NEW

SU71
Non-Liquid Filled Sanitary Digital Pressure Gauge with Transmitter

Gases and Fluids
(SUS316L pressure receiving part)

Overview

This pressure gauge is designed with 「Non-liquid filled」 without the need for an intermediary liquid within the sensor for further contribution for Food, Pharmaceutical and Cosmetic manufacturing process with 「Safe and Reliable」 pressure measurement.

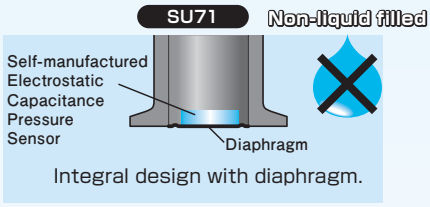
Features

- Safe and reliable construction with Non-liquid filled design
- Safe all stainless enclosure
- Ranges covering low range from 20kPa
- Accuracy: ±0.5%F.S.
- Available at 150℃ without radiation fin
- Evolutionally flat pressure receiving part with SUS316L
- Standard comes with Electrolytic polishing + Passivation treatment
- No need to offset Zero point when installed with clamp
- Two mounting method can be specified (Standard・Reversed)
- Enclosure rating: Equivalent to IP67 (Vent tube: Equivalent to IP67)

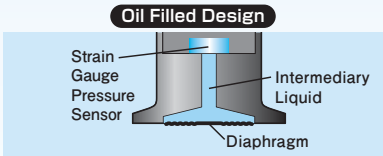
「No liquid enclosed!」「No radiation fin!」「No zero shift by clamping effect!」 Contributes for higher level of pressure control with self-developed sensing technology placing importance in manufacturing site.

Safe non-Liquid filled sensor

Designed for safety operation without the need for an intermediary liquid within the sensor for worry free spill of enclosed liquid when compared to liquid filled sensor in the unlikely event that the diaphragm develops a leak, making it ideal for food, pharmaceutical and cosmetic processing.



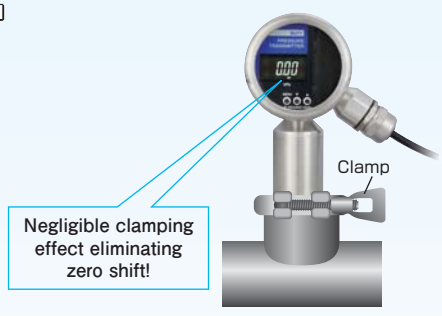
Integral design with diaphragm.



Transmission of Pressure in liquid is required.

No zero adjustment is necessary

It utilizes Electrostatic Capacitance Type pressure sensor. This sensor design eliminates chance of clamping effect and zero shift after installation. Easy installation and maintenance is possible in the field of industry.



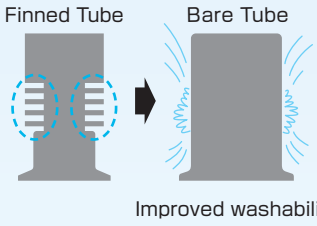
Flat surface pressure sensing element made of SUS316L

Evolutionally flat and smooth sensing part ensures great performance of wash- down. Diaphragm as process interface conforms to 1s ferule fitting eliminates chance of contamination. Standard with electropolished and passivation surface finish.

Surface Roughness: Rz 0.7
(Diaphragm and Flange)

Bare tube without radiating fin but capable of up to 150°C process measurement

"Bare heat radiating tube without fin" design is suitable for wash-down significantly reduces chance of contamination with like foreign matter or dirt. High allowable temp process media up to 150 can be measured accommodating CIP.

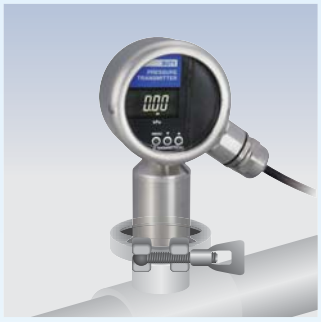


Electrical connection (Terminal)

Terminal block for the electrical connections shows up when front cover opens. Terminal block itself can be detached from body to make wiring work easy.

Available in two types of mounting

Two mounting method can be specified (Standard・Reversed)

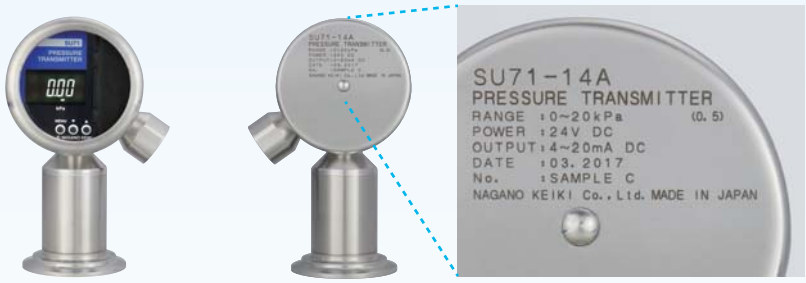


Standard
(Lower pressure connection)

Reversed
(Upper pressure connection)

Safe and reliable all stainless steel case

Case material: Stainless, Gasket part: Fluororubber, Indicator: Glass (or Acrylic) provide sanitarily excellence. All-stainless enclosure without surface painting provides worry free coat peeling.



Model number and pressure range are directly laser-marked on the case. There is no need to worry about peeling label off.

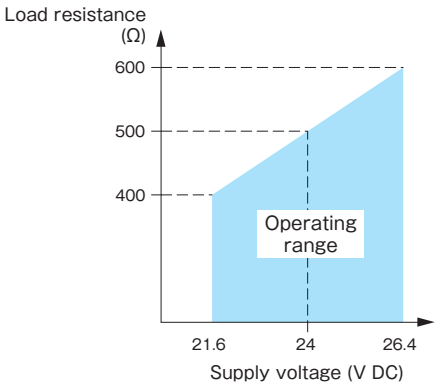
Specifications 1

Item	Description						
Media	Fluids and Gases compatible with wetted parts						
Pressure range (Display digit)	———	-50 to 50kPa (50.00)	-100 to 100kPa (100.0)	———	-100 to 300kPa (300.0)	-100 to 500kPa (500.0)	———
	0 to 20kPa*1 (20.00) (2S ferrule only)	0 to 50kPa (50.00)	0 to 100kPa (100.00)	0 to 200kPa (200.0)	0 to 300kPa (300.0)	0 to 500kPa (500.0)	0 to 1000kPa (1000.0)
Allowable maximum pressure*2	-20 to 100kPa	-50 to 250kPa	-100 to 500kPa	-100 to 1000kPa	-100 to 1500kPa		
Indication accuracy*3	±(0.5%F.S.+1digit) (at 23℃)						
Supply voltage	24V DC±10% (Refer to「Specifications 2」for the operating range of voltage and load resistance.						
Analog output	4 to 20mA DC (2 wire system)						
Analog output accuracy*3	±0.5%F.S. (at 23℃)						
Output resolution	0.1%F.S.						
Response time	Less than 30ms (without filter setting)						
Numeric display	4½ digits LCD (Character height 10mm, LED Backlight) Display update rate 500ms						
Unit display	LCD: Bar indication (LED backlight) Pressure unit: kPa Scaling unit: Right edge						
Setting	Internal switch (MENU, ▲, ▼) Pressure indication mode: Pressure indication/Analog scaling Scaling indication mode: Scaling indication / Analog scaling output Hold mode: Maximum or minimum value indication Digital filter function: Moving average times (Selectable None, 2, 4, 8, 16) Loo check function: Arbitrary analog output (4 to 20mA DC) Zero adjustment function: Pressure zero adjustment						
Accuracy under operating temperature range (-5 to 70℃)	Indication: ±(2.0%F.S.+1digit) Analog output: ±2.0%F.S.		Indication: ±(1.5%F.S.+1digit) Analog output: ±1.5%F.S.				
Wetted parts allowable temperature*4	-5 to 150℃ (Non-Freezing)						
Ambient temperature*4	-5 to 70℃ (Non-Freezing)						
Storage temperature range	-10 to 75℃ (Non-Freezing)						
Ambient operating and storage humidity	Less than 85%RH (Non-Freezing)						
Insulation resistance	More than 100MΩ (Between case and terminal 50V DC)						
Withstand voltage	250V AC, 1 minute						
EMC immunity	Applicable Standards EN61326-1 : 2013, EN61326-2-3 : 2013						
RoHS Compliance	EU RoHS Directive applicable						
Enclosure rating*6	Equivalent to IP67: JS C 0920 (IP65 for vent tube opening to atmosphere)						
Reference atmospheric pressure	Open to atmosphere by vent tube (Backside of case)						
Wetted parts (Diaphragm+Flange)	SUS316L Electrolytic polishing + Polishing + Passivation treatment (Less than Rz 0.7μm)						
Connection	1S, 1½S, 2S (Ferrule:ISO/IDF Standard)						
Terminal electrical connection	AWG 24 to 12 (Cross-sectional area of conductor: 0.21 to 3.31mm²)						
Outlet for electric wire*5	JIS F 8801 B type G1/2 (Option: Cable gland Manufactured by Japan AVCFSA21-10, FSA21-13)						
Case material	Case: SUS304 Packings: Fluorine rubber Display: Glass, Tempered glass (Option), Acrylic glass (Option)						
Weight	1S, 1½S: Approx. 540g, 2S: Approx. 650g						

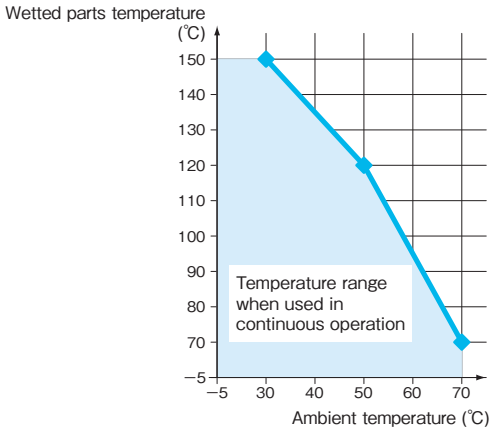
*1: 1S, 1½S ferrule are available upon request.
*2: Ensure the use within specification of connecting part (Clamp, gasket etc.)
*3: It includes the effect of linearity, hysteresis and repeatability.
*4: Refer to「Specifications 2」for the operating range of voltage and load resistance.
*5: Ensure the use of applicable cable gland in accordance with electrical wire outlet specification.
*6: Enclosure rating is assured only when IP67 applicable cable accommodating SU71 cable gland is used with appropriate connection.
Note IP65 for pressure indicating part (Vent tube part). Avoid submersion.

Specifications 2

Supply voltage and load resistance

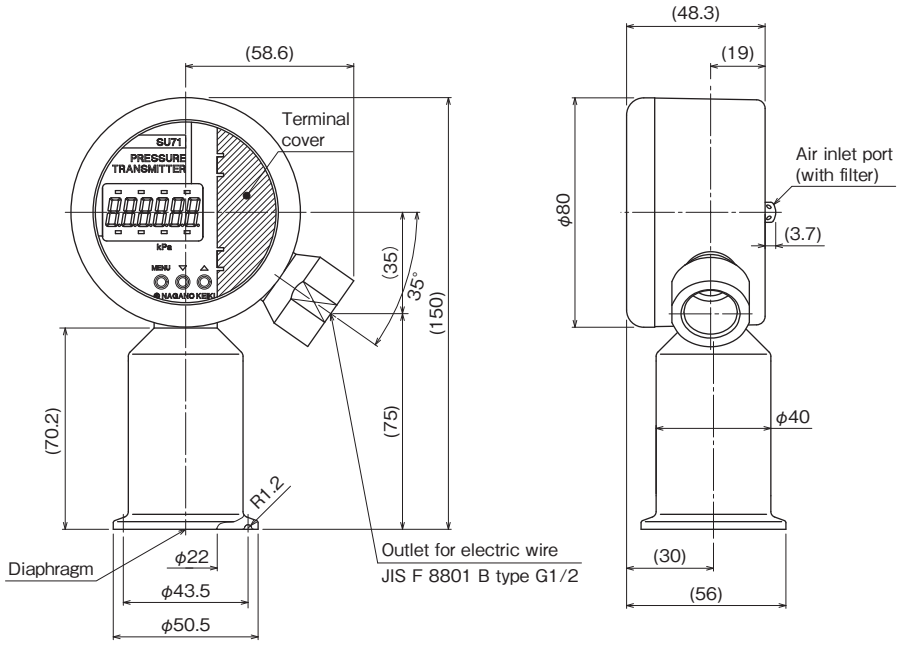


Ambient temperature range and wetted parts temperature

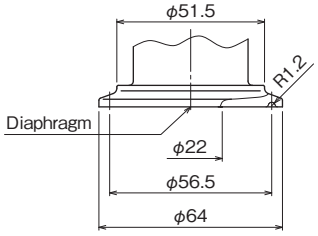


Dimensions

Unit: mm



1S, 1 1/2 S Ferrule (IDF/ISO standard)



2S Ferrule (IDF/ISO standard)

Model number configuration

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

Model

S	U	7	1	—			A	—		5	1	1		4		×	×	×	×	
					①	②	③		④	⑤	⑥	⑦	⑧	⑨	⑩	⑪	⑫	⑬	⑭	⑮

Non-Liquid Filled Sanitary Digital Pressure Gauge with Transmitter

Model number		Product specifications	Additional specifications (Optional)
① Connection type	1	Ferrule type Standard type (Lower pressure connection)	
	2	Ferrule type Handstand type (Upper pressure connection)	
② Size (Connection)	2	1S (Not available for 0 to 20kPa)*1	
	3	1½S (Not available for 0 to 20kPa)*1	
	4	2S	
③ Wetted parts	A	SUS316L Electrolytic polishing + Polishing + Passivation treatment	

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

④ Pressure range		④Pressure range (Display digit)	Allowable maximum pressure*2
	L	-50 to 50kPa (50.00)	-50 to 250kPa
	1	-100 to 100kPa (100.0)	-100 to 500kPa
	3	-100 to 300kPa (300.0)	-100 to 1500kPa
	5	-100 to 500kPa (500.0)	
	V	0 to 20kP*1 (20.00)	-20 to 100kPa
	W	0 to 50kPa (50.00)	-50 to 250kPa
	X	0 to 100kPa (100.00)	-100 to 500kPa
	B	0 to 200kPa (200.0)	-100 to 1000kPa
	C	0 to 300kPa (300.0)	-100 to 1500kPa
	E	0 to 500kPa (500.0)	
	G	0 to 1000kPa (1000.0)	

⑤ Indication accuracy	5	±(0.5%F.S.+1digit) (at 23℃)
⑥ Power source	1	24V DC±10%
⑦ Output	1	4 to 20mA DC (2 wire system)

⑧ Outlet for electric wire			
	C	JIS F 8801 G1/2 (Female connection)*3	
	1	Cable gland (Packed in the box) Manufactured by Japan AVC	Type: FSA21-10 Applicable cable diameter: 6 to 10mm
	2		Type: FSA21-13 Applicable cable diameter: 9 to 14mm

⑨ Treatment	4	Use no oil & water*4
⑩ Window material	1	Standard glass
	2	Tempered glass
	3	Acrylic resin
⑮ Documents	0	Not required
	1	Required (Documents available upon request) Datasheet (Drawing / Specifications) Instruction manual Calibration test report (One-part one sheet) Inspection / Traceability certificate Certificate of Electrolytic polishing Certificate of Passivation treatment

「Available specifications」
・Wetted parts: Diaphragm・Flange
SUS316L Electrolytic polishing + Polishing + Passivation treatment

*1 Pressure range: 2S ferrule only for 0 to 20kPa
(1S, 1½S ferrule are available upon request). Please consult us.

*2 Please use it within the range of proof pressure of connected parts (clamp, nut, and gasket, etc.).

*3 Ensure the use of applicable cable gland in accordance with electrical wire outlet specification.

*4 Standard comes with use no oil and water without specifying by label.

*Specify code "X" to refer N/A