GC68
Digital Indicator

Overview

This digital indicator is used in combination with a pressure transmitter. Easy-to- use digital pressure indication ability and analog output functions are built in one compact enclosure.

Features

- It can supply electrical power directly to pressure transmitter with easy wiring.
- 4 digit large LED display and 2 relay contacts for comparator output.
- It can act 3 roles: pressure indication, transmitter and switch with various functions including loop check, scaling.
- Selectable from panel or surface mounting.

Specifications 1

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:
Panel mounting / Surface mounting (DIN rail)

Pressure display ability:
Minimum 50Pa to maximum 50MPa
(Compound range is available)

Accuracy:
Pressure indication accuracy: ± (0.5% F.S.±1digit)
Square root extraction indication accuracy: ±0.5%F.S.
Temperature coefficient: ±0.03% F.S./°C

Display:
4 digit, 10 mm LED
Display update rate 0.2s

Unit:
Pa, kPa, MPa

Power source:
24V DC ±10%

Consumption electric current:
55mA and under
(75mA and under when output is 4 to 20mA)

Comparator output:
Relay contact (110V AC, 0.2A resistance load) × 2 outputs
Response time: 5ms and under
Deadband: Hysteresis mode: Adjustable 0 to 100% of F.S.
Window comparator mode: 1% F.S. Fixed
Delay: 0 to 2.00 s (Both ON and OFF)
Comparator (OUT1, OUT2) operation LED (Red)
Red lit when comparator output becomes ON status

Analog output: (Option)
4 to 20mA DC (load resistance 400 Ω and under)
or 1 to 5V DC (load resistance 10 kΩ and over)
Indication accuracy: ±0.5% F.S.
Response time: 50ms and under

Square root extraction function:
Wind velocity and air volume display (GC68-□□2)
(N/A when compound range)

Scaling function:
Indication value, analog output

Loop check function:
Comparator output, analog output

Filter function:
25ms, 250ms, 2.5s, 5s, 10s

Specifications2

Self diagnostic function:
Over pressure, Comparator overloaded, Outside of effective range for the zero adjustment

Hold function:
Peak and bottom values display

Other features:
One touch of zero adjustment, key lock

Operating temperature:
-10 to 50°C (No freezing)

Operating humidity:
35 to 85%RH (No dew condensation)

Storage temperature:
-20 to 60°C (No freezing)

Enclosure:
IP40 (Indoor use)

Case material:
PC/ABS (UL-94, V-0)

Weight:
Approx. 80g (Panel mounting),
Approx. 135g (Surface mounting)

Input signal:
4 to 20mA DC or 1 to 5V DC

Types of pressure and unit of measure:

Pressure	Pressure unit	Pressure sensor (NKS Model Number)	Media
Low differentialpressure	Pa, kPa	・KL14・KL19 etc.	Dry air Nitrogen gas
Low pressure	kPa, MPa	・KP15・KL71・KH25 etc.	Gases Fluids
Midium low pressure to high pressure	MPa	・KH15・KH43・KH55 etc.	Gases Fluids

＊Consult us for the need of By pressure range, compound is possible, too.

Maximum display avility for each renge:

Positive pressure range		Compound pressure range	
Pressure range	Maximum display value	Pressure range	Maximum display value
0 to 50Pa	50.0	±50Pa	50.0
0 to 100Pa	100.0	±100Pa	100.0
0 to 200Pa	200.0	±200Pa	200
0 to 0.5kPa	0.500	±0.5kPa	0.500
0 to 1kPa	1.000	±1kPa	1.000
0 to 2kPa	2.000	±2kPa	2.00
0 to 5kPa	5.00	±5kPa	5.00
0 to 10kPa	10.00	±10kPa	10.00
0 to 20kPa	20.00	±20kPa	20.0
0 to 50kPa	50.0	±50kPa	50.0
0 to 100kPa	100.0	±100kPa	100.0
0 to 200kPa	200.0	-100 to 200kPa	200.0
0 to 0.5MPa	0.500	-0.1 to 0.5MPa	0.500
0 to 1MPa	1.000	-0.1 to 1MPa	1.000
0 to 2MPa	2.000	-0.1 to 2MPa	2.000
0 to 5MPa	5.00		
0 to 10MPa	10.00		
0 to 20MPa	20.00		
0 to 35MPa	35.0		
0 to 50MPa	50.0		

＊ Ensure to specify model no. of pressure sensor with pressure range that used with GC68.
＊ Negative sign (-) is displayed when the vacuum pressure is measured. ( ) value represents max. display value for bidirectional pressure range.
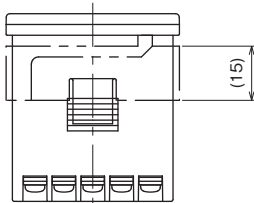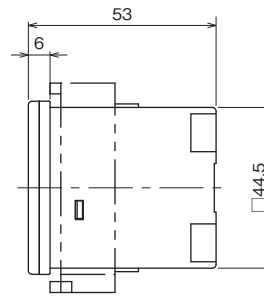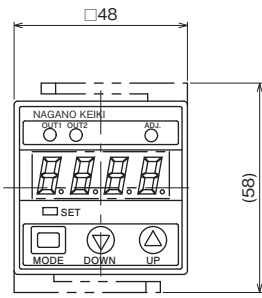＊ Contact us for nonstandard ranges

Wiring

Panel mounting

Pressure transmitter

4 to 20mA DC or 1 to 5V DC / Analog output (COM) / Ground

24V

| 10 | 9 | 8 | 7 | 6 |

OUT1   OUT2

| 1 | 2 | 3 | 4 | 5 |

OUT1   OUT2   (COM)

Power

Surface mounting

Pressure transmitter

Ground / Analog output (COM) / 4 to 20mA DC or 1 to 5V DC

24V

| 6 | 7 | 8 | 9 | 10 |

OUT2   OUT1

| 5 | 4 | 3 | 2 | 1 |

(COM)   OUT2   OUT1

Power

Dimensions

Unit: mm

Panel mounting

□48

(58)

NAGANO KEIKI
OUT1 OUT2   ADJ.

SET

MODE DOWN UP

53

6

□44.5

(15)

Back view

10 9 8 7 6

M3
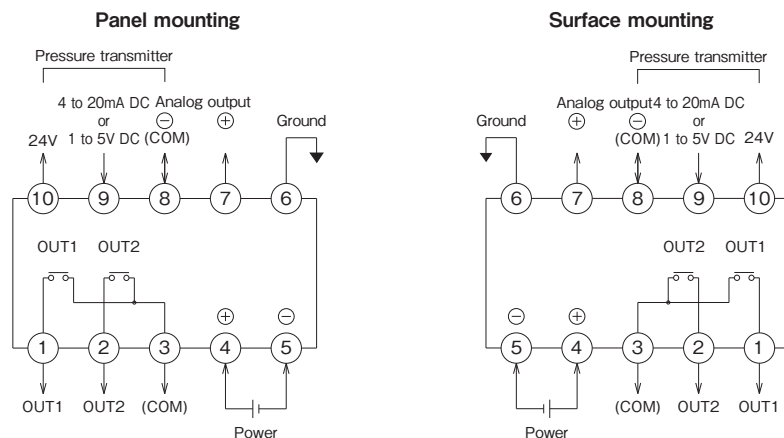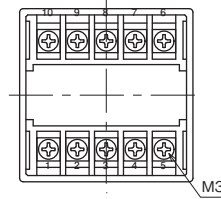
Diagram of panel mounting

Panel (Thickness 1 to 4mm)
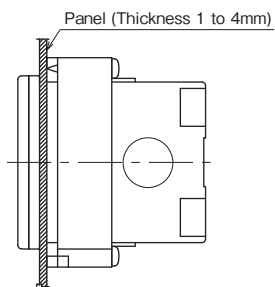
Panel cutout dimension

45 $^{+0.6}_{0}$

45 $^{+0.6}_{0}$

Surface mounting

49

36
(Mounting hole)

NAGANO KEIKI
OUT1 OUT2   ADJ.

SET

MODE DOWN UP

M3

75
84
93

2×4.5
(Mounting hole)

60

4

35.4 ±0.1
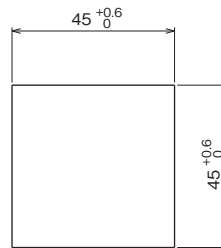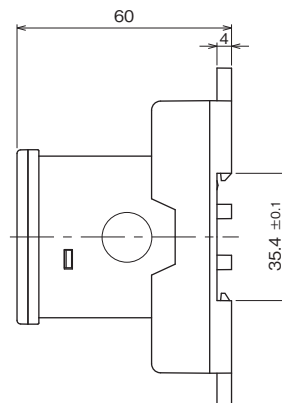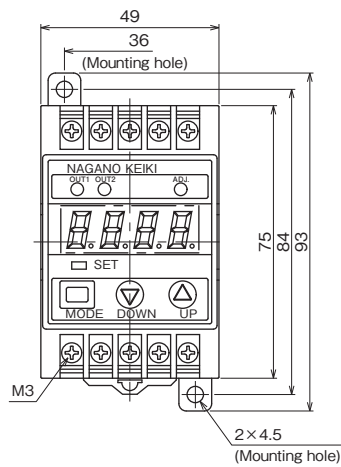
Diagram of rail mounting

DIN rail

GC68
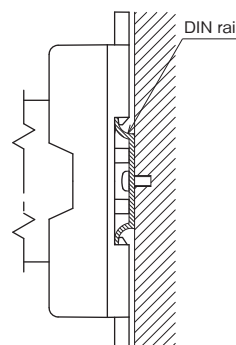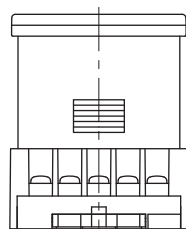
Digital Indicator

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

Model

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

Digital Indicator

Model number			Product specifications	Additional specifications (Optional)

① Mounting	2	Surface mounting
	3	Panel mounting

② Input signal	1	4 to 20mA DC
	8	1 to 5V DC

③ Display	1	Pressure display
	2	Square root extraction

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

④ Pressure range *1	1	0 to 50, 100, 200Pa
	2	0 to 0.5, 1, 2, 5, 10, 20kPa
	3	0 to 50, 100, 200kPa
	4	0 to 0.5, 1, 2, 5, 10, 20MPa
	5	0 to 35, 50MPa
	6	Compound ranges (Square root extraction is not displayed)

⑤ Indication accuracy	5	Pressure display accuracy: ±(0.5% F.S.±1digit) Square root extraction indication accuracy: ±(0.5% F.S.±1digit)

⑥ Power source	1	24V DC ±10%

⑦ Comparator output	2	Relay contact × 2 outputs (110V AC, 0.2A Load resistance)

⑧ Analog output	0	Not required
	1	4 to 20mA DC
	8	1 to 5V DC

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 Attending inspection

*1: Ensure to specify model no. of pressure sensor with pressure range that used with GC68.
Negative sign (-) is displayed when when the vacuum pressure is measured.
Contact us for other ranges.

＊Specify code "X" to refer N/A