

Pressure Gauge for General Purpose Series G15/G27

RoHS



G15-10-01



G27-10-R1

- Be sure to read the precautions on page 663 for selection and mounting.

Standard Specifications

Model		G15	G27
Type		Back side thread	
Port size ⁽¹⁾		R 1/8: M5 (Female thread)	R 1/16
Fluid ⁽²⁾		Air	
Indication precision		±5% F.S. (Full span)	
Material	Case (Surface treatment)	Zinc die-casted (Black graphite coated)	
	Clear cover	Polycarbonate	
	Stud (Surface treatment)	Zinc die-casted (Black graphite coated)	
	Bourdon tube	Brass	
Mass (kg)		0.01	0.015

- Caution on handling: When drain or oil, etc. gets into the gauge, it may result in a malfunction.

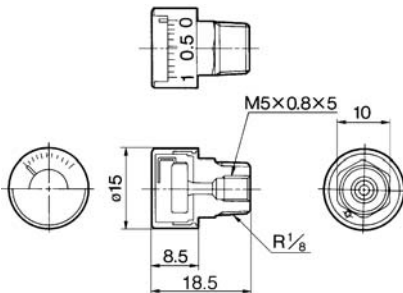
Note 1) When mounting a pressure gauge, use caution not to tighten excessively. Excessive tightening will cause product to be damaged. Use a pipe tape for sealing. Recommended tightening torque is between 3 and 4 N·m for R 1/16 and 7 and 9 N·m for R 1/8.

Note 2) Water cannot be used as an operating fluid. Because the clearance gap of the air passage of the Bourdon tube is very small. Water will block the gap and cause a malfunction.

Similarly, when using other fluids, please consult with SMC for fluid compatibility information concerning possible corrosion and response delay, etc.

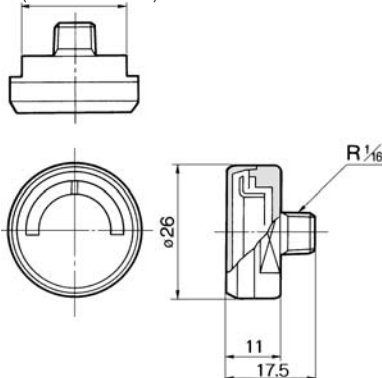
Dimensions

G15



G27

21 (Width across flats)



Model (Standard)

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread
	MPa	psi		
G15-10-01 ⁽²⁾	0 to 1.0	—	MPa	R 1/8, M5 (Female thread)
G27-10-R1	0 to 1.0	—	MPa	R 1/16

Note 1) Do not apply more excessive pressure than max. pressure display. It will be a cause of malfunction.

Note 2) Display unit: single unit compatible

Model (Made to Order)

Other versions of this unit can be made on a made-to-order basis.

Please consult with SMC for details, as delivery times may be extended.

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread
	MPa	psi		
G27-10-M5-X201	0 to 1.0	—	MPa	M5 (Female thread)
G27-P10-R1-X30	0 to 1.0	0 to 150	MPa, psi	R 1/16

Note 1) Do not apply more excessive pressure than max. pressure display. It will be a cause of malfunction.

How to Order

G 15 - 10 - 01 - []

• Pressure gauge

Symbol	Outside diameter
15	ø15
27	ø26

• Size

• Connection thread

Symbol	Size
01 ⁽¹⁾	R 1/8: M5 (Female thread)
R1 ⁽²⁾	R 1/16

Note 1) Both R1/8 and M5 (female thread) in case of G15 type

Note 2) Compatible with G27 type only

• Max. display pressure

Symbol	Unit
10 ⁽¹⁾	1.0 MPa
P10 ^{(1) (2)}	1.0 MPa, 150 psi

Note 1) Pressure other than 1.0 MPa is not available.

Note 2) This symbol must be used with Option "X30."

• Option

Symbol	Specifications
Nil	—
X30	Both MPa and psi
X201	M5 (Female thread) only

Note 1) X3 (Wetted parts SUS) specifications are not available.

Pressure Gauge for General Purpose/ With Limit Indicator

Series **G36/GA36**



G36-10-01

- Be sure to read the precautions on page 663 for selection and mounting.

Standard Specifications

Model		G36	GA36
Type		Back side thread	Vertical side thread
Port size ⁽¹⁾		R 1/8 (Option M: With M5 female thread)	
Fluid ⁽²⁾		Air	
Indication precision		±3% F.S. (Full span)	
Material	Case (Surface treatment)	Aluminum die-casted (Black disulfide molybdenum coat treated)	Rolled steel (Black melamine painted)
	Clear cover	Polycarbonate (Part no.: G36-00-00-3)	
	Stud (Surface treatment)	Aluminum die-casted (Black disulfide molybdenum coat treated)	Brass
	Bourdon tube	Brass	
Mass (kg)		0.04	0.05

Note 1) When installing a pressure gauge, be careful not to fasten too tight. Excessive tightening will result in damage. Use a pipe tape for sealing. Recommended tightening torque is R 1/8: Set between 7 and 9 N·m.

Note 2) Not applicable to water as fluid because its stud is made from aluminum die-casted. Water may cause corrosion and block the air passage. Use a pressure gauge with wetted parts made from stainless steel, G46-□-X3. (Note: Take care when using G36-□-01M, whose wetted part is made from brass. Some corrosion may result.) Design system to not be affected by water hammer when using water as fluid. Similarly, when using other fluids, please consult with SMC, to prevent corrosion-related problems.

Model (Standard)

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note
	MPa				
G36-2-01	0 to 0.2		MPa	R 1/8	—
G36-4-01	0 to 0.4				
G36-7-01	0 to 0.7				
G36-10-01	0 to 1.0				
GA36-10-01	0 to 1.0				

Note 1) 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 with SMC for details, as delivery times may be extended.

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
G36-10-01-X2	0 to 1.0	—	MPa	R 1/8	Plated stem (Ni)
G36-P2-01-X30	0 to 0.2	0 to 30	MPa, psi		—
G36-P10-01-X30	0 to 1.0	0 to 150			
G36-15-01	0 to 1.5	—	MPa		

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

Pressure Gauge for General Purpose/With Limit Indicator *Series G36/GA36*

How to Order

G **36** - **10** - **01** -

● **Size**

Symbol	Outside diameter
36	ø37.5

● **Connection thread**

Symbol	Size
01	R 1/8

● **Option**

Symbol	Specifications
Nil	—
M	M5 (Female thread)

Note) Use M5 female thread when piping onto a panel.

● **Type**

Symbol	Type
Nil	Back side thread
A	Vertical side thread

● **Max. display pressure**

Symbol	Unit
2	0.2 MPa
4	0.4 MPa
7	0.7 MPa
10	1.0 MPa
15	1.5 MPa
P2 <small>Note)</small>	0.2 MPa, 30 psi
P10 <small>Note)</small>	1.0 MPa, 150 psi

Note) This symbol must be used with Option "X30."

● **Option**

Symbol	Specifications
Nil	—
X2	Nickel plated
X4	Oil-free <small>(Wetted parts degrease washing)</small>
X30	Both MPa and psi

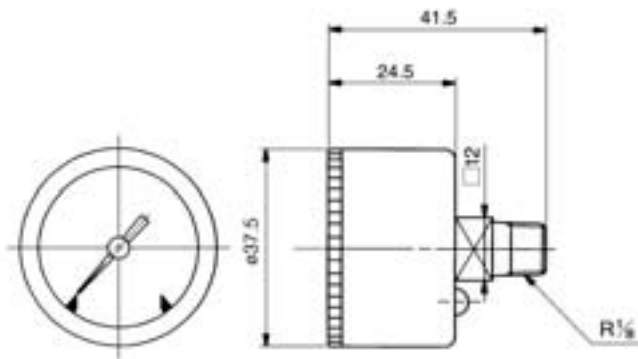
Note 1) X3 (wetted parts stainless steel) specifications is not available.

Note 2) Cover ring assembly is not available.

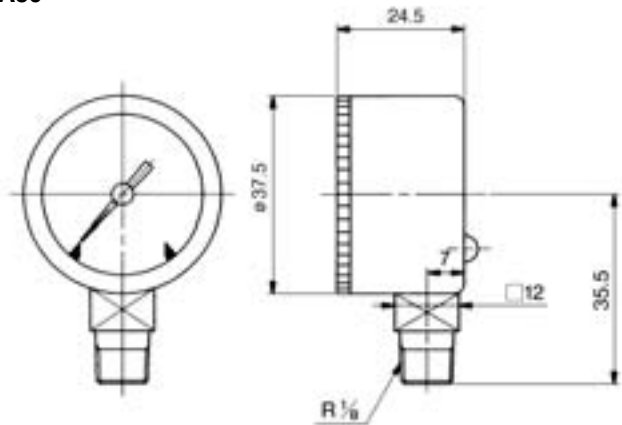
● **Pressure gauge**

Dimensions

G36



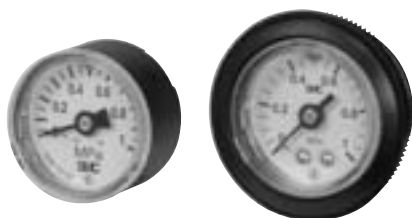
GA36



G
GS
PPA

Pressure Gauge for General Purpose/ With Limit Indicator

Series G46/GA46



G46-10-02M-C

- Be sure to read the precautions on page 663 for selection and mounting.

Standard Specifications

Model		G46	GA46
Type		Back side thread	Vertical side thread
Port size ⁽¹⁾		R 1/8, R 1/4 (Option M: with M5 female thread)	
Fluid ⁽²⁾		Air	
Indication precision		±3% F.S. (Full span)	
Material	Case (Surface treatment)	Aluminum die-casted (Black disulfide molybdenum coated)	Rolled steel (Black melamine painted)
	Clear cover	Polycarbonate (Part no.: G46-00-00-3)	
	Stud (Surface treatment)	Aluminum die-casted (Black disulfide molybdenum coated)	Brass
	Bourdon tube	Brass	
Mass (kg)		0.05	0.075
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 to be damaged. 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) Not applicable to water as fluid because its stud is made from aluminum die-casting. Water may cause corrosion and block the air passage. Use G46-□-X3 pressure gauge with wetted parts stainless steel (wetted parts of G46-□-01M are made of brass and this become lightly corroded. Take precautions when using.) Design system to not be affected by water hammer when using water as fluid. Similarly, when using other fluids, please consult SMC for fluid compatibility information concerning corrosive potential.

Model (Standard)

Model	Pressure range ⁽¹⁾	Indication unit	Connection thread	Note
	MPa			
G46-2-01/02	0 to 0.2	MPa	R 1/8, 1/4	—
G46-4-01/02	0 to 0.4			
G46-7-01/02	0 to 0.7			
G46-10-01/02	0 to 1.0			
G46-2-01 to 02M	0 to 0.2			
G46-4-01 to 02M	0 to 0.4		R 1/8, 1/4 M5 (Female thread)	
G46-7-01 to 02M	0 to 0.7			
G46-10-01 to 02M	0 to 1.0			
GA46-10-01 to 02	0 to 1.0			

Note 1) 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 with SMC for details, as delivery times may be extended.

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note			
	MPa	psi						
G46-2-01 to 02-C/C1	0 to 0.2	—	MPa	R 1/8, 1/4	With cover ring assembly			
G46-4-01 to 02-C/C1	0 to 0.4	—						
G46-7-01 to 02-C/C1	0 to 0.7	—						
G46-10-01 to 02-C/C1	0 to 1.0	—						
G46-2-01 to 02M-C/C1	0 to 0.2	—						
G46-4-01 to 02M-C/C1	0 to 0.4	—		R 1/8, 1/4 M5 (Female thread)				
G46-7-01 to 02M-C/C1	0 to 0.7	—						
G46-10-01 to 02M-C/C1	0 to 1.0	—						
G46-P2-01 to 02-X30	0 to 0.2	0 to 30				MPa, psi	R 1/8, 1/4	—
G46-P10-01 to 02-X30	0 to 1.0	0 to 150						
G46-2-02M-X4	0 to 0.2	—	MPa	R 1/4 M5 (Female thread)	Oil-free			
G46-4-02M-X4	0 to 0.4	—						
G46-7-02M-X4	0 to 0.7	—						
G46-10-02M-X4	0 to 1.0	—						
G46-2-02M-C/C1-X4	0 to 0.2	—				Oil-free, With cover ring assembly		
G46-4-02M-C/C1-X4	0 to 0.4	—						
G46-7-02M-C/C1-X4	0 to 0.7	—						
G46-10-02M-C/C1-X4	0 to 1.0	—						
G46-P2-01 to 02-C-X30	0 to 0.2	0 to 30			MPa, psi		R 1/8, 1/4	With cover ring assembly
G46-P10-01 to 02-C-X30	0 to 1.0	0 to 150						
G46-10-02-X2	0 to 1.0	—	MPa	R 1/4	Plated stem (Ni)			
G46-15-01 to 02	0 to 1.5	—						

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

Pressure Gauge for General Purpose/With Limit Indicator *Series G46/GA46*

How to Order

G **46** - **10** - **01** - **Option** - **Attachment** - **Option**

• **Pressure gauge**

• **Type**

Symbol	Type
Nil	Back side thread
A	Vertical side thread

• **Size**

Symbol	Outside diameter
46	ø42.5

• **Connection thread**

Symbol	Size
01	R 1/8
02	R 1/4

• **Option**

Symbol	Specifications
Nil	—
M	With M5 (Female thread)

Note) Use M5 female thread when piping onto a panel.

• **Max. display pressure**

Symbol	Unit
2	0.2 MPa
4	0.4 MPa
7	0.7 MPa
10	1.0 MPa
15	1.5 MPa
P2 (Note)	0.2 MPa, 30 psi
P10 (Note)	1.0 MPa, 150 psi

Note) This symbol must be used with Option "X30."

• **Attachment**

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

Note) Compatible with G46 type only

• **Option**

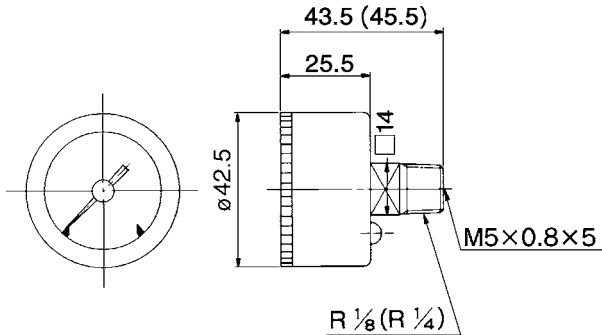
Symbol	Specifications
Nil	—
X2	Stud parts Nickel plated
X3 (1) (2)	Wetted parts stainless steel (1)
X4	Oil-free (Wetted parts degrease washing)
X30	Both MPa and psi

Note 1) Movable parts (gear, etc) inside pressure gauge are made of brass.
Note 2) Compatible with G46 type only

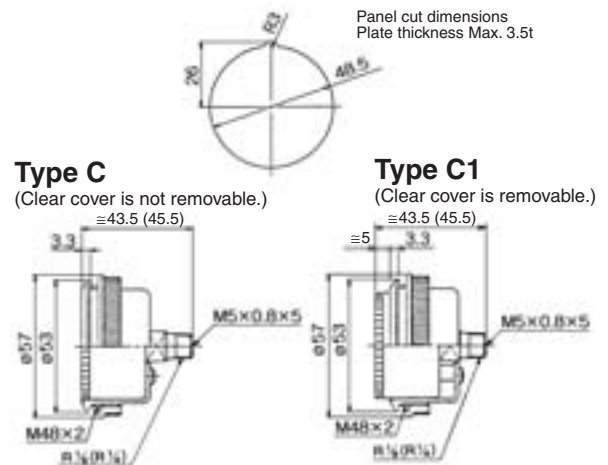
G
GS
PPA

Dimensions The dimensions in (): Connecting thread R 1/4

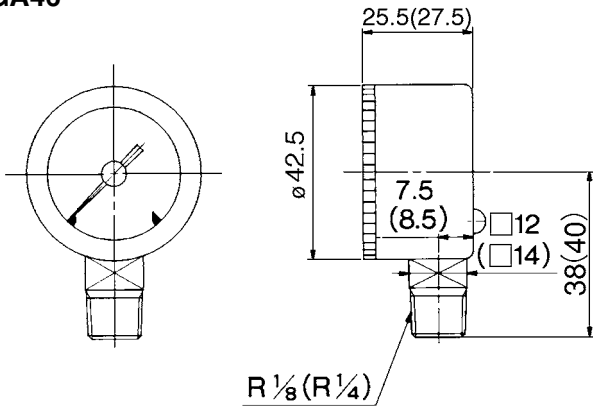
G46



G46: With cover ring assembly (For panel mount)



GA46



For setting method, refer to page 662.

Pressure Gauge for General Purpose

Series G33/GA33

RoHS



- Be sure to read the precautions on page 663 for selection and mounting.

Standard Specifications

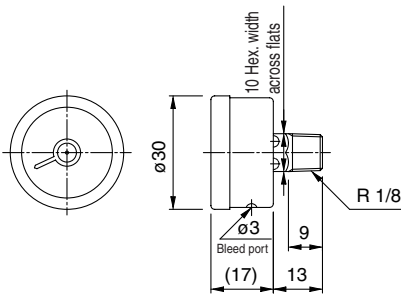
Model		G33	GA33
Type		Back side thread	Vertical side thread
Port size ⁽¹⁾		R 1/8	
Fluid ⁽²⁾		Air	
Indication precision		±3% F.S. (Full span)	
Material	Case	Stainless steel	
	Clear cover	Glass	
	Stud	Brass	
	Bourdon tube	Brass	
Applicable model	IP5000, IP6000, IR1000, IT1000, ARM2500, 3000		

Note 1) When mounting a pressure gauge, use caution not to tighten excessively. Excessive tightening will cause product to be damaged. Use a pipe tape for sealing. Recommended tightening torque: R 1/8: Set between 7 and 9 N·m.

Note 2) When using other fluids, please consult with SMC for fluid compatibility information concerning corrosive potential.

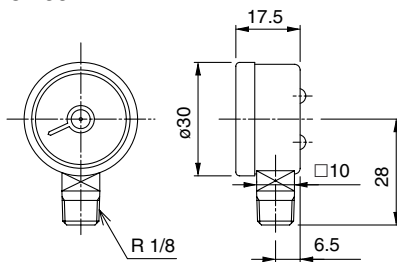
Dimensions

G33



G33-□□-01

GA33



GA33-□□-01

Model (Standard)

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
G33-2-01	0 to 0.2	—	MPa	R 1/8	—
G33-3-01	0 to 0.3	—			
G33-4-01	0 to 0.4	—			
G33-6-01	0 to 0.6	—			
G33-10-01	0 to 1.0	—			
GA33-2-01	0 to 0.2	—			
GA33-4-01	0 to 0.4	—			
GA33-7-01	0 to 0.7	—			
GA33-10-01	0 to 1.0	—			

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

Model (Made to Order)

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
G33-2-01-X2	0 to 0.2	—	MPa	R 1/8	X2: Stud parts electroless nickel plated
G33-3-01-X2	0 to 0.3	—			
G33-4-01-X2	0 to 0.4	—			
G33-6-01-X2	0 to 0.6	—			
G33-10-01-X2	0 to 1.0	—			
GA33-2-01-X2	0 to 0.2	—			X2: Stud parts nickel plated
GA33-4-01-X2	0 to 0.4	—			
GA33-7-01-X2	0 to 0.7	—			
GA33-10-01-X2	0 to 1.0	—			
G33-10-01-X4	0 to 1.0	—			
GA33-P10-01-X30	0 to 1.0	0 to 150	MPa, psi	R 1/8	—

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

How to Order

G □ **33** - **10** - **01** - □

• Pressure gauge

• Frame type

Symbol	Type
Nil	Back side thread
A	Vertical side thread

• Model

Symbol	Outside diameter
33	30

• Connection thread

Symbol	Size
01	R 1/8

• Max. display pressure

Symbol	Unit
2	0.2 MPa
3	0.3 MPa
4	0.4 MPa
6	0.6 MPa
7	0.7 MPa
10	1.0 MPa
P10 ^{(1) (2)}	1.0 MPa, 150 psi

• Option

Symbol	Specifications
Nil	—
X2	Stud parts electroless nickel plated
X4	Oil-free (Wetted parts degrease washing)
X30	Both MPa and psi

Note 1) X3 (Wetted parts stainless steel) specifications is not available.

Note 2) Please contact SMC separately for pressure range of GA33 between 0 and 0.6 MPa.

Pressure Gauge for General Purpose Series G43

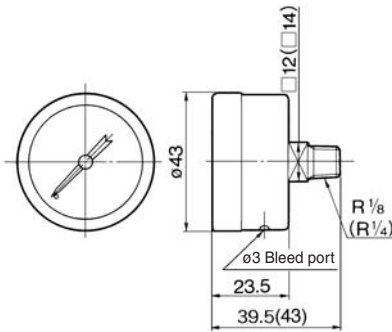
RoHS



G43-10-01

- Be sure to read the precautions on page 663 for selection and mounting.

External Dimensions (Except made-to-order products)



The dimensions in (): Connecting thread R 1/4

Standard Specifications

Model		G43
Type		Back side thread
Port size ⁽¹⁾		R 1/8, R 1/4
Fluid ⁽²⁾		Air
Indication precision		±3% F.S. (Full span)
Material	Case	Stainless steel
	Clear cover	Glass
	Stud	Brass
	Bourdon tube	Brass
Applicable model		IP200, IP8000, IR2000, IR3000, IT2000, 4000

Note 1) When mounting a pressure gauge, use caution not to tighten excessively. Excessive tightening will cause product to be damaged. 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 with water, use G43-□-X3 (wetted parts stainless steel) and use caution not to apply water hammer. When using the other fluids, please consult with SMC for fluid compatibility information concerning corrosive potential.

G
GS
PPA

Model (Standard)

Model	Pressure range ⁽¹⁾	Indication unit	Connection thread	Note
	MPa			
G43-2-01 to 02	0 to 0.2	MPa	R 1/8, R 1/4	—
G43-4-01 to 02	0 to 0.4			
G43-6-01	0 to 0.6		R 1/8	
G43-7-01 to 02	0 to 0.7		R 1/8, R 1/4	
G43-10-01 to 02	0 to 1.0			

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

Model (Made to Order)

Model	Pressure range ⁽¹⁾	Indication unit	Connection thread	Note
	MPa			
G43-2-01 to 02-X2	0 to 0.2	MPa	R 1/8, R 1/4	X2: Stud parts nickel plated
G43-4-01 to 02-X2	0 to 0.4		R 1/8	
G43-6-01-X2	0 to 0.6		R 1/8	
G43-7-01 to 02-X2	0 to 0.7		R 1/8, R 1/4	
G43-10-01 to 02-X2	0 to 1.0			
G43-2-01 to 02-X3	0 to 0.2	MPa	R 1/8, R 1/4	X3: Wetted parts stainless steel
G43-4-01 to 02-X3	0 to 0.4		R 1/8	
G43-6-01-X3	0 to 0.6		R 1/8	
G43-7-01 to 02-X3	0 to 0.7		R 1/8, R 1/4	
G43-10-01 to 02-X3	0 to 1.0			
G43-2-01 to 02-X4	0 to 0.2	MPa	R 1/8, R 1/4	X4: Oil-free (Wetted parts degreasing)
G43-4-01 to 02-X4	0 to 0.4		R 1/8	
G43-6-01-X4	0 to 0.6		R 1/8	
G43-7-01 to 02-X4	0 to 0.7		R 1/8, R 1/4	
G43-10-01 to 02-X4	0 to 1.0			

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

How to Order

G 43 - 10 - 01 - □

- Pressure gauge**: G 43
- Max. display pressure**: 10 (Symbol: 2, 3, 4, 6, 7, 10; Unit: MPa)
- Option**: □ (Symbol: Nil, X2, X3, X4; Specifications)

Model	
Symbol	Outside diameter
43	ø43

Symbol	Unit: MPa
2	0.2
3	0.3
4	0.4
6	0.6
7	0.7
10	1.0

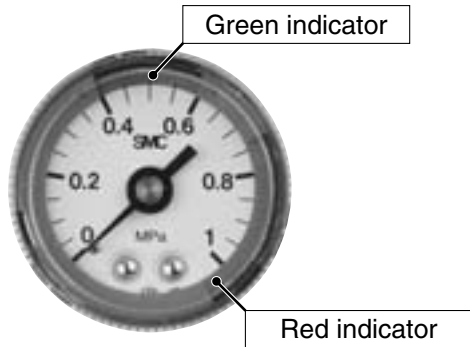
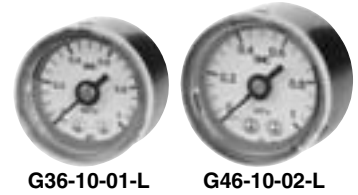
Connection thread size	
Symbol	Size
01	R 1/8
02	R 1/4

Symbol	Specifications
Nil	—
X2	Stud parts nickel plated
X3	Wetted parts stainless steel
X4	Oil-free (Wetted parts degrease washing)

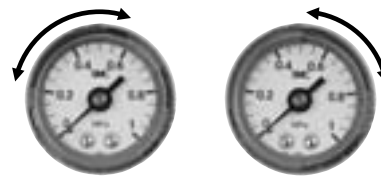
Pressure Gauge with Limit Indicator/ Color Zone Type

Series G36-L/G46-L

■ Red and green zones offer improved visibility of pressure control range.



Indicator adjusts to highlight preferred range.



Standard Specifications

Model		G36-L	G46-L
Type		Back side thread	
Port size ⁽¹⁾		R 1/8	R 1/8, R 1/4
Fluid ⁽²⁾		Air	
Indication precision		±3% F.S. (Full span) ⁽³⁾	
Material	Case (Surface treatment)	Rolled steel (Black melamine painted)	
	Clear cover	Polycarbonate (Part no.: G36-00-00-3) Nylon (Part no.: G36-00-00-3N)	Polycarbonate (Part no.: G46-00-00-3) Nylon (Part no.: G46-00-00-3N)
	Stud	Brass	
	Bourdon tube	Brass	
Mass (kg)		0.04	0.05

Note 1) When mounting a pressure gauge, use caution not to tighten excessively. Excessive tightening will cause product to be damaged. 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 other fluids, please consult with SMC for fluid compatibility information concerning corrosive potential.

Note 3) Temperature conditions: at 20°C (±5°C), in other cases, ±6°C F.S.

Model (Standard)

Model	Pressure range ⁽¹⁾		Green zone setting range		Indication unit	Connection thread	Note
	MPa		Minimum setting range (MPa)	Maximum setting range (MPa)			
G36-2-01-L□	0 to 0.2		0.01	0.1	MPa	R 1/8	—
G36-4-01-L□	0 to 0.4		0.02	0.2			
G36-10-01-L□	0 to 1.0		0.05	0.5			
G46-2-01 to 02-L□	0 to 0.2		0.01	0.1		R 1/8, 1/4	
G46-4-01 to 02-L□	0 to 0.4		0.02	0.2			
G46-10-01 to 02-L□	0 to 1.0		0.05	0.5			

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

Model (Made to Order)

Model	Pressure range ⁽¹⁾		Green zone setting range		Indication unit	Connection thread	Note
	MPa	psi	Minimum setting range (MPa (psi))	Maximum setting range (MPa (psi))			
G36-P2-01-L□-X30	0 to 0.2	0 to 30	0.01 (2)	0.1 (14)	MPa, psi	R 1/8	—
G36-P4-01-L□-X30	0 to 0.4	0 to 60	0.02 (4)	0.2 (28)			
G36-P10-01-L□-X30	0 to 1.0	0 to 150	0.05 (10)	0.5 (70)			
G46-P2-01 to 02-L□-X30	0 to 0.2	0 to 30	0.01 (2)	0.1 (14)		R 1/8, 1/4	
G46-P4-01 to 02-L□-X30	0 to 0.4	0 to 60	0.02 (4)	0.2 (28)			
G46-P10-01 to 02-L□-X30	0 to 1.0	0 to 150	0.05 (10)	0.5 (70)			

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

How to Order

G36-10-01-L - -

Size

Symbol	Outside diameter
36	ø37.5
46	ø42.5

Max. display pressure

Symbol	Unit
2	0.2 MPa
4	0.4 MPa
10	1.0 MPa
P2 (Note)	0.2 MPa, 30 psi
P4 (Note)	0.4 MPa, 60 psi
P10 (Note)	1.0 MPa, 150 psi

(Note) This symbol must be used with Option "X30."

Made to Order

Symbol	Specifications
Nil	—
X30	Both MPa and psi

Clear cover material

Symbol	Material
Nil	Polycarbonate
N	Nylon

Color zone type

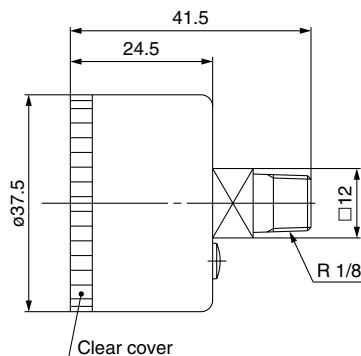
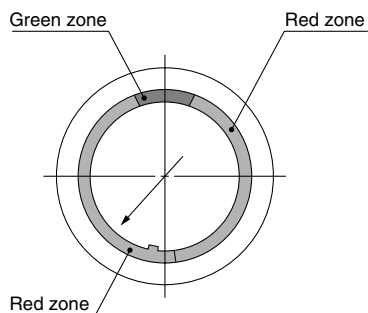
Thread port size

Symbol	Port	Applicable size	
		G36	G46
01	R 1/8	●	●
02	R 1/4	—	●

G
GS
PPA

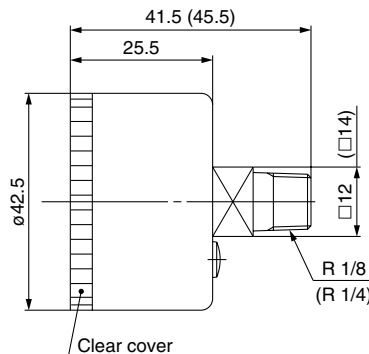
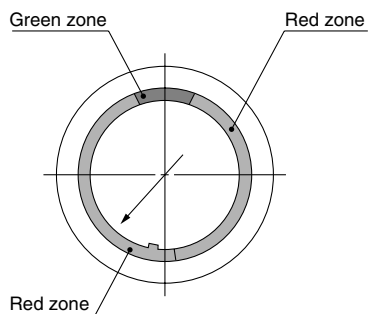
Dimensions

G36



- Clear cover
- Polycarbonate part no.: G36-00-00-3
- Nylon part no.: G36-00-00-3N

G46



- Clear cover
- Polycarbonate part no.: G46-00-00-3
- Nylon part no.: G46-00-00-3N

(): R 1/4

Oil-free/External Parts Copper-free Pressure Gauge/With Limit Indicator Series G46E



G46E-10-02M

G46E-10-02M-C

- Be sure to read the precautions on page 663 for selection and mounting.

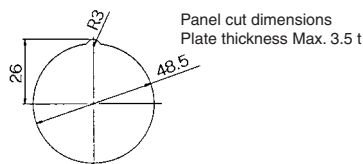
Dimensions

Dimensions in ():
R 1/4 connecting thread

G46E

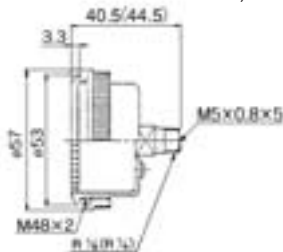


G46E: With cover ring assembly (For panel mounting)



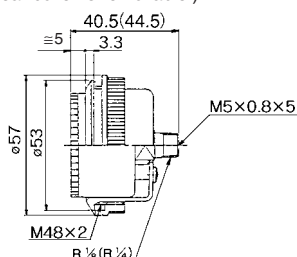
Type C

(Clear cover is not removable.)



Type C1

(Clear cover is removable.)



Standard Specifications

Model		G46E
Type		Back side thread
Port size ⁽¹⁾		R 1/8, R 1/4 (Option M: with M5 female thread)
Fluid ⁽²⁾		Air
Indication precision		±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⁾
Mass (kg)		0.08
Attachment: With cover ring assembly	C	Part no.: 1305104-1A
	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 1/8: Set between 7 and 9 N·m, R 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 ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
G46E-2-01 to 02M	0 to 0.2	—	MPa	R 1/8 R 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 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

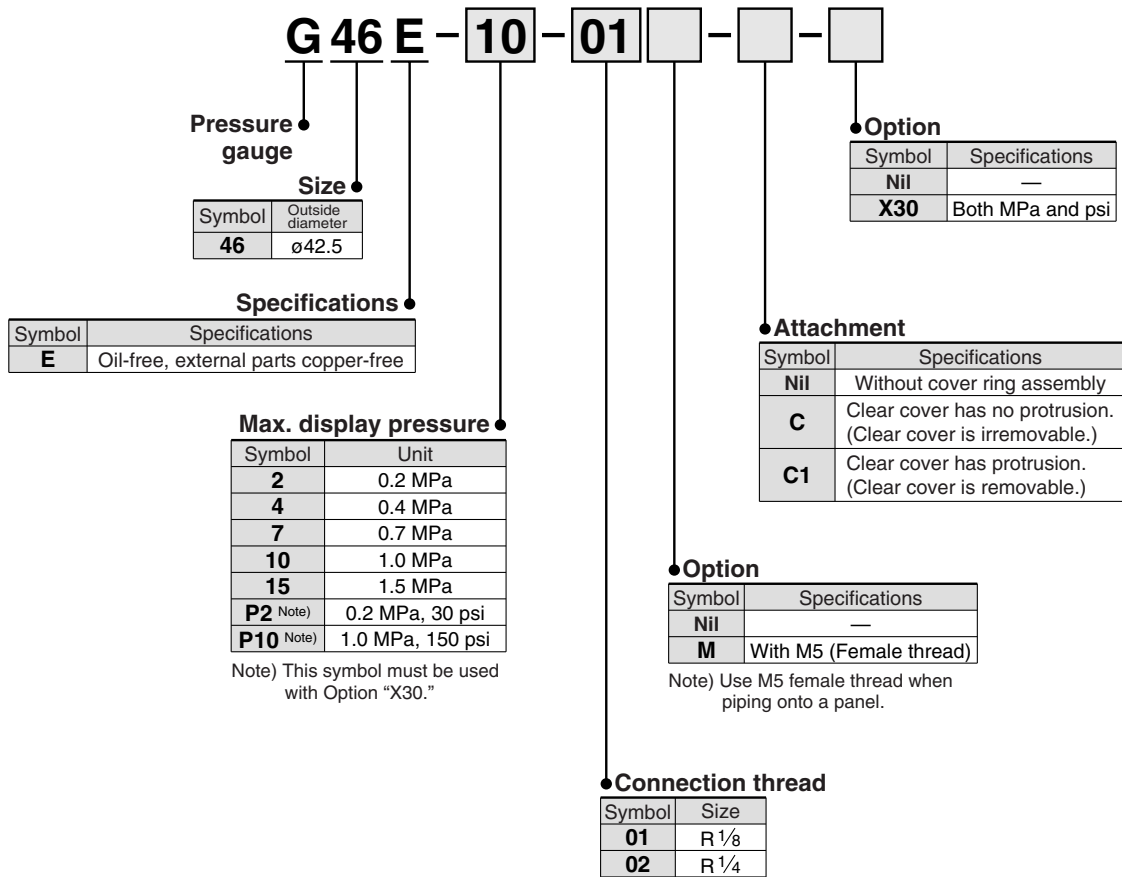
Model (Made to Order)

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 ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
G46E-2-01 to 02M-C, C1	0 to 0.2	—	MPa	R 1/8 R 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	—			
G46-P2-01 to 02M-C, C1-X30	0 to 0.2	0 to 30	MPa, psi	M5 (Female thread)	
G46-P10-01 to 02M-C, C1-X30	0 to 1.0	0 to 150			

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

How to Order



G
GS
PPA

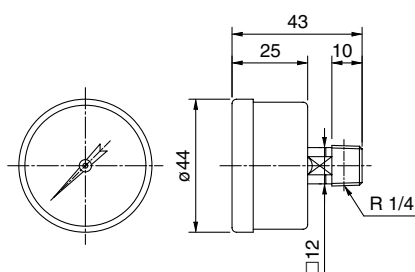
Pressure Gauge for Clean Series (10-series)

Series G49



- Be sure to read the precautions on page 663 for selection and mounting.

Dimensions



Standard Specifications Installation of a filter on the breathing hole (filtration 3 μm) enables an unit to curb particle generation from the pressure gauge inside.

Model		G49
Type		Back side thread
Port size ⁽¹⁾		R 1/4
Fluid ⁽²⁾		Air
Indication precision		±3% F.S. (Full span)
Material	Case (Surface treatment)	Zinc die-casted (Chromate plated)
	Clear cover	Glass
	Stud (Surface treatment)	Brass (Nickle plated for external parts only)
	Bourdon tube	Brass ⁽³⁾
Mass (kg)		0.095

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: Set between 12 and 14 N·m.

Note 2) When fluid is water, use G49-□-X3. Wetted parts of G49-□-X3 are made of Stainless steel. Use caution as some corrosion may be caused by water. Standard G49 pressure gauge contact area is made of brass. When using water, use caution not to apply water hammer. Similarly, when using other fluids, consult 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 nickel plated.

Model (Standard)

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
G49-2-02	0 to 0.2		MPa	R 1/4	—
G49-7-02	0 to 0.7				
G49-10-02	0 to 1.0				

Note 1) 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 with SMC for details, as delivery times may be extended.

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
G49-P2-02-X30	0 to 0.2	0 to 30	MPa, psi	R 1/4	—
G49-P10-02-X30	0 to 1.0	0 to 150			

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

How to Order

G 49 - 10 - 02 - □

Pressure gauge

Size

Symbol	Outside diameter
49	ø44

Max. display pressure

Symbol	Unit
2	0.2 MPa
7	0.7 MPa
10	1.0 MPa
P2 ^{Note)}	0.2 MPa, 30 psi
P10 ^{Note)}	1.0 MPa, 150 psi

Note) This symbol must be used with Option "X30."

Option

Symbol	Specifications
Nil	—
X3	Wetted parts stainless steel ⁽²⁾
X30	Both MPa and psi

Note 1) Cover ring assembly is not available.

Note 2) Movable parts (gear, etc) inside pressure gauge are made of brass.

Connection thread

Symbol	Size
02	R 1/4

G
GS
PPA

Pressure Gauge for Clean Regulator/ With Limit Indicator

Series *G46-SR A/B*



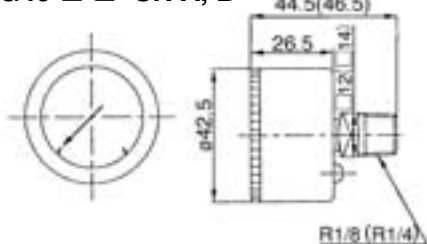
G46-10-02-SR A,B

- Be sure to read the precautions on page 663 for selection and mounting.

Dimensions

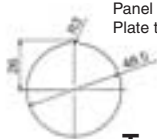
Dimensions in (): R 1/4 connecting thread

G46-□-□- SR A, B



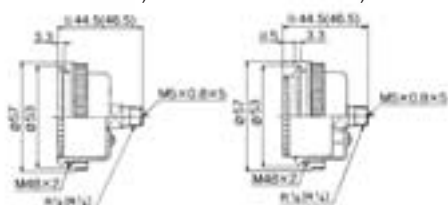
G46-□-□- SRB: With cover ring assembly (For panel mount)

Panel cut dimensions
Plate thickness Max. 3.5t



Type C
(Clear cover is not removable.)

Type C1
(Clear cover is removable.)



Standard Specifications

Model		G46-□-SRA	G46-□-SRB
Type		Back side thread	
Port size ⁽¹⁾		R 1/8, R 1/4	
Fluid ⁽²⁾		Air	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 ⁽³⁾	
Material ⁽⁴⁾	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"> • Polyethylene cap for stud parts. • Airtight polyethylene bag 	<ul style="list-style-type: none"> • Polyethylene cap for stud parts. • Polyethylene bag
Mass (kg)		0.085	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 ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
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 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

Model (Made to Order)

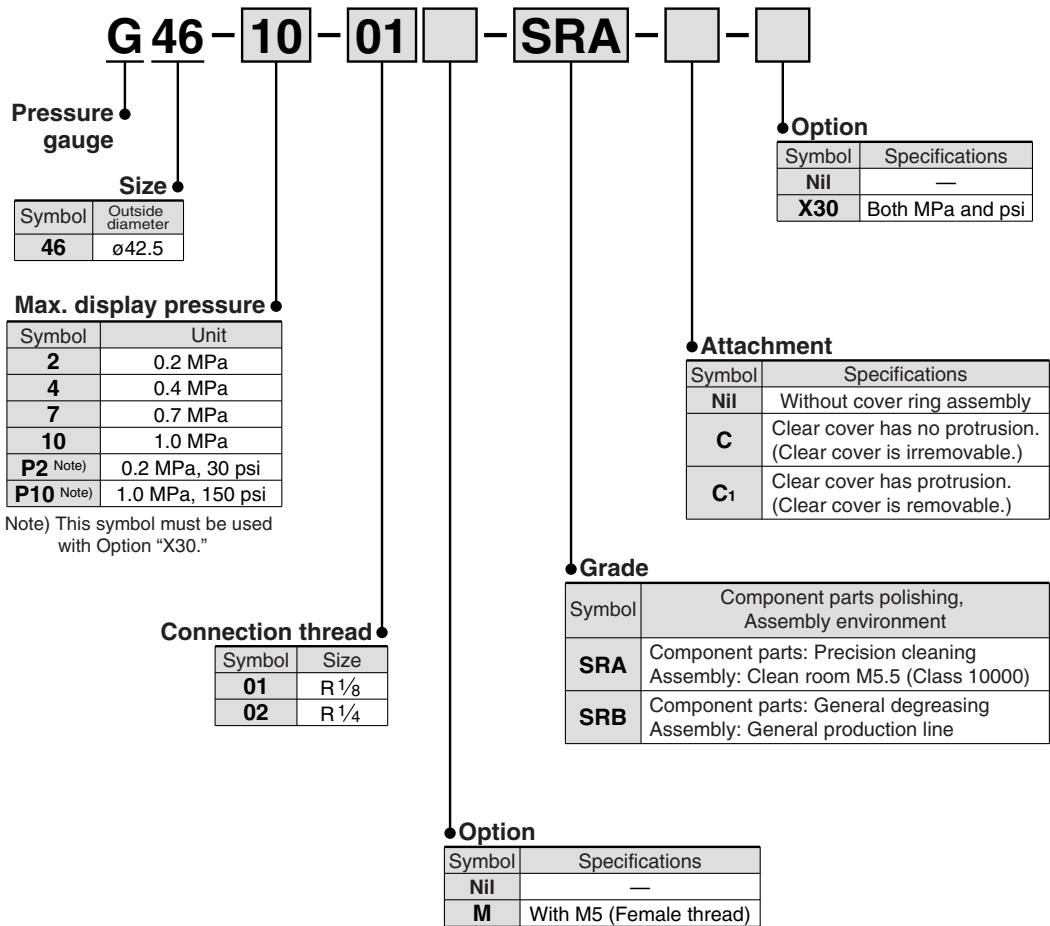
Other versions of this unit can be made on a made-to-order basis. Please consult with SMC for details, as delivery times may be extended.

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
G46-P2-01 to 02-SRA-X30	0 to 0.2	0 to 30	MPa, psi	R 1/8 R 1/4	—
G46-P10-01 to 02-SRB-X30	0 to 1.0	0 to 150			

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

Pressure Gauge for Clean Regulator/ With Limit Indicator *Series G46-SR A/B*

How to Order



* 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).

Note) This symbol must be used with Option "X30."

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

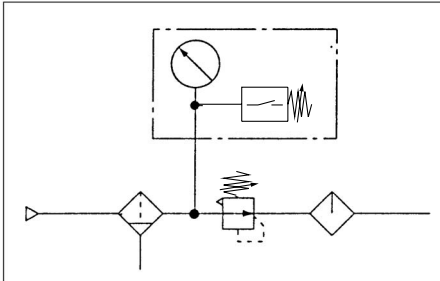
G
GS
PPA

Pressure Gauge with Switch Series GP46



- A pressure switch function has been added to the gauge.
- The pressure switch is equipped with a light for verifying operation.
- The pressure gauge is equipped with a limit indicator.
- To be used for verifying the supply pressure.

Circuit Example



- Be sure to read the precautions for selection and mounting.

Standard Specifications

Model		GP46	
Gauge	Type	Back side thread	
	Ambient and fluid temperature	-5 to 60°C (No freezing)	
	Indicated pressure rang	0 to 1.0 MPa	
	Port size ⁽¹⁾	R 1/8, 1/4 (Option M: with M5 female thread)	
	Fluid ⁽²⁾	Air	
Pressure switch	Indication precision	±0.03 MPa	
	Setting range ^{(3) (4)}	0.1 to 0.8 MPa	
	Hysteresis	0.07 MPa	
	Pointer error ⁽⁵⁾	±0.05 MPa (5 to 40°C) ±0.08 MPa (-5 to 60°C) No freezing	
	Contact	With light: 1a (Normally open) Without light: 1ab (Normally open/ Normally closed)	
	Wiring	Lead wire (Length: 300 mm)	
	Indicator light	AC	Neon light
		DC	Light emitting diode (LED)
Clear cover		Part no.: G46-00-00-3	
Attachment: With cover ring assembly		C Part no.: 1305104-4A	
Weight (kg)		0.12	

Note 1) When mounting a pressure gauge, use caution not to tighten excessively. Excessive tightening will cause product to be damaged. 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) Water is not an acceptable fluid. When using the other fluids, please consult with SMC for compatibility information concerning corrosion.

Note 3) Set value of pressure switch is indicated by pointer (green). It is the point where the circuit between N.O. (white) and COM (black) is turned off during pressure decrease. To set the value, turn needle in clockwise position to the correct value. When setting; if desired set position has been passed, turn needle in a counterclockwise direction back again beyond the desired value and then once again return needle in a clockwise direction stopping at the desired value. Value must be set while needle is traveling in a clockwise direction.

Note 4) Make sure to provide a minimum difference of 0.1 MPa between the set pressure and the operating pressure (including the pressure drop). If the difference is smaller, it could lead to improper operation. Refer to page 662 for details on how to set the setting needle. Use caution: Operating pressure should be the sum of the pressure of the setting needle error (±0.05 MPa), the hysteresis (0.07 MPa), and the display accuracy (±0.05 MPa) on the set pressure value, or the circuit between N.O. (white) and COM (black) may not turn ON while pressure is increasing.

Note 5) Maximum error value: Add the pressure gauge indicator error of 0.03 MPa to the setting needle error.

Model (Standard)

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

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note
	MPa				
GP46-10-01 to 02 (-Q)	0 to 1.0		MPa	R 1/8 R 1/4	—
GP46-10-01 to 02L2 (-Q)					
GP46-10-01 to 02L5 (-Q)					

Note 1) 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 with SMC for details, as delivery times may be extended.

Model	Pressure range ⁽¹⁾		Indication unit	Connection thread	Note
	MPa	psi			
GP46-10-01 to 02-X201 (-Q)	0 to 1.0		MPa	R 1/8 R 1/4	Lead wire length 3 m
GP46-10-01 to 02L2-X201 (-Q)					
GP46-10-01 to 02L5-X201 (-Q)					
Note 2) GP46-P10-01 to 02-X30 (-Q)	0 to 1.0	0 to 140	MPa, psi		—
Note 2) GP46-P10-01 to 02L2-X30					
Note 2) GP46-P10-01 to 02L5-X30					

Note 1) Do not apply pressure more than the maximum display pressure. This will cause a malfunction.

Micro-switch Rated Voltage

Load	Load resistant		
	Rated voltage	30 VDC	125 VAC
Operating current range	0.01 to 0.5 A	0.01 to 0.3 A	0.01 to 0.2 A

How to Order

GP 46 - 10 - 01 [] [] - [] - []

Pressure gauge with switch

Size

Symbol	Outside diameter
46	ø42.5

Max. display pressure

Symbol	Unit
10	1.0 MPa
P10	1.0 MPa, 140 psi

Note) Indicate X30 for special specifications when displaying "P10."

Connection thread

Symbol	Size
01	R 1/8
02	R 1/4

Option

Symbol	Specifications
Nil	—
M	With M5 (Female thread)

Option

Symbol	Specifications
Nil	—
X30	Both MPa and psi
X201	Lead wire length 3 m
Q (Note)	Compliant with CE marking

Note) The rated micro switch for CE marked products is under the following conditions.

Load	Load resistant	
Rated voltage	30 VDC	125 VAC
Operating current range	0.01 to 0.5 A	0.01 to 0.3 A

Attachment

Symbol	Specifications
Nil	Without cover ring assembly
C	Clear cover has no protrusion. (Clear cover is irremovable.)

Note) Option C1 (Clear cover has protrusion. (Clear cover is removable.) is not compliant.

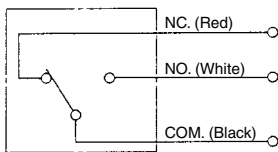
Indicator light Note 1, 2)

Nil	Without indicator light
L2	Neon light (100 VAC/220 VAC)
L5	LED/24 VDC

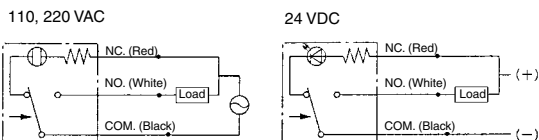
Note 1) Please consult with SMC for X30.
Note 2) 220V AC is not available for -Q.

Circuit Diagram

Without indicator light



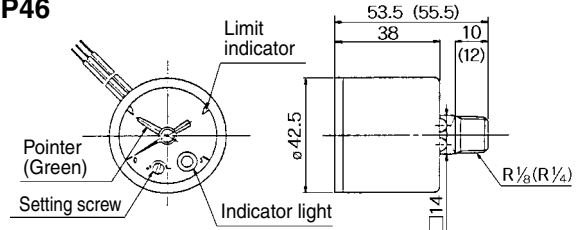
With indicator light



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 (-Q: With ground terminal on back side)

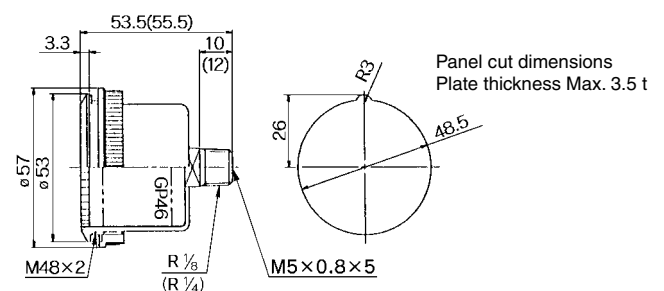
GP46



(): R 1/4

GP46: With cover ring assembly (For panel mounting)

Clear cover is not removable.

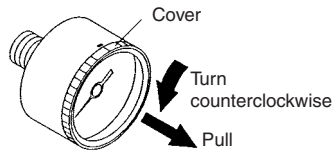


Refer to page 662 for mounting method.

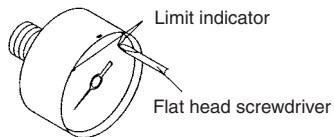
Pressure Gauge Guide

Procedure for Setting the Limit Gauge Indicator

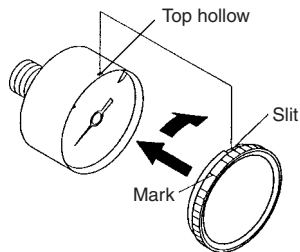
- (1) Before setting the (green) limit indicator, turn the cover counterclockwise (approximately 6 to 7 mm) until it stops. Then, remove by pulling it towards you.



- (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.

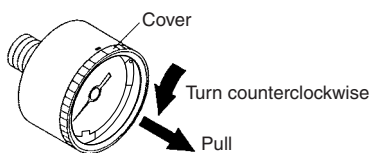


- (3) After completing the setting, replace the cover. Fit the cover by aligning the cutout in the cover to the groove on the top of the black case. Turn the cover clockwise (approximately 6 to 7 mm) until it stops. Make sure that the matching mark on the cover is aligned with the groove on the top of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

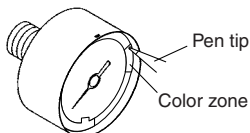


Procedure for Setting the Limit Gauge Indicator (Color Zone Type)

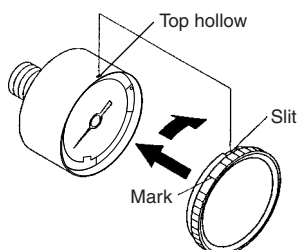
- (1) Before setting the color zone (red), turn the cover counterclockwise (approximately 6 to 7 mm) until it stops. Then remove by pulling it towards you.



- (2) Use a pen tip to set the color zone (red). Be careful not to bend the other needle or damage the dial plate.

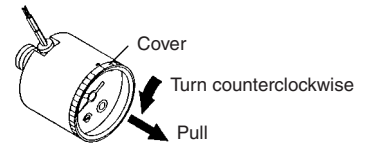


- (3) After completing the setting, replace the cover. Fit the cover by aligning the cutout in the cover to the groove on the top of the black case. Turn the cover clockwise (approximately 6 to 7 mm) until it stops. Make sure that the matching mark on the cover is aligned with the groove on the top of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

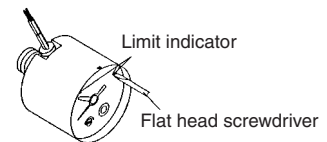


Procedure for Setting the Limit Gauge Indicator and the Setting Needle

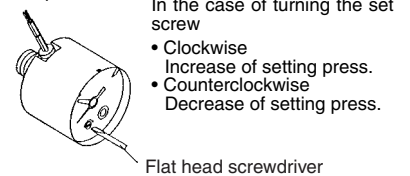
- (1) Before setting the limit indicator and the (green) setting needle, turn the cover counterclockwise (approximately 6 to 7 mm) until it stops. Then, remove by pulling it towards you.



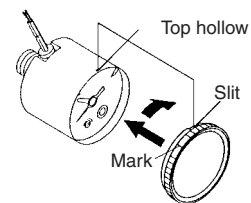
- (2) Use a flat head screwdriver (with a 2.9 mm blade width) to set the (green) limit indicator. Be careful not to bend the other needle or damage the dial plate.



- (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.

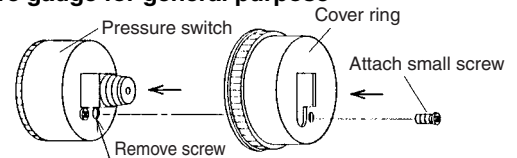


- (4) After completing the setting, replace the cover. Fit the cover by aligning the cutout in the cover to the groove on the top of the black case. Turn the cover clockwise (approximately 6 to 7 mm) until it stops. Make sure that the matching mark on the cover is aligned with the groove on the top of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

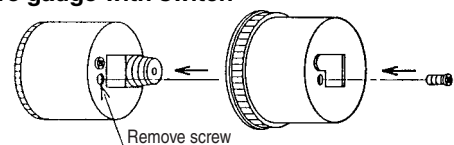


Procedure for Assembling the Cover Ring Assembly

● 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.



Pressure Gauge Guide

Specific Product Precautions

Be sure to read this before handling.
Refer to front matters 58 and 59 for safety 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.

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