





Pressure Gauge Guide

Pressure Gauge for General Purpose

Outside diameter	Model	Type	Indication precision ±% FS	Pressure range MPa	Connection thread	Material			Indication ⁽¹⁾ unit	Attachment ⁽²⁾
						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 0 to 0.7 0 to 1.0 0 to 1.5	R 1/8	Aluminum die-casted (Black disulfide molybdenum coated) Rolled steel (Black melamine painted)	Poly-carbonate	Aluminum die-casted (Black disulfide molybdenum coated)	MPa	—
	GA36	Vertical side thread		Brass						
	ø42.5 G46	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	Aluminum die-casted (Black disulfide molybdenum coated) Rolled steel (Black melamine painted)	Poly-carbonate	Aluminum die-casted (Black disulfide molybdenum coated)	MPa	Cover ring assembly
	GA46	Vertical side thread		R 1/8 R 1/4	Brass			—		
	ø30 G33	Back side thread	3	0 to 0.2 0 to 0.3 0 to 0.4 0 to 0.6 0 to 0.7 0 to 1.0	R 1/8	Stainless steel	Glass	Brass	MPa	—
	GA33	Vertical side thread								
	ø43 G43	Back side thread		R 1/8 R 1/4						




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 ⁽¹⁾ unit	Attachment ⁽²⁾
						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 ⁽¹⁾ 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 ⁽¹⁾ 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 ⁽¹⁾ unit	Attachment ⁽²⁾
						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.

Oil-free/External Parts Copper-free Pressure Gauge/With Limit Indicator

G46E

O.D.: $\phi 42$



G46E-10-02M

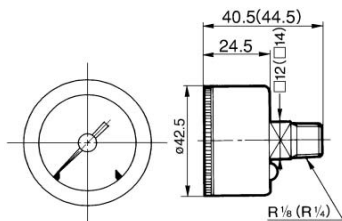
G46E-10-02M-C

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

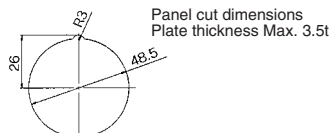
Dimensions

Dimensions in: $R \frac{1}{4}$ connecting thread

G46E

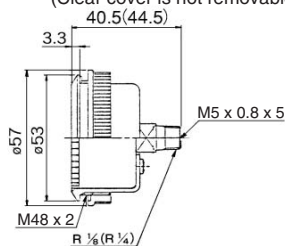


G46E (Type DT): With cover ring assembly (For panel mounting)



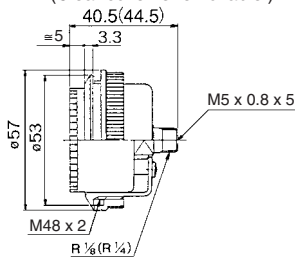
Type C

(Clear cover is not removable.)



Type C1

(Clear cover is removable.)



For mounting method, refer to page 14-11-15.

Standard Specifications

Model		G46E
Type		Back side thread
Port size ⁽¹⁾		$R \frac{1}{8}$, $R \frac{1}{4}$ (Option M: with M5 female thread)
Fluid ⁽²⁾		Air
Indication precision		$\pm 3\%$ F.S. (Full span)
Fluid contact part cleaning		Wetted parts degrease washing
Material	Case (Surface treatment)	Rolled steel (Black melamine painted)
	Clear cover (Surface treatment)	Polycarbonate (Hard coated) Part no.: G46-00-00-2
	Stud (Surface treatment)	Brass (Electroless nickel plated)
	Bourdon tube	Brass ⁽³⁾
Weight (kg)		0.08
Attachment:	C	Part no.: 1305104-1A
With cover ring assembly	C1	Part no.: 1305104-3A

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: $R \frac{1}{8}$: Set between 7 and 9 N·m, $R \frac{1}{4}$: 12 and 14 N·m respectively.

Note 2) When fluid is water, use G46-□-X3. Wetted parts are made of stainless steel construction. (Some corrosion may be caused by water because this product's wetted parts are made of brass.) Design system to not be affected by water hammer when using water as fluid. Similarly, when using other fluids, please consult with SMC for fluid compatibility information concerning corrosive potential.

Note 3) Bourdon tube and internal movable parts (gear, etc.) are made of brass and are not electrolessly nickel plated. This is not an internally copper-free product.

Model (Standard)

Model	Pressure range ^(Note)	Indication unit	Connection thread	Note
	MPa			
G46E-2-01 to 02M	0 to 0.2	MPa	$R \frac{1}{8}$ $R \frac{1}{4}$ M5 (Female thread)	—
G46E-4-01 to 02M	0 to 0.4			
G46E-7-01 to 02M	0 to 0.7			
G46E-10-01 to 02M	0 to 1.0			

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

Model (Made to Order)

Other versions of this unit can be made on a made-to-order basis. Please consult SMC for details, as delivery times may be extended.

Model	Pressure range ^(Note)	Indication unit	Connection thread	Note
	MPa			
G46E-2-01 to 02M-C/ C1	0 to 0.2	MPa	$R \frac{1}{8}$ $R \frac{1}{4}$ M5 (Female thread)	With cover ring assembly
G46E-4-01 to 02M-C/ C1	0 to 0.4			
G46E-7-01 to 02M-C/ C1	0 to 0.7			
G46E-10-01 to 02M-C/ C1	0 to 1.0			

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

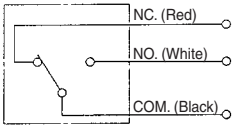
How to Order

G 46 E - 10 - 01 M - C

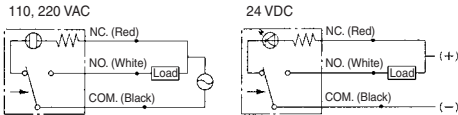
- Pressure gauge**: G
- Size**: 46 (Symbol: 46, Outside diameter: $\phi 42.5$)
- Option**: E (Oil-free, external parts copper-free)
- Max. display pressure**: 10 (Symbol: 10, Unit: MPa: 1.0)
- Connection thread**: 01 (Symbol: 01, Size: $R \frac{1}{8}$), 02 (Symbol: 02, Size: $R \frac{1}{4}$)
- Attachment (Cover ring assembly)**: M (Symbol: Nil, Specifications: Without cover ring assembly), C (Symbol: C, Specifications: Clear cover has no protrusion. (Clear cover is irremovable.)), C1 (Symbol: C1, Specifications: Clear cover has protrusion. (Clear cover is removable.))

Circuit Diagram

Without indicator light



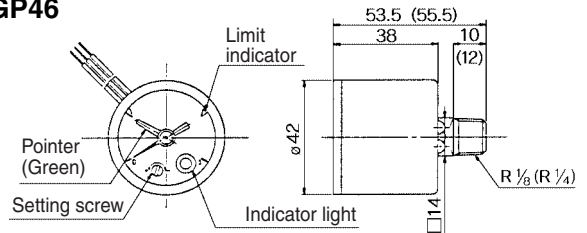
With indicator light



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

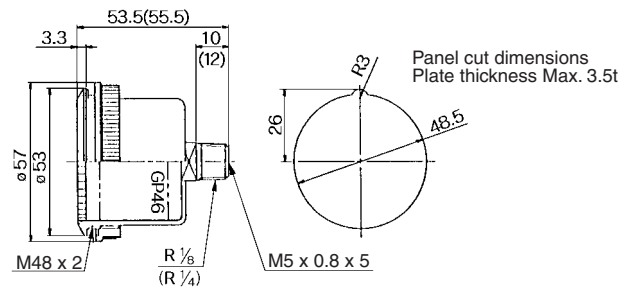
GP46



(): R 1/4

GP46: With cover ring assembly (For panel mounting)

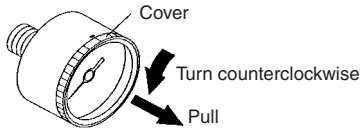
Clear cover is not removable.



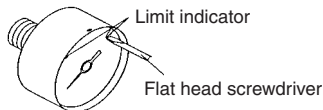
Refer to page 14-11-15 for mounting method.

Procedure for Setting the Limit Gauge Indicator

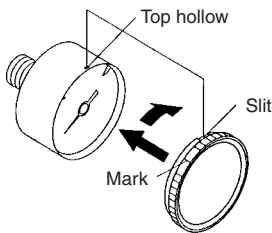
- (1) Before setting the (green) limit indicator, turn the cover counterclockwise (approximately 6 to 7 mm) until it stops. Then, remove by pulling it towards you.



- (2) 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.



- (3) 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

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

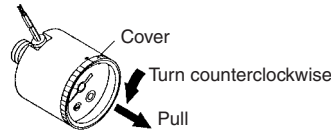
Mounting

⚠️ Caution

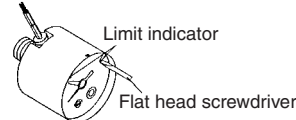
1. During transport and installation, do not apply shock to the product, such as by dropping doing so will affect its precision.
2. Regarding the installation posture, place it perpendicular to the ground, with the zero point on the reading of a pressure gauge facing down.
3. Do not install it in an area that is exposed to high temperature or humidity, because doing so will lead to improper operation.
4. 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

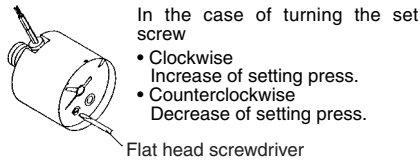
- (1) Before setting the limit indicator and the (green) setting needle, turn the cover counterclockwise (approximately 6 to 7 mm) until it stops. Then, remove by pulling it towards you.



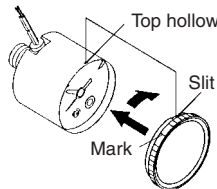
- (2) Use a flat head screwdriver (with a 2.9 mm blade width) to set the (green) limit indicator. Be careful not to bend the other needle or damage the dial plate.



- (3) 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.

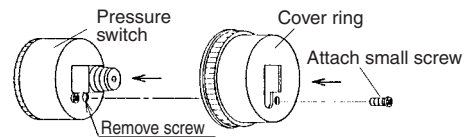


- (4) After completing the setting, replace the cover. Fit the cover by aligning the cutout in the cover to the groove on the top of the black case. Turn the cover clockwise (approximately 6 to 7 mm) until it stops. Make sure that the matching mark on the cover is aligned with the groove on the top of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

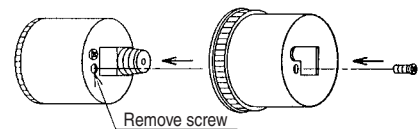


Procedure for Assembling the Cover Ring Assembly

● Pressure gauge for general purpose



● Pressure gauge with switch



1. Remove the small screw (1 position) from the pressure gauge.
2. Place the cover ring on the pressure gauge.
3. 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.

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