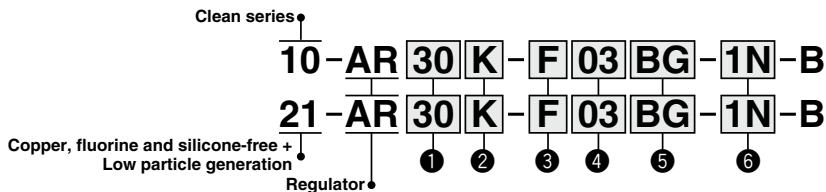


Series 10-21-AR-B Regulator

Series 10-21-AR□K-B Regulator with Backflow Function



How to Order



- Option/Semi-standard: Select one each for a to g.
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.

| | Symbol | Description | ① Body size | | | | | | |
|--------------------------|----------------------|--|-----------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---|
| | | | 20 | 25 | 30 | 40 | 50 | 60 | |
| ② With backflow function | Nil | Without backflow function | ● | ● | ● | ● | ● | ● | |
| | K ^{Note 1)} | With backflow function | ● | ● | ● | ● | ● | ● | |
| ③ Thread type | + | | | | | | | | |
| | Nil | Rc | ● | ● | ● | ● | ● | ● | |
| | N | NPT | ● | ● | ● | ● | ● | ● | |
| | F | G | ● | ● | ● | ● | ● | ● | |
| ④ Port size | + | | | | | | | | |
| | 01 | 1/8 | ● | — | — | — | — | — | |
| | 02 | 1/4 | ● | ● | ● | ● | — | — | |
| | 03 | 3/8 | — | ● | ● | ● | — | — | |
| | 04 | 1/2 | — | — | — | ● | — | — | |
| | 06 | 3/4 | — | — | — | — | ● | — | |
| ⑤ Option | + | | | | | | | | |
| | a Mounting | Nil | Without mounting option | ● | ● | ● | ● | ● | ● |
| | | B ^{Note 2)} | With bracket | ● | ● | ● | ● | ● | ● |
| | | H | With set nut (for panel mounting) | ● | ● | ● | ● | — | — |
| b Pressure gauge | + | | | | | | | | |
| | Nil | Without pressure gauge | ● | ● | ● | ● | ● | ● | |
| | G | Round type pressure gauge (without limit indicator) | ● | ● | ● | ● | ● | ● | |
| ⑥ Semi-standard | + | | | | | | | | |
| | c Set pressure | Nil | 0.05 to 0.85 MPa setting | ● | ● | ● | ● | ● | ● |
| | | 1 ^{Note 4)} | 0.02 to 0.2 MPa setting | ● | ● | ● | ● | ● | ● |
| | + | | | | | | | | |
| | d Exhaust mechanism | Nil | Relieving type | ● | ● | ● | ● | ● | ● |
| | | N | Non-relieving type | ● | ● | ● | ● | ● | ● |
| | + | | | | | | | | |
| | e Flow direction | Nil | Flow direction: Left to right | ● | ● | ● | ● | ● | ● |
| | | R | Flow direction: Right to left | ● | ● | ● | ● | ● | ● |
| | + | | | | | | | | |
| f Knob | Nil | Downward | ● | ● | ● | ● | ● | ● | |
| | Y | Upward | ● | ● | ● | ● | ● | ● | |
| + | | | | | | | | | |
| g Pressure unit | Nil | Name plate and pressure gauge in imperial units: MPa | ● | ● | ● | ● | ● | ● | |
| | Z ^{Note 5)} | Name plate: psi, Pressure gauge: Both MPa and psi | ○ ^{Note 6)} | ○ ^{Note 6)} | ○ ^{Note 6)} | ○ ^{Note 6)} | ○ ^{Note 6)} | ○ ^{Note 6)} | |

Note 1) When using a non-relieving type with a backflow function, if the inlet pressure is increased slowly, the inlet pressure may continue to the outlet side.

Note 2) Option B, G, H are not assembled and supplied loose at the time of shipment.

Note 3) Assembly of a bracket and set nuts (10-/21-AR20(K)-B to AR40(K)-B)

Including 2 mounting screws for the 10-/21-AR50(K)-B, AR60(K)-B

Note 4) The only difference from the standard specifications is the adjusting spring for the regulator. It does not restrict the setting of 0.2 MPa or more.

When the pressure gauge is attached, a 0.2 MPa pressure gauge will be fitted.

Note 5) For thread type: NPT. This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.)

Note 6) ○: For thread type: NPT only

Standard Specifications

| Model | 10-/21-AR20(K)-B | 10-/21-AR25(K)-B | 10-/21-AR30(K)-B | 10-/21-AR40(K)-B | 10-/21-AR40(K)-06-B | 10-/21-AR50(K)-B | 10-/21-AR60(K)-B |
|-------------------------------|--|------------------|------------------|------------------|---------------------|------------------|------------------|
| Port size | 1/8, 1/4 | 1/4, 3/8 | 1/4, 3/8 | 1/4, 3/8, 1/2 | 3/4 | 3/4, 1 | 1 |
| Pressure gauge port size | 1/8 | | | | | | |
| Fluid | Air | | | | | | |
| Ambient & fluid temperature | -5 to 60°C (No freezing) | | | | | | |
| Proof pressure | 1.5 MPa | | | | | | |
| Maximum operating pressure | 1.0 MPa | | | | | | |
| Set pressure range | 0.05 to 0.85 MPa | | | | | | |
| Construction | Relieving type | | | | | | |
| Grease | 10-: Fluorine grease 21-: Lithium soap based grease | | | | | | |
| Cleanliness class (ISO class) | 10-: Class 3 21-: Class 3 | | | | | | |

Directional
Control Valves

Air Cylinders

Accessory Part No.

| Option | Model | 10-/21-AR20(K)-B | 10-/21-AR25(K)-B | 10-/21-AR30(K)-B | 10-/21-AR40(K)-B | 10-/21-AR40(K)-06-B | 10-/21-AR50(K)-B | 10-/21-AR60(K)-B |
|-------------------------------------|-------------------------|--------------------------------------|------------------|------------------|------------------|---------------------|--------------------------------|------------------|
| Bracket assembly ^{Note 1)} | | AR23P-270AS | AR28P-270AS | AR33P-270AS | AR43P-270AS | | AR52P-270AS ^{Note 2)} | |
| Set nut | | AR23P-260S | AR28P-260S | AR33P-260S | AR43P-260S | | ___ ^{Note 3)} | |
| Pressure gauge ^{Note 4)} | Standard | 10: G49-10-□01, 21: G49-10-□01-MS-X3 | | | | | | |
| | 0.02 to 0.2 MPa setting | 10: G49-4-□01, 21: G49-4-□01-MS-X3 | | | | | | |

Note 1) Assembly of a bracket and set nuts.

Note 2) Assembly includes a bracket and 2 mounting screws.

Note 3) Please consult with SMC regarding the set nuts for the 10-/21-AR50(K)-B and AR60(K)-B.

Note 4) □ in part numbers for a round pressure gauge indicates a type of connection thread. No indication is necessary for R; however, indicate N for NPT.

Please contact SMC regarding the connection thread NPT and pressure gauge supply for Both MPa and psi unit specifications.

Rotary Actuators

Air Grippers

Air Preparation
Equipment

Modular F. R.

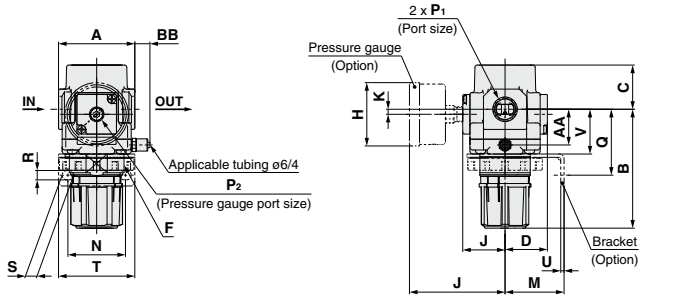
Pressure Control
Equipment

Fittings & Tubing

Flow Control
EquipmentPressure Switches/
Pressure Sensors

Dimensions

**10-
21-AR20-B to 40-06-B**



Panel fitting dimension

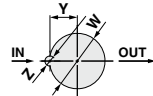
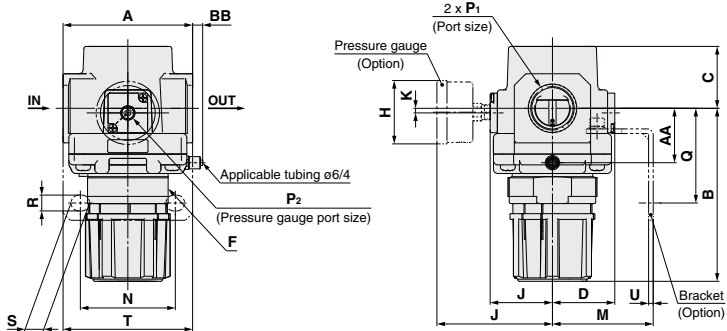


Plate thickness
 10-/21-AR20-B-30-B: Max. 3.5
 10-/21-AW40-B: Max. 5

**10-
21-AR50-B/60-B**

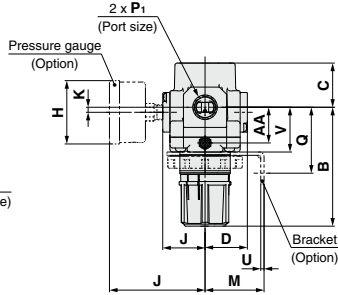
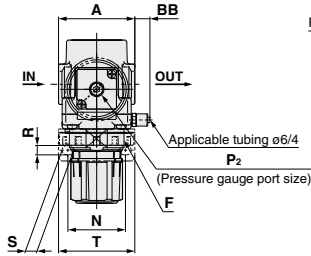


| Model | Standard specifications | | | | | | | | | | | Optional specifications | | | | | | | | | | | | |
|------------------|-------------------------|----------------|--------------|-------|------|------|-----------|------|------------|------|------|-------------------------|---------------------------|----|-----------------------|------|-----|------|----|-----|-------------|------|----|---|
| | P ₁ | P ₂ | A B (Note 1) | | | C | D | F | J | K | AA | BB | Round type pressure gauge | | Bracket mounting size | | | | | | Panel mount | | | |
| | | | H | J | M | | | | | | | | N | Q | R | S | T | U | V | W | Y | Z | | |
| 10-/21-AR20-B | 1/8, 1/4 | 1/8 | 40 | 67.4 | 26.5 | 28.5 | M28 x 1 | 28.5 | 2 (Note 2) | 20.5 | 11 | ø44 | 65.5 | 30 | 34 | 43.9 | 5.4 | 15.4 | 55 | 2.3 | 24.7 | 28.5 | 14 | 6 |
| 10-/21-AR25-B | 1/4, 3/8 | 1/8 | 53 | 71.9 | 28 | 27.5 | M32 x 1.5 | 27.5 | 0 | 21.3 | 9.8 | ø44 | 64.5 | 30 | 34 | 43.9 | 5.4 | 15.4 | 55 | 2.3 | 25.7 | 32.5 | 16 | 6 |
| 10-/21-AR30-B | 1/4, 3/8 | 1/8 | 53 | 85.6 | 30.7 | 29.4 | M38 x 1.5 | 29.4 | 3.5 | 24.8 | 10.5 | ø44 | 66.4 | 41 | 40 | 45.8 | 6.5 | 8 | 53 | 2.3 | 31.1 | 38.5 | 19 | 7 |
| 10-/21-AR40-B | 1/4, 3/8, 1/2 | 1/8 | 70 | 91.7 | 35.8 | 33.8 | M42 x 1.5 | 33.8 | 3.5 | 28.9 | 10.5 | ø44 | 70.8 | 50 | 54 | 54 | 8.5 | 10.5 | 70 | 2.3 | 35.5 | 42.5 | 21 | 7 |
| 10-/21-AR40-06-B | 3/4 | 1/8 | 75 | 93.2 | 35.8 | 33.8 | M42 x 1.5 | 33.8 | 3 | 30.4 | 8 | ø44 | 70.8 | 50 | 54 | 55.5 | 8.5 | 10.5 | 70 | 2.3 | 37 | 42.5 | 21 | 7 |
| 10-/21-AR50-B | 3/4, 1 | 1/8 | 90 | 125.2 | 43 | 43.3 | — | 43.3 | 3.2 | 40 | 7 | ø44 | 80.3 | 70 | 66 | 65.8 | 11 | 13 | 90 | 3.2 | — | — | — | — |
| 10-/21-AR60-B | 1 | 1/8 | 95 | 129.6 | 46 | 43.3 | — | 43.3 | 3.2 | 44.5 | 4.5 | ø44 | 80.3 | 70 | 66 | 65.8 | 11 | 13 | 90 | 3.2 | — | — | — | — |

Note 1) The dimension of B is the length when the filter regulator knob is unlocked.
 Note 2) For the 10-/21-AR20-B only, the position of the pressure gauge is above the center of the piping.

Dimensions

¹⁰⁻/₂₁₋AR20K-B to 40K-06-B



Panel fitting dimension

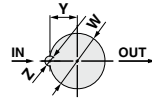
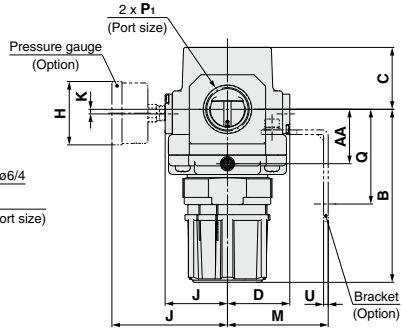
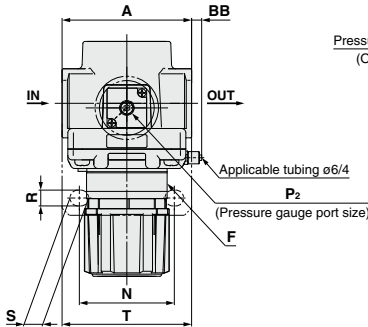


Plate thickness
 10-/21-AR20K-B-30K-B: Max. 3.5
 10-/21-AR40K-B: Max. 5

¹⁰⁻/₂₁₋AR50K-B/60K-B



| Model | Standard specifications | | | | | | | | | | | Optional specifications | | | | | | | | | | | | |
|-------------------|-------------------------|----------------|----|----------------------|------|------|-----------|------|----------------------|------|------|---------------------------|------|-----------------------|----|------|-----|------|----|-------------|------|------|----|---|
| | P ₁ | P ₂ | A | B ^{Note 1)} | C | D | F | J | K | AA | BB | Round type pressure gauge | | Bracket mounting size | | | | | | Panel mount | | | | |
| | | | | | | | | | | | | H | J | M | N | Q | R | S | T | U | V | W | Y | Z |
| 10-/21-AR20K-B | 1/8, 1/4 | 1/8 | 40 | 67.4 | 26.5 | 28.5 | M28 x 1 | 28.5 | 2 ^{Note 2)} | 20.5 | 11 | ø44 | 65.5 | 30 | 34 | 43.9 | 5.4 | 15.4 | 55 | 2.3 | 24.7 | 28.5 | 14 | 6 |
| 10-/21-AR25K-B | 1/4, 3/8 | 1/8 | 53 | 71.9 | 28 | 27.5 | M32 x 1.5 | 27.5 | 0 | 21.3 | 9.8 | ø44 | 64.5 | 30 | 34 | 43.9 | 5.4 | 15.4 | 55 | 2.3 | 25.7 | 32.5 | 16 | 6 |
| 10-/21-AR30K-B | 1/4, 3/8 | 1/8 | 53 | 85.6 | 30.7 | 29.4 | M38 x 1.5 | 29.4 | 3.5 | 24.8 | 10.5 | ø44 | 66.4 | 41 | 40 | 45.8 | 6.5 | 8 | 53 | 2.3 | 31.1 | 38.5 | 19 | 7 |
| 10-/21-AR40K-B | 1/4, 3/8, 1/2 | 1/8 | 70 | 91.7 | 35.8 | 33.8 | M42 x 1.5 | 33.8 | 3.5 | 28.9 | 10.5 | ø44 | 70.8 | 50 | 54 | 54 | 8.5 | 10.5 | 70 | 2.3 | 35.5 | 42.5 | 21 | 7 |
| 10-/21-AR40K-06-B | 3/4 | 1/8 | 75 | 93.2 | 35.8 | 33.8 | M42 x 1.5 | 33.8 | 3 | 30.4 | 8 | ø44 | 70.8 | 50 | 54 | 55.5 | 8.5 | 10.5 | 70 | 2.3 | 37 | 42.5 | 21 | 7 |
| 10-/21-AR50K-B | 3/4, 1 | 1/8 | 90 | 125.2 | 43 | 43.3 | — | 43.3 | 3.2 | 40 | 7 | ø44 | 80.3 | 70 | 66 | 65.8 | 11 | 13 | 90 | 3.2 | — | — | — | — |
| 10-/21-AR60K-B | 1 | 1/8 | 95 | 129.6 | 46 | 43.3 | — | 43.3 | 3.2 | 44.5 | 4.5 | ø44 | 80.3 | 70 | 66 | 65.8 | 11 | 13 | 90 | 3.2 | — | — | — | — |

Note 1) The dimension of B is the length when the filter regulator knob is unlocked.
 Note 2) For the 10-/21-AR20K-B only, the position of the pressure gauge is above the center of the piping.

Directional Control Valves
 Air Cylinders
 Rotary Actuators
 Air Grippers
 Air Preparation Equipment
 Modular F. R.
 Pressure Control Equipment
 Fittings & Tubing
 Flow Control Equipment
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