



Thin type pressure gauge

# G401 Series

Thin, compact design ideal for incorporating devices.  
Suitable for filter regulator, regulator, and pressure switch (P4000).

● Connection: O ring sealant, set screw

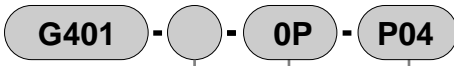
JIS symbol



## Specifications

Descriptions		G401
Working fluid		Compressed air
Fluid temperature	°C	5 to 60
Ambient temperature	°C	5 to 60
Precision	Grade	JIS3 grade or equivalent ( $\pm 3\%F/S$ ) (at 5 to 35°C)
Shape		Square shaped, set screw
Display section diameter		$\phi 26$
Material	Housing	PBT resin
	Lens	Polycarbonate resin
Pressure range	MPa	0 to 0.4
		0 to 1.0
Connection		O ring sealant, set screw
Weight	g	11

## How to order



A Series

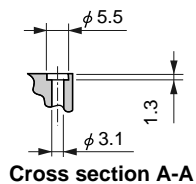
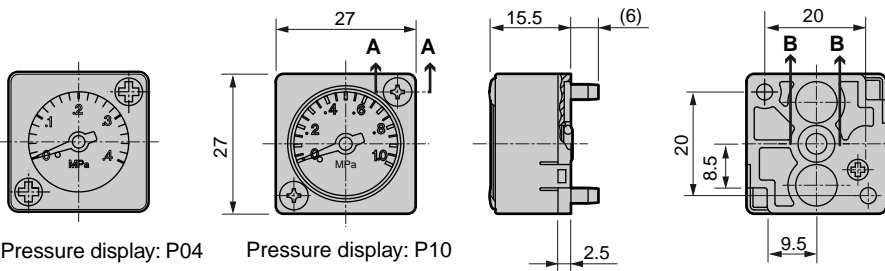
B Connection method

C Pressure display

Symbol	Descriptions
<b>A Series</b>	
Blank	Standard Series
W	Standard white Series
<b>B Connection method</b>	
Blank	Set screw for metal (nominal 3 tapping screw) (R3000, 4000, 8000 Series provided as standard) (R3100, 4100, 8100 Series)
OP	Set screw for resin (nominal 3 tapping screw) (R1000, W1000 series provided as standard)
<b>C Pressure display (MPa)</b>	
P04	0 to 0.4MPa
P10	0 to 1.0MPa

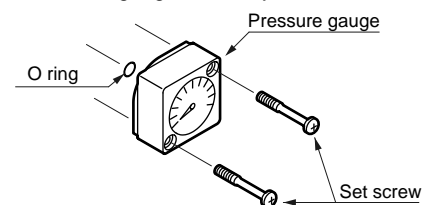
## Dimensions and part material

### ● G401



Part name	Material
Bourdon tube	Phosphor bronze
Case	PBT resin
Lens	Polycarbonate resin

### ● Pressure gauge assembly



\* Tighten the set screw with 0.6 N·m or less.

## Applications





Pressure gauge with safety mark

# G40D/G50D Series

Green and red zones simplify visual control.

● Port size: R1/8, R1/4

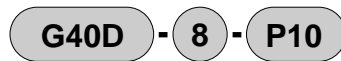
JIS symbol



## Specifications

Descriptions	G40D, G50D	
	P10	P04
Working fluid	Compressed air	
Full scale MPa	1.0	0.4
Safety mark setting range MPa	0.15 to 1.0	0.06 to 0.4
Max. setting width MPa	0.45	0.18
Ambient temperature °C	5 to 60	
Fluid temperature °C	5 to 60	
Port size R	1/8, 1/4	
Precision	JIS3 grade or equivalent ( $\pm 3\%F-S$ ) (at 5 to 35 °C)	
Weight g	G40D: 85	G50D: 100

## How to order



A Model no.

B Port size

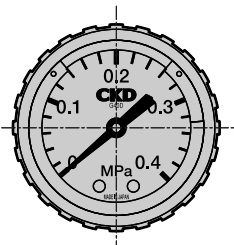
C Pressure display

Symbol	Descriptions
<b>A Model no.</b>	
G40D	Pressure gauge with safety mark
G50D	Pressure gauge with safety mark
<b>B Port size</b>	
6	R1/8
8	R1/4
<b>C Pressure display</b>	
P10	0 to 1.0MPa
P04	0 to 0.4MPa

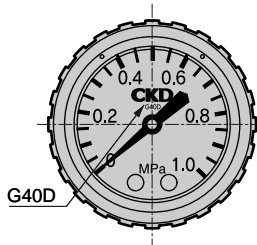
## Note on model no. selection

- \* Designate R1/4 when mounting on Selex FRL Series.
- \* Designate G40D-8 when selecting for Selex FRL1000 Series.
- \* Ample pressure gauges are available other than pressure gauge with safety mark, so consult with CKD.

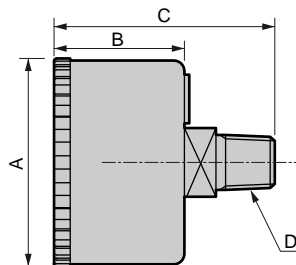
## Dimensions and material



Pressure display: P04

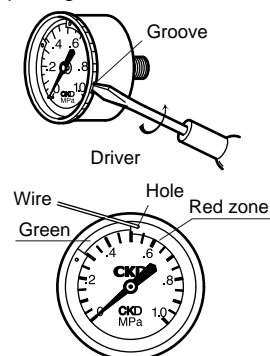


Pressure display: P10



## Adjustment method of pressure range

Opening the clear cover



Remove the transparent cover and insert a wire to the hole in red zone to move the red zone. After the adjustment, always supply compressed air after assembling the transparent cover.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

Ending

Pressure gauge with safety mark  
F.R.L. unit

Part name	Material
Bourdon tube/stock	Brass
Housing	Steel sheet + paint
Lens	Polyamide resin
Mark	PBT resin

Model no.	A	B	C	D
G40D-6	φ	26.5	44	R1/8
G40D-8	42.5	26.5	46	R1/4
G50D-6	φ	27.5	44	R1/8
G50D-8	52.5	27.5	46	R1/4



Pressure gauge with limit mark

# G41D Series

Easy visual inspection control due to green arrow.

● Port size: R1/8, R1/4

JIS symbol



## Specifications

Descriptions	G41D	
Working fluid	Compressed air	
Fluid temperature °C	5 to 60	
Ambient temperature °C	5 to 60	
Precision Note 1 Grade	JIS3 grade or equivalent ( $\pm 3\%$ F/S) (at 5 to 35°C)	
Shape	DT type (rear side screw/stock section 4 square)	
Display section diameter	$\phi 42$	
Material	Stock / Bourdon tube	Brass
	Housing	Stainless steel
	Lens	Polycarbonate resin
	Mark	Polyacetal resin
Pressure range MPa (Setting range)	0 to 0.4 0 to 1.0	
Port size Note 1	R1/8, 1/4	
Weight	g 82	

Note 1: The guaranteed display accuracy temperature is  $20 \pm 15^\circ\text{C}$ .

## How to order

**G41D - 6 - P04**

**A** Model no.

**B** Port size

**C** Pressure display

Symbol	Descriptions
<b>A Model no.</b>	
<b>G41D</b>	Pressure gauge with limit mark
<b>B Port size Note 1</b>	
<b>6</b>	R1/8
<b>8</b>	R1/4
<b>C Pressure display</b>	
<b>P02</b>	0 to 0.2MPa
<b>P04</b>	0 to 0.4MPa
<b>P10</b>	0 to 1.0MPa

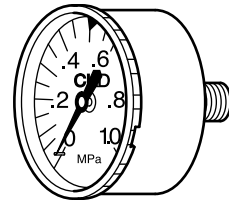
## ⚠ Note on model no. selection

Note 1: NPT and G threads are used as custom orders.

## Adjustment method

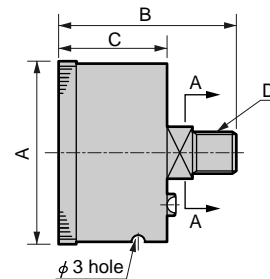
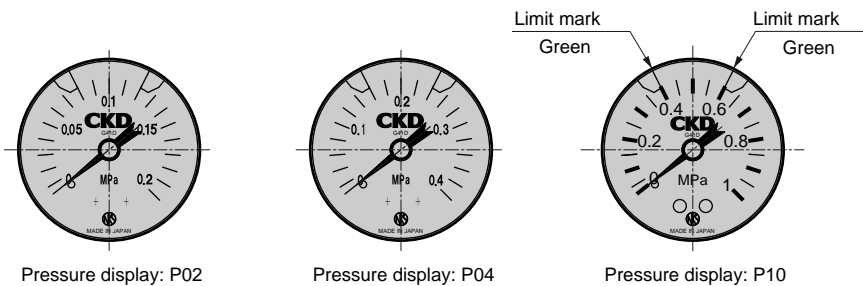
Remove the transparent cover, then move the green arrow with a screw driver, etc.

After the adjustment, always supply compressed air after assembling the transparent cover.



Remove the transparent cover by turning it counterclockwise and pulling it off.

## Dimensions



Model no.	A	B	C	D	E
G41D-6	$\phi 42$	40.5	24.5	R1/8	12
G41D-8	$\phi 42$	44.5	24.5	R1/4	14



Cross section A-A



General purpose pressure gauge

# G49D/G59D Series

● Port size: R1/8, R1/4

JIS symbol



## Specifications

Descriptions		G49D	G59D
Working fluid		Compressed air	
Fluid temperature °C		5 to 60	
Ambient temperature °C		5 to 60	
Precision Note 1		JIS3 grade or equivalent ( $\pm 3\%F/S$ ) (at 5 to 35°C)	
Shape		DT type (rear side screw, stock section 4 square)	
Display section diameter		$\phi 42$	$\phi 52$
Material	Stock / Bourdon tube	Brass Note 2	
	Housing	Steel sheet + chrome plating	
	Lens	Glass	
Pressure range MPa		0 to 0.2	
		0 to 0.4	
		0 to 1.0	
		0 to 2.0	
Port size	R	1/8, 1/4	
Weight	g	86	115

Note 1: The guaranteed display accuracy temperature is  $20 \pm 15^\circ\text{C}$ .

Note 2: The material of the Bourdon's tube is phosphor bronze only for pressure indication "P20."

## How to order

**G49D - 6 - P02**

A Model no.

B Port size

C Pressure display

Symbol	Descriptions
<b>A Model no.</b>	
<b>G49D</b>	
<b>G59D</b>	
<b>B Port size</b> Note 2	
<b>6</b>	R1/8
<b>8</b>	R1/4
<b>C Pressure display (MPa)</b> Note 1	
<b>P02</b>	0 to 0.2
<b>P04</b>	0 to 0.4
<b>P10</b>	0 to 1.0
<b>P20</b>	0 to 2.0

**Clean room specifications** (catalog No. CB-033SA)

● Dust generation preventing structure for use in cleanrooms

G49D - ..... - **P9\***

G59D - ..... - **P9\***

**Copper and PTFE free** (page 536)

G49D - ..... - **P6**

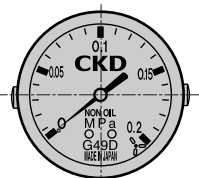
G59D - ..... - **P6**

**Note on model no. selection**

Note 1: Displays other than a MPa display are custom order.

Note 2: NPT thread is available as custom order.

## Dimensions



Pressure display: P02



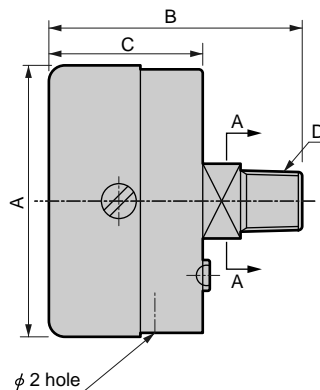
Pressure display: P04



Pressure display: P10



Pressure display: P20



Cross section A-A

Model no.	A	B	C	D	E
G49D-6	$\phi 43.5$	40.5	24.5	R1/8	12
G49D-8	$\phi 43.5$	44	24.5	R1/4	14
G59D-6	$\phi 52$	44.5	28	R1/8	12
G59D-8	$\phi 52$	46.5	28	R1/4	14
G49D-6-P6	$\phi 42.8$	43.5	27.5	R1/8	12
G59D-8-P6	$\phi 51.8$	52.5	30	R1/4	14

Refrigerating type dryer  
Desiccant type dryer  
High polymer membrane dryer  
Air filter  
Auto. drain / others  
F.R.L. (Module unit)  
F.R.L. (Separate)  
Compact F.R.  
Precise regulator  
F.R.L. (Related products)  
Clean F.R.  
Electro pneumatic regulator  
Air booster  
Speed control valve  
Silencer  
Check valve / others  
Joint / tube  
Vacuum filter  
Vacuum regulator  
Suction plate  
Magnetic spring buffer  
Mechanical pressure SW  
Electronic pressure SW  
Contact / close contact cont. SW  
Air sensor  
Pressure SW for coolant  
Small flow sensor  
Small flow controller  
Flow sensor for air  
Flow sensor for water  
Total air system  
Total air system (Gamma)

Ending

General purpose pressure gauge  
F.R.L. unit



Pressure gauge for panel mount

# G53D Series

JIS symbol



## Features

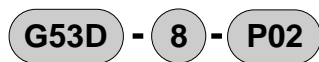
- An embedded panel mount has been added to the conventional pressure gauge
- M5 female threads are used at the connection port as standard

## Specifications

Model no.	G53D	
Working fluid	Compressed air	
Fluid temperature	°C	5 to 60
Ambient temperature	°C	-5 to 60 (no freezing)
Precision	Note 1	JIS 3 grade or equivalent ( $\pm 3\%F/S$ )
Shape	DT type (rear side screw, stock section 4 square)	
Display section diameter	$\phi 52$	
Material	Stock, Bourdon tube	Brass
	Housing	Steel sheet + chrome plating
	Lens	Glass
Pressure range	MPa	0 to 0.2
		0 to 0.4
		0 to 1.0
Port size	R	1/8 (M5 female thread), 1/4 (M5 female thread)
Weight	g	100

Note 1: Display precision proof temperature is  $20 \pm 15$  °C.

## How to order



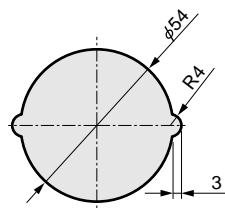
Symbol	Descriptions
<b>A</b>	<b>Port size</b> <b>Note 1</b>
<b>6</b>	1/8 (M5 female thread)
<b>8</b>	1/4 (M5 female thread)
<b>B</b>	<b>Pressure display MPa</b> <b>Note 2</b>
<b>P02</b>	0 to 0.2
<b>P04</b>	0 to 0.4
<b>P10</b>	0 to 1.0

## ! Note on model no. selection

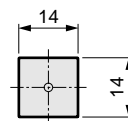
Note 1: Consult with CKD for the NPT thread.

Note 2: Check with CKD for indications other than MPa.

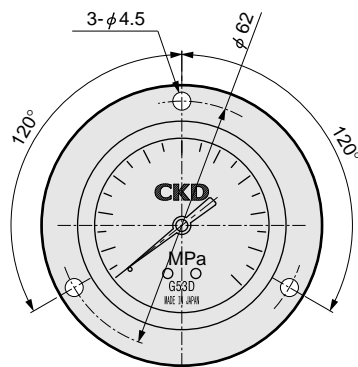
### Dimensions



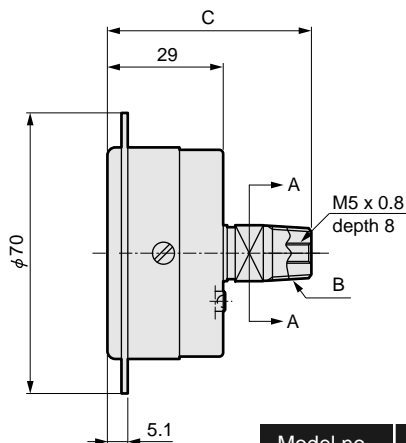
Panel cut dimension



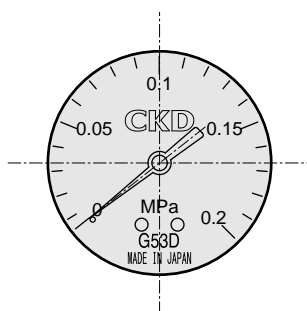
Cross section A-A



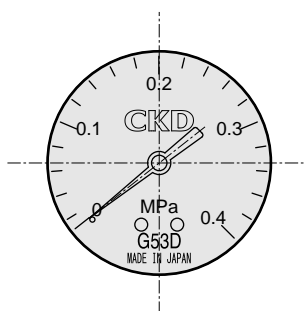
Scale display



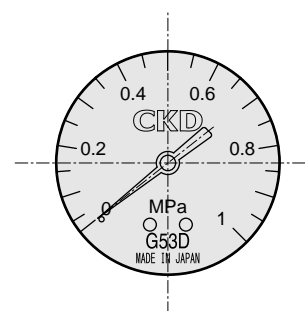
Model no.	B	C
G53D-6	Rc1/8	48
G53D-8	Rc1/4	51



Pressure display: P02



Pressure display: P04



Pressure display: P10

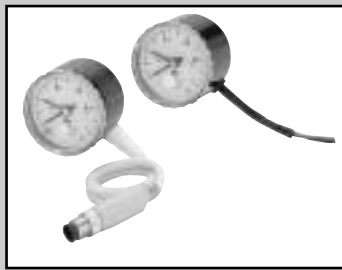
### ⚠ Safety precautions

- Check that no impact or vibration is applied directly to the product.
- Repeated and sudden increase and decrease in pressure and pressure pulsation must be avoided because it could adversely affect the life of the pressure gauge. Ease the pressure fluctuation in the circuit.

Refrigerating type dryer  
Desiccant type dryer  
High polymer membrane dryer  
Air filter  
Auto. drain / others  
F.R.L. (Module unit)  
F.R.L. (Separate)  
Compact F.R.  
Precise regulator  
F.R.L. (Related products)  
Clean F.R.  
Electro pneumatic regulator  
Air booster  
Speed control valve  
Silencer  
Check valve / others  
Joint / tube  
Vacuum filter  
Vacuum regulator  
Suction plate  
Magnetic spring buffer  
Mechanical pressure SW  
Electronic pressure SW  
Contact / close contact cont. SW  
Air sensor  
Pressure SW for coolant  
Small flow sensor  
Small flow controller  
Flow sensor for air  
Flow sensor for water  
Total air system  
Total air system (Gamma)

Ending

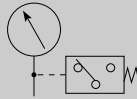
Pressure gauge for panel mount  
F.R.: L. unit



Pressure gauge with switch

# G52D Series

JIS symbol



## Features

- Introducing a pressure switch function to the analog pressure gauge
- Nonpolar connector used as option
- Activation confirmation lamp as option

## Specifications

Descriptions		Pressure gauge
Working fluid		Compressed air
Fluid temperature		5 to 60°C
Ambient temperature		-5 to 60°C (no freezing)
Precision	Note 1	JIS 3 grade or equivalent ( $\pm 3\%F/S$ )
Shape		DT type (rear side screw, stock section 6 square)
Material	Stock	Brass
	Bourdon tube	Phosphor bronze
	Housing	Steel sheet, chrome plating
	Lens	Polycarbonate resin
	Setting needle	ABS resin (green)
Pressure range	Note 2	0 to 1.0MPa
Port size		R1/4
Weight		150g

Note 1: Display precision proof temperature is 20  $\pm$  15 °C.

Note 2: Do not apply pressure exceeding the maximum indication pressure, or operation could fail.

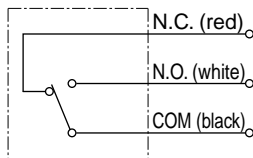
Descriptions		Pressure switch
Pressure switch setting range		0.1 to 0.8MPa
Hysteresis		0.07MPa
Contact configuration		W/o light: 1ab (normally open, normally closed) With light: 1a (normally open)
Setting needle error		$\pm 0.05$ MPa
Lead wire length		300mm
Electric connection		Without light: lead wire 3 pcs. With light: M12 connector (4 pins)
Indicator light		LED (load current: 8 to 30mA)

## Rated of micro switch

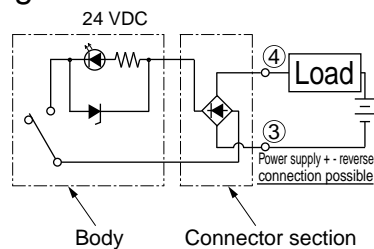
Load	Resistance load	
Rated voltage	30 VDC	125 VAC
Working current range	0.1 to 1A	0.1 to 1A

## Electric wiring diagram

### ○ Without light



### ○ With light/LED



## How to order

**G52D - 8 - P10 - 3N**

Model no.

**A** Port size

**B** Pressure display

**C** Option

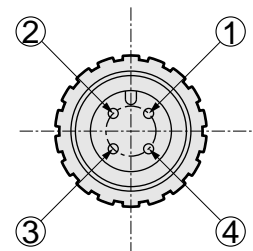
Symbol	Descriptions
<b>A</b>	Port size <b>Note 1</b>
<b>8</b>	R1/4
<b>B</b>	Pressure display <b>Note 2</b>
<b>P10</b>	0 to 1.0
<b>C</b>	Option
<b>Blank</b>	Without light
<b>3N</b>	LED (24 VDC) not polarized

## ⚠ Note on model no. selection

Note 1: Consult with CKD for the NPT thread.

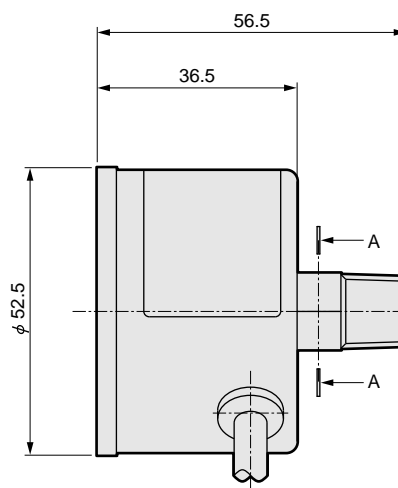
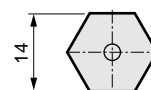
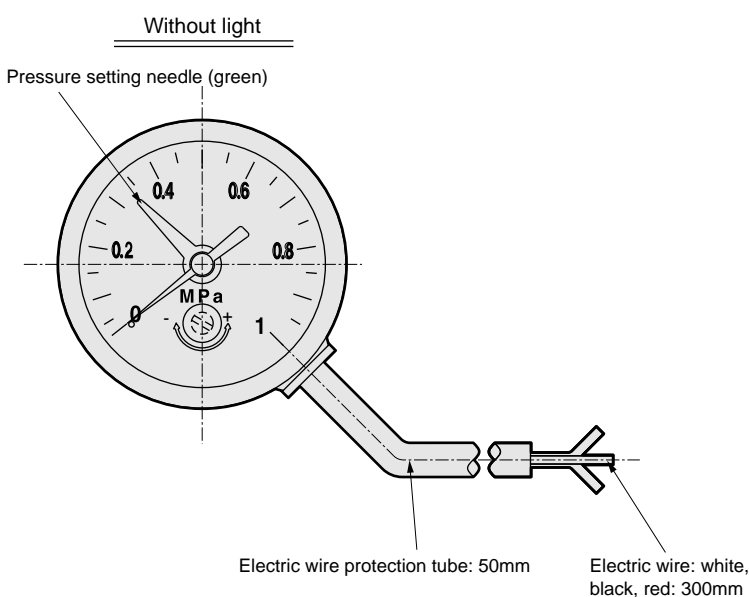
Note 2: Check with CKD for indications other than MPa.

## Terminal array of male connector

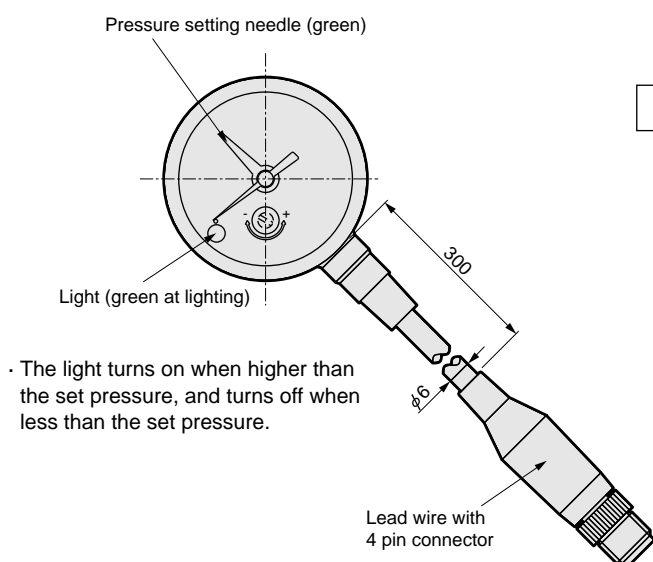


### Dimensions

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending



### With indicator light



### Setting the setting needle

○ Pass a flat-tip screwdriver (tip width 2.9 mm) through the rubber cap on the lens, and turn the setting screw to set the setting needle to the required pressure.

- \* Turn the setting screw
  - Minus (-) side (clockwise) → setting pressure decrease
  - Plus (+) side (counterclockwise) → setting pressure increase

· The light turns on when higher than the set pressure, and turns off when less than the set pressure.

### ⚠ Safety precautions

- Check that no impact or vibration is applied directly to the product.
- Repeated and sudden increase and decrease in pressure and pressure pulsation must be avoided because it could adversely affect the life of the pressure gauge. Ease the pressure fluctuation in the circuit.
- The pressure switch setting value is indicated with the green setting indicator. Set the pressure switch value so that the setting indicator turns clockwise. If the setting indicator passes the setting position, turn the setting indicator counterclockwise once, then reset.
- Set the setting with a difference of 0.1 MPa or more from the working pressure (including pressure drop). Malfunctions could result if the difference is small. Refer to the drawings above for details on setting the setting needle. When using the pressure switch in the normal open state, the switch may not turn on when the pressure drops unless a pressure, to which the set indication error ( $\pm 0.05$  MPa), hysteresis (0.07 MPa), and indicated accuracy ( $\pm 3\%$ F/S) have been added, has been applied.
- Add the pressure gauge's indication accuracy to the maximum value of the setting indicator and indicator's error (set indicator error).
- When the DC lamp is used, the internal voltage drop is to be 4V or less and load current 8 to 30mA at 24VDC.
- Wire the lead so that the repeated bending strain and tensile strength are not applied to the wire. Failure to do so could lead to disconnection or malfunction.

Pressure gauge with switch  
F.R.L. unit



Refrigerating type dryer  
 Desiccant type dryer  
 High polymer membrane dryer  
 Air filter  
 Auto. drain / others  
 F.R.L. (Module unit)  
 F.R.L. (Separate)  
 Compact F.R.  
 Precise regulator  
 F.R.L. (Related products)  
 Clean F.R.  
 Electro pneumatic regulator  
 Air booster  
 Speed control valve  
 Silencer  
 Check valve / others  
 Joint / tube  
 Vacuum filter  
 Vacuum regulator  
 Suction plate  
 Magnetic spring buffer  
 Mechanical pressure SW  
 Electronic pressure SW  
 Contact / close contact cont. SW  
 Air sensor  
 Pressure SW for coolant  
 Small flow sensor  
 Small flow controller  
 Flow sensor for air  
 Flow sensor for water  
 Total air system  
 Total air system (Gamma)  
 Ending



Miniature pressure gauge

# G29D Series

● Port size: R1/16, R1/8

JIS symbol



## Specifications

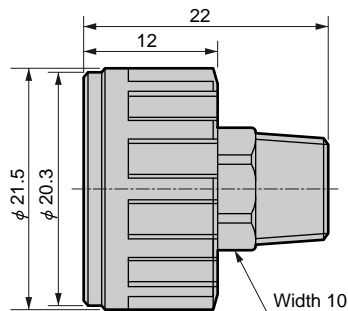
Descriptions		G29D
Working fluid		Compressed air
Fluid temperature	°C	5 to 60
Ambient temperature	°C	5 to 60
Precision		Scale
Shape		DS type (rear side screw, stock section 6 square)
Display section diameter		φ21
Material	Body	Zinc alloy die casting + paint
	Lens	Polycarbonate resin
Pressure range	MPa	0 to 1.0
Port size	R	1/16, 1/8
Weight	g	12

## How to order



Symbol	Descriptions
<b>A</b>	<b>Port size</b>
3	R1/16
6	R1/8
<b>B</b>	<b>Pressure display (MPa)</b>
P10	0 to 1.0

## Dimensions





Compact round pressure gauge

# G39D Series

● Port size: R1/8

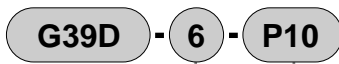
JIS symbol



## Specifications

Descriptions		G39D
Working fluid		Compressed air
Fluid temperature °C		5 to 60
Ambient temperature °C		5 to 60
Precision		JIS3 grade or equivalent (± 3%F/S) (at 5 to 35°C)
Shape		DT type (rear side screw, stock section 6 square)
Display section diameter		φ26
Material	Stock / Bourdon tube	Brass (phosphor bronze)
	Housing	Steel sheet + paint
	Lens	Acryl resin
Pressure range MPa		0 to 0.4
		0 to 1.0
Port size	R	1/8
Weight	g	37

## How to order

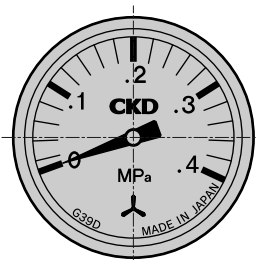


A Port size

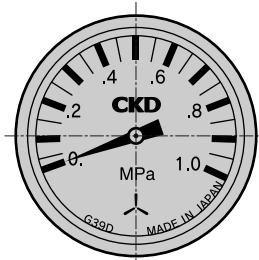
B Pressure display

Symbol	Descriptions
<b>A Port size</b>	
6	R1/8
<b>B Pressure display (MPa)</b>	
P04	0 to 0.4
P10	0 to 1.0

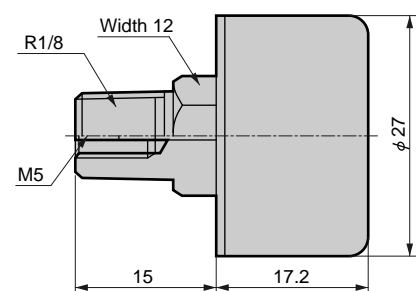
## Dimensions



Pressure display: P04



Pressure display: P10



Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)

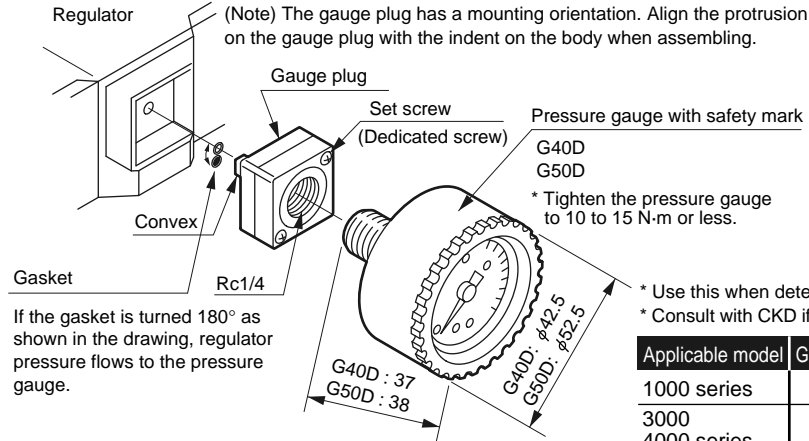
Ending

Compact round pressure gauge  
F.R.L. unit

# Pressure gauge series

## Gauge plug assembly (assembly of gauge plug, gasket, set screw)

Use when mounting the pressure gauge.



Applicable model	Gauge plug assembly model no.
1000 series	R1000-G-PLUG
3000	
4000 series	R3000-G-PLUG
8000	

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact conf. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending



Differential pressure gauge

# GA400-8-P02 Series

For controlling service life of air filter.

Differential pressure measuring range: 0 to 0.2MPa± 3%F.S.

JIS symbol



## Specifications

Descriptions	GA400-8-P02
Max. working pressure MPa	1.0
Withstanding pressure MPa	1.5
Fluid temperature (ambient temperature) °C	5 to 65
Differential pressure measuring range MPa	0 to 0.2
Pressure gauge accuracy	Full scale ±3%
Port size (high pressure side) R	1/4
Product weight kg	0.34

\* Nylon tube (O.D. 4 x I.D. 2.5, model no. F-1504) 0.5m, a single straight half union (port size R1/4, model no. MJS4-8), and a set of sealing tape are attached to the differential pressure gauge (GA400-8-P02) as standard accessory.

Designate GA400-8-P02-T1.5 when using the type with 1.5 m long nylon tubing.

## Clean room specifications

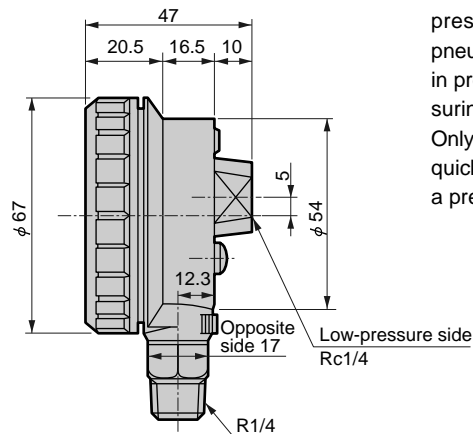
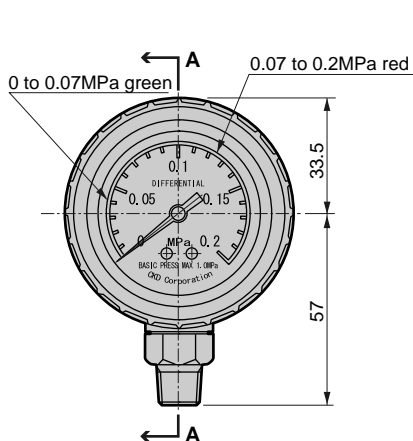
(catalog No. CB-033SA)

- Dust generation preventing structure for use in cleanrooms

GA400 - ..... - P90

## Dimensions

GA400-8-P02



## Operational principle

Applied measuring principle of a pressure gauge, differential pressure gauge measures differential pressure between pneumatic components in the pneumatic circuit. Differential pressure is measured in pressurized state, so accurate and precise measuring result is obtained.

Only assembling by-pass circuit, installed easily and quickly. Maintenance is also easy by only checking a pressure gauge.

## Cautions

### ⚠ Precautions

When assembling a stop valve in the by-pass circuit, always open the stop valve before supply compressed air.

### ⚠ Safety precautions (GA400)

Caution 1: Avoid direct sun lay.

Refrigerating type dryer
Desiccant type dryer
High polymer membrane dryer
Air filter
Auto. drain / others
F.R.L. (Module unit)
F.R.L. (Separate)
Compact F.R.
Precise regulator
F.R.L. (Related products)
Clean F.R.
Electro pneumatic regulator
Air booster
Speed control valve
Silencer
Check valve / others
Joint / tube
Vacuum filter
Vacuum regulator
Suction plate
Magnetic spring buffer
Mechanical pressure SW
Electronic pressure SW
Contact / close contact cont. SW
Air sensor
Pressure SW for coolant
Small flow sensor
Small flow controller
Flow sensor for air
Flow sensor for water
Total air system
Total air system (Gamma)
Ending

Differential pressure gauge  
F.R.L. unit