

GC63 Battery Type Digital Differential Pressure Gauge

For gas measurement
(Featuring silicone diaphragm)

Overview

Battery type digital differential pressure gauge requires no wirings for easy installation and field monitoring for applications include HVAC and semiconductor machinery. Optionally available external power supply adds comparator output for various applications including filter clogging monitoring.

Features

- 17mm large LCD (3 1/2 digit)
- Analog bar graph to easily recognize measurement status.
- Comparator output with external power cable (Option)
- Filter, Peak hold display, and Zero adjustment



Features of sensor

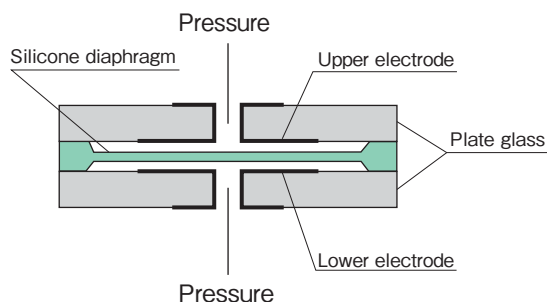
Silicon Capacitive (SC) Sensor

Miniaturized sensing part designed with silicon diaphragm having less moving parts contributes for excellent vibration proof and shock resistance.

Actual size

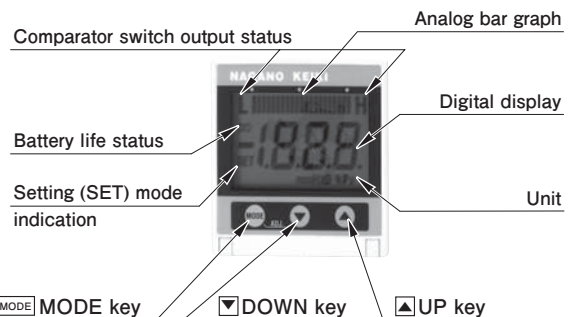


SC Sensor
Sensor chip



Function

- Analog bar graph to easily recognize measurement status.
- When using the external power source, a comparator output is available (Option).



MODE MODE key

Use the mode key for selecting each operation mode and sub mode.

▼ DOWN key

Sets values and selects items. It displays minimum pressure value in measurement mode while holding the key.

▲ UP key

Sets values and selects items. It displays maximum pressure value in measurement mode while holding the key.

Specifications 1

Item	Description	
Media	Gas (Dry air and nitrogen gas) No water or dusts should be contained.	
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	
Mounting	Surface mounting	
Process connection	G1/8	
Wetted parts	Silicon, aluminum, silicone, glass and ABS	
Differential pressure range	0 to 50Pa → 0 to 5kPa, ±50Pa → ±500Pa Refer to pressure range table	
Maximum allowable pressure	50kPa	
Accuracy	Differential pressure display accuracy: ± (1.0%F.S.+1 digit) at 23°C (Differential pressure range: 1kPa and over), ± (2.0%F.S.+1 digit) at 23°C (Differential pressure range 500Pa and under)	
Square root operation accuracy (GC63-□□2)	±0.5%F.S. (Within 5 to 100%F.S.)	
Square root display (GC63-□□2)	0 to 1999 (Decimal point position and the maximum display value can be altered)	
Display	3 1/2 digit, 17mm LCD LCD Analog bar graph (21 Segment)	
Display update rate	1s	
Units of display	Differential pressure display (GC63-□□1) Pa, kPa Square root display (GC63-□□2) (LCD Pressure unit display is disappeared)	
Battery	AA Alkaline Batteries (LR6) × 2	
Battery life	Continuous operation Approx. 2 years Battery life status indication available	
External power source and output cable (Option)	External power source 24V DC 5mA Maximum One-comparator output N channel opening drain (30V DC 80mA Maximum) Response: Within 2s Operation mode: Window comparator Deadband: 1%F.S. fixed Operation display: H, L display	
Function	Filter	1s, 2s, 4s (Moving average)
	Error indication	Over pressure, Outside of effective range for the zero adjustment
	Hold	Display of peak and bottom values
	Others	Zero adjustment, Key lock
	Warning display	Battery life status indication available
Operating temperature	0 to 40°C (Non-Freezing)	
Operating humidity	35 to 85%RH (Non-Condensing)	
Storage temperature	-10 to 50°C (Non-Freezing)	
Allowable leak rate	$1.7 \times 10^{-4} \text{Pa} \cdot \text{m}^3/\text{s} \text{ *1}$	
Enclosure	Indoor use (IP40 IEC Standard)*2	
Case materials	ABS	
Weight	Approx. 130g (Include battery)	
Accessory	Hexagon socket head plug, AA Alkaline Batteries Unit label (×10, ×100, ×1000, m/s, m ³ /min, m ³ /h) ...with part number GC63-□□2	

* 1 This product is NOT suitable for use with leakage test requiring strict measurement of leakage amounts.

* 2 When the front cover is closed.

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Specifications2

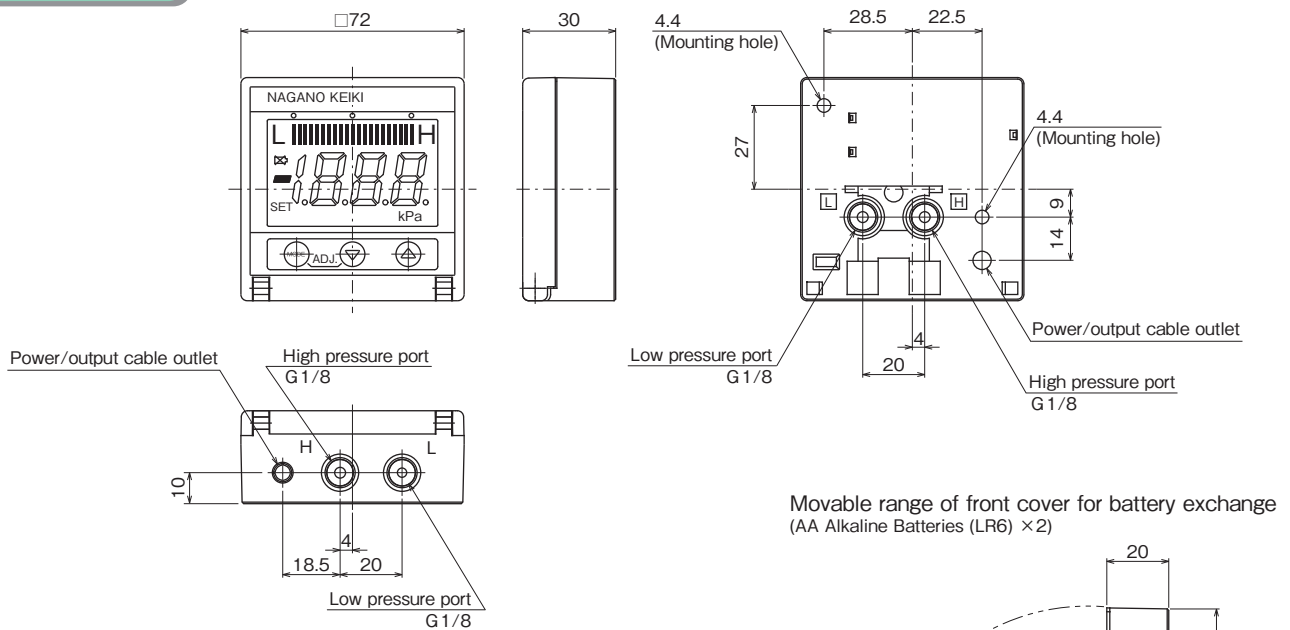
Differential pressure range, display digits, accuracy and temperature coefficient:

Differential pressure range		LCD Display digit		Accuracy	
		Pa	kPa	Display accuracy	Temperature coefficient
0 to 50Pa	±50Pa	50.0 (±50.0)	_____	±(2.0%F.S.+1 digit) at 23°C	±0.2%F.S./°C (Zero/ Span)
0 to 100Pa	±100Pa	100 (±100)	_____		
0 to 200Pa	±200Pa	200 (±200)	_____		
0 to 500Pa	±500Pa	500 (±500)	_____		
0 to 1kPa	_____	_____	1.00	±(1.0%F.S.+1 digit) at 23°C	±0.1%F.S./°C (Zero/ Span)
0 to 2kPa	_____	_____	2.00		
0 to 5kPa	_____	_____	5.00		

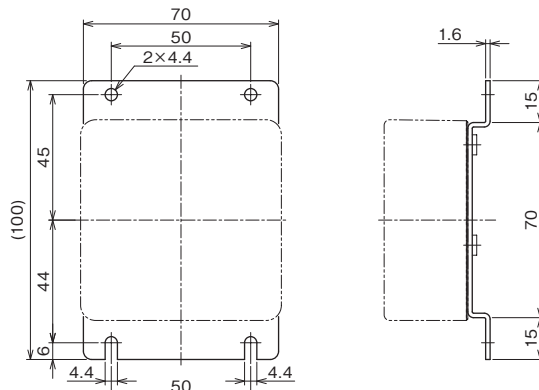
- * Negative mark (-) is displayed when the pressure measured at high pressure port (H) is lower than the pressure measured at low pressure port (L).
- * Square root extraction (± bidirectional range is not available.)

Dimensions 1

Unit: mm



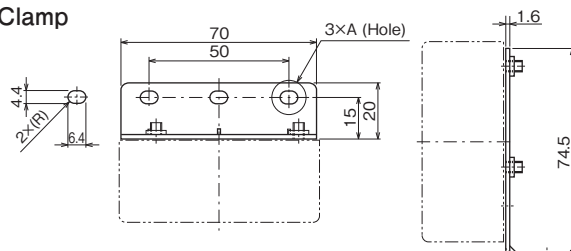
Mounting clamp for wall mounting



Part name	Material	QTY.	Remarks
Mounting clamp (Standard)	SPCC	1	M4 sems screw

*Ensure that tightening torque for G1/8 thread should be 2N/m or less for attachment of mounting clamp.

L Clamp



*There are process connections on back and side of the unit (H and L). After connecting to process connections, unused pressure port must be covered by included hexagon socket plug. Ensure that tightening torque for G1/8 thread should be 1N/m or less.

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Dimensions2

Process Connection				
GC63-□2□	GC63-□3□	GC63-□4□	GC63-□5□	GC63-□6□
φ5 Barb (Straight)	φ7 Barb (Straight)	φ7 Barb (Rotary)	Joint for φ6 metal pipe	Rc1/8 Conversion joint
φ6 With 2m tube	φ8 With 2m tube	φ8 With 2m tube		

Model number configuration

Please specify the model, each requiring specification and differential pressure range to order.

Model

GC63 — □ □ □ — □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Digital Differential 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 Mounting	1	Surface mounting			
	2	With mounting clamp for wall mounting			
	3	L type mounting clamp			
② Process Connection *1	1	G1/8 (Standard)			
	2	φ5 Barb (Straight)	With 2m vinyl tube		
	3	φ7 Barb (Straight)	With 2m vinyl tube		
	4	φ7 Barb (Rotary)	With 2m vinyl tube		
	5	Joint for φ6 metal pipe			
	6	Rc 1/8 Conversion joint			
③ Display	1	Differential pressure display			
	2	Square root extraction (± bidirectional range is not available.)			
④ Differential pressure range *2	④	⑤	④Differential pressure range		⑤Accuracy
	M	9	0 to 50Pa		±(2.0%F.S.+1digit) at 23°C
	N	9	0 to 100Pa		
	P	9	0 to 200Pa		
	Q	9	0 to 500Pa		±(1.0%F.S.+1digit) at 23°C
	R	7	0 to 1kPa		
	S	7	0 to 2kPa		
	T	7	0 to 5kPa		
	B	9	±50Pa		±(2.0%F.S.+1digit) at 23°C
	C	9	±100Pa		
D	9	±200Pa			
E	9	±500Pa			
⑧ Cable for power source / output	0	Not required			
	D	Cable for power source / output: 2 m			
⑮ Documents	0	Not required			
	1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Inspection procedure Calibration test report (One-part one sheet) Inspection / Traceability certificate Calibration test report for pressure standard Attending inspection			

Please specify differential pressure range and unit of measure along with corresponding ordering code.

*1: 2m vinyl tube is included for 2 to 4.

*2: Negative sign (-) is displayed when the pressure measured at high pressure port (H) is lower than the pressure measured at low pressure port (L).

* Specify code "X" to refer N/A

Caution

The product can't be used for corrosive, flammable gas and fluid measurements.