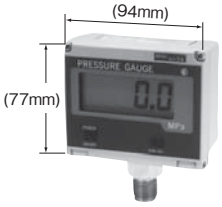
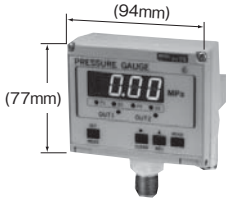
# GC7_
# Digital Pressure Gauge

## Overview

**This is a digital pressure gauge that is applicable for a wide range of pressure media featuring proven semiconductor strain gauge with excellent durability and stability.**
**Appropriate model can be selected depending on the applications with pressure indication, output, installing method etc. There are two types of sensor, direct connection type or separate type to install in the place varies on site.**


| Model | GC73 | GC74 | GC75 |
|---|---|---|---|
| External appearance |  |  |  |
| Mounting method | Panel mounting<br>(Mounting clamp) | Lower connection<br>Surface mounting | Lower connection<br>Surface mounting |
| Indication | 3 1/2 digits<br>LED display<br>(Character height: 14.2mm) | 3 1/2 digits<br>Large-sized LCD display<br>(Character height: 17.8mm) | 3 1/2 digits<br>LED display<br>(Character height: 14.2mm) |
| Power source | 24V DC<br>100V AC<br>200V AC | Alkaline Dry cell AA× 3 pcs<br>(Battery type) | 24V DC |
| Output | Comparator output<br>Relay contact output,<br>Open collector output<br>Analog output<br>(Option)<br>4 to 20mA DC,<br>1 to 5V DC | ——— | Comparator output<br>Relay contact output,<br>Open collector output<br>or<br>Analog output<br>4 to 20mA DC,<br>1 to 5V DC |
| Enclosure | Indoor use | Drip-proof (IP54) | Drip-proof (IP54) |

# GC73 Panel mounting type digital pressure gauge

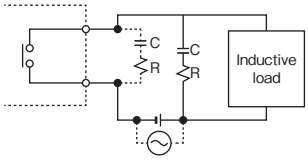
## Specifications

**Type:**
Panel mounting
**Sensor part mounting:**
Direct connection type, separate type
**Installation environment:**
Install in location where no gases or liquids may exist that have the potential to become flammable or ignitable under normal operating condition
**Connection:**
G1/4B, G3/8B, G1/2B, R1/4, R3/8, R1/2
＊R□ screw is available up to 50MPa
**Wetted parts:**
O-ring type……Sealed by O-ring to maintain sealing performance
Diaphragm material SUS630 (17-4PH)
Fitting SUS316
O-ring material NBR
Welding type…Completely sealed by electron beam welding (1MPa or higher)
Diaphragm material SUS630 (17-4PH)
Fitting SUS316
**Pressure range:**
0 to 300kPa→0 to 100MPa
-100 to 300kPa→-0.1 to 2MPa
**Allowable maximum pressure:**
200% of pressure range
(150% for 35, 50MPa, 120% for 70, 100MPa)
**Operating temperature range:**
0 to 50℃ (Non-condensing)
**Storage temperature range:**
-20 to 70℃
**Power source:**
24V DC, 100V AC or 200V AC

**Comparator output:**
Output contents……(Either of them)
Relay contact output
200V AC, 2A (Load resistance)
Open collector output
30V, 80mA DC or lower
Number of output…Independent two contacts
Response time……Within 10ms
Pressure setting range, deadband‥‥
Pressure setting range, dead band
**Analog output:** (Option)
4 to 20mA DC or 1 to 5V DC
Response time…Within 1ms
Load resistance…400Ω or lower (Current output)
10kΩ or higher (Voltage output)
**Accuracy:**
± (0.5%F.S.+1digit)
(Except 0.3MPa or lower and 70MPa or higher)
± (1.0%F.S.+1digit)
**Temperature coefficient:** (Both zero and span)
±0.05%F.S./℃ (At accuracy ±0.5%F.S.)
±0.1%F.S./℃ (At accuracy ±1.0%F.S.)
**Peak hold function:** (Option)
Peak hold function Changing hold value and measurement value by [HOLD] button
2 units display function Altered by button
**Pressure indication:**
3 1/2 digits LED display
Character height 14.2mm
Display update rate Approx. 0.2s
**Case material:**
SPCC
**Enclosure:**
Indoor use
**Weight:**
Approx. 800g (Direct connection type at 24V DC)

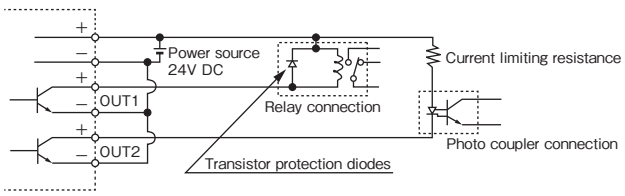
## Example of output

### Example of relay output

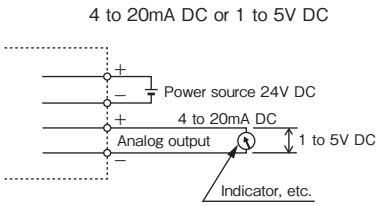



In case of inductive load, insert contact protection circuit in parallel to load or contact.
Varistor can be used instead of CR.

### Example of open collector output



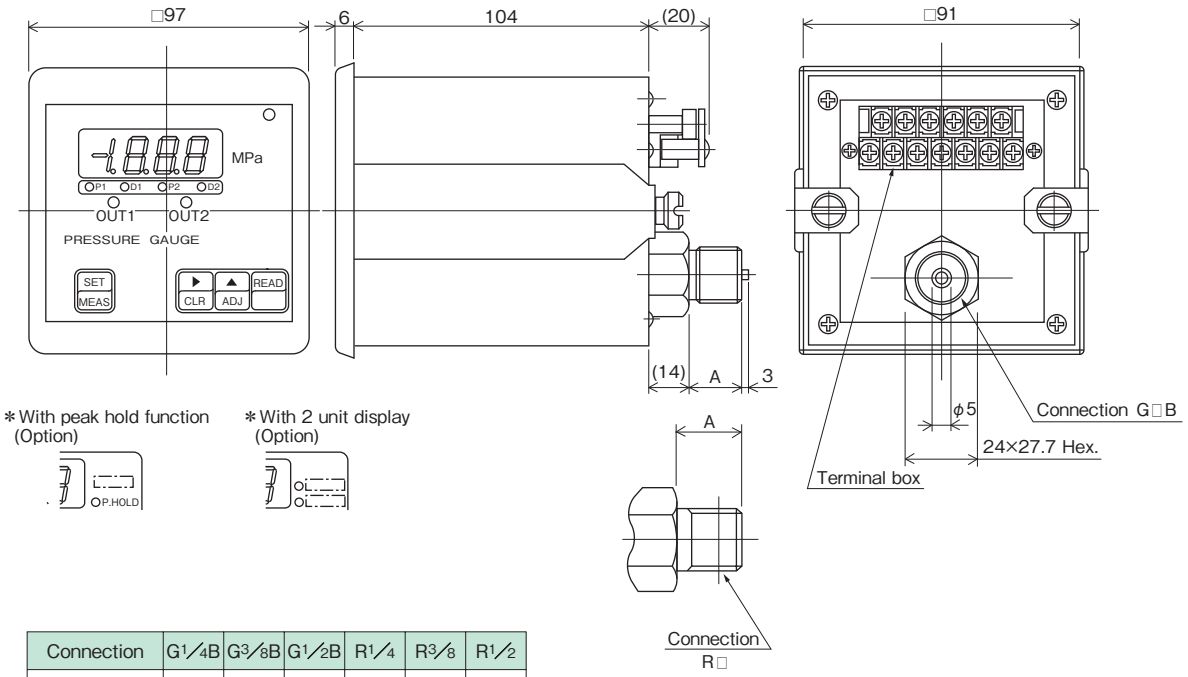

### Example of analog output



## Dimensions

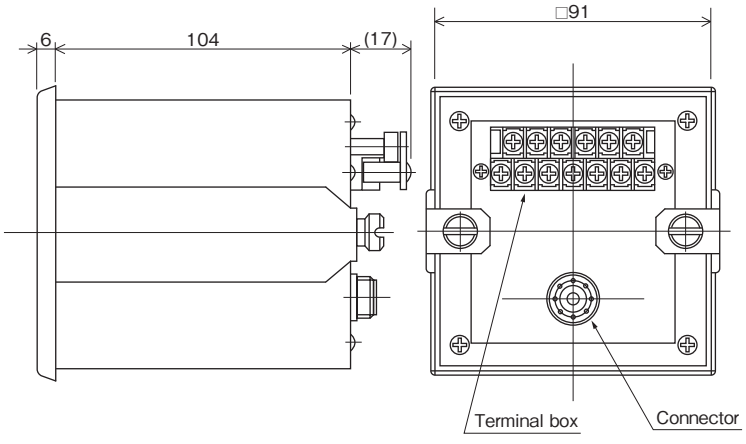
Unit: mm

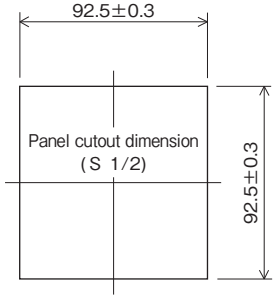
### Panel mounting



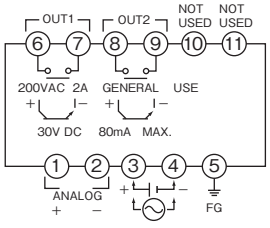

| Connection | G1/4B | G3/8B | G1/2B | R1/4 | R3/8 | R1/2 |
|---|---|---|---|---|---|---|
| A (mm) | 16 | 18 | 20 | 16 | 18 | 20 |

### Sensor parts separate type

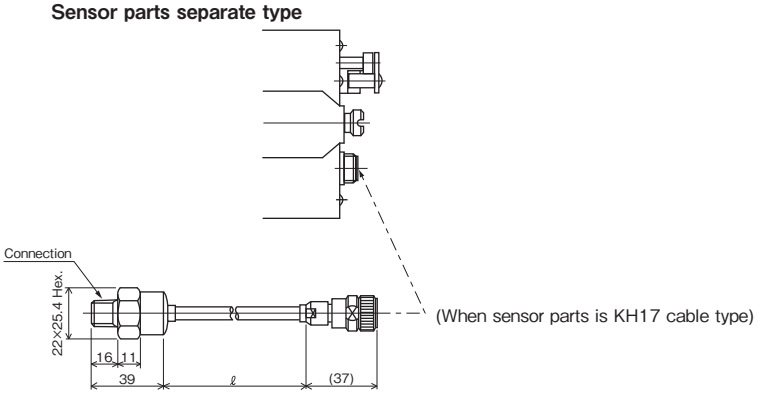



Terminal box wiring




Sensor parts separate type



# GC74 Drip-proof type digital pressure gauge

## Specifications

**Type:**
Lower connection, surface mounting

**Sensor part mounting:**
Direct type, separate type

**Installation environment:**
Install in location where no gases or liquids may exist that have the potential to become flammable or ignitable under normal operating condition

**Connection:**
G1/4B, G3/8B, G1/2B, R1/4, R3/8, R1/2
*R□ screw is available up to 50MPa

**Wetted parts:**
O-ring type……Sealed by O-ring to maintain sealing performance
Diaphragm material SUS630 (17-4PH)
Fitting SUS316
O-ring material NBR
Welding type…Completely sealed by electron beam welding (1MPa or higher)
Diaphragm material SUS630 (17-4PH)
Fitting SUS316

**Pressure range:**
0 to 300kPa→0 to 100MPa
-100 to 300kPa→-0.1 to 2MPa

**Allowable maximum pressure:**
200% of pressure range
(150% for 35, 50MPa, 120% for 70, 100MPa)

**Operating temperature range:**
0 to 50℃ (Non-condensation)

**Storage temperature range:**
-20 to 70℃

**Power source:**
Alkaline Dry cell AA × 3 pcs. (Battery type)
Battery life: Approx. 1 year

**Accuracy:**
±(0.5%F.S.+1digit)
(Except 0.3MPa or lower, and 70MPa or higher)
±(1.0%F.S.+1digit)

**Temperature coefficient:** (Both zero and span)
±0.05%F.S./℃ (At accuracy ±0.5%F.S.)
±0.1% F.S./℃ (At accuracy ±1.0%F.S.)

**Peak hold function:** (Option)
Changing hold value and measurement value by [HOLD] button
※There are three ways to clear the hold value.
Please specify required clear type when ordering.
・Standard peak hold
It is cleared when the hold value is switched to the measurement value by using the "HOLD" button.
・Manual reset peak hold
During displaying the hold value, press the "ZERO ADJ." button to clear it.
・Automatic reset peak hold
The peak value is displayed for 2 seconds, and then it is cleared automatically.

**Pressure indication:**
3 1/2 digi LCD display
Character height 17.8mm
Display cycle 0.5s

**Case material:**
Lower connection, surface mounting Aluminum die-casting

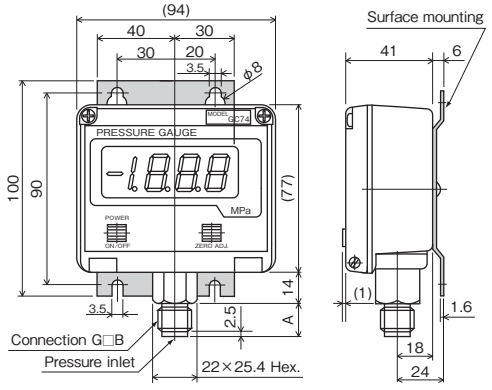
**Enclosure:**
Drip-proof (IP54)

**Weight:**
Approx. 430g

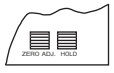
## Dimensions

Unit: mm

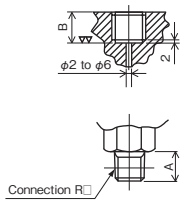
### Lower connection, Surface mounting



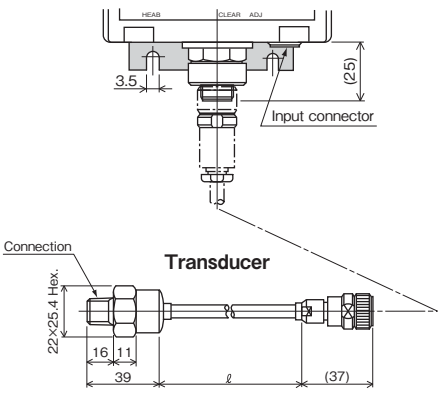

**With peak hold**
(Option)




### Examples of mounting screw hole G□B




### Sensor parts separate type




(When sensor parts is KH17 cable type)

| Connection | G1/4B | G3/8B | G1/2B | R1/4 | R3/8 | R1/2 |
|---|---|---|---|---|---|---|
| A (mm) | 16 | 18 | 20 | 16 | 18 | 20 |
| B (mm) (Reference) | 15 | 17 | 19 | — | — | — |

# GC75 Drip-proof type digital pressure gauge

## Specifications

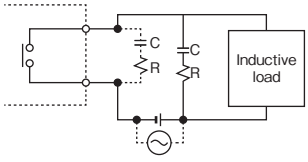
**Type:**
Lower connection, surface mounting
**Sensor part mounting:**
Direct type, separate type
**Installation environment:**
Install in location where no gases or liquids may exist that have the potential to become flammable or ignitable under normal operating condition
**Connection:**
G1/4B, G3/8B, G1/2B, R1/4, R3/8, R1/2
※*R□ screw is available up to 50MPa
**Wetted parts:**
O-ring type……Sealed by O-ring to maintain sealing performance
Diaphragm material SUS630 (17-4PH)
Fitting SUS316
O-ring material NBR
Welding type…Completely sealed by electron beam welding (1MPa or higher)
Diaphragm material SUS630 (17-4PH)
Fitting SUS316
**Pressure range:**
0 to 300kPa→0 to 100MPa
-100 to 300kPa→-0.1 to 2MPa
**Allowable maximum pressure:**
200% of pressure range
(150% for 35, 50MPa, 120% for 70, 100MPa)
**Operating temperature range:**
0 to 50℃ (Non-condensing)
**Storage temperature range:**
-20 to 70℃
**Power source:**
24V DC±5% 60mA DC or lower
**Comparator output:**
Output type……(Either of them)
Relay contact output
110V AC, 0.2A (Load resistance)
Open collector output
30V, 80mA DC or lower
Number of output……Independent two contacts
Response time……Within 10ms
Pressure setting range, dead band……
Arbitrarily changeable within pressure range

**Analog output:**
4 to 20mA DC or 1 to 5V DC
Response time……Within 1ms
Load resistance……400Ω or lower (Current output)
10kΩ or higher (Voltage output)
※Separate type of sensor parts (For pressure transmitter) is not available
**Accuracy:**
±(0.5%F.S.+1digit)
(Except 0.3MPa or lower and 70MPa or higher)
±(1.0%F.S.+1digit)
**Temperature coefficient:** (Both zero and span)
±0.05%F.S./℃ (At accuracy ±0.5%F.S.)
±0.1%F.S./℃ (At accuracy ±1.0%F.S.)
**Peak hold function:** (Option)
Peak hold function Hold value and measurement value can be displayed alternatively by pressing "HOLD" button.
2 units display function Altered by button
**Pressure indication:**
3 1/2 digits LED display
Character height 14.2mm
Display cycle Approx. 0.2s
**Case material:**
Aluminum die-casting
**Enclosure:**
Drip-proof (IP54)
**Weight:**
Approx. 430g

**Output**
Select either comparator or analog output.

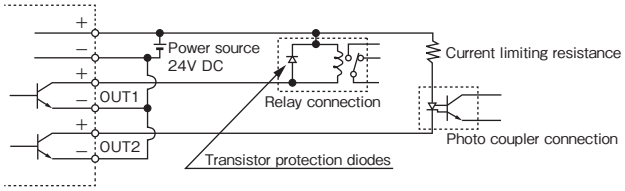
## Example of output

Example of relay output

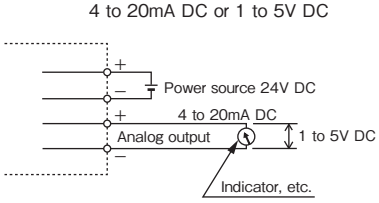



In case of inductive load, insert contact protection circuit in parallel to load or contact.
Varistor can be used instead of CR.

Example of open collector output



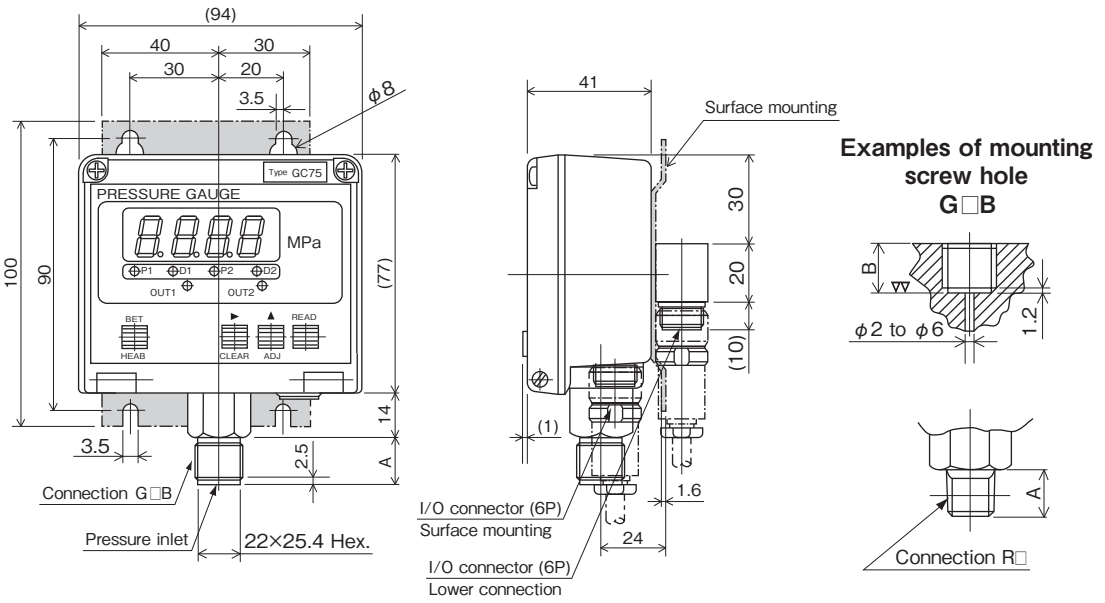

Example of analog output



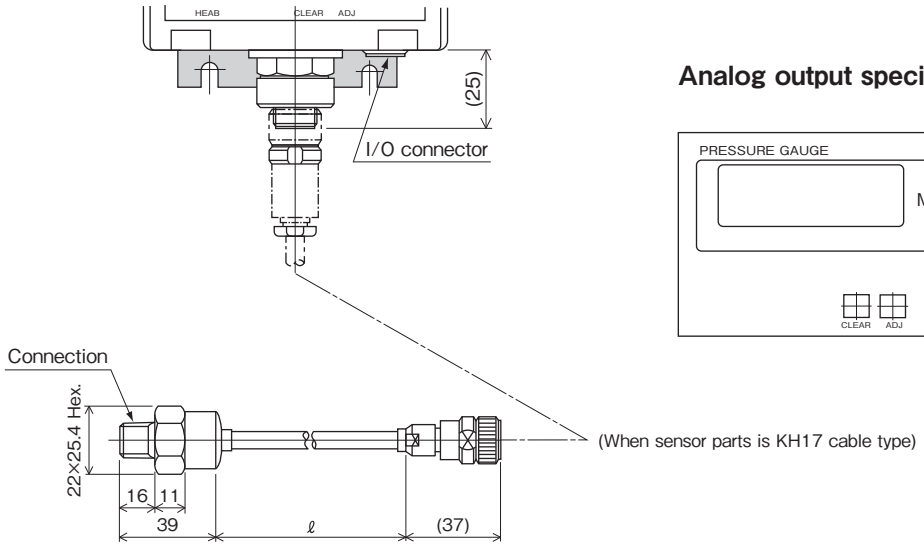
## Dimensions

Unit: mm

### Lower connection, Surface mounting




### Sensor parts separate type

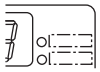



### Analog output specifications panel




**＊With peak hold**
(Option)


**＊With 2 unit display**
(Option)



| Connection | G1/4B | G3/8B | G1/2B | R1/4 | R3/8 | R1/2 |
|---|---|---|---|---|---|---|
| A (mm) | 16 | 18 | 20 | 16 | 18 | 20 |
| B (mm) (Reference) | 15 | 17 | 19 | — | — | — |

### Wiring of input and output connector pin

| Pin number | Comparator output | Analog output | Cable color |
|---|---|---|---|
| A | Power source 24V | Power source 24V | Red |
| B | Power source 0V | Power source 0V | Black |
| C | OUT1 (+) | Analog output (+) | White |
| D | OUT1 (−) | Analog output (−) | Green |
| E | OUT2 (+) | NC | Blue |
| F | OUT2 (−) | NC | Brown |

### Connector pin array

## Model number configuration

Please specify the model number, each specs and the range for ordering.

Model

| G | C | 7 | 3 | — | 3 | | | — | | | | | | | | | | × | × | × | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Panel Mounting Type Digital Pressure Gauge | | | | | ① | ② | ③ | | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ | ⑫ | ⑬ | ⑭ | ⑮ | |

| Model number | | Product specifications | Additional specifications (Optional) |
|---|---|---|---|
| ① Type | 3 | Panel mounting (Direct type, separate type) | |
| ② Connection | 0 | Separate type | |
| | 2 | G1/4B | |
| | 3 | G3/8B | |
| | 4 | G1/2B | |
| | 7 | R1/4 | Available up to 50MPa |
| | 8 | R3/8 | Available up to 50MPa |
| | 9 | R1/2 | Available up to 50MPa |
| | | Others | |
| ③ Sensor part | 3 | O-ring type (SUS630 (17-4PH)+NBR+SUS316) | |
| | 4 | Welding type (SUS630 (17-4PH)+SUS316) | |
| | A | Separate type transducer input | |
| | B | Separate type transmitter input (4 to 20mA input only) | |
| ④ Pressure range | 0 | Separate type (Varies depending on mating sensor) | |
| | O-ring type | | |
| | 1 | -100 to 300, 500kPa | -0.1 to 1, 2MPa |
| | 2 | 0 to 300, 500kPa | 0 to 1, 2, 3.5, 5, 10MPa |
| | Welding type | | |
| | A | 0 to 1, 2, 3.5, 5, 10MPa | |
| | B | 0 to 20, 35MPa | |
| | C | 0 to 50, 70MPa | |
| | D | 0 to 100MPa | |
| ⑤ Accuracy | 0 | Separate type (Varies depending on mating sensor) | |
| | 5 | ±(0.5%F.S.+1digit) except 0.3MPa or lower, and 70MPa or higher | |
| | 7 | ±(1.0%F.S.+1digit) | |
| ⑥ Power source | 1 | 24V DC | |
| | 2 | 100V AC | |
| | 4 | 200V AC | |
| ⑦ Signal output | 2 | Relay contact output 200V AC 2A | |
| | 3 | NPN open collector output 30V DC, 80mA max. | |
| ⑧ Analog output | 0 | Not required | |
| | 1 | 4 to 20mA DC | |
| | 8 | 1 to 5V DC | |
| ⑨ Contact type (Function) | 0 | Not required | |
| | 1 | Peak hold function | |
| | 2 | Valley hold function | |
| ⑩ Treatment | 0 | Not required | |
| | 1 | Use no oil | |
| | 2 | Use no water | |
| | 3 | Use no oil & water | |
| ⑪ Other additional spec. | 0 | Not required | |
| | 1 | Nonstandard pressure unit | |
| ⑮ Documents | 0 | Not required | |
| | 1 | Required<br>(Documents available upon request)<br>Datasheet (Drawing / Specifications)<br>Instruction manual<br>Inspection procedure Mill test report<br>Calibration test report (One-part one sheet)<br>Inspection / Traceability certificate<br>Strength calculation sheet<br>Attending inspection | |

Please specify pressure range and unit of measure along with corresponding ordering code.
Select appropriate pressure range in line with sensor part type in ③.

[Manufacturing range]
- The accuracy of separate type is effected by accuracy of mating sensor.
- Please prepare separately for mating sensor (Transducer or transmitter).

### Treatment against wetted parts

**■Use no oil**
Oil used in manufacturing the gauges had been flushed out & no oil residue remained inside its wetted parts.

**■Use no water**
Water used in manufacturing the gauges had been flushed out & no water residue remained inside its wetted parts.

**■Use no oil & water**
Oil/Water used in manufacturing the gauges had been flushed out & no oil/water residue remained inside its wetted parts.

＊Specify code "X" to refer N/A

## Model number configuration

Please specify the model number, each specs and the range for ordering.

Model

| G | C | 7 | 4 | — | ① | ② | ③ | — | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ | ⑫ | ⑬ | ⑭ | ⑮ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | B | × | × | | | | × | × | × | |

Drip-proof Type Digital Pressure Gauge

| Model number | | Product specifications | Additional specifications (Optional) |
|---|---|---|---|
| ① Type | 1 | Lower connection (Direct type) | |
| | 2 | Surface mounting (Direct type, separate type) | |
| ② Connection | 2 | G1/4B | |
| | 3 | G3/8B | |
| | 4 | G1/2B | |
| | 7 | R1/4 | Available up to 50MPa |
| | 8 | R3/8 | Available up to 50MPa |
| | 9 | R1/2 | Available up to 50MPa |
| | | Others | |
| ③ Sensor part | 3 | O-ring type (SUS630 (17-4PH)+NBR+SUS316) | |
| | 4 | Welding type (SUS630 (17-4PH)+SUS316) | |
| | A | Separate type transducer input | |
| ④ Pressure range | 0 | Separate type (Varies depending on mating sensor) | |
| | | O-ring type | |
| | 1 | -100 to 300, 500kPa | -0.1 to 1, 2MPa |
| | 2 | 0 to 300, 500kPa | 0 to 1, 2, 3.5, 5, 10MPa |
| | | Welding type | |
| | A | 0 to 1, 2, 3.5, 5, 10MPa | |
| | B | 0 to 20, 35MPa | |
| | C | 0 to 50, 70MPa | |
| | D | 0 to 100MPa | |
| ⑤ Accuracy | 0 | Separate type (Varies depending on mating sensor) | |
| | 5 | ±(0.5%F.S.+1digit) except 0.3MPa or lower, and 70MPa or higher | |
| | 7 | ±(1.0%F.S.+1digit) | |
| ⑥ Power source | B | Alkaline Dry cell AA × 3 pcs. | |
| ⑨ Contact type (Function) | 0 | Not required | |
| | 1 | Peak hold function | |
| ⑩ Treatment | 0 | Not required | |
| | 1 | Use no oil | |
| | 2 | Use no water | |
| | 3 | Use no oil & water | |
| ⑪ Other additional spec. | 0 | Not required | |
| | 1 | Nonstandard pressure unit | |
| ⑮ Documents | 0 | Not required | |
| | 1 | Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Mill test report Calibration test report (One-part one sheet) Inspection / Traceability certificate Strength calculation sheet Attending inspection | |

Please specify pressure range and unit of measure along with corresponding ordering code.
Select appropriate pressure range in line with sensor part type in ③.

[Manufacturing range]
・The accuracy of separate type is effected by accuracy of mating sensor.
・Please prepare separately for mating sensor (Transducer).

*Hold value and measurement value are displayed alternatively by pressing "HOLD" button.
※There are three ways to clear the hold value.
Specify among following three.
・Standard peak hold
Hold value is cleared when the「HOLD」button was pressed entering to measurement value.
・Manual reset peak hold
Hold value is cleared by pressing「ZERO ADJ」while displaying hold value.
・Auto reset peak hold
The peak value is displayed for 2 seconds, and then it is cleared automatically.

### Treatment against wetted parts

**■Use no oil**
Oil used in manufacturing the gauges had been flushed out & no oil residue remained inside its wetted parts.

**■Use no water**
Water used in manufacturing the gauges had been flushed out & no water residue remained inside its wetted parts.

**■Use no oil & water**
Oil/Water used in manufacturing the gauges had been flushed out & no oil/water residue remained inside its wetted parts.

*Specify code "X" to refer N/A

## Model number configuration

Please specify the model number, each specs and the range for ordering.

Model

| G C 7 5 | — | ① | ② | ③ | — | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ | ⑩ | ⑪ | ⑫ | ⑬ | ⑭ | ⑮ |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Drip-proof Type Digital Pressure Gauge | | | | | | | | 1 | | | | | | × | × | × | |

| Model number | | Product specifications | Additional specifications (Optional) |
|---|---|---|---|
| ① Type | 1 | Lower connection (Direct type) | |
| | 2 | Surface mounting (Direct type, separate type) | |
| ② Connection | 0 | Separate type | |
| | 2 | G1/4B | |
| | 3 | G3/8B | |
| | 4 | G1/2B | |
| | 7 | R1/4 | Available up to 50MPa |
| | 8 | R3/8 | Available up to 50MPa |
| | 9 | R1/2 | Available up to 50MPa |
| | | Others | |
| ③ Sensor part | 3 | O-ring type (SUS630 (17-4PH)+NBR+SUS316) | |
| | 4 | Welding type (SUS630 (17-4PH)+SUS316) | |
| | A | Separate type transducer input | |
| | B | Separate type transmitter input (4 to 20mA input only) | |
| ④ Pressure range | 0 | Separate type (Varies depending on mating sensor) | |
| | | O-ring type | |
| | 1 | -100 to 300, 500kPa | -0.1 to 1, 2MPa |
| | 2 | 0 to 300, 500kPa | 0 to 1, 2, 3.5, 5, 10MPa |
| | | Welding type | |
| | A | 0 to 1, 2, 3.5, 5, 10MPa | |
| | B | 0 to 20, 35MPa | |
| | C | 0 to 50, 70MPa | |
| | D | 0 to 100MPa | |
| ⑤ Accuracy | 0 | Separate type (Varies depending on mating sensor) | |
| | 5 | ±(0.5%F.S.+1digit) except 0.3MPa or lower, and 70MPa or higher | |
| | 7 | ±(1.0%F.S.+1digit) | |
| ⑥ Power source | 1 | 24V DC | |
| ⑦ Signal output | 0 | Not required | |
| | 2 | Relay contact output 110V AC 0.2A | |
| | 3 | NPN open collector output 30V DC, 80mA max. | |
| ⑧ Analog output | 0 | Not required | |
| | 1 | 4 to 20mA DC* | |
| | 8 | 1 to 5V DC* | |
| ⑨ Contact type (Function) | 0 | Not required | |
| | 1 | Peak hold function | |
| | 2 | Valley hold function | |
| ⑩ Treatment | 0 | Not required | |
| | 1 | Use no oil | |
| | 2 | Use no water | |
| | 3 | Use no oil & water | |
| ⑪ Other additional spec. | 0 | Not required | |
| | 1 | Nonstandard pressure unit | |
| ⑮ Documents | 0 | Not required | |
| | 1 | Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Mill test report Calibration test report (One-part one sheet) Inspection / Traceability certificate Strength calculation sheet Attending inspection | |

Please specify pressure range and unit of measure along with corresponding ordering code.
Select appropriate pressure range in line with sensor part type in ③.

Output is either ⑦ or ⑧

[Manufacturing range]
- The accuracy of separate type is effected by accuracy of mating sensor.
- Please prepare separately for mating sensor (Transducer or transmitter).
- Output is either ⑦ or ⑧

*Sensor parts separate type (For pressure transmitter) is not available.

### Treatment against wetted parts

**■Use no oil**
Oil used in manufacturing the gauges had been flushed out & no oil residue remained inside its wetted parts.

**■Use no water**
Water used in manufacturing the gauges had been flushed out & no water residue remained inside its wetted parts.

**■Use no oil & water**
Oil/Water used in manufacturing the gauges had been flushed out & no oil/water residue remained inside its wetted parts.

*Specify code "X" to refer N/A