

# General Specifications

Model Y/11AM  
Pneumatic  
Absolute Pressure Transmitter

P10 Series

GS 02C01B02-00E

*Model Y/11AM Pneumatic Absolute Pressure Transmitter measures absolute pressure in spans from 5.3 to 200 kPa. 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.
- Stable Absolute Reference.

## ■ STANDARD SPECIFICATIONS

### Span Limits:

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

### Range Limits \*:

Refer to Table 1.  
\*: Kit for suppressed-zero ranges is installed as standard. Upper range-value must not exceed upper range-limit of capsule.

### Overpressure Limits:

Refer to Table 1.

### Output Signal:

20 to 100 kPa.

### Accuracy:

Refer to Table 2.

### Repeatability:

0.1 % of span.

### Dead Band:

0.05 % of span.

### Air Supply Pressure:

140 kPa, 1.4 kgf/cm<sup>2</sup> or bar, or 20 psi.

### Air Consumption:

0.5 m<sup>3</sup>/h at 0 °C, 101.3 kPa {1.033 kgf/cm<sup>2</sup>} 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.

Table 1. Span, Range and Overpressure Limits.

Capsule		–	M-calibration	P-calibration	bar-calibration
M	Span Limits	5.3 to 53 kPa	40 to 400 mmHg	1.6 to 15.7 inHg	53 to 530 mbar
	Range Limits	0 to 53 kPa abs.	0 to 400 mmHg abs.	0 to 15.7 inHg abs.	0 to 530 mbar abs.
	O. P. Limits	0.7 MPa	7 kgf/cm <sup>2</sup>	100 psi	7 bar
H	Span Limits	50 to 200 kPa	375 to 1520 mmHg	14.8 to 59.8 inHg	500 to 2000 mbar
	Range Limits	0 to 200 kPa abs.	0 to 1520 mmHg abs.	0 to 59.8 inHg abs.	0 to 2000 mbar abs.
	O. P. Limits	1 MPa	10 kgf/cm <sup>2</sup>	142 psi	10 bar
Output Signal		20 to 100 kPa	0.2 to 1.0 kgf/cm <sup>2</sup>	3 to 15 psi	0.2 to 1.0 bar
Option Code		Standard Specifications	CAL-M	CAL-E	CAL-B

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**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 Connection:**

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

**Wetted Parts Material:**

Body: Forged JIS SUS 316 stainless steel.  
 Process Connector: SCS 14 A (equivalent to SUS 316 Stainless Steel casting)  
 Diaphragm Capsule: SUS 316L stainless steel.  
 Force Bar: SUS 316 stainless steel.  
 Force Bar Seal: Cobalt-nickel alloy.  
 Process Connector Gasket: Teflon (PTFE) (see Note 1).  
 Capsule Gasket: SUS 316L stainless steel coated with Teflon.  
 Force Bar Seal Gasket: Silicone elastomer.

**Connection Hardware:**

JIS SCM435 chrome-molybdenum steel cap screws and nuts for body; JIS SCM435 cap screws for process connector.

**Cover:**

Cast aluminum, finished with gray polyurethane paint.  
 Gasketed for National Electrical Manufacturers Association (NEMA) (USA) Type3 weatherproof service.

**Approximate Weight:**

9.3 kg (21 lb).

**Table 2. Accuracy**  
(includes linearity, hysteresis and repeatability).


Capsule	Spans		Accuracy (% of span)
	kPa	mmHg	
M	5.3 to 13	40 to 100	±0.5
	13 to 33	101 to 248	±1.0
	33 to 53	249 to 400	±2.0
H	50 to 113	375 to 850	±0.5
	113 to 200	851 to 1520	±1.0

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**MODEL AND SUFFIX CODES**

Model	Suffix Codes	Description
Y/11AM	.....	Pneumatic absolute pressure transmitter.
Dia- phragm Capsule	-M.....	Medium range capsule. Span: 5.3 to 53 kPa
	-H.....	High range capsule. Span: 50 to 200 kPa
Body Material *1	S.....	Forged SUS 316 stainless steel.
Process Connection	1.....	JIS Rc 1/4 female.
	2.....	JIS Rc 1/2 female.
	3 *2.....	ANSI 1/4 NPT female.
	4 *2.....	ANSI 1/2 NPT female.
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, vent and drain plug 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/cm<sup>2</sup> or bar, or 30 to 150 psi.

Output pressure: 140 kPa, 1.4 kgf/cm<sup>2</sup> 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 <sup>2</sup>	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 <sup>2</sup>	NAS-FM
	0 to 30 psi	NAS-FE
	0 to 2 bar	NAS-FB
	Without gauge	NAS-F

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**Low Spans:**

Refer to Table 3.

Option code: LD.

**Cover Color Other Than Standard Finish:**

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

Option code: SCF-.

**High Process Temperature:**

Glass reinforced Teflon gaskets are used in the process connector and force bar seal.

Maximum process temperature to 190 °C (375 °F).

Option code: DG5.

**Steam Tracing:**

Internal steam trace: Two hollow studs are substituted for the body bolts. Glass reinforced Teflon gaskets are used in the process connector and force bar seal.

Steam connections JIS R1/8 or 1/8 NPT male.

Maximum temperature limit at body 190 °C (375 °F).

Option code: BSTR.

External steam trace: Jacketed on both sides of body.

Steam connections JIS Rc1/4 or 1/4 NPT female.

Maximum steam pressure 0.3 MPa, 3 kg/cm<sup>2</sup> or bar, or 40 psi.

Option code: ESTR.

**Stainless Steel Hardware:**

JIS SUS 630 cap screws and nuts for the body;

JIS SUS 630 cap screws for process connector.

Option code: SSB.

**Oxygen Service Preparation:**

Degrease cleansing treatment.

Option code: OSW.

**Table 3. Low Spans**

Capsule	Span (kPa)	Accuracy (%)	
		Suffix Code LD	Suppressed -Zero Range
M	2.7 to 6.5	±0.5	±1.5
	6.5 to 16.5	±1.0	
	16.5 to 26	±2.0	±3.0
H	25 to 56	±0.5	±1.5
	56 to 100	±1.0	

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**Calibration Units:**

M-calibration (Unit: kgf/cm<sup>2</sup>)

Option code: CAL-M

P-calibration (Unit: psi)

Option code: CAL-E

bar-calibration (Unit: bar)

Option code: CAL-B

**■ 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/cm<sup>2</sup>, bar or psi).
5. Calibrated range.
6. Tag number and application.

## DIMENSIONS

Unit : mm

