





# Pressure Gauge Guide

## Pressure Gauge for General Purpose

Outside diameter	Model	Type	Indication precision ±% FS	Pressure range MPa	Connection thread	Material			Indication <sup>(1)</sup> unit	Attachment <sup>(2)</sup>
						Case	Clear cover	Stud		
	ø15 G15	Back side thread	5	0 to 1.0	R 1/8 M5 (Female thread)	Zinc die-casted (Black graphite coated)	Poly-carbonate	Zinc die-casted (Black graphite coated)	MPa	—
	ø26 G27	Back side thread		0 to 1.0					R 1/16	
	ø37.5 G36	Back side thread	3	0 to 0.2 0 to 0.4	R 1/8	Aluminum die-casted (Black disulfide molybdenum coated)	Poly-carbonate	Aluminum die-casted (Black disulfide molybdenum coated)	MPa	—
	GA36	Vertical side thread		0 to 0.7 0 to 1.0 0 to 1.5						
	ø42.5 G46	Back side thread	3	0 to 0.2 0 to 0.4	R 1/8 R 1/4	Aluminum die-casted (Black disulfide molybdenum coated)	Poly-carbonate	Aluminum die-casted (Black disulfide molybdenum coated)	MPa	Cover ring assembly
	GA46	Vertical side thread		0 to 0.7 0 to 1.0 0 to 1.5						R 1/8 R 1/4
	ø30 G33	Back side thread	3	0 to 0.2 0 to 0.3	R 1/8	Stainless steel	Glass	Brass	MPa	—
	GA33	Vertical side thread		0 to 0.4 0 to 0.6						
	ø43 G43	Back side thread		0 to 0.7 0 to 1.0						




Note 1) Please consult with SMC for other scale indication units and connecting thread "NPT".

Note 2) Possible for use in panel mounting.

Note 3) Please contact SMC for the pressure range 0 to 0.6 MPa of GA33.

## Oil-free/External Parts Copper-free Pressure Gauge


Outside diameter	Model	Type	Indication precision ±% FS	Pressure range MPa	Connection thread	Material			Indication <sup>(1)</sup> unit	Attachment <sup>(2)</sup>
						Case	Clear cover	Stud		
	ø42.5 G46E	Back side thread	3	0 to 0.2 0 to 0.4 0 to 0.7 0 to 1.0 0 to 1.5	R 1/8 R 1/4	Rolled steel (Black melamine painted)	Poly-carbonate (Hard coated)	Brass (Electroless nickel plated)	MPa	Cover ring assembly



Note 1) Please consult with SMC for other scale indication units and connecting thread "NPT".

Note 2) Possible for use in panel mounting.


## Pressure Gauge for Clean Series (10-Series)

Outside diameter	Model	Type	Indication precision ±% FS	Pressure range MPa	Connection thread	Material			Indication <sup>(1)</sup> unit	Attachment
						Case	Clear cover	Stud		
	ø44 G49	Back side thread	3	0 to 0.4 0 to 0.7 0 to 1.0	R 1/4	Zinc die-casted (Chrome plated)	Glass	Brass (Nickel plated)	MPa	—



Note 1) Please consult with SMC for other scale indication units and connecting thread "NPT".

## Pressure Gauge for Clean Regulator


Outside diameter	Model	Type	Indication precision ±% FS	Pressure range MPa	Connection thread	Material			Indication <sup>(1)</sup> unit	Attachment
						Case	Clear cover	Stud		
	ø42.5 G46-SRA, B	Back side thread	3	0 to 0.2 0 to 0.4 0 to 0.7 0 to 1.0 0 to 1.5	R 1/8 R 1/4	Stainless steel (Black melamine painted)	Poly-carbonate (Hard coated)	Stainless steel	MPa	Cover ring assembly



Note 1) Please consult with SMC for other scale indication units and connecting thread "NPT".

Note 2) Possible for use in panel mounting.

## Pressure Gauge with Switch

Outside diameter	Model	Type	Indication precision ±% FS	Pressure range MPa	Connection thread	Material			Indication <sup>(1)</sup> unit	Attachment <sup>(2)</sup>
						Case	Clear cover	Stud		
	ø42.5 GP46	Back side thread	3	0 to 1.0	R 1/8 R 1/4	Rolled steel (Black melamine painted)	Poly-carbonate	Brass	MPa	Cover ring assembly



Note 1) Please consult with SMC for other scale indication units and connecting thread "NPT".

Note 2) Possible for use in panel mounting.

Pressure Gauge for Clean Regulator/With Limit Indicator

G46-□-□-SRA, B

O.D.: ø42

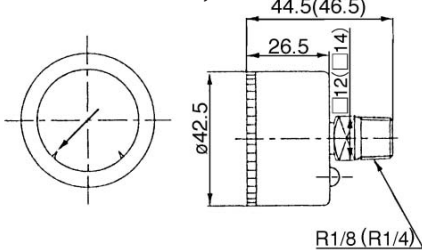


G46-10-02-SR A, B

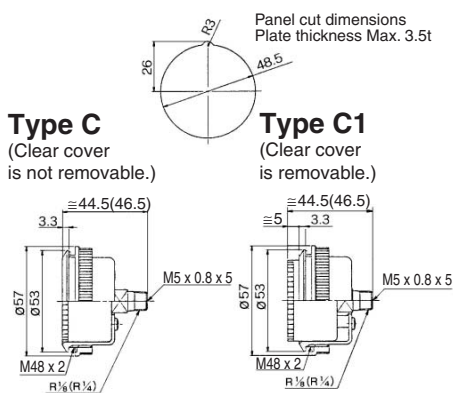
- Be sure to read the precautions on page 14-11-15 for selection and installation.

Dimensions Dimensions in ( ): R 1/4 connecting thread

G46-□-□- SRA, B



G46-□-□- SRB:  
With cover ring assembly  
(For panel mount)



Standard Specifications

Model		G46-□-SRA	G46-□-SRB
Type	Back side thread		
Port size <sup>(1)</sup>	R 1/8, R 1/4		
Fluid <sup>(2)</sup>	Air		
Indication precision	±3% F.S. (Full span)		
Fluid contact part cleaning (Wetted part)	Precision cleaning	General degreasing	
Assembly/environment	Clean room M5.5 (Class 10000)	General production line	
Oil/Water free	Oil/Water-free <sup>(3)</sup>		
Material <sup>(4)</sup>	Case	Stainless steel 304 (Black melamine painted)	
	Clear cover (Surface treatment)	Polycarbonate (Hard coated) Part no.: G46-00-00-2	
	Stud	Stainless steel 316	
	Bourdon tube	Stainless steel 316	
Attachment: cover ring assembly	C	Part no.: 1305104-6A	
	C1	Part no.: 1305104-7A	
Packaging	<ul style="list-style-type: none"> <li>• Polyethylene cap for stud parts.</li> <li>• Airtight polyethylene bag</li> </ul>	<ul style="list-style-type: none"> <li>• Polyethylene cap for stud parts.</li> <li>• Polyethylene bag</li> </ul>	
Weight (kg)	0.085		

- Note 1) When mounting a pressure gauge, use caution not to tighten excessively. Excessive tightening will cause product failure. Use a pipe tape for sealing. Recommended tightening torque: R 1/8 : Set between 7 and 9 N·m, R 1/4 : 12 and 14 N·m respectively.
- Note 2) When using water, use caution not to apply water hammer. When using other fluids, please consult with SMC for compatibility information concerning corrosion potential.
- Note 3) When manufacturing pressure gauge, SMC uses caution not to allow water to remain in the wetted parts.
- Note 4) Movable parts (gear, etc) inside pressure gauge are made of brass.

Model (Standard) Made-to-order products, (not including models above) may take longer leadtime. Please consult with SMC beforehand.

Model	Pressure range <sup>(Note)</sup>	Indication unit	Connection thread	Note
	MPa			
G46-2-01 to 02-SRA	0 to 0.2	MPa	R 1/8 R 1/4	—
G46-2-01 to 02-SRB				
G46-4-01 to 02-SRA	0 to 0.4			
G46-4-01 to 02-SRB				
G46-7-02-SRA	0 to 0.7			
G46-7-02-SRB				
G46-10-02-SRA	0 to 1.0			
G46-10-02-SRB				

Note) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

How to Order

**G 46 - 10 - 01 M - SRA - C**

- Pressure gauge Size**

Symbol	Outside diameter
46	ø42.5
- Max. display pressure**

Symbol	Unit: MPa
2	0.2
4	0.4
7	0.7
10	1.0
- Connection thread**

Symbol	Size
01	R 1/8
02	R 1/4
- Attachment (Cover ring assembly)**

Symbol	Specifications
Nil	Without cover ring assembly
C	Clear cover has no protrusion. (Clear cover is irremovable.)
C1	Clear cover has protrusion. (Clear cover is removable.)
- Option**

Symbol	Specifications
Nil	—
M	With M5 (Female thread)

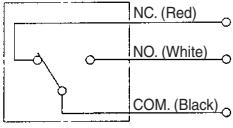
Note) Use M5 female thread when panel-mounting for piping.
- Grade**

Symbol	Component parts polishing, Assembly environment
SRA	Component parts: Precision cleaning Assembly: Clean room M5.5 (Class 10000)
SRB	Component parts: General degreasing Assembly: General production line

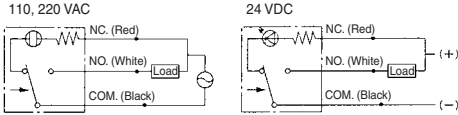
\* Part number for pressure gauge with MPa-psi units is G46-P\*\*\*\*\*-X30. This will no longer be sold for use in Japan after the new Weight and Measure Act has been implemented (October, 1999).

## Circuit Diagram

### Without indicator light



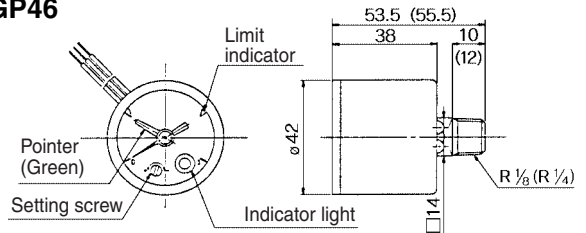
### With indicator light



The arrow in the diagram indicates the direction of the pressure increase. The light turns OFF when the pressure becomes higher than the set pressure and turns ON when the pressure becomes lower than the set pressure.

## Dimensions

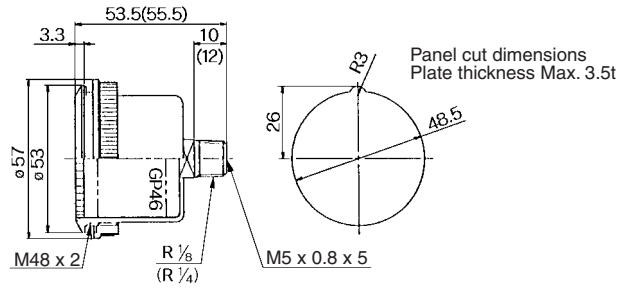
### GP46



( ): R 1/4

### GP46: With cover ring assembly (For panel mounting)

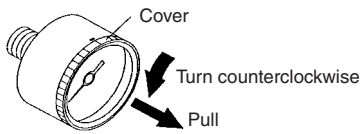
Clear cover is not removable.



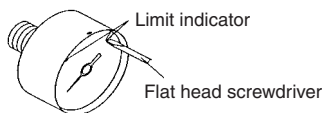
Refer to page 14-11-15 for mounting method.

## Procedure for Setting the Limit Gauge Indicator

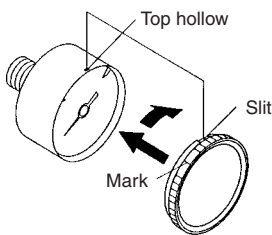
- Before setting the (green) limit indicator, turn the cover counterclockwise (approximately 6 to 7 mm) until it stops. Then, remove by pulling it towards you.



- Use a flat head screwdriver (with a 2.9 mm blade width) to set the (green) limit indicator. Be careful not to bend the other needle or damage the dial plate.



- After completing the setting, replace the cover. Fit the cover by aligning the cutout in the cover to the groove on the top of the black case. Turn the cover clockwise (approximately 6 to 7 mm) until it stops. Make sure that the matching mark on the cover is aligned with the groove on the top of the case.



## ⚠️ Precautions

Be sure to read before handling. Refer to pages 14-21-3 to 14-21-4 for Safety Instructions and Common Precautions.

## Selection

### ⚠️ Caution

- Do not apply high load voltage (current) or surge current as this can cause the switch to malfunction.
- Make sure that no direct impact or vibrations are applied to the body.
- If operating under pressure pulsations or in high frequency operations, please contact SMC.

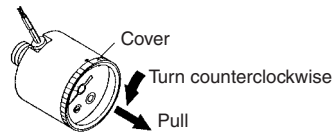
## Mounting

### ⚠️ Caution

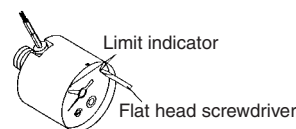
- During transport and installation, do not apply shock to the product, such as by dropping doing so will affect its precision.
- Regarding the installation posture, place it perpendicular to the ground, with the zero point on the reading of a pressure gauge facing down.
- Do not install it in an area that is exposed to high temperature or humidity, because doing so will lead to improper operation.
- To screw in the pressure gauge, make sure to turn the gauge by placing a wrench over the square wrench flats. If the pressure gauge is screwed in by holding it on some other area, air leakage or damage may result.

## Procedure for Setting the Limit Gauge Indicator and the Setting Needle

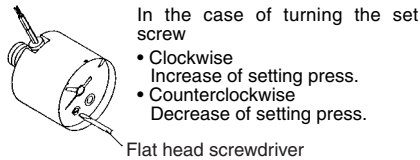
- Before setting the limit indicator and the (green) setting needle, turn the cover counterclockwise (approximately 6 to 7 mm) until it stops. Then, remove by pulling it towards you.



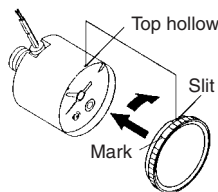
- Use a flat head screwdriver (with a 2.9 mm blade width) to set the (green) limit indicator. Be careful not to bend the other needle or damage the dial plate.



- Before setting the setting needle, use a flat head screwdriver (with a 2.9 mm blade width) to turn the setting screw and set the setting needle to the set pressure.

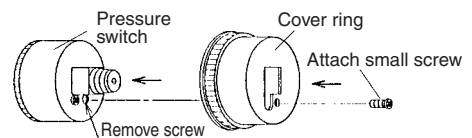


- After completing the setting, replace the cover. Fit the cover by aligning the cutout in the cover to the groove on the top of the black case. Turn the cover clockwise (approximately 6 to 7 mm) until it stops. Make sure that the matching mark on the cover is aligned with the groove on the top of the case.

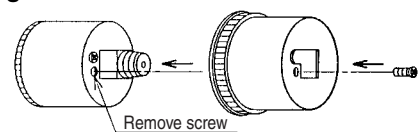


## Procedure for Assembling the Cover Ring Assembly

### ● Pressure gauge for general purpose



### ● Pressure gauge with switch



- Remove the small screw (1 position) from the pressure gauge.
- Place the cover ring on the pressure gauge.
- Using the small screw that is provided with the cover ring, install the cover ring. The installation torque is 0.3 to 0.5 N·m.

F.R.L.

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