






Precision Regulator

Series IR1000/2000/3000

	Series	Model	Regulating pressure range	Port size	Page
Basic Type	Series IR1000 	IR1000	0.005 to 0.2 MPa	1/8	553
		IR1010	0.01 to 0.4 MPa		
		IR1020	0.01 to 0.8 MPa		
	Series IR2000 	IR2000	0.005 to 0.2 MPa	1/4	553
		IR2010	0.01 to 0.4 MPa		
		IR2020	0.01 to 0.8 MPa		
	Series IR3000 	IR3000	0.01 to 0.2 MPa	1/4, 3/8, 1/2	553
		IR3010	0.01 to 0.4 MPa		
		IR3020	0.01 to 0.8 MPa		
Air Operated Type	Series IR2000 	IR2120	0.01 to 0.8 MPa	1/4	553
	Series IR3000 	IR3120	0.01 to 0.8 MPa	1/4, 3/8, 1/2	553

ARJ

AR425
to 935

AMR

ARM

ARP

IR

IRV

VEX1□

SRH

SRP

SRF

ARX20

VCHR

ITV

IC

PVQ

VEF
VEP

VER

VEA

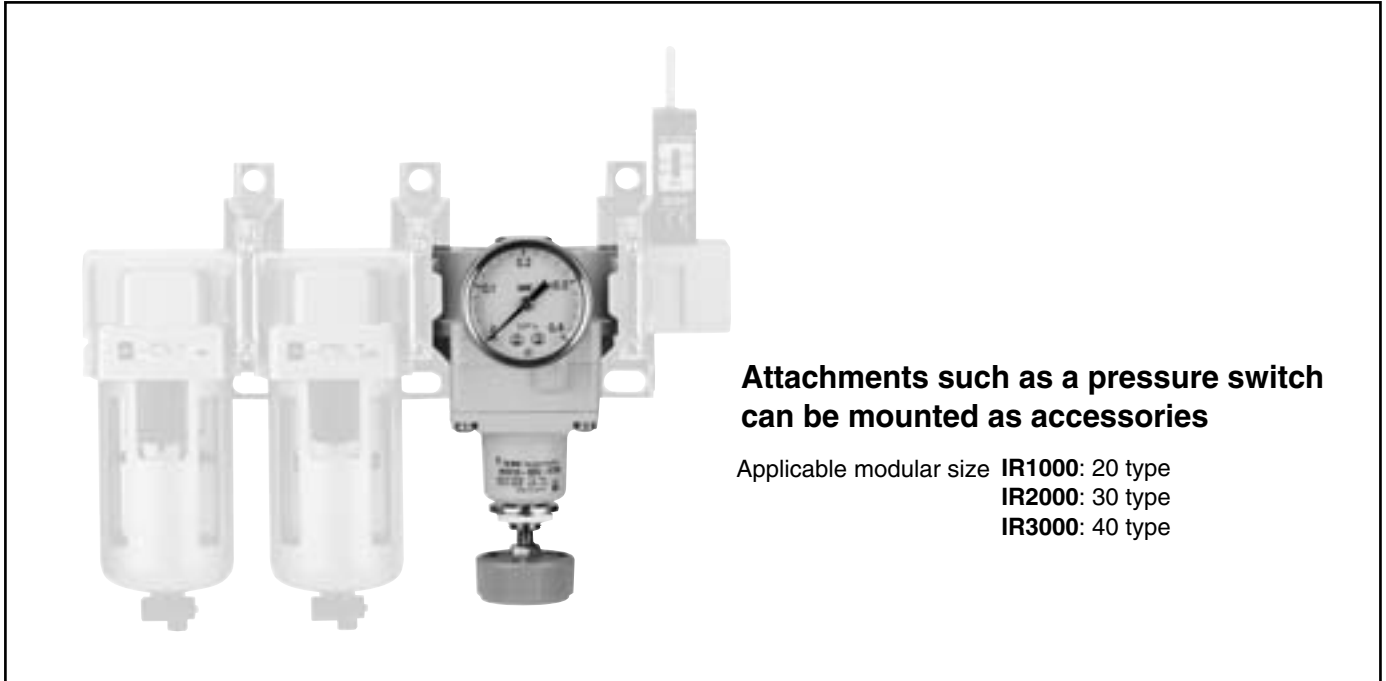
VY2

VBA
VBAT

AP100

Compatible with new modular connection brackets (-X120)

Can be combined with AF (Air filter) and AFM (Mist separator).



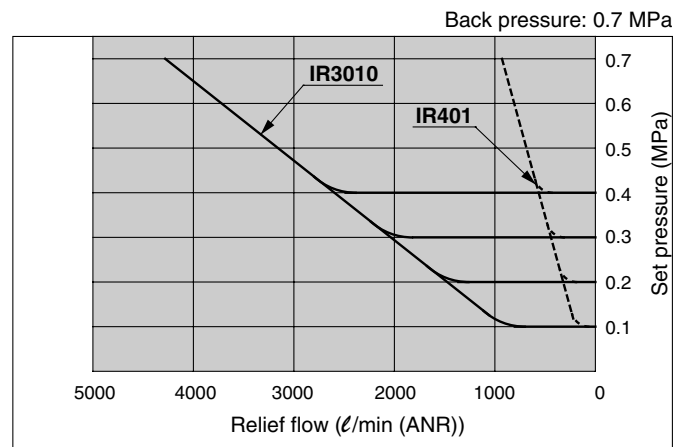
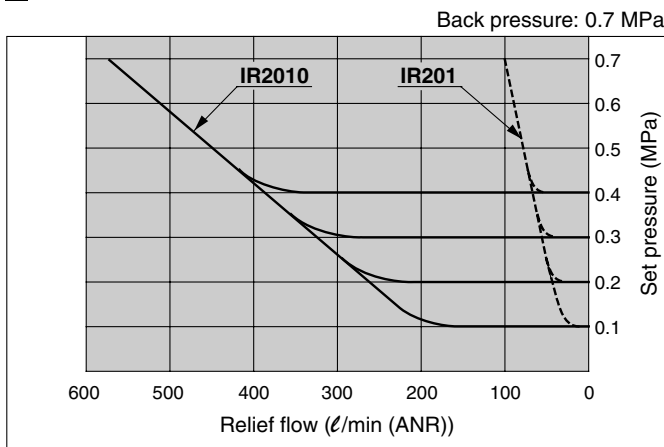
Attachments such as a pressure switch can be mounted as accessories

Applicable modular size
IR1000: 20 type
IR2000: 30 type
IR3000: 40 type

* Mount the standard type with a conventional connection bracket.

Relief flow characteristics

Possible to relieve (exhaust) air ranged 50 to 4000 ℓ/min (ANR)



Series Variations

Specifications	Model	Basic type			Air operated type	
		IR10□□	IR20□□	IR30□□	IR2120	IR3120
Maximum set pressure	0.2 MPa	●	●	●	—	—
	0.4 MPa	●	●	●	—	—
	0.8 MPa	●	●	●	●	●
Port size	Rc 1/8	●	—	—	—	—
	Rc 1/4	—	●	●	●	●
	Rc 3/8	—	—	●	—	●
	Rc 1/2	—	—	●	—	●

Made to Order Specifications

Symbol	Specifications/Content
10-	Clean Series
20-	Copper-free and fluorine-free
80-	Ozone resistant
-T	For high temperature
-L	For low temperature
-X1	Non-grease specifications
-X465□	With digital pressure switch (ISE30)
IRM□□	Manifold (Except Series IR2120, IR3000)

* For details, refer to page 560.

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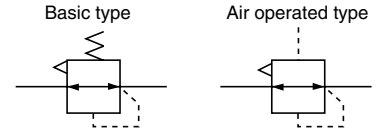
AP100

Precision Regulator

RoHS

Series IR1000/2000/3000

JIS Symbol



Standard Specifications

Model	Basic type			Air operated type	
	IR10□0	IR20□0	IR30□0	IR2120	IR3120
Max. supply pressure	Max. 1.0 MPa				
Min. supply pressure (1)	Set pressure + 0.05 MPa			Set pressure + 0.1 MPa	Set pressure + 0.1 MPa
Regulating pressure range	IR1000: 0.005 to 0.2 MPa IR1010: 0.01 to 0.4 MPa IR1020: 0.01 to 0.8 MPa	IR2000: 0.005 to 0.2 MPa IR2010: 0.01 to 0.4 MPa IR2020: 0.01 to 0.8 MPa	IR3000: 0.01 to 0.2 MPa IR3010: 0.01 to 0.4 MPa IR3020: 0.01 to 0.8 MPa	0.01 to 0.8 MPa	0.01 to 0.8 MPa
Input signal (2) pressure	—			0.01 to 0.8 MPa	0.01 to 0.8 MPa
Sensitivity	Within 0.2% of full span				
Repeatability	Within ±0.5% of full span				
Linearity (3)	—			Within ±1% of full span	
Air consumption (4) (At supply pressure of 1.0 MPa)	4.4 ℓ/min (ANR) or less	4.4 ℓ/min (ANR) or less	11.5 ℓ/min (ANR) or less	4.4 ℓ/min (ANR) or less	11.5 ℓ/min (ANR) or less
Port size	Rc 1/8	Rc 1/4	Rc 1/4, 3/8, 1/2	Rc 1/4	Rc 1/4, 3/8, 1/2
Pressure gauge port	Rc 1/8 (2 locations)				
Ambient and fluid temperature	-5 to 60°C (No freezing)				
Mass (kg)	0.14	0.30	0.64	0.35	0.71

- Note 1) With the condition of no flow on the output side. Together with the set pressure, be sure to maintain a minimum differential pressure of 0.05 MPa for models IR1000 and IR2000, and 0.1 MPa for model IR3000.
- Note 2) Applicable only to air operated types IR2120 and IR3120. The basic type is excepted.
- Note 3) Indicates the linearity of the output pressure with respect to the input pressure.
- Note 4) Air is normally being discharged to the atmosphere from a bleed hole or an exhaust port.

How to Order

IR 2000 0-02

Body size

1	IR1000
2	IR2000
3	IR3000

Type of setting

0	Basic type (Handle)
1	Air operated type (Series IR2000/3000 only)

Regulating pressure range

For series IR1000/2000

0	0.005 to 0.2 MPa
1	0.01 to 0.4 MPa
2	0.01 to 0.8 MPa

Note) Air operated type is model IR2120 only.

For series IR3000

0	0.01 to 0.2 MPa
1	0.01 to 0.4 MPa
2	0.01 to 0.8 MPa

Note) Air operated type is model IR3120 only.

Thread type

Nil	Rc
N	NPT*
F	G*

* Option

Port size

Symbol	size	Application		
		IR1000	IR2000	IR3000
01	1/8	●		
02	1/4		●	●
03	3/8			●
04	1/2			●

Suffix 1

Nil	—
T	For high temp. environments (-5 to 100°C) (Max. 80°C with pressure gauge.)
L	For low temp. environments (-30 to 60°C)

Suffix 2

Nil	—
R	Pressure gauge, Bracket, Name plate, Mounting on the opposite side

Note) The standard mounting position of the pressure gauge is on the front, when viewing the regulator with the SUP side to the left and OUT side to the right.

Accessory

Nil	None
B	With bracket
G	With pressure gauge*

* Pressure gauge is included, (but not assembled).

Made to Order Specifications (Refer to page 560)

Symbol	Specifications/Content
X1	Non-grease specifications
X120	Compatible with modular connection brackets(Refer to page 554)
X465□	With digital pressure switch (ISE30A)

- * 1 Add prefix (10-) for the clean room specification.
- * 2 Add prefix (20-) for the copper-free and fluorine-free specification.
- * 3 Add prefix (80-) for the ozone-resistant specification.
- * 4 Manifold specification is available for IR1000 and IR2000. (Except IR2120 and IR3000)

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Series IR1000/2000/3000

Specification Combinations

○: Standard specifications ○: Combination possible ■: Combination not possible



Series IR3000



Series IR2000



Series IR1000

Specifications	Symbol	Applicable model					
		IR1000 IR1010 IR1020	IR2000 IR2010 IR2020	IR2120	IR3000 IR3010 IR3020	IR3120	
Standard specifications	Set pressure Max. 0.2 MPa	0	○	○	■	○	■
	Set pressure Max. 0.4 MPa	1	○	○	■	○	■
	Set pressure Max. 0.8 MPa	2	○	○	○	○	○
	Connection Rc 1/8	01	○	■	■	■	■
	Connection Rc 1/4	02	■	○	○	○	○
	Connection Rc 3/8	03	■	■	■	○	○
	Connection Rc 1/2	04	■	■	■	○	○
Accessory	Bracket	B	○	○	○	○	○
	Pressure gauge	G	○	○	○	○	○
Option	Pressure gauge reverse mounted	R	○	○	○	○	○
	Connection NPT 1/8	N01	○	■	■	■	■
	Connection NPT 1/4	N02	■	○	○	○	○
	Connection NPT 3/8	N03	■	■	■	○	○
	Connection NPT 1/2	N04	■	■	■	○	○
	Connection G 1/8	F01	○	■	■	■	■
	Connection G 1/4	F02	■	○	○	○	○
	Connection G 3/8	F03	■	■	■	○	○
Connection G 1/2	F04	■	■	■	○	○	

Modular and Accessory Combinations

Description	Applicable model		
	IR10□0-□□-X120	IR20□0-□□-X120	IR30□0-□□-X120
1. Air filter	AF20	AF30	AF40
2. Mist separator	AFM20	AFM30	AFM40
3. Interface	Y200	Y300	Y400
4. Interface with bracket	Y200T	Y300T	Y400T

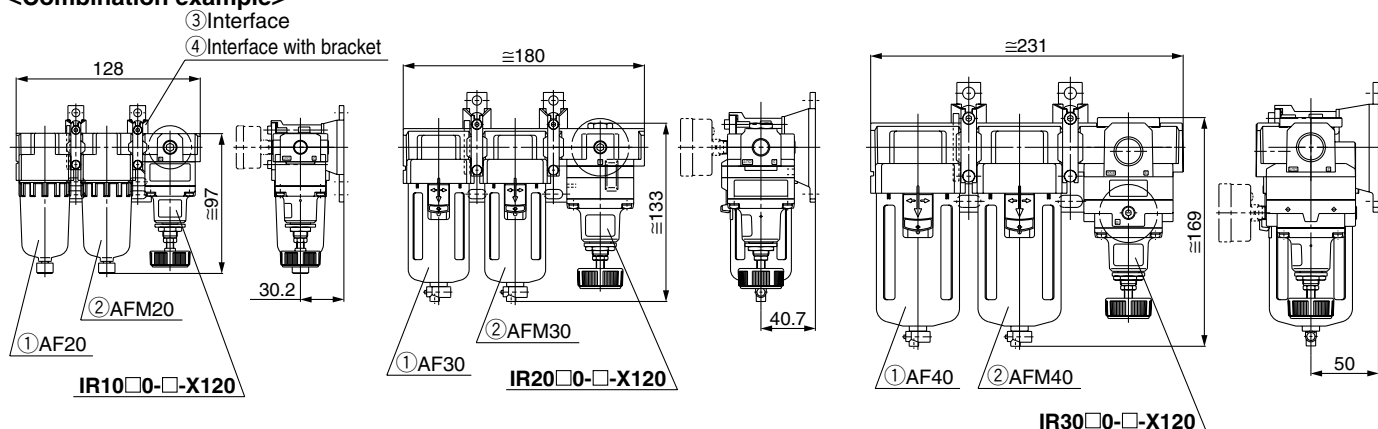
Note 1) Use the made-to-order product (IR□□-X120) for modular connections.

The interface and interface with bracket listed above cannot be connected to the standard type.

Use a conventional connection interface when connecting the standard type with modular connections.

Note 2) The made-to-order product number (IR□□-X120) is for the precision regulator only. For modular connections, please order the applicable products and accessories separately.

<Combination example>



Accessory (Option)/Part No.

Description	Part no.								
	IR1000	IR1010	IR1020	IR2000	IR2010	IR2020/2120	IR3000	IR3010	IR3020/3120
Bracket	P36201023			P36202028			P362030-20*1		
Pressure gauge*2	G33-2-01	G33-4-01	G33-10-01	G43-2-01	G43-4-01	G43-10-01	G43-2-01	G43-4-01	G43-10-01

*1 A bracket and two mounting screws (M5 x 35)

To mount the bracket, remove two body screws (M5 x 30) on the name plate on the opposite side and replace the attached two bracket mounting screws (M5 x 35).

*2 Accuracy ±3% (Full span)

