

General Specifications

Model Y/11GM
Pneumatic
Gauge Pressure Transmitter

P10 Series

GS 02C01B04-00E

Model Y/11 GM Pneumatic Gauge Pressure Transmitter measures gauge pressure from -0.1 to 20 MPa in spans of 0.07 to 13.7 MPa. The instrument transmits a proportional 20 to 100 kPa signal to remote pneumatic receivers.

■ FEATURES

- Time-Proven Pneumatic Differential Pressure Transmitter Design
- Trouble-Free Construction.
- Excellent Performance.
- Easy to Calibrate.
- Wide Range.
- Overrange Protection.

■ STANDARD SPECIFICATIONS

Span Limits:

Refer to Table 1.
Span is continuously adjustable within range limits.

Range Limits *:

Refer to Table 1.
*: when lower range-value is other than zero, optional kit for elevated-zero or suppressed-zero ranges is installed.

Overpressure Limits:

Refer to Table 1.

Output Signal:

20 to 100 kPa.

Accuracy (includes linearity, hysteresis and repeatability):

±0.5 % of span.

Repeatability:

0.1 % of span.

Dead Band:

0.05 % of span.

Air Supply Pressure:

140 kPa, 1.4 kgf/cm² or bar, or 20 psi.

Air Consumption:

0.5 m³/h at 0 °C, 101.3 kPa {1.033 kgf/cm²} absolute (0.3 scfm).

Ambient Operating Temperature Range:

-40 to 120 °C (-40 to 250 °F).

Process Temperature Limits:

-40 and 120 °C (-40 and 250 °F) at capsule.

Mounting:

Bracket for nominal 50 mm (2 inches) horizontal or vertical pipe.

Air Connection:

Tapped for JIS R1/4 or 1/4 NPT, whichever specified.



Process Connections:

JIS Rc1/2, Rc1/4, 1/2 NPT, or 1/4 NPT female, whichever specified.

Wetted Parts Material:

Process Connection Block: Forged JIS SUS 316 stainless steel.

Bellows Capsule: SUS 316L stainless steel.

Capsule Gaskets: Silicone elastomer.

Body Material:

Forged SUS 316 stainless steel. Not wetted by process.

Connection Hardware:

JIS SCM435 chrome-molybdenum steel cap screws and nuts through body and process connection block.

Cover:

Cast aluminum, finished with gray polyurethane paint.
Gasketed for National Electrical Manufacturers Association (NEMA) (USA) Type 3 weatherproof service.

Approximate Weight:

5.3 kg (12 lb).

Table 1. Span, Range and Overpressure Limits.


Capsule		–	M-calibration	P-calibration	bar-calibration
A	Span Limits	0.07 to 0.55 MPa	0.7 to 5.6 kgf/cm ²	10 to 80 psi	0.7 to 5.5 bar
	Range Limits	-0.1 to 0.6 MPa	-1 to 6 kgf/cm ²	-50 to 90 psi	-1 to 6 bar
	O. P. Limits	0.7 MPa	7 kgf/cm ²	100 psi	7 bar
B	Span Limits	0.14 to 1.4 MPa	1.4 to 14 kgf/cm ²	20 to 200 psi	1.4 to 14 bar
	Range Limits	-0.1 to 2.4 MPa	-1 to 24 kgf/cm ²	-15 to 350 psi	-1 to 24 bar
	O. P. Limits	3.5 MPa	35 kgf/cm ²	500 psi	35 bar
C	Span Limits	0.28 to 2.7 MPa	2.8 to 28 kgf/cm ²	40 to 400 psi	2.8 to 27 bar
	Range Limits	-0.1 to 5.1 MPa	-1 to 52 kgf/cm ²	-15 to 750 psi	-1 to 51 bar
	O. P. Limits	7 MPa	70 kgf/cm ²	1000 psi	70 bar
D	Span Limits	0.7 to 6.8 MPa	7 to 70 kgf/cm ²	100 to 1000 psi	7 to 68 bar
	Range Limits	-0.1 to 10 MPa	-1 to 105 kgf/cm ²	-15 to 1500 psi	-1 to 100 bar
	O. P. Limits	14 MPa	140 kgf/cm ²	2000 psi	140 bar
E	Span Limits	1.4 to 13.7 MPa	14 to 140 kgf/cm ²	200 to 2000 psi	14 to 137 bar
	Range Limits	-0.1 to 20 MPa	-1 to 210 kgf/cm ²	-15 to 3000 psi	-1 to 200 bar
	O. P. Limits	28 MPa	280 kgf/cm ²	4000 psi	280 bar
Output Signal		20 to 100 kPa	0.2 to 1.0 kgf/cm ²	3 to 15 psi	0.2 to 1.0 bar
Option Code		Standard Specifications	CAL-M	CAL-E	CAL-B

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MODEL AND SUFFIX CODES

Model	Suffix Codes	Description
Y/11GM	Pneumatic gauge pressure transmitter.
Bellows Capsule	-A	A capsule. Span:0.07 to 0.55 MPa
	-B	B capsule. Span:0.14 to 1.4 MPa
	-C	C capsule. Span:0.28 to 2.7 MPa
	-D	D capsule. Span:0.7 to 6.8 MPa
	-E	E capsule. Span:1.4 to 13.7 MPa
Body Material *1	S	Forged JIS SUS 316 stainless steel.
Process Connection	1	JIS Rc1/4 female.
	2	JIS Rc1/2 female.
	3 *2	ANSI 1/4 NPT female.
	4 *2	ANSI 1/2 NPT female.
	8	Diaphragm sealed transmitter.(Refer to GS 06P01D01-00E)
Options	/ <input type="checkbox"/> / <input type="checkbox"/>	

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- *1:  Users must consider the characteristics of selected wetted parts material and the influence of process fluids. The use of inappropriate materials can result in the leakage of corrosive process fluids and cause injury to personnel and/or damage to plant facilities. It is also possible that the diaphragm itself can be damaged and that material from the broken diaphragm and the fill fluid can contaminate the user's process fluids. Be very careful with highly corrosive process fluids such as hydrochloric acid, sulfuric acid, hydrogen sulfide, sodium hypochlorite, and high-temperature steam (150 °C [302 °F] or above). Contact Yokogawa for detailed information of the wetted parts material.
- *2: Air connections are also tapped for ANSI NPT threads in addition to the process connection.

OPTIONS

Air Set:

Fixed combination pressure regulator and filter with 35 mm diameter pressure gauge mounted and piped to transmitter. Also available without gauge.
 Supply pressure: 0.2 to 1 MPa, 2 to 10 kgf/cm² or bar, or 30 to 150 psi.
 Output pressure: 140 kPa, 1.4 kgf/cm² or bar, or 20 psi.
 Maximum operating temperature: 80 °C (180 °F).

Air Connection	Gauge Scale	Option Code
JIS Rc 1/4 female	0 to 200 kPa	GAS-FP
	0 to 2 kgf/cm ²	GAS-FM
	0 to 30 psi	GAS-FE
	0 to 2 bar	GAS-FB
	Without gauge	GAS-F
1/4 NPT female	0 to 200 kPa	NAS-FP
	0 to 2 kgf/cm ²	NAS-FM
	0 to 30 psi	NAS-FE
	0 to 2 bar	NAS-FB
	Without gauge	NAS-F

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Kit for Elevated-Zero or Suppressed-Zero Ranges:

Permits adjustments to 1000 % of minimum span and to range limits of capsule. Upper range-value must not exceed upper range-limit of capsule.
 Option code: R-kit for suppressed-zero ranges and L-kit for elevated-zero ranges.

Low Spans:

Refer to Table 2. Accuracy ±0.5 % of span.
 (Add 0.5 % with Suffix Code R or L)
 Option code: LD.

Cover Color Other Than Standard Finish:

Specify in color block by color code. Refer to GS 22D1F1-E.
 Option code: SCF-.

Stainless Steel Hardware:

JIS SUS 630 cap screws and nuts through body and process connection block.
Option code: SSB.

Oxygen Service Preparation:

Degrease cleansing treatment.
Option code: OSW.

ANSI connection:

For diaphragm sealed transmitter with ANSI process flange, air connections with tapped for ANSI NPT threads.
Option code: NPT

Calibration Units:

M-calibration (Unit kgf/cm²) Option code: CAL-M
P-calibration (Unit psi) Option code: CAL-E
bar-calibration (Unit bar) Option code: CAL-B

Table 2. Low Spans

Capsule	Span		
	kPa	kgf/cm ²	psi
A	35 to 270	0.35 to 2.8	5 to 40
B	70 to 700	0.7 to 7	10 to 100
C	140 to 1350	1.4 to 14	20 to 200
D	350 to 3400	3.5 to 35	50 to 500
E	700 to 6800	7 to 70	100 to 1000

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ORDERING INSTRUCTIONS

Specify the following when ordering:

1. Model and suffix codes.
2. Option codes.
3. Process and air connections (Rc or NPT).
4. Output signal unit (kPa, kgf/cm², bar or psi).
5. Calibrated range.
6. Tag number and application.

DIMENSIONS

