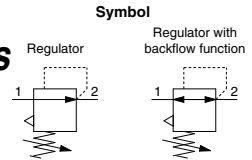
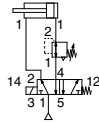


**ARP20 to ARP40 Series**Direct Operated Precision Regulator with  
Backflow Function/Modular Type**ARP20K to ARP40K Series**

- With the backflow function it incorporates a mechanism to exhaust the air pressure in the outlet side reliably and quickly.

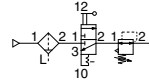
## Example 1)

When the pressure in the rear and the front of the cylinder differs:



## Example 2)

When the air supply is cut off and releasing the inlet pressure to the atmosphere, the residual pressure release of the outlet side can be ensured for a safety purpose.

**How to Order**

**ARP** **30** **K** - **03** **BE** -

1 2 3 4 5 6

- Option / Semi-standard: Select one each for **a** to **f**.
  - Option / Semi-standard symbol: Enter them alphanumerically.
- Example) ARP30K-03BE-1RY

		Symbol	Description	①			
				Body size			
				20	30	40	
②	With backflow function	Nil	Without backflow function	●	●	●	
		K	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	—	—	●	
+							
⑤ Option <small>Note 1)</small>	a	Mounting	Nil	Without mounting option	●	●	●
			B <small>Note 2)</small>	With bracket	●	●	●
			H	With set nut (For panel mount)	●	●	●
	+						
	b	Pressure gauge	Nil	Without pressure gauge	●	●	●
			E	Square embedded type pressure gauge (With limit indicator)	●	●	●
			G	Round type pressure gauge (With limit indicator)	●	●	●
		Digital pressure switch	E1 <small>Note 3)</small>	Output: NPN output / Electrical entry: Wiring bottom entry	●	●	●
			E2 <small>Note 3)</small>	Output: NPN output / Electrical entry: Wiring top entry	●	●	●
			E3 <small>Note 3)</small>	Output: PNP output / Electrical entry: Wiring bottom entry	●	●	●
			E4 <small>Note 3)</small>	Output: PNP output / Electrical entry: Wiring top entry	●	●	●
					●	●	●

Direct Operated Precision Regulator/Modular Type **ARP20 to ARP40 Series**

Direct Operated Precision Regulator with Backflow Function/Modular Type **ARP20K to ARP40K Series**



ARP20/ARP20K



ARP30/ARP30K



ARP40/ARP40K

		Symbol	Description	①			
				Body size			
				20	30	40	
6	c	Set pressure	Nil	0.005 to 0.4 MPa setting	●	●	●
			1 <small>Note 4)</small>	0.005 to 0.2 MPa setting	●	●	●
			3 <small>Note 4)</small>	0.008 to 0.6 MPa setting	●	●	●
			+				
	d	Flow direction	Nil	Flow direction: Left to right	●	●	●
			R	Flow direction: Right to left	●		●
			+				
	e	Knob	Nil	Downward facing knob	●	●	●
			Y	Upward facing knob	●	●	●
			+				
	f	Pressure unit	Nil	Name plate and pressure gauge in imperial units: MPa	●	●	●
			Z <small>Note 5)</small>	Name plate and pressure gauge in imperial units: psi	○ <small>Note 7)</small>	○ <small>Note 7)</small>	○ <small>Note 7)</small>
			ZA <small>Note 6)</small>	Digital pressure switch: With unit conversion function	△ <small>Note 8)</small>	△ <small>Note 8)</small>	△ <small>Note 8)</small>

Note 1) Options B, G, H are shipped together, (but not assembled).

Note 2) Set nut is included for bracket.

Note 3) When choosing with H (panel mount), the installation space for lead wires will not be secured. In this case, select "wiring top entry" for the lead wire entry. (Select "wiring bottom entry" when the semi-standard Y is chosen simultaneously.)

Note 4) The only difference from the standard specifications is the pressure regulator spring.

It does not restrict the setting of 0.2 MPa/0.6 MPa or more.

When the pressure gauge is attached, a 0.2 MPa pressure gauge for 0.2 MPa setting will be fitted, and a 0.7 MPa pressure gauge for 0.6 MPa setting will be fitted.

When a digital pressure switch is attached, the pressure display is fixed to 1.0 MPa.

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.) The digital pressure switch will be equipped with the unit conversion function, setting to psi initially.

Note 6) For options: E1, E2, E3, E4. This product is for overseas use only according to the new Measurement Law. (The SI unit is provided for use in Japan.)

Note 7) ○: For thread type: NPT only

Note 8) △: Combination available for options: E1, E2, E3, E4.

ARJ

AR425  
to 935

ARX

AMR

ARM

ARP

IR□-A

IR

IRV

VEV

SRH

SRP

SRF

ITV

IC

ITVH

ITVX

PVQ

VY1

VBA

VBAT

AP100

# ARP20/30/40 Series

## Specifications

Model			ARP20(K)	ARP30(K)	ARP40(K)
Port size			1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2
Fluid			Air		
Proof pressure			1.2 MPa		
Max. operating pressure			0.7 MPa		
Set pressure range <small>Note 1)</small>	For 0.4 MPa setting	Ex.) ARP30-02BG	0.005 to 0.4 MPa		
	For 0.2 MPa setting	Ex.) ARP30-02BG-1	0.005 to 0.2 MPa		
	For 0.6 MPa setting	Ex.) ARP30-02BG-3	0.008 to 0.6 MPa		
Sensitivity			Within 0.2% F.S.		
Repeatability <small>Note 2)</small>			Within ±1% F.S. (or ±3 kPa)		
Air consumption	For 0.4 MPa setting	Ex.) ARP30-02BG	1 L/min (ANR) or less (at P2 = 0.4 MPa)		
	For 0.2 MPa setting	Ex.) ARP30-02BG-1	0.6 L/min (ANR) or less (at P2 = 0.2 MPa)		
	For 0.6 MPa setting	Ex.) ARP30-02BG-3	1.4 L/min (ANR) or less (at P2 = 0.6 MPa)		
Pressure port size <small>Note 3)</small>			1/8	1/8	1/4
Ambient and fluid temperature	With digital pressure switch	Ex.) ARP30-02BE1	-5 to 60°C (No freezing)		
			-5 to 50°C (No freezing)		
Construction			Bleed type		
Weight (kg) <small>Note 4)</small>			0.2	0.3	0.5

Note 1) When a product with backflow function (ARP20K to 40K) is chosen, set the inlet pressure 0.05 MPa or higher than the set pressure.

Note 2) For the type set to 0.2 MPa only, repeatability will be within ±3 kPa.

Note 3) Port thread is not provided for products with square embedded-type pressure gauges.

Note 4) Weight shown is for product without any options.

## Optional Parts

Model			ARP20(K)	ARP30(K)	ARP40(K)
Bracket assembly <small>Note 1)</small>			ARP20P-270AS	ARP30P-270AS	ARP40P-270AS
Set nut			AR23P-260S	AR33P-260S	AR43P-260S
Pressure gauge	0.4 MPa	Round type <small>Note 2)</small>	G36-4-□01		G46-4-□02
		Square embedded type <small>Note 3)</small>	GC3-4AS [GC3P-010AS (Pressure gauge cover only)]		
	0.2 MPa	Round type <small>Note 2)</small>	G36-2-□01		G46-2-□02
		Square embedded type <small>Note 3)</small>	GC3-2AS [GC3P-010AS (Pressure gauge cover only)]		
	0.7 MPa	Round type <small>Note 2)</small>	G36-7-□01		G46-7-□02
		Square embedded type <small>Note 3)</small>	GC3-7AS [GC3P-010AS (Pressure gauge cover only)]		
	Digital type <small>Note 4)</small>	NPN output / Wiring bottom entry	ISE35-N-25-MLA [ISE35-N-25-M (Switch body only)]		
		NPN output / Wiring top entry	ISE35-R-25-MLA [ISE35-R-25-M (Switch body only)]		
		PNP output / Wiring bottom entry	ISE35-N-65-MLA [ISE35-N-65-M (Switch body only)]		
		PNP output / Wiring top entry	ISE35-R-65-MLA [ISE35-R-65-M (Switch body only)]		

Note 1) Assembly includes a bracket and set nuts.

Note 2) □ in part numbers for a round-type pressure gauge indicates a type of connection thread. No indication is necessary for R; however, indicate N for NPT. The G thread is unavailable. If it is required, select the R thread type (Nil) instead. Please contact SMC regarding the connection thread NPT and pressure gauge supply for psi unit specifications.

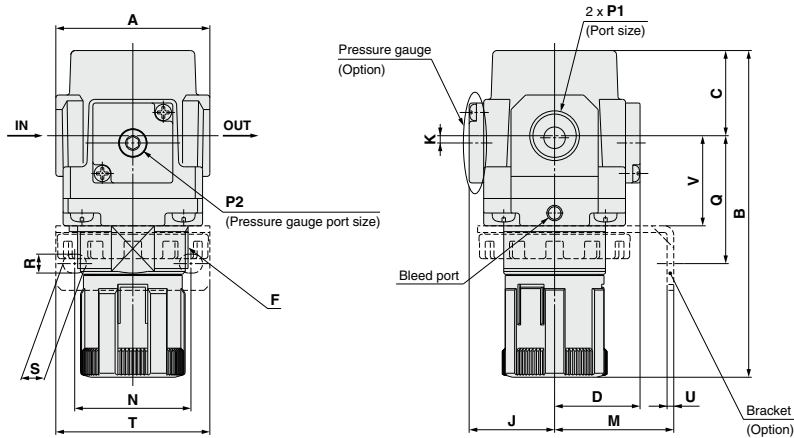
Note 3) Includes one O-ring and 2 mounting screws. [ ]: Pressure gauge cover only.

Note 4) Lead wire with connector (2 m), adapter, lock pin, O-ring (1 pc.), and mounting screws (2 pcs.) are included. [ ]: Switch body only.

For how to order the digital pressure switch, refer to page 767.

# ARP20/30/40 Series

## Dimensions



Panel fitting dimension

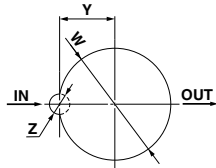
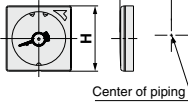
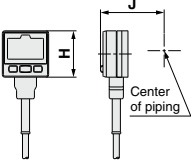
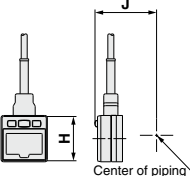
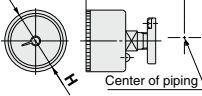


Plate thickness  
ARP20(K), ARP30(K): Max. 3.5  
ARP40(K): Max. 5

### Pressure Gauge Option

Option	Square embedded type pressure gauge	Digital pressure switch (Electrical entry: Wiring bottom entry)	Digital pressure switch (Electrical entry: Wiring top entry)	Round type pressure gauge
Dimensions				

Model	Standard specifications								
	P1	P2	A	B <sup>Note 1)</sup>	C	D	F	J	K <sup>2 Note 2)</sup>
ARP20(K)	1/8, 1/4	1/8	40	98	27	28.5	M28 x 1	28.5	2
ARP30(K)	1/4, 3/8	1/8	53	117	29	29.5	M38 x 1.5	29.5	2.5
ARP40(K)	1/4, 3/8, 1/2	1/4	70	148	41	34	M42 x 1.5	34	1

Model	Optional specifications																
	Square embedded type pressure gauge		Digital pressure switch		Round type pressure gauge		Bracket mount dimension							Panel mount			
							M	N	Q	R	S	T	U				
ARP20(K)	□28	29.5	□27.8	40	ø37.5	66	30	34	47	5.4	15.4	55	2.3	28	28.5	14	6
ARP30(K)	□28	30.5	□27.8	41	ø37.5	67	41	40	44	6.5	8	53	2.3	31	38.5	19	7
ARP40(K)	□28	35	□27.8	45	ø42.5	74	50	54	54	8.5	10.5	70	2.3	35.5	42.5	21	7

Note 1) The total length of B dimension is the length when the filter regulator knob is unlocked.

Note 2) For ARP20(K) only, the position of the pressure gauge is above the center of the piping.