

3-Color Display Digital Gap Checker Without Control Unit

ISA3 Series



How to Order

ISA3 - **G** **C** **N** - **M** **2** [] [] []

Rated distance range

F	0.01 to 0.03 mm
G	0.02 to 0.15 mm
H	0.05 to 0.30 mm

Piping specifications

	Supply side	Detection side
C	Rc1/8	$\phi 4$ One-touch fitting *1
		$\phi 6$ One-touch fitting *2
F	G1/8 *3	G1/8 *3

- *1 When F is selected for the rated distance range
- *2 When G or H is selected for the rated distance range
- *3 Conforming to ISO 1179-1

Output specifications

N	NPN 1 output
P	PNP 1 output
A *11	NPN 2 outputs
B *11	PNP 2 outputs

- *11 2 switch outputs type
OUT1: Gap size detection
OUT2: Gap size, outlet pressure, supply pressure detection (Select from the above.)

Unit specifications of pressure value

Nil	With unit conversion function *9
M	Fixed SI unit *10

- *9 Under the New Measurement Act, digital gap checkers with the unit conversion function are not permitted for use in Japan.
- *10 Unit: kPa

Stations

1	1 station
2	2 stations
3	3 stations
4	4 stations
5	5 stations
6	6 stations

Option 1 (Cable)

Nil	Straight *5 *6	S	Centralized lead wire (Lead wire only) *4 *5
	Right angle *5 *6		
L		T	Centralized lead wire (With bracket) *4 *5
N	None		

- *4 Cannot be selected for 1 station. One set is provided per manifold. A centralized lead wire is provided with M12 connectors for the number of stations. Refer to page 21 for details.
- *5 At the factory, the options are not attached to the product, but packed together with it for shipment.
- *6 Cables are provided for the number of stations.

- Made to Order (Refer to page 22-2.)

-X219 Cable in-line entry

Option 2 (Bracket)

Nil	None (DIN rail mounting) *7
B	With bracket *5 *8

- *7 Order DIN rail separately. (Refer to page 17.)

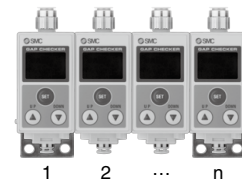
- *8 About the number of brackets, 1 station: 1 piece is packed, 2 stations or more: 2 pieces are packed.

Bracket mounting position

2 stations
(Mount to 1st and 2nd stations)



n stations
(Mount to 1st and nth stations)



1 2 ... n

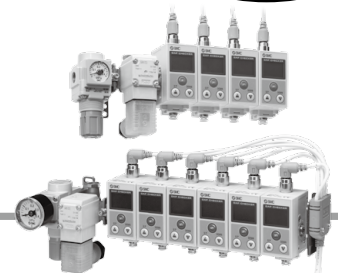
3-Color Display Digital Gap Checker



With Control Unit



ISA3 Series



How to Order

ISA3 - **G** **C** **N** - **M** **2** **B** - **L** **1** **1** **1**

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F	0.01 to 0.03 mm
G	0.02 to 0.15 mm
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Piping specifications

	Supply side	Detection side
C	Rc1/8	$\phi 4$ One-touch fitting *1
		$\phi 6$ One-touch fitting *2
F	G1/8 *3	G1/8 *3

- *1 When F is selected for the rated distance range
- *2 When G or H is selected for the rated distance range
- *3 Conforming to ISO 1179-1

Output specifications

N	NPN 1 output
P	PNP 1 output
A *14	NPN 2 outputs
B *14	PNP 2 outputs

- *14 2 switch outputs type
OUT1: Gap size detection
OUT2: Gap size, outlet pressure, supply pressure detection (Select from the above.)

Unit specifications of pressure value

Nil	With unit conversion function *12
M	Fixed SI unit *13

- *12 Under the New Measurement Act, digital gap checkers with the unit conversion function are not permitted for use in Japan.
- *13 Unit: kPa

Stations

1	1 station
2	2 stations
3	3 stations
4	4 stations
5	5 stations
6	6 stations

Option 1 (Cable)

Nil	Straight *5 *6	S	Centralized lead wire (Lead wire only) *4 *5
L	Right angle *5 *6		Centralized lead wire (With bracket) *4 *5
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- *4 Cannot be selected for 1 station. One set is provided per manifold. A centralized lead wire is provided with M12 connectors for the number of stations. Refer to page 21 for details.
- *5 At the factory, the options are not attached to the product, but packed together with it for shipment.
- *6 Cables are provided for the number of stations.

Made to Order

(Refer to page 22-1 and 22-2.)

-X169	Without 2-port solenoid valve (Control unit)
-X219	Cable in-line entry

2-port solenoid valve rated voltage

Nil	24 VDC
1 *11	100 VAC
2 *11	110 VAC

*11 Produced upon receipt of order

Regulator (Refer to page 18.)

N *10	Without regulator		
0 *10	Without pressure gauge		
1	Round type pressure gauge	0.4 MPa	MPa single notation
	Square type pressure gauge		
	Round type pressure gauge	0.2 MPa	
5 *10	Round type pressure gauge	0.4 MPa	MPa-psi double notation
	Square type pressure gauge		
6 *10	Round type pressure gauge	0.2 MPa	
	Square type pressure gauge		
7 *10	Round type pressure gauge	0.2 MPa	psi single notation
	Square type pressure gauge		
8 *10	Round type pressure gauge	0.2 MPa	
	Square type pressure gauge		

*10 Produced upon receipt of order

Control unit (Regulator, 2-port valve)

L	Control unit (Supply port: Left side)
R	Control unit (Supply port: Right side)

Control unit piping specifications *8

Gap checker piping specifications	Supply port piping specifications
C	Rc1/4
F	G1/4 *9

- *8 When the control unit is mounted, the piping specifications of the supply port will be changed due to piping specification of the gap checker.
- *9 Conforming to ISO 16030

Option 2 (Bracket)

B	With bracket *7
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*7 The bracket for control unit is shipped mounted on the product.

For gap checker precautions and specific product precautions, refer to the "Operation Manual" on the SMC website. Click [here](#) for details.

Specifications

Model		ISA3-F	ISA3-G	ISA3-H
Applicable fluid		Dry air (Filtered through a 5 μm filter)		
OUT1 OUT2 *5	Rated distance range	0.01 to 0.03 mm	0.02 to 0.15 mm	0.05 to 0.30 mm
	Displayable/Settable range (Distance reference) *1	0 to 60 *2	10 to 300 *2	30 to 500 *2
	Minimum display resolution (Distance reference) *1	1		
	Rated pressure range	100 to 200 kPa		
	Displayable range (Pressure value) *3	-20 to 220 kPa		
	Repeatability	0.005 mm or less	0.010 mm or less	0.020 mm or less
	Temperature characteristics (Reference: 25°C)	0.010 mm or less	0.015 mm or less	0.030 mm or less
Hysteresis	0 to variable (Default: 3)	0 to variable (Default: 20)		
OUT2 *6	Rated pressure range	0 to 200 kPa		
	Set pressure range	-20 to 220 kPa		
	Minimum display/setting resolution	1 kPa		
	Repeatability	±0.5% F.S. ±1 digit		
	Temperature characteristics (Reference: 25°C)	±2% F.S.		
Hysteresis	0 to variable *7			
Withstand pressure	600 kPa			
Detection nozzle	ø1.5 *4			
Consumption flow rate	5 L/min or less	12 L/min or less	22 L/min or less	
Power supply voltage	24 VDC ±10%, Ripple (p-p) 10% or less (With power supply polarity protection)			
Current consumption	25 mA or less			
Switch output	1 output (NPN or PNP), 2 outputs (NPN or PNP)			
	Maximum load current	10 mA		
	Maximum applied voltage	26.4 V		
	Residual voltage	1 V or less (at 10 mA)		
	Short-circuit protection	Provided		
Display	2-screen display, LCD Main screen: 3-digit, 7-segment, 2-color (Orange/Green) Sub screen: 6-digit, 7-segment, 1-color (White)			
Environmental resistance	Enclosure	IP67 equivalent *8		
	Operating temperature range	Operating: 0 to 50°C, Stored: -20 to 70°C (No condensation or freezing)		
	Operating humidity range	Operating/stored: 35 to 85% RH (No condensation)		
	Withstand voltage	1000 VAC or more (in 50/60 Hz) for 1 minute between terminals and housing		
Insulation resistance	2 MΩ or more (500 VDC measured via megohmmeter) between terminals and housing			
Piping specifications	For C type	Supply port	Rc1/8	
		Detection port	ø4 One-touch fitting	ø6 One-touch fitting
	For F type	Supply port	G1/8 (Compliant with ISO 1179-1)	
		Detection port	G1/8 (Compliant with ISO 1179-1)	
Cable	Lead wire with connector		M12 lead wire with 4 pin connector, 4 cores, ø4, 5 m Conductor O.D.: 0.72 mm, Insulator O.D.: 1.14 mm	
	Centralized lead wire	M12 lead wire with 4 pin connector section	4 cores, ø4, Insulator O.D.: 1.14 mm	
		Centralized lead wire section	2 to 3 stations (1 output) 5 cores, ø4, 5 m 2 to 3 stations (2 outputs) 8 cores, ø6, 5 m 4 to 6 stations (1 output) 8 cores, ø6, 5 m 4 to 6 stations (2 outputs) 14 cores, ø6, 5 m Conductor O.D.: 0.50 mm, Insulator O.D.: 1.00 mm (2 to 6 stations common)	
Weight	113 g (Cable not included, One-touch fitting)			
Standards	CE/UKCA marking			

*1 For details, refer to the Relationship Between Displayed Value and Distance on page 14.

*2 If hysteresis is set to 3 (Default setting), the "Displayable/Settable range" of the F type is limited to 57. If hysteresis is set to 20 (Default setting), the G type is limited to 280 and the H type is limited to 480.

*3 The pressure value will be the indicated on the sub screen.

*4 For details on the detection nozzle, refer to the figures on page 14.

*5 Refers to when OUT2 is set to detect the distance

*6 Refers to when OUT2 is set to detect the pressure

*7 If the applied pressure fluctuates around the set value, the hysteresis must be set to a value more than the fluctuating width, otherwise chattering will occur.

*8 Only applies to the digital gap checker body excluding the control unit.

Rated Distance Range and Displayable/Settable Range

⚠ Caution

The displayed value is a reference value obtained by converting the distance between the workpiece and the detection surface into a digital numerical value. It is not displayed in units.

For details, refer to the Relationship Between Displayed Value and Distance on page 14.

Rated distance range: Distance range within which the product meets the specifications

Displayable/Settable range: Range within which it is possible to display or set values, (Not guaranteed to meet the specifications)

Model	Distance				
	0 mm	0.02 mm	0.05 mm	0.15 mm	0.30 mm
ISA3-F type	Rated distance range		Displayable/Settable range		
ISA3-G type	Rated distance range		Displayable/Settable range		
ISA3-H type	Rated distance range		Displayable/Settable range		

■ Rated distance range

■ Displayable/Settable range

Supply Pressure Dependence Characteristics

The distance for the product to turn ON varies depending on the supply pressure.

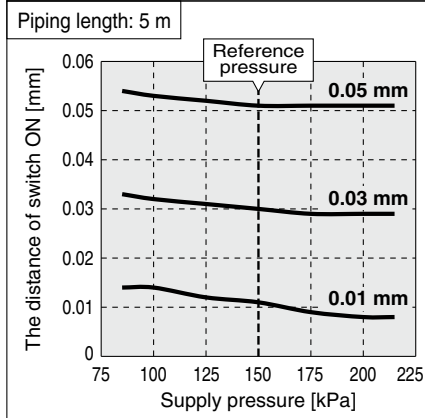
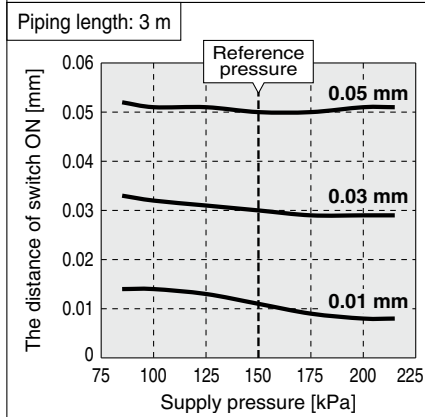
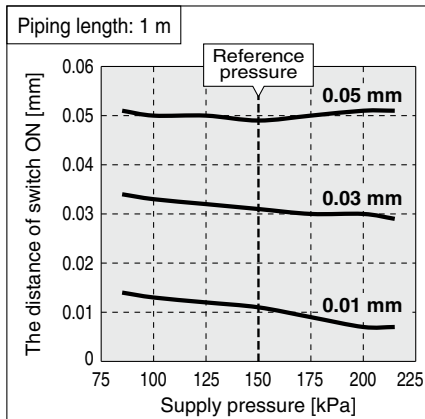
The graphs below show the variation of the distance for the product to turn ON, for 3 types of gap, by changing the supply pressure (± 50 kPa) when the product is set to turn ON at 150 kPa supply pressure.

Test conditions	Detection nozzle: $\phi 1.5$ Piping: F type $\phi 4 \times \phi 2.5$ tube/G, H type $\phi 6 \times \phi 4$ tube Reference pressure: 150 kPa
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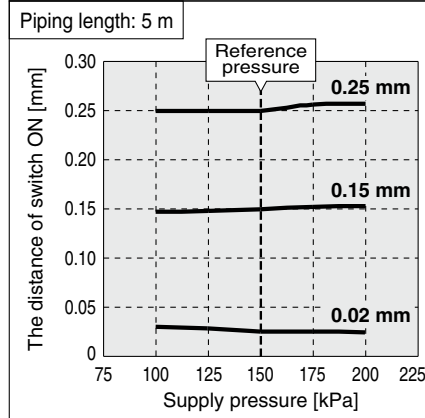
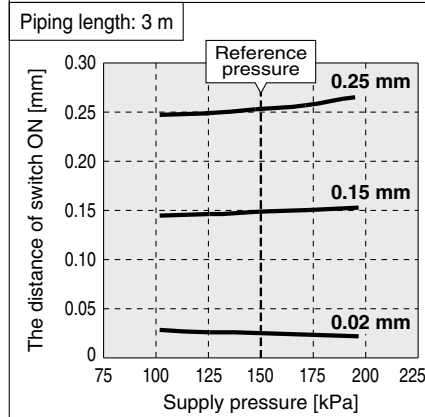
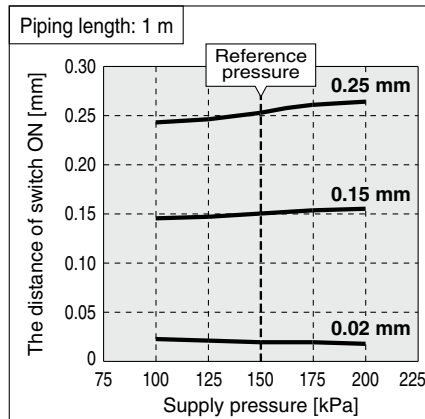
* Use within the rated pressure range (100 kPa to 200 kPa).

It will be impossible to measure the gap when the operating pressure is less than 80 kPa or over 220 kPa. And the output will be OFF.
(Refer to the Relationship Between Supply Pressure and Display on page 22.)

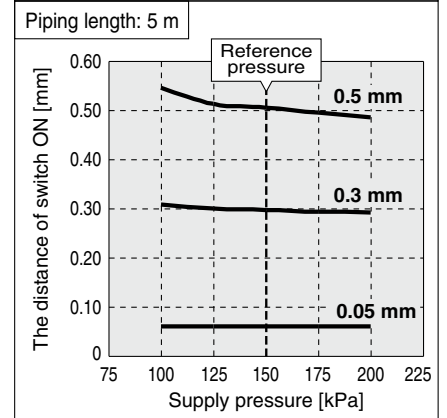
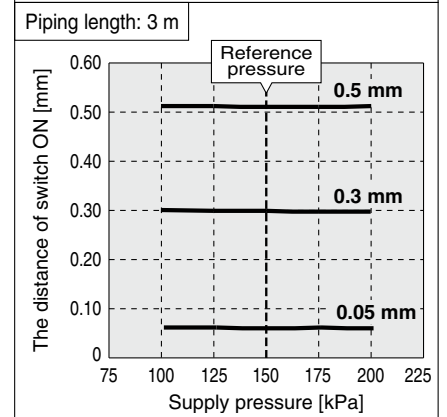
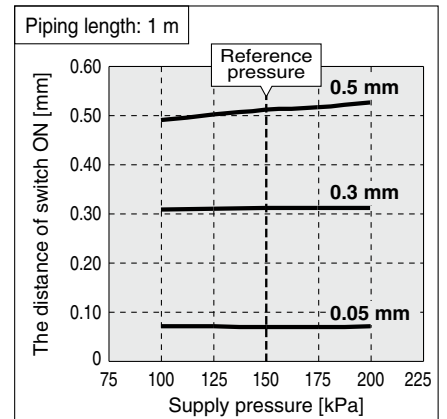
ISA3-F



ISA3-G



ISA3-H



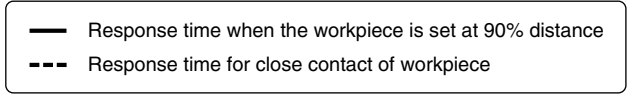
Response Time

Response time is the elapsed time between the pressure supply and the turning ON of the switch output.

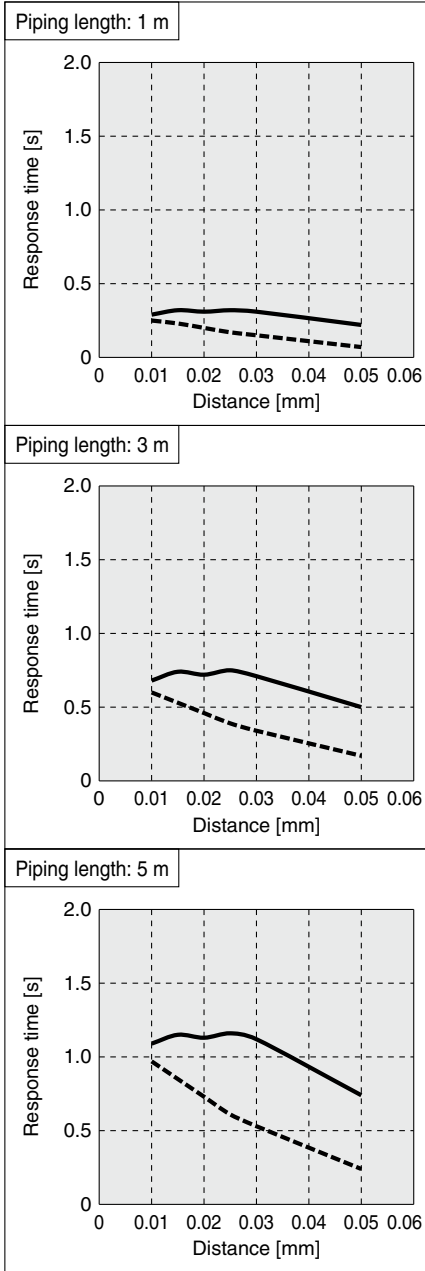
The response time varies depending on the piping length from the OUT port to the detection nozzle, and the seating condition of the workpiece. The graphs below show the response time when the workpiece is approached at 90% distance and 0% distance (close contact). (* The switch point is 100% distance.)

(Example: When the switch point is set to 0.1 mm, the response time when the workpiece is at 0.09 mm and 0 mm are measured.)

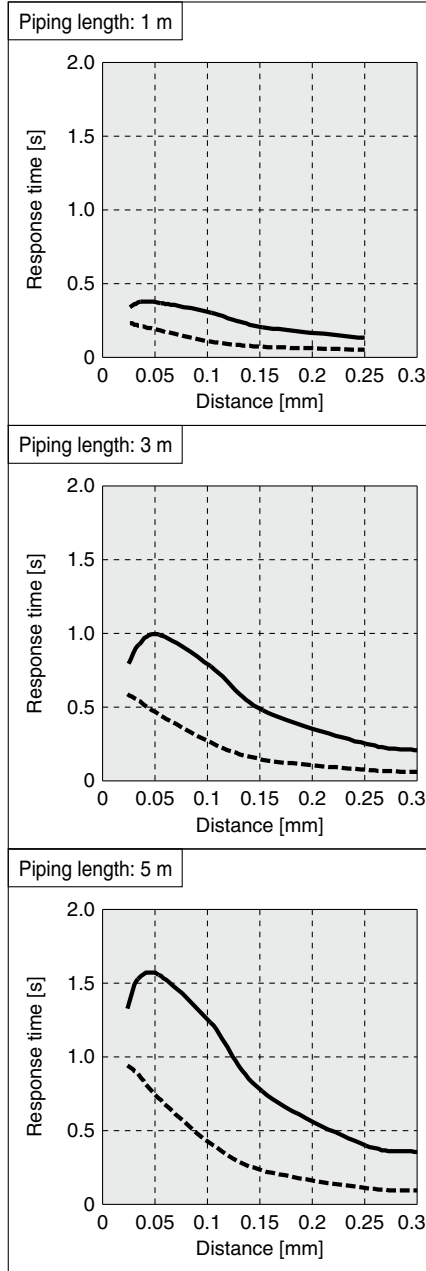
Test conditions	Detection nozzle: $\varnothing 1.5$ Piping: F type $\varnothing 4 \times \varnothing 2.5$ tube/G, H type $\varnothing 6 \times \varnothing 4$ tube Supply pressure: 200 kPa
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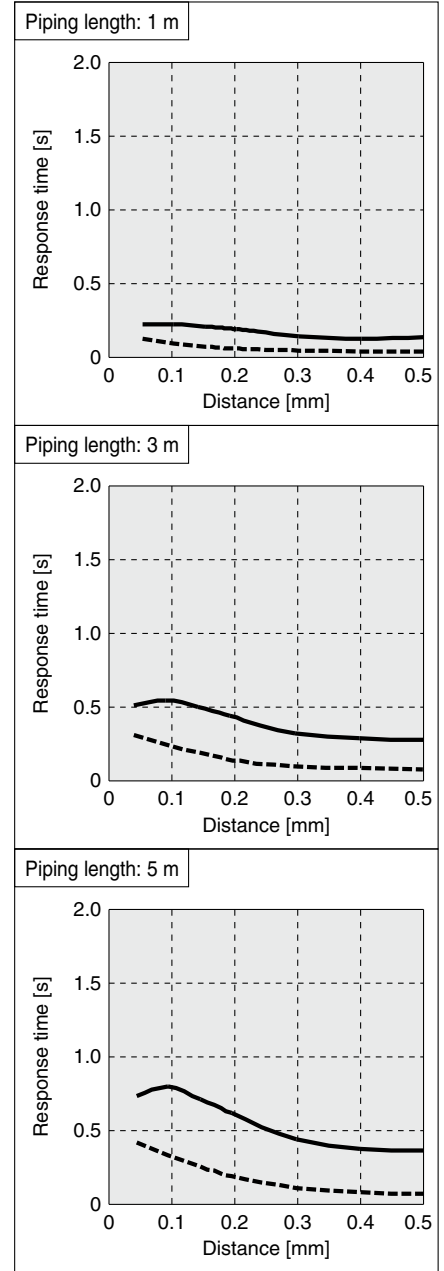
ISA3-F



ISA3-G



ISA3-H



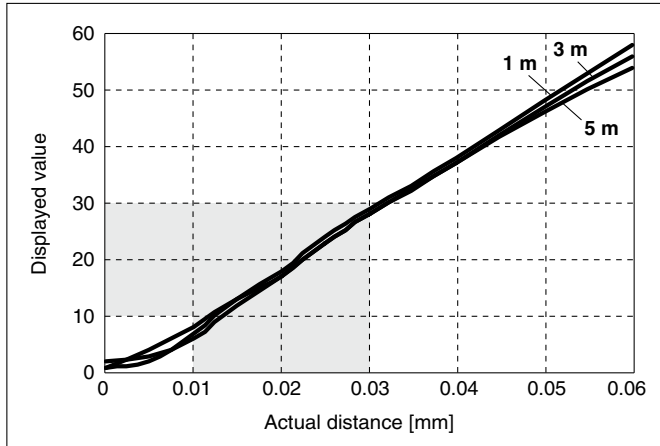
Relationship Between Displayed Value and Distance

The graphs below show the relationship between the displayed value and distance.

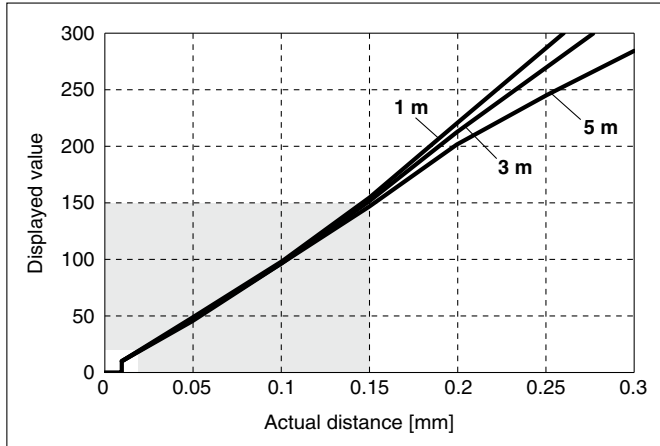
* The data shown below are for reference. They change depending on the individual product differences, machining dimensions of the nozzle, etc.

Test conditions	Detection nozzle: $\phi 1.5$
	Detection nozzle piping:
	F type $\phi 4 \times \phi 2.5$ tube 1 m, 3 m, 5 m/ G, H type $\phi 6 \times \phi 4$ tube 1 m, 3 m, 5 m
	Supply pressure: 200 kPa

ISA3-F

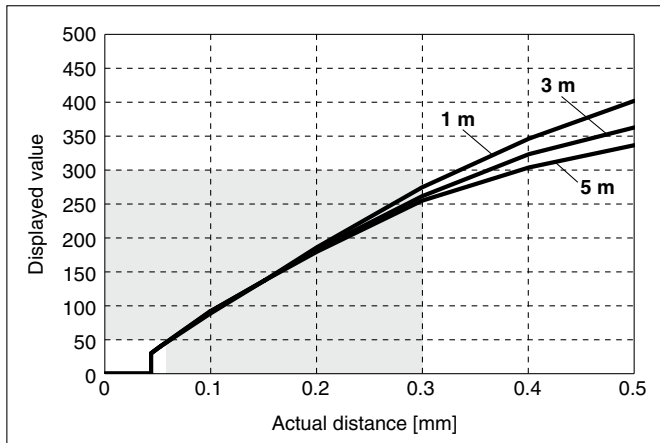


ISA3-G



* Values of 9 and under are displayed as "0."

ISA3-H



* Values of 29 and under are displayed as "0."

Detection Nozzle Shape

The nozzle shape must be similar to Fig. 1.

Do not chamfer the nozzle as shown in Fig. 2, as the characteristics will be affected.

Fig. 1: Recommended nozzle shape

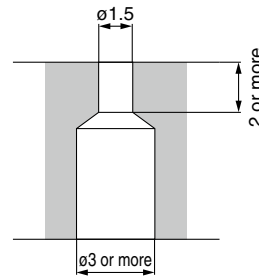
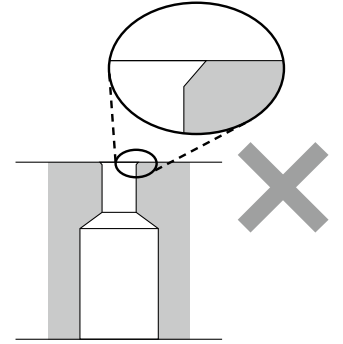
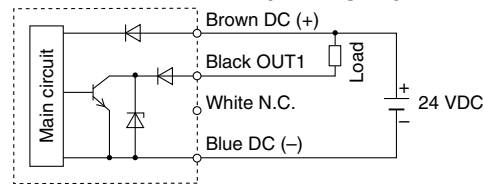


Fig. 2: Unsuitable nozzle shape

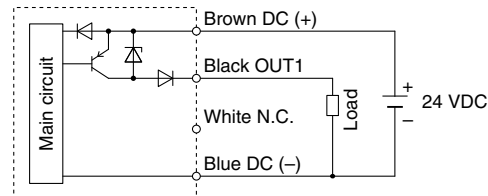


Internal Circuits and Wiring Examples

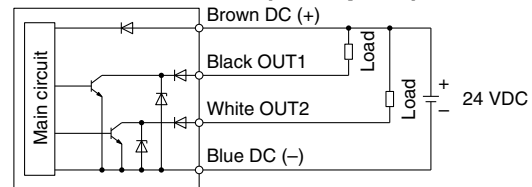
ISA3-□□N NPN (1 output)



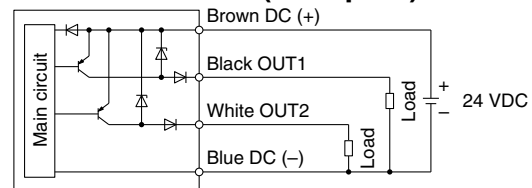
ISA3-□□P PNP (1 output)



ISA3-□□A NPN (2 outputs)



ISA3-□□B PNP (2 outputs)

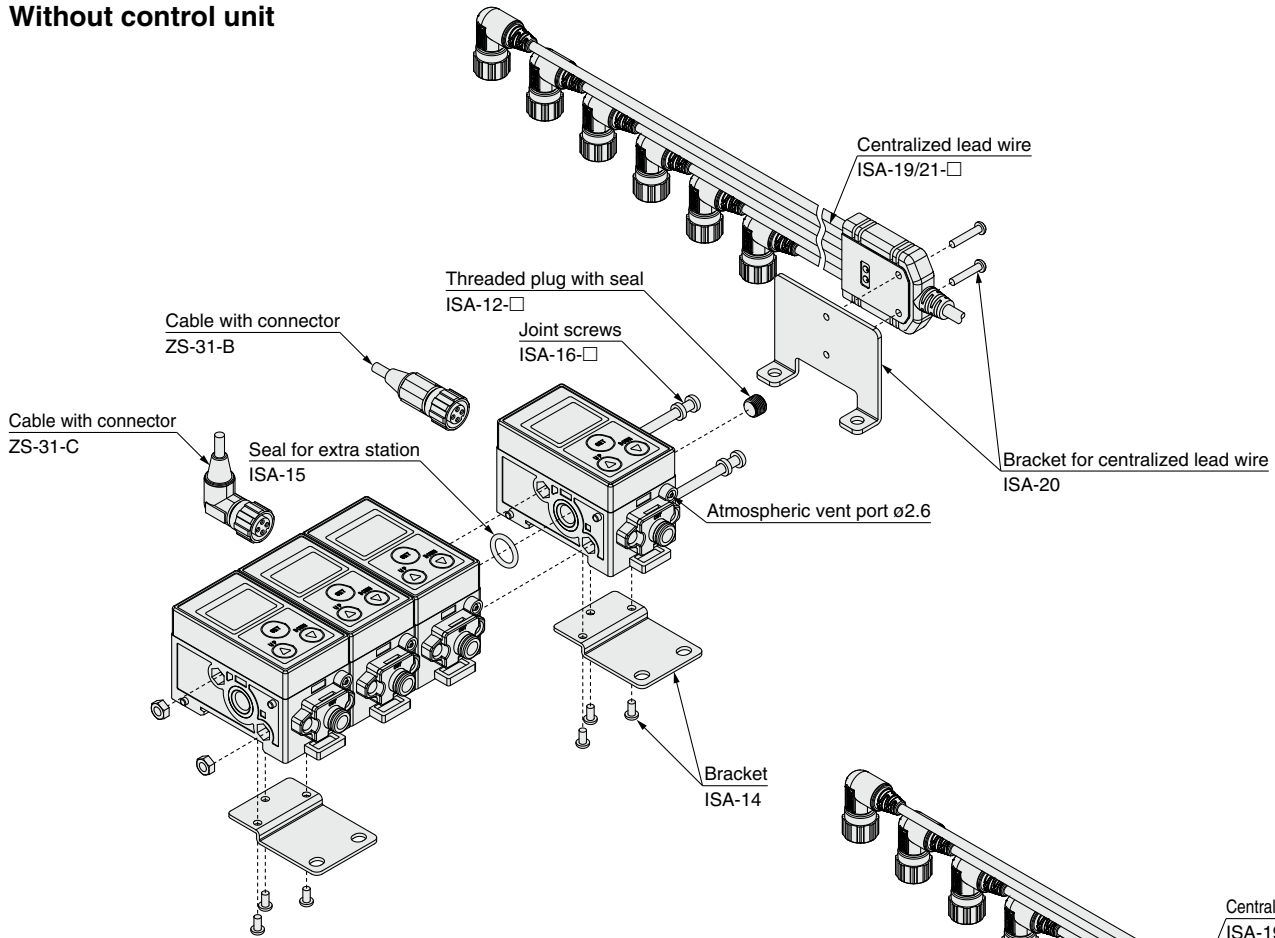


* Refer to the **Web Catalog** for wiring details of the VX2 series (2-port solenoid valve).

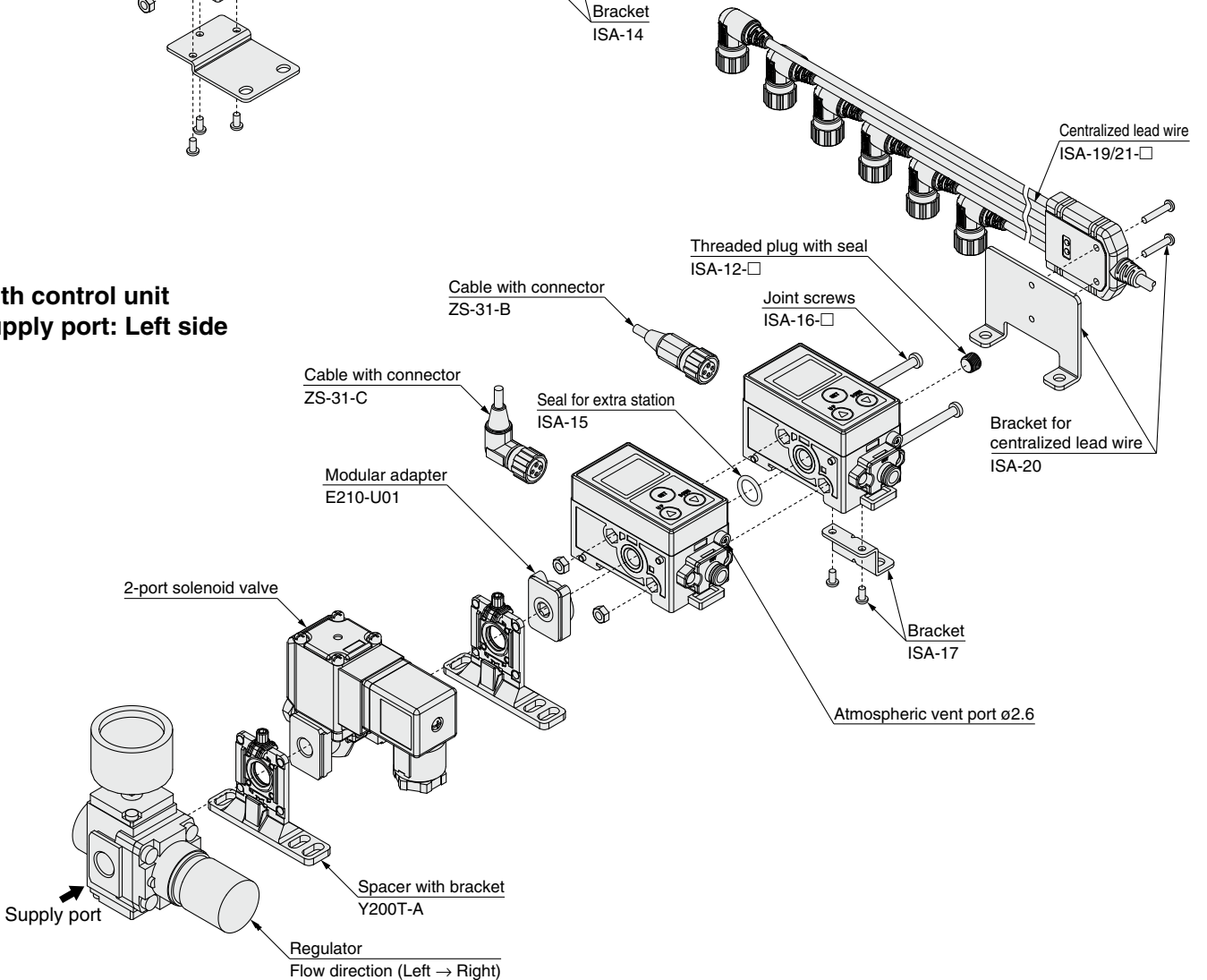
ISA3 Series

Construction Diagram

Without control unit

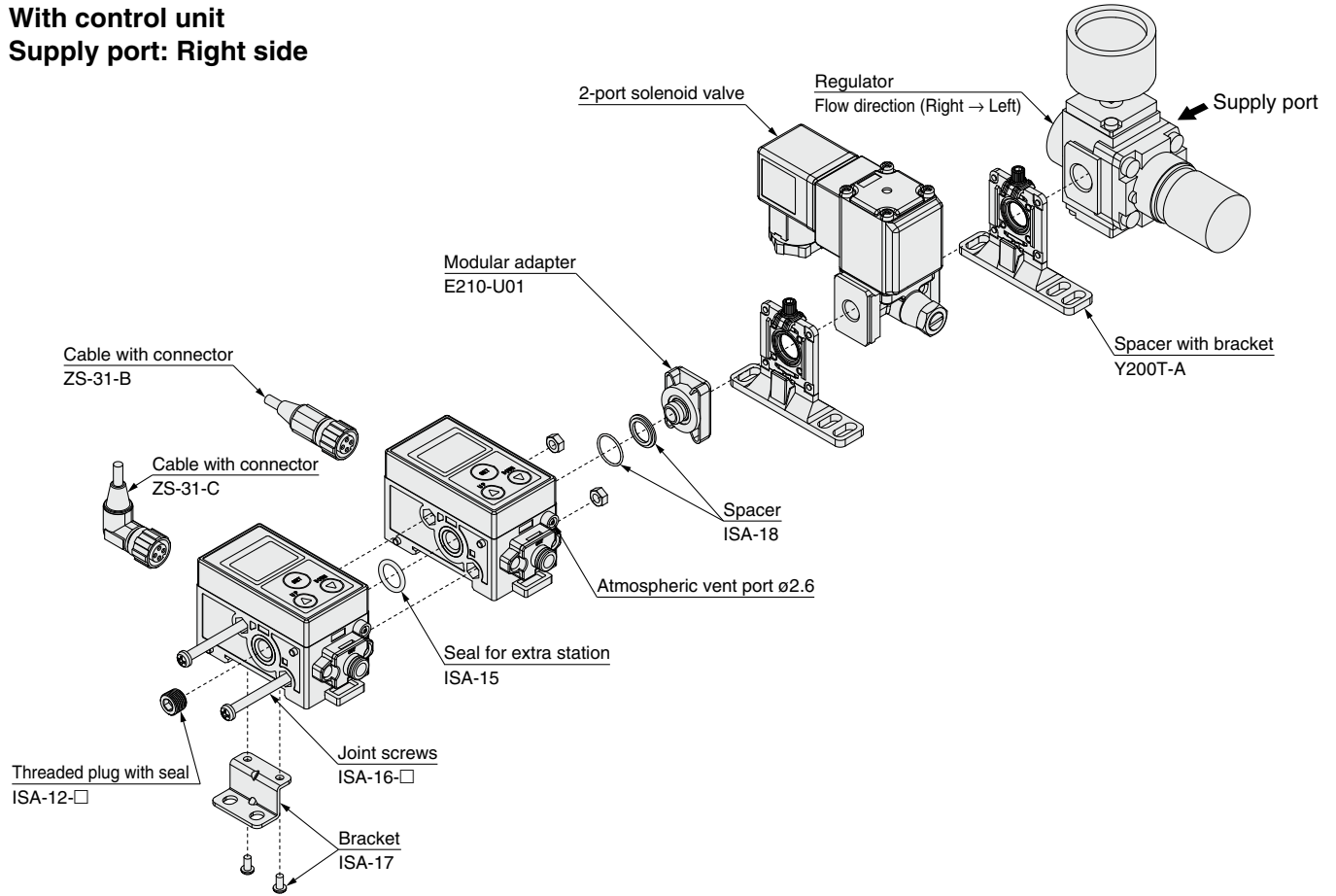


With control unit Supply port: Left side



Construction Diagram

With control unit
Supply port: Right side



If there is a possibility that the atmospheric vent port of the gap checker will be exposed to water or dust, insert a tube into the atmospheric vent port and route the other end of the tube to a safe place away from water or dust.

* For tubing, please use the SMC TU0425 (polyurethane, O.D. ø4, I.D. ø2.5) for the gap checker.

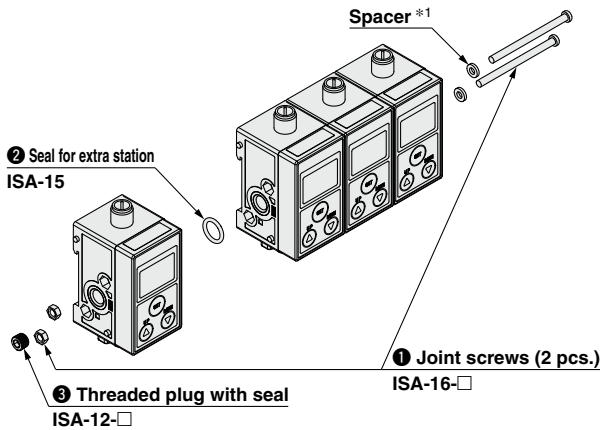
⚠ Caution

SMC products are not intended for use as instruments for legal metrology.

Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country. Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

ISA3 Series

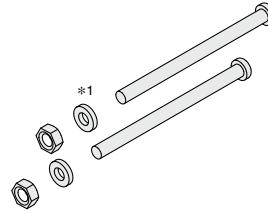
Parts List



*1 Spacers are included for 4 and 6 stations.

- 1 Joint screws**
2 screws,
2 spacers, 2 nuts

Stations	Part no.
2	ISA-16-2
3	ISA-16-3
4 *1	ISA-16-4
5	ISA-16-5
6 *1	ISA-16-6



- 2 Seal for extra station**
ISA-15 1 pc.

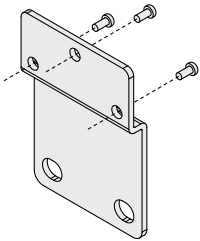


- 3 Threaded plug with seal**
ISA-12-□ 1 pc.

Piping	Part no.
Rc1/8	ISA-12-A
G1/8	ISA-12-C

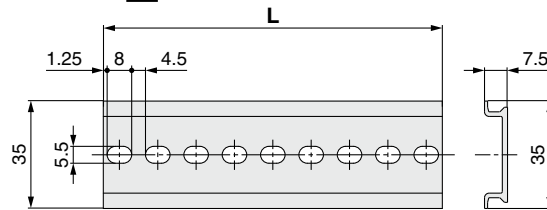


Bracket ISA-14



With 3 tapping screws (3 x 8)

DIN rail ISA-5-1

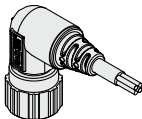


Stations	Part no.	L
1	ISA-5-1	73.0
2	ISA-5-2	135.5
3	ISA-5-3	173.0
4	ISA-5-4	210.5
5	ISA-5-5	248.0
6	ISA-5-6	285.5

Lead wire with connector ZS-31-B ZS-31-C

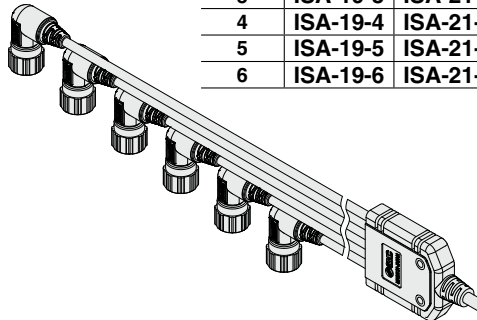
Straight 5 m

Right angle 5 m

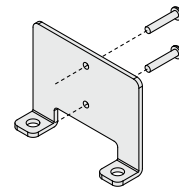


Centralized lead wire ISA-19/21-2

Stations	Part no.	
	1 output	2 outputs
2	ISA-19-2	ISA-21-2
3	ISA-19-3	ISA-21-3
4	ISA-19-4	ISA-21-4
5	ISA-19-5	ISA-21-5
6	ISA-19-6	ISA-21-6



Bracket for centralized lead wire ISA-20



* With 2 mounting screws (M3 x 16L)

Parts List (Control Unit)

■ Regulator

AR20 - [] 02 [] - 1 [] - B []

● Pipe thread type

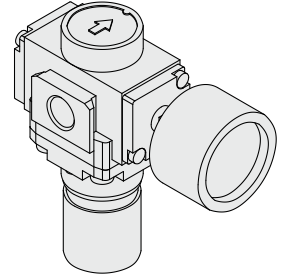
Nil	Rc
F	G

● Flow direction

Nil	Flow direction: Left → Right
R	Flow direction: Right → Left

● Option (Pressure gauge shape)

Nil	Without pressure gauge	Nil	Max. display pressure of the pressure gauge
		Nil	—
E	With square embedded type pressure gauge (With limit indicator)	Nil	Max. display pressure: 0.4 MPa, MPa single notation
		-X2105	Max. display pressure: 0.2 MPa, MPa single notation
		-X2176	Max. display pressure: 60 psi (0.4 MPa), psi single notation *2
		-X2175	Max. display pressure: 30 psi (0.2 MPa), psi single notation *2
G *1	With round type pressure gauge (With limit indicator, MPa single notation)	Nil	Max. display pressure: 0.4 MPa
		-X2105	Max. display pressure: 0.2 MPa
P *1	With round type pressure gauge (With limit indicator, MPa-psi double notation *2)	Nil	Max. display pressure: 0.4 MPa
		-X2105	Max. display pressure: 0.2 MPa



*1 The pressure gauge port is 1/8. The pressure gauge is included in the package, but not assembled.

*2 This product is for overseas use only according to the New Measurement Act.
(The SI unit type is provided for use in Japan.)

For details, refer to the **Web Catalog**.

■ 2-port solenoid valve

VX210 [Z] [Z2A] X276

● Body material/Port size/Orifice diameter

Symbol	Body material	Port size	Orifice diameter
Z	Aluminum	No thread machining (1/8)	ø4
B *1		Rc1/4	
D *1		G1/4	

*1 Produced upon receipt of order

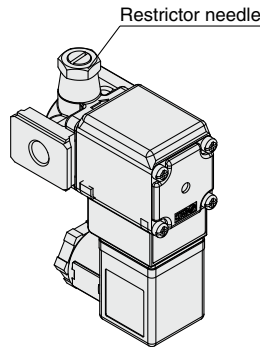
● Specifications

Symbol	Specifications
X276	With restrictor

● Voltage/Electrical entry

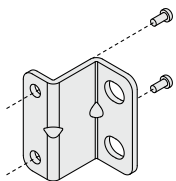
Symbol	Voltage	Electrical entry
Z2A	24 VDC	DIN terminal with light (With surge voltage suppressor)
Z2B *2	100 VAC	
Z2C *2	110 VAC	

*2 Produced upon receipt of order
When 100 VAC and 110 VAC are selected, the product without thread machining (symbol: Z) cannot be selected.



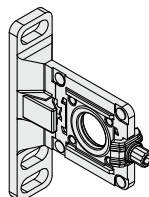
For specifications other than X276, refer to the **Web Catalog**.

■ Bracket (when control unit fitted)
ISA-17

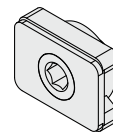


With 2 tapping screws (3 x 8)

■ Spacer with bracket
Y200T-A



■ Modular adapter
E210-U01



■ Spacer
ISA-18



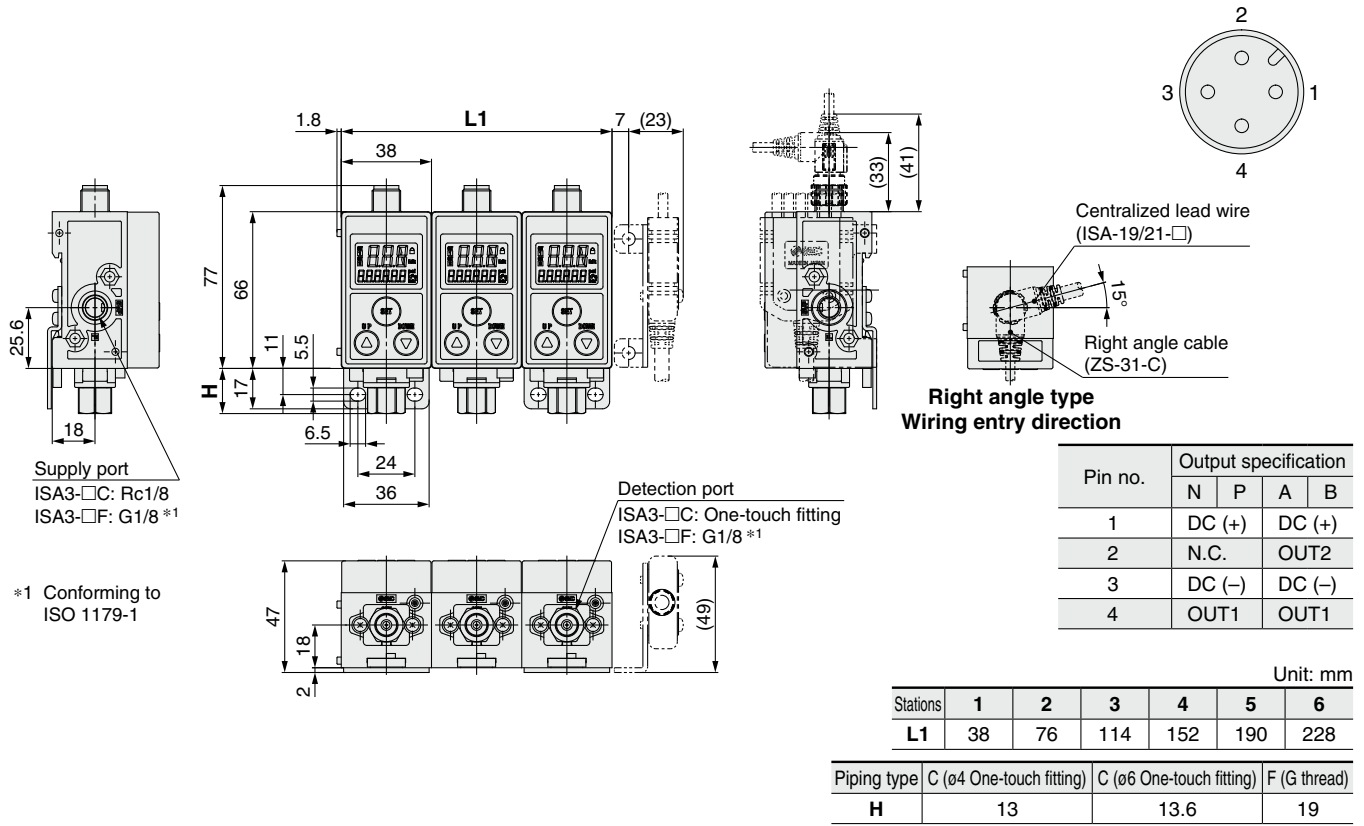
With O-ring

* When a 2-port solenoid valve is connected to the right

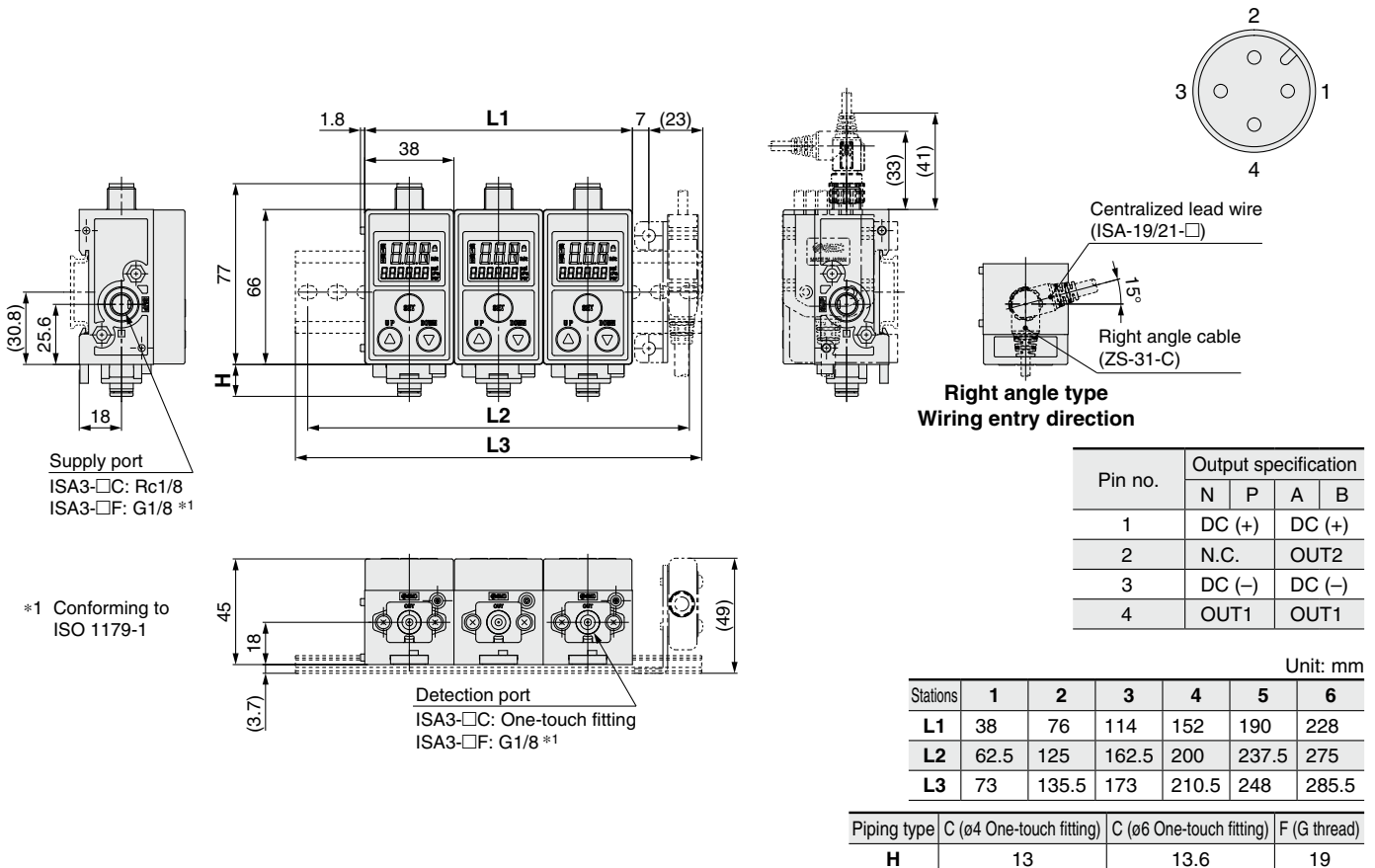
ISA3 Series

Dimensions

ISA3-□□ (Bracket mounting)



ISA3-□□ (DIN rail mounting)

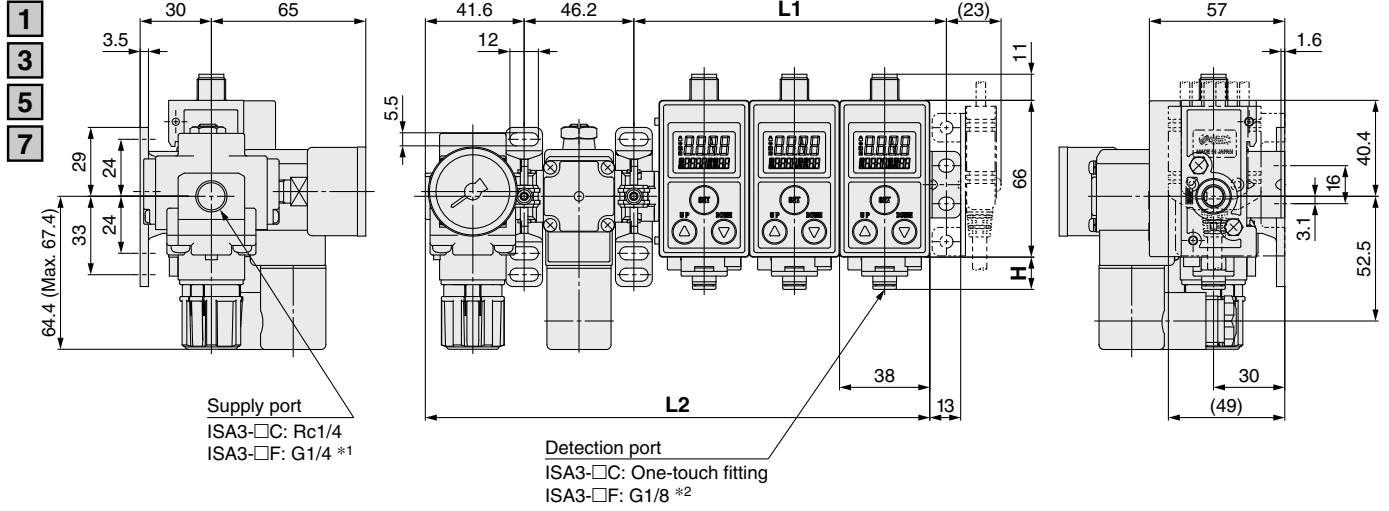


Dimensions

ISA3-□□□-□□□B-L (With control unit)

● Regulator

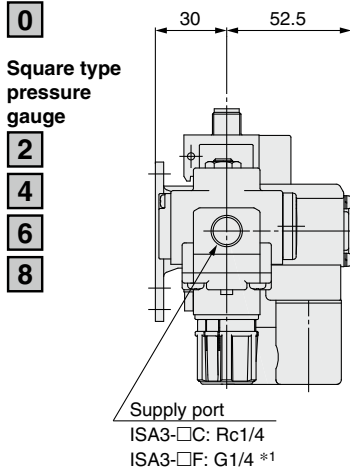
Round type pressure gauge



ISA3-□□□-□□□B-L

● Regulator

Without pressure gauge



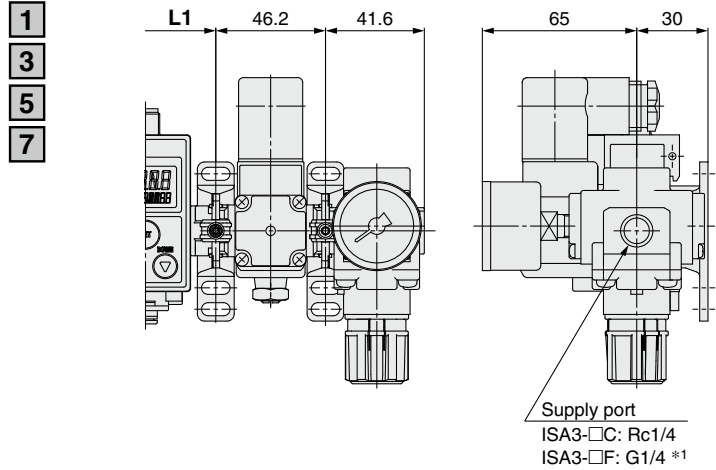
Square type pressure gauge

- 2**
- 4**
- 6**
- 8**

ISA3-□□□-□□□B-R

● Regulator

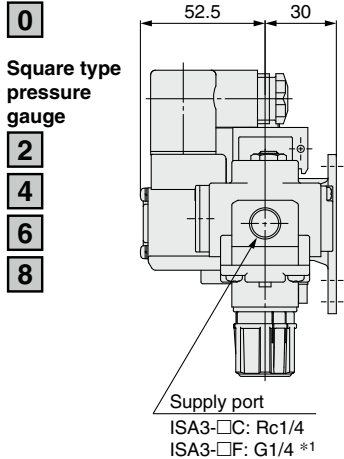
Round type pressure gauge



ISA3-□□□-□□□B-R

● Regulator

Without pressure gauge



Square type pressure gauge

- 2**
- 4**
- 6**
- 8**

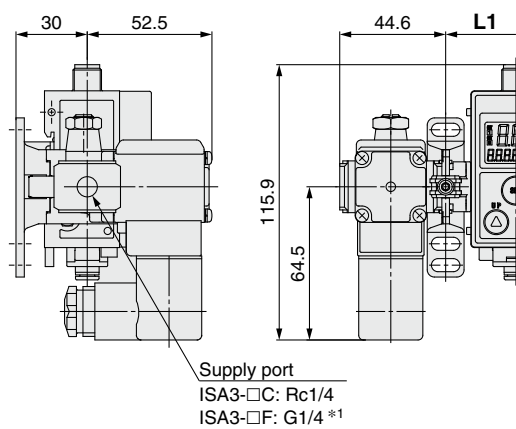
Unit: mm

Stations	1	2	3	4	5	6
L1	55.6	93.6	131.6	169.6	207.6	245.6
L2	136.4	174.4	212.4	250.4	288.4	326.4
Piping type	C (ø4 One-touch fitting)		C (ø6 One-touch fitting)		F (G thread)	
H	13		13.6		19	

ISA3 Series

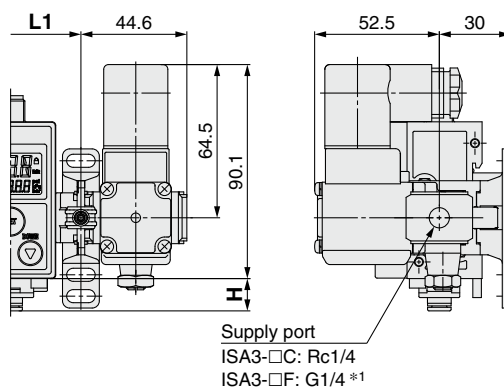
Dimensions

ISA3-□□□-□□□B-LN□



- *1 Conforming to ISO 16030
- *2 Conforming to ISO 1179-1
- * Bracket mounting only

ISA3-□□□-□□□B-RN□



Unit: mm

Stations	1	2	3	4	5	6
L1	55.6	93.6	131.6	169.6	207.6	245.6
Piping type	C (ø4 One-touch fitting)		C (ø6 One-touch fitting)		F (G thread)	
H	13		13.6		19	

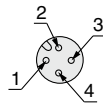
ISA3 Series

Dimensions

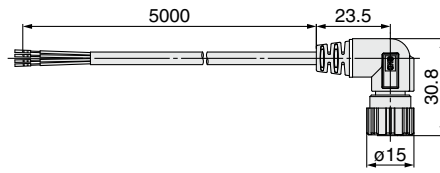
ZS-31-B (Cable with connector)



Connector pin no.

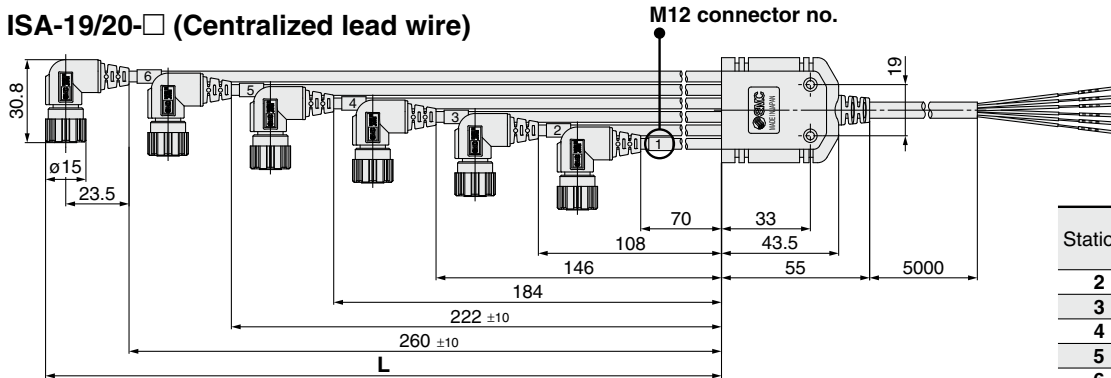


ZS-31-C (Cable with connector)



Pin no.	Lead wire color	Description	Pin no.	Lead wire color	Description
1	Brown	DC(+)	3	Blue	DC(-)
2	White	OUT2	4	Black	OUT1

ISA-19/20-□ (Centralized lead wire)



Unit: mm

Stations	Part no.		L
	1 output	2 outputs	
2	ISA-19-2	ISA-21-2	139
3	ISA-19-3	ISA-21-3	177
4	ISA-19-4	ISA-21-4	215
5	ISA-19-5	ISA-21-5	253
6	ISA-19-6	ISA-21-6	291

ISA-19-□ (Centralized lead wire: 1 output type)

M12 connector no.	Pin no.	Description	Lead wire color
1	1	DC(+)	Brown*1
	2	N.C.	—
	3	DC(-)	Blue*1
	4	OUT1	Black
2	1	DC(+)	Brown*1
	2	N.C.	—
	3	DC(-)	Blue*1
	4	OUT1	White
3	1	DC(+)	Brown*1
	2	N.C.	—
	3	DC(-)	Blue*1
	4	OUT1	Gray

M12 connector no.	Pin no.	Description	Lead wire color
4	1	DC(+)	Brown*1
	2	N.C.	—
	3	DC(-)	Blue*1
	4	OUT1	Orange
5	1	DC(+)	Brown*1
	2	N.C.	—
	3	DC(-)	Blue*1
	4	OUT1	Red
6	1	DC(+)	Brown*1
	2	N.C.	—
	3	DC(-)	Blue*1
	4	OUT1	Green

ISA-21-□ (Centralized lead wire: 2 outputs type)

·ISA-21-2/3

M12 connector no.	Pin no.	Description	Lead wire color
1	1	DC(+)	Brown*1
	2	OUT2	Orange
	3	DC(-)	Blue*1
	4	OUT1	Black
2	1	DC(+)	Brown*1
	2	OUT2	Red
	3	DC(-)	Blue*1
	4	OUT1	White
3	1	DC(+)	Brown*1
	2	OUT2	Green
	3	DC(-)	Blue*1
	4	OUT1	Gray

·ISA-21-4/5/6

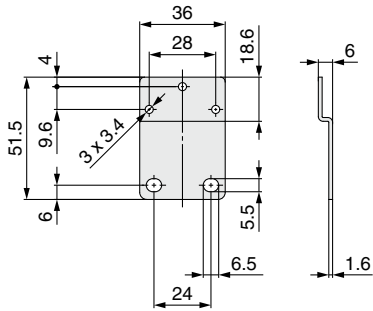
M12 connector no.	Pin no.	Description	Lead wire color
1	1	DC(+)	Brown*1
	2	OUT2	Yellow
	3	DC(-)	Blue*1
	4	OUT1	Black
2	1	DC(+)	Brown*1
	2	OUT2	Purple
	3	DC(-)	Blue*1
	4	OUT1	White
3	1	DC(+)	Brown*1
	2	OUT2	Gray/Black
	3	DC(-)	Blue*1
	4	OUT1	Gray

M12 connector no.	Pin no.	Description	Lead wire color
4	1	DC(+)	Brown*1
	2	OUT2	Orange/Black
	3	DC(-)	Blue*1
	4	OUT1	Orange
5	1	DC(+)	Brown*1
	2	OUT2	Red/Black
	3	DC(-)	Blue*1
	4	OUT1	Red
6	1	DC(+)	Brown*1
	2	OUT2	Green/Black
	3	DC(-)	Blue*1
	4	OUT1	Green

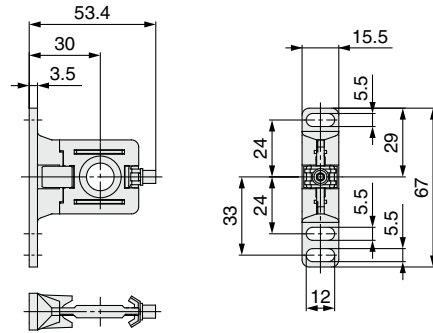
*1 Brown and blue are connected inside the product.

Dimensions

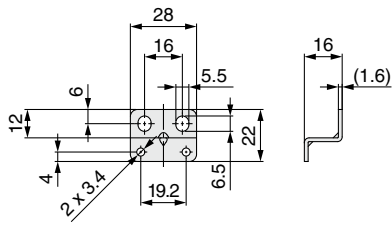
ISA-14 (Bracket when control unit not fitted)



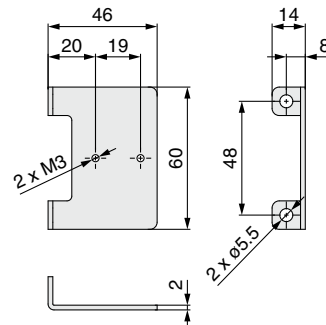
Y200T-A (Spacer with bracket)



ISA-17 (Bracket when control unit fitted)



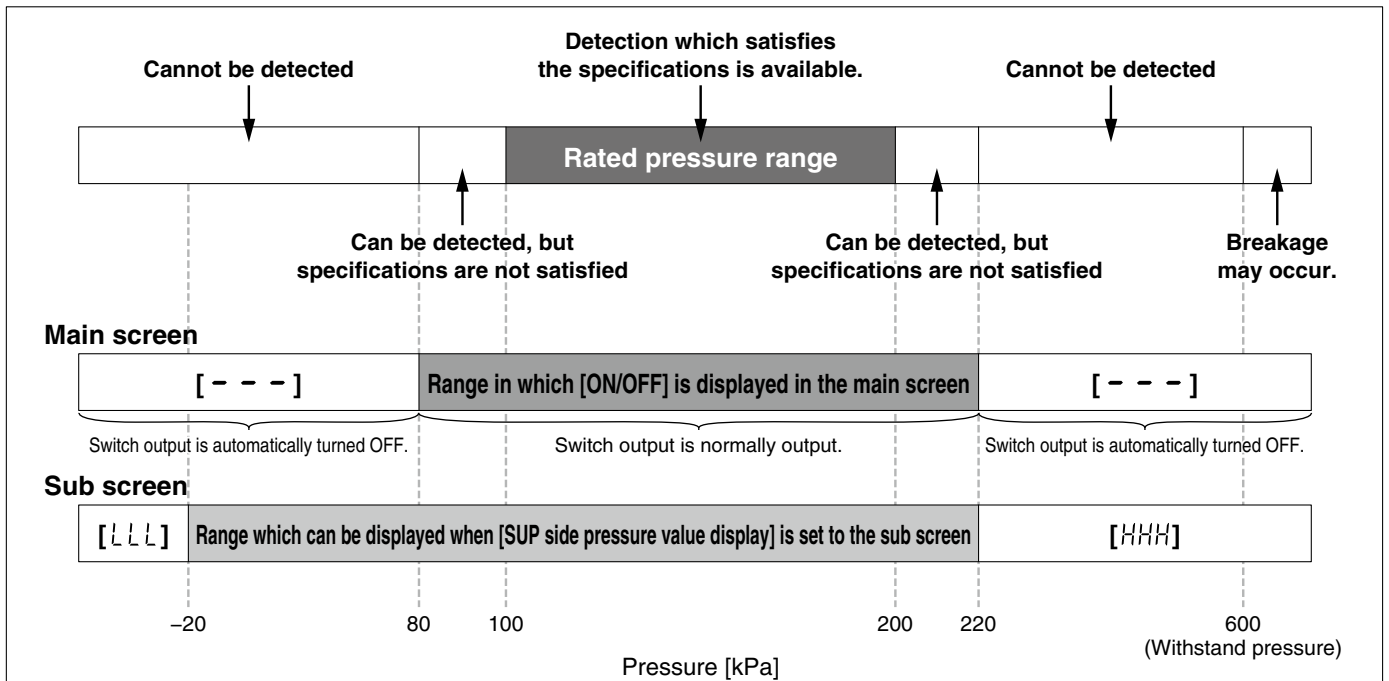
ISA-20 (Bracket for centralized lead wire)



Error Indication

Main screen	Name	Description	Measures
- - -	Supply pressure error	Displayed when supply pressure is outside the range of 80 kPa to 220 kPa. Measurement is not possible.	Supply rated pressure (100 kPa to 200 kPa). The product will return to measurement mode automatically.
- - -	Outside of the displayable range (Switch point change mode)	The workpiece is outside the displayable range.	Move the workpiece closer to the detection nozzle.
Er 1	OUT1 over current error	The switch output (OUT1) load current has exceeded 80 mA.	Turn the power OFF and remove the cause of the over current. Then turn the power ON again.
Er 3	Zero clear error	Zero clear was not performed at atmospheric pressure. (Pressure outside of ± 14 kPa was supplied present.)	Perform zero clear at atmospheric pressure.
Er 0	System error	An internal data error has occurred.	Turn the power OFF and turn it ON again.
Er 4 to Er 9			
Sub screen	Name	Description	Measures
HHH	Supply pressure error (When [SUP side pressure value display] is set to the sub screen)	Pressure exceeding 220 kPa is supplied.	Keep the supply pressure within the displayable range of -20 kPa to 220 kPa.
LLL		Vacuum pressure (less than -20 kPa) is supplied.	

Relationship Between Supply Pressure and Display



ISA3 Series Made to Order



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

1 Compatible with control units without a 2-port solenoid valve

This is a product with a control unit without a 2-port solenoid valve. (Combination of an ISA3 and a regulator)

How to Order

ISA3 - [] [] [] - [] [] [] B - [] [] - X169

Enter the standard product number. (Page 10)

● Regulator (Refer to page 18.)*1

1	With regulator	Round type pressure gauge	0.4 MPa	MPa single notation
2		Square type pressure gauge		

* Not compatible with the ISA3-L series (IO-Link compatible)

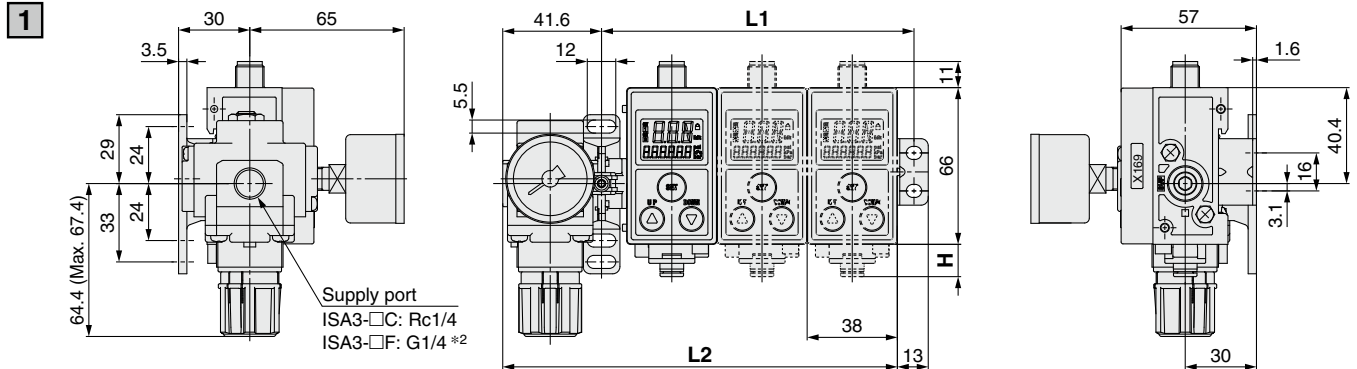
*1 The type without a regulator (option "N") is available as standard and therefore cannot be selected.

Dimensions

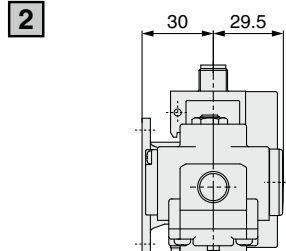
ISA3-[]-[]-[]-[]-[] B-L [] -X169 (With control unit)

● Regulator

Round type pressure gauge



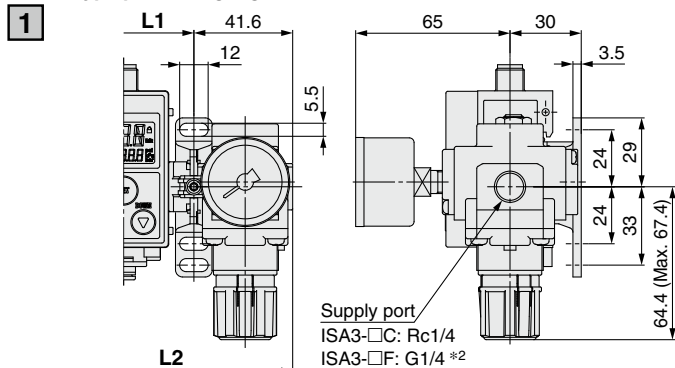
Square type pressure gauge



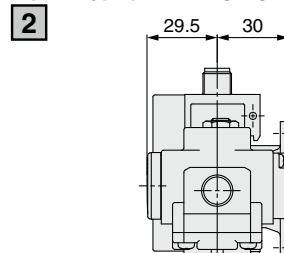
ISA3-[]-[]-[]-[]-[] B-R [] -X169 (With control unit)

● Regulator

Round type pressure gauge



Square type pressure gauge



	Unit: mm					
Stations	1	2	3	4	5	6
L1	55.6	93.6	131.6	169.6	207.6	245.6
L2	90.2	128.2	166.2	204	242.2	280.2
Piping type	C (ø4 One-touch fitting)		C (ø6 One-touch fitting)		F (G thread)	
H	13		13.6		19	

*2 Conforming to ISO 16030

* Bracket mounting only

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

2 A cable in-line entry type

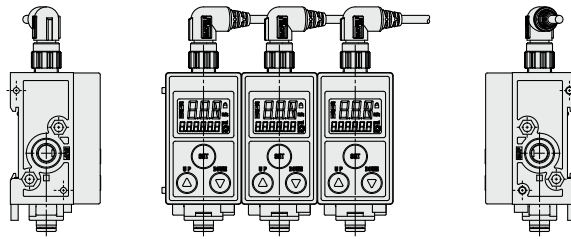
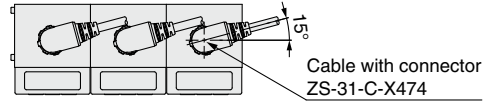
This product has an in-line cable entry.

How to Order

Without control unit

ISA3 - [] [] [] - [] [] L [] - X219

Enter the standard product number. (Page 9)

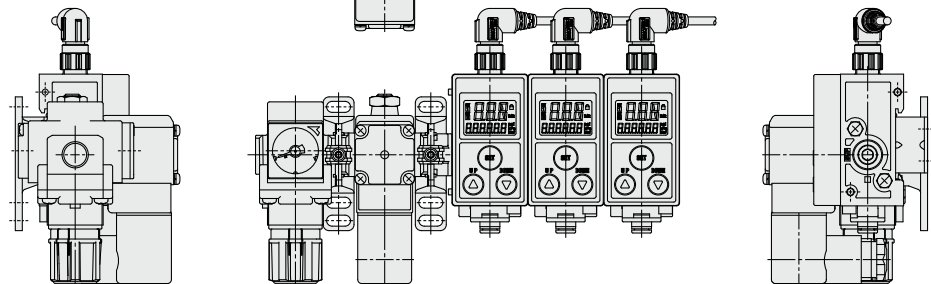
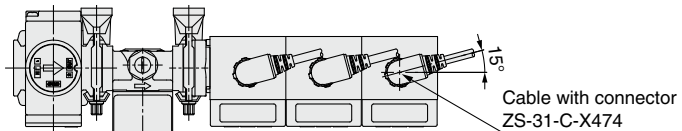


* Dimensions are the same as the standard product.
For details, refer to page 19.

With control unit

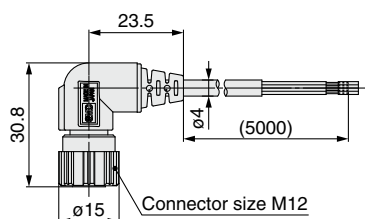
ISA3 - [] [] [] - [] [] LB - [] [] [] - X219

Enter the standard product number. (Page 10)

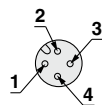


* Dimensions are the same as the standard product.
For details, refer to page 20.

ZS-31-C-X474 (Cable with connector)



Connector pin no.



Pin no.	Lead wire color	Description	Pin no.	Lead wire color	Description
1	Brown	DC (+)	3	Blue	DC (-)
2	White	OUT2	4	Black	OUT1