

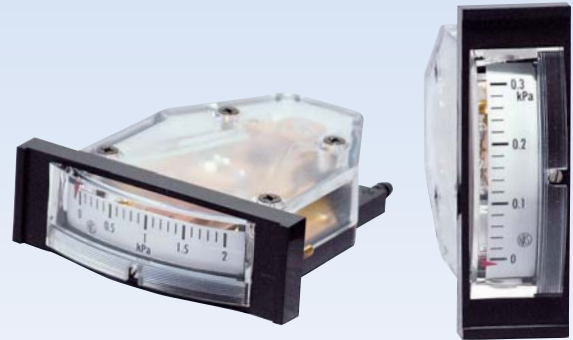
DG87

Differential Pressure Gauge

Overview

This high accuracy differential pressure gauge is designed for detecting air filter pressure drop used in an air-conditioning system to monitor extremely low pressure measurement.

Coupled with its easy pressure reading, application includes not only for differential pressure measurement but also for flow and low pressure measurement, etc.



Features

- Incorporates diaphragm made of silicone rubber with small hysteresis characteristic.
- Improved vibration proof and durability through the use of custom linkage system against displacement magnification mechanism.
- Incorporates overpressure protector not to damage moving parts in case of overpressurization.
- Zero adjustable from the front panel is possible
- Small and light weight

RoHS

Specifications

Media:

Air or non-corrosive gas

Design and Construction:

Case Sealed Type

Mounting:

Protruded Display (Horizontal scale, vertical scale)
Embedded Display (Horizontal scale, vertical scale)

Position Orientations:

Upward-facing horizontal, 45°Upward, Vertical,
45°Downward, Downward-facing horizontal
*Zero centered ranges for vertical position only.

Pressure Connection:

φ5.5 Barb fitting (For tubing with φ4 inner diameter vinyl tube)

Wetted parts:

Diaphragm	Silicon rubber
Case	Polycarbonate resin
Covering glass	Methacrylate resin
Others	Bronze, brass, neoprene and NBR

Differential pressure range:

0 to 50Pa→0 to 40kPa
50 to 0 to 50Pa, 100 to 0 to 100Pa
For details, refer to the range selection table.

Proof pressure for sensing element* (Proof pressure for the single port):

30kPa (For 1kPa range and below)
100kPa (For 2kPa range and above)
*Same proof pressure applied for negative pressure measurement (Vacuumed at L pressure side)

Proof pressure for enclosure (applying pressure at two ports):

100kPa

Operating temperature range:

-20 to 60°C (Non-freezing)

Accuracy:

±2.5%F.S.
JIS B7505-1 specifies that lower and upper 10% of the scale and 5% around "centered zero" has 1.5 times greater accuracy than specified accuracy.

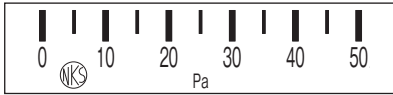
Weight:

Approx. 120g

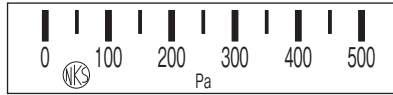
Scale Interval 1

Positive Pressure Range (Horizontal scale)

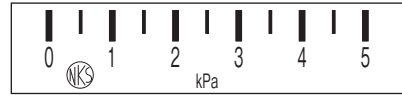
Actual size



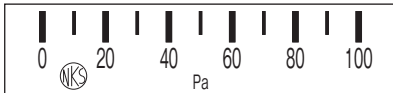
Differential pressure range	Minor graduation
0 to 50Pa	5Pa
0 to 0.05kPa	0.005kPa



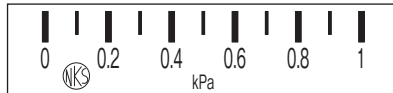
Differential pressure range	Minor graduation
0 to 500Pa	50Pa
0 to 0.5kPa	0.05kPa



Differential pressure range	Minor graduation
0 to 5kPa	0.5kPa



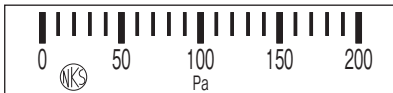
Differential pressure range	Minor graduation
0 to 100Pa	10Pa
0 to 0.1kPa	0.01kPa



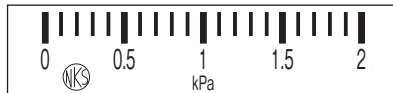
Differential pressure range	Minor graduation
0 to 1kPa	0.1kPa



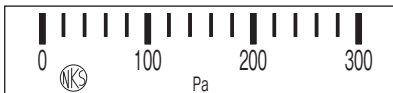
Differential pressure range	Minor graduation
0 to 10kPa	1kPa



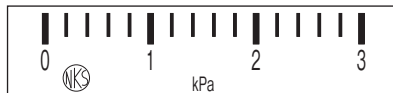
Differential pressure range	Minor graduation
0 to 200Pa	10Pa
0 to 0.2kPa	0.01kPa



Differential pressure range	Minor graduation
0 to 2kPa	0.1kPa

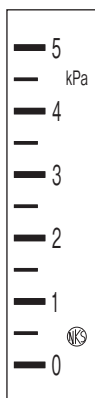
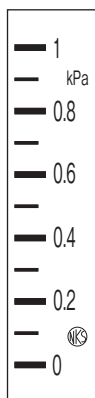
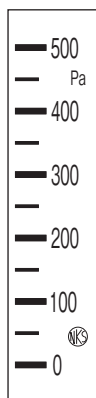
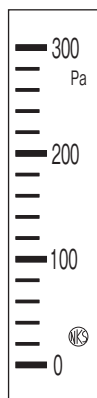
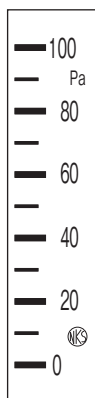
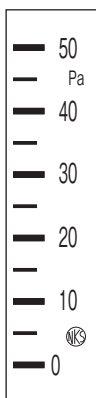


Differential pressure range	Minor graduation
0 to 300Pa	20Pa
0 to 0.3kPa	0.02kPa



Differential pressure range	Minor graduation
0 to 3kPa	0.2kPa

Positive Pressure Range (Vertical scale)



Differential pressure range
0 to 50Pa
0 to 0.05kPa

Differential pressure range
0 to 100Pa
0 to 0.1kPa

Differential pressure range
0 to 200Pa
0 to 0.2kPa

Differential pressure range
0 to 300Pa
0 to 0.3kPa

Differential pressure range
0 to 500Pa
0 to 0.5kPa

Differential pressure range
0 to 1kPa

Differential pressure range
0 to 2kPa

Differential pressure range
0 to 3kPa

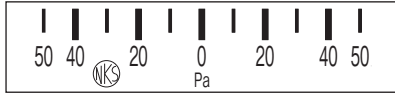
Differential pressure range
0 to 5kPa

Differential pressure range
0 to 10kPa

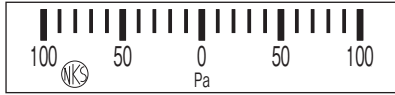
Scale Interval 2

Zero Centered Scale (Horizontal)

Actual size

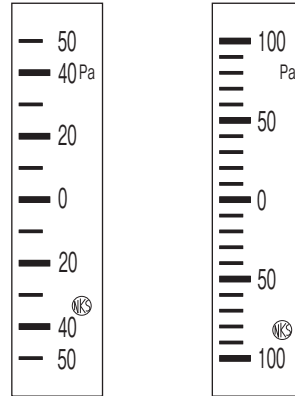


Differential pressure range	Minor graduation
50 to 0 to 50Pa	10Pa



Differential pressure range	Minor graduation
100 to 0 to 100Pa	10Pa

Zero Centered Scale (Vertical)



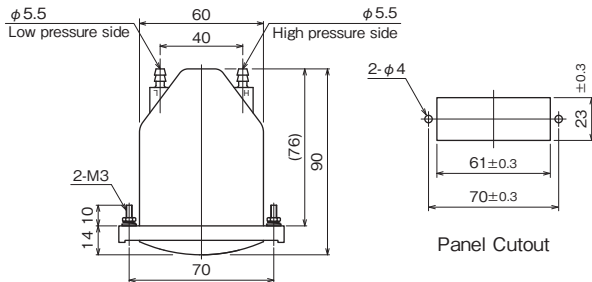
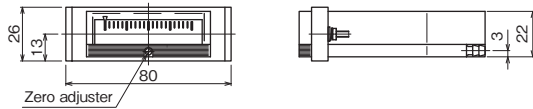
Differential pressure range
50 to 0 to 50Pa

Differential pressure range
100 to 0 to 100Pa

Dimensions

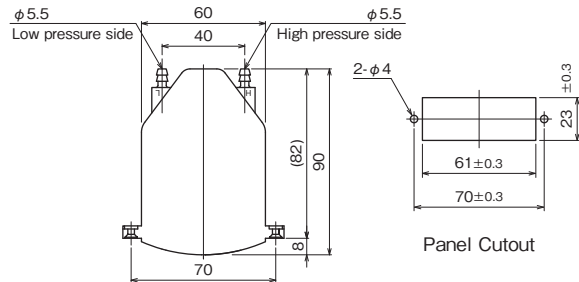
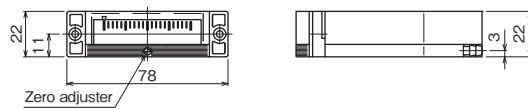
Unit: mm

Protruded Display (Horizontal scale)



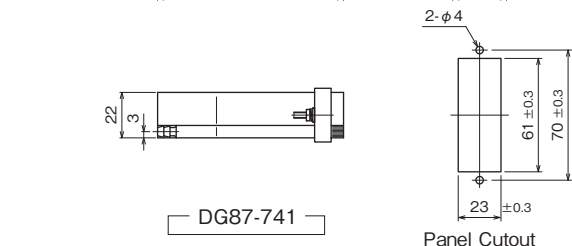
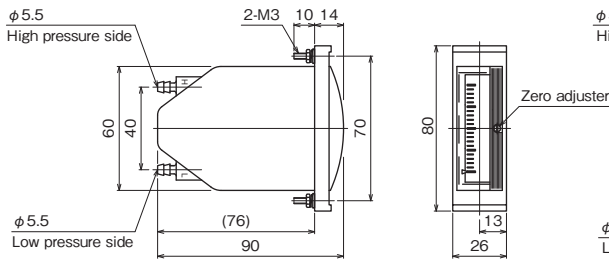
DG87-541

Embedded Display (Horizontal scale)



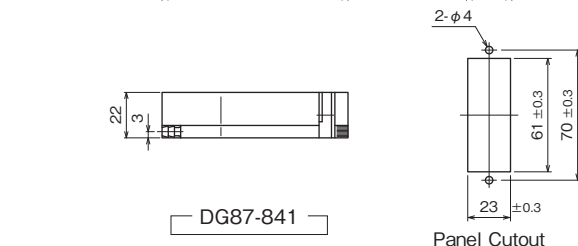
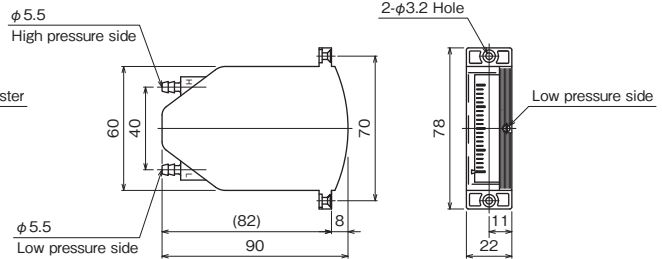
DG87-641

Protruded Display (Vertical scale)



DG87-741

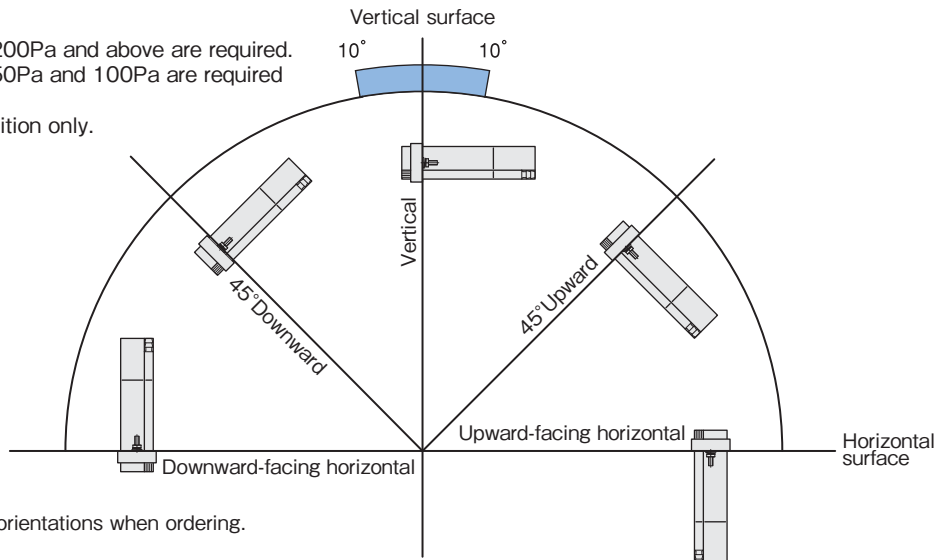
Embedded Display (Vertical scale)



DG87-841

Position Orientations

No need to specify tilt angle where 200Pa and above are required.
 No need to specify tilt angle where 50Pa and 100Pa are required for use in () zone.
 Zero centered ranges for vertical position only.



Consult factory for other position orientations when ordering.

Model number configuration

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

Model																	
D G 8 7			4 1		X X X X X X X X X X												
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	5	Protruded Display (Horizontal scale)
	6	Embedded Display (Horizontal scale)
	7	Protruded Display (Vertical scale)
	8	Embedded Display (Vertical scale)
② Pressure Connection	4	φ 5.5 Barb fitting (For tubing with φ 4 inner diameter vinyl tube)
③ Wetted parts	1	Diaphragm: Silicone rubber
④ Differential pressure range	1	0 to 200, 300, 500Pa, 1kPa
	2	0 to 2, 3, 5kPa
	3	0 to 10, 20, 40kPa
	4	0 to 50, 100Pa
	5	50 to 0 to 50, 100 to 0 to 100Pa
⑤ Position orientations	A	Upward-facing horizontal
	B	45° Upward
	C	Vertical
	D	45° Downward
	E	Downward-facing horizontal
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 Attending inspection

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

Pressure Range Selection Table

Differential pressure range	Accuracy	Proof pressure for sensing element* (Single port)	
0 to 50Pa	±2.5%F.S.	30kPa	
0 to 100Pa			
0 to 200Pa			
0 to 300Pa			
0 to 500Pa			
0 to 1kPa			
0 to 2kPa		100kPa	
0 to 3kPa			
0 to 5kPa			
0 to 10kPa			
0 to 20kPa			
0 to 40kPa			
50 to 0 to 50Pa		±2.5%F.S.	30kPa
100 to 0 to 100Pa			

JIS B7505-1 specifies that lower and upper 10% of the scale and 5% around "centered zero" has 1.5 times greater accuracy than specified accuracy.
 * Same proof pressure applied for negative pressure measurement (Vacuumed at L pressure side)

* Specify code "X" to refer N/A