr>
<tr>
<td>Regulating pressure range</td>
<td>Standard: 0.2 to 0.7 MPa, Low pressure use (0.2 MPa setting): 0.05 to 0.2 MPa</td>
</tr>
<tr>
<td>Ambient and operating temperature range</td>
<td>–5 to 60°C (No freezing)</td>
</tr>
<tr>
<td>Construction</td>
<td>Relieving type</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>0.065</td>
</tr>
</tbody>
</table>

---

### Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Port size</th>
<th>IN</th>
<th>OUT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARJ310-01</td>
<td>R1/8, M5 x 0.8</td>
<td>R1/8</td>
<td>Rc 1/8</td>
</tr>
<tr>
<td>ARJ310-N01</td>
<td>NPT1/8, M5 x 0.8</td>
<td>NPT1/8</td>
<td></td>
</tr>
<tr>
<td>ARJ310F-01-04</td>
<td>R1/8, M5 x 0.8</td>
<td>ø4 One-touch fitting</td>
<td></td>
</tr>
<tr>
<td>ARJ310F-01-06</td>
<td>R1/8, M5 x 0.8</td>
<td>ø6 One-touch fitting</td>
<td></td>
</tr>
<tr>
<td>ARJ310F-N01-03</td>
<td>NPT1/8, M5 x 0.8</td>
<td>ø5/32” One-touch fitting</td>
<td></td>
</tr>
<tr>
<td>ARJ310F-N01-07</td>
<td>NPT1/8, M5 x 0.8</td>
<td>ø1/4” One-touch fitting</td>
<td></td>
</tr>
</tbody>
</table>

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### Accessory (Option) Part No.

<table>
<thead>
<tr>
<th>Accessory (Option) Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bracket</td>
</tr>
<tr>
<td>Pressure gauge (Note)</td>
</tr>
</tbody>
</table>

**Note:** Pressure gauges (G15) for 0.2 MPa are not available.

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### How to Order

**ARJ 3 10**

- With One-touch fitting
- Body size
- Model
- Thread type

**ARJ 3 10 F**

- With One-touch fitting
- Model
- Thread type

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**Port size (IN, OUT)**

- **IN**
  - 01
  - 1/8 (Male thread), M5 x 0.8 (Female thread)
- **OUT**
  - 01
  - 1/8 (Female thread)

**Made to Order**

- Refer to page 676 for details.

**Semi-standard**

- Nil
  - 0.7 MPa setting (Standard)
- 1
  - 0.2 MPa setting (Note 1)
- S
  - With seal

**Applicable tubing O.D. (OUT)**

**Metric size**

- 04
  - 4 mm
- 06
  - 6 mm

**Inch size**

- 03
  - 5/32”
- 07
  - 1/4”

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**Note 1:** Compared with standard specifications, its adjusting spring has been only changed for 0.2 MPa. It is not the product which does not allow the pressure more than 0.2 MPa. Adjusting spring is not replaceable. Besides, in the case with the pressure gauge, the pressure gauge will be the one for 1 MPa.

**Note 2:** For products with pressure gauge, pressure gauge is shipped together with product.

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**Symbol**

1 2
Flow Rate Characteristics (Representative Values)

**ARJ310-01**

<table>
<thead>
<tr>
<th>Inlet pressure (MPa)</th>
<th>Outlet pressure (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**ARJ310F-01-04**

<table>
<thead>
<tr>
<th>Inlet pressure (MPa)</th>
<th>Outlet pressure (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**ARJ310F-01-06**

<table>
<thead>
<tr>
<th>Inlet pressure (MPa)</th>
<th>Outlet pressure (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.2</td>
<td>0.2</td>
</tr>
</tbody>
</table>

Pressure Characteristics (Representative Values)

Conditions:
- Inlet pressure: 0.7 MPa
- Outlet pressure: 0.2 MPa
- Flow rate Q = 20 L/min (ANR)

Construction

**ARJ310-01**

**ARJ310F-01**

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>Aluminum alloy</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Valve guide</td>
<td>Brass</td>
<td>Electroless nickel plated</td>
</tr>
<tr>
<td>3</td>
<td>Bonnet</td>
<td>Brass</td>
<td>Electroless nickel plated</td>
</tr>
<tr>
<td>4</td>
<td>Piston</td>
<td>POM</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Valve</td>
<td>Brass</td>
<td>Rubber lining material: NBR</td>
</tr>
<tr>
<td>6</td>
<td>Adjusting screw</td>
<td>Iron</td>
<td>Nickel plated</td>
</tr>
<tr>
<td>7</td>
<td>Panel nut</td>
<td>Iron</td>
<td>Zinc chromated</td>
</tr>
<tr>
<td>8</td>
<td>Hexagon nut</td>
<td>Iron</td>
<td>Zinc chromated</td>
</tr>
<tr>
<td>9</td>
<td>Adjusting spring</td>
<td>Steel wire</td>
<td>Zinc chromated</td>
</tr>
<tr>
<td>10</td>
<td>Valve spring</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Spring holder</td>
<td>Steel band</td>
<td>Zinc chromated</td>
</tr>
<tr>
<td>12</td>
<td>Mini Y-seal</td>
<td>NBR</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>O-ring</td>
<td>NBR</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Lock washer</td>
<td>SS</td>
<td>Zinc chromated</td>
</tr>
<tr>
<td>15</td>
<td>Bracket</td>
<td>Steel band</td>
<td>Electroplated parts Accessory</td>
</tr>
<tr>
<td>16</td>
<td>Pressure gauge</td>
<td>Accessory</td>
<td>Accessory</td>
</tr>
<tr>
<td>17</td>
<td>Cassette</td>
<td>POM, Stainless steel</td>
<td></td>
</tr>
</tbody>
</table>
ARJ310 Series

Dimensions

ARJ310-01

ARJ310F-01

Panel cutout dimensions
ø12.5/Panel thickness: 4 or less

Port size
Rc, NPT 1/8

Applicable tubing O.D.
Metric size ø4, ø6
Inch size ø5/32", ø1/4"

M5 x 0.8 (Female thread)

Pressure gauge
Rc, NPT 1/8

Approximate settings
0.2 MPa setting
0.4 MPa Setting

Made to Order Specifications

Please contact SMC for detailed dimensions, specifications and lead times.

For moderate pressure (0.4 MPa Setting): Compared with standard specifications, its adjusting spring has been only changed for 0.4 MPa. It is not the product which does not allow the pressure more than 0.4 MPa. Adjusting spring is not replaceable.

How to Order

ARJ 3 10 - 01 B - X204

Body size
Model
Thread type
Relieving type
Nil R, Rc
N NPT

Port size (IN-OUT)
Nil None
B Bracket

Semi-standard
Nil 0.7 MPa setting (Standard)
1 0.2 MPa setting [Note]
S With seal

Note 1) Compared with standard specifications, its adjusting spring has been only changed for 0.4 MPa. It is not the product which does not allow the pressure more than 0.4 MPa. Adjusting spring is not replaceable.
ARJ310 Series
Specific Product Precautions
Be sure to read this before handling the products.
Refer to back page 50 for Safety Instructions and pages 387 to 391 for Precautions on every series.

<table>
<thead>
<tr>
<th>Design and Selection</th>
<th>Mounting</th>
</tr>
</thead>
</table>

⚠️ Warning
1. This product cannot be used as a check regulator by installing it between solenoid valve and actuator. It can result in causing breakdown and malfunction.

2. When piping, tighten the regulator with the recommended proper tightening torque (M5: 1.5 to 2 N·m, R 1/8: 7 to 9 N·m) while holding the wrench flats (width 11) of the valve guide for IN port and holding the hexagonal section of the body for the OUT port. Excessive tightening or holding a part other than those specified can cause damage.

3. While piping to products or operating the knob, ensure that an excess bending moment should not be applied to a product, because it may result in damage.

⚠️ Caution
To set the correct pressure
1. Make connections after confirming the 🗼 mark which indicates the air inlet. Reversed connections can cause malfunction.