

General Specifications

Model Y/11AL
Pneumatic
Absolute Pressure Transmitter

P10 Series

GS 02C01B01-00E

Model Y/11AL Pneumatic Absolute Pressure Transmitter measures absolute pressure in spans from 1.3 to 5.3 kPa. The instrument transmits a proportional 20 to 100 kPa pneumatic 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:

1.3 to 5.3 kPa.

Span is continuously adjustable within range limits.

Range Limits *:

0 to 9.3 kPa absolute.

*: When lower range-value is above zero, optional kit for suppressed-zero ranges is installed.

Overpressure Limits:

0.7 MPa.

Output Signal:

20 to 100 kPa.

Accuracy (includes linearity, hysteresis and repeatability):

±1.0 % of span.

Repeatability:

0.5 % of span.

Dead Band:

0.1 % 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:

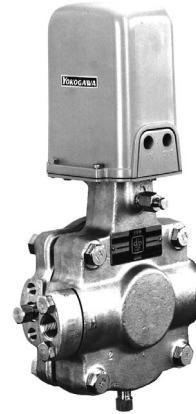
-40 to 120 °C (-40 to 250 °F).

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. Transmitter must be mounted with capsule faces vertical.



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 14A (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 SCM 435 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:

15 kg (33 lb).

Table 1. Span, Range and Overpressure Limits.


Capsule		–	M-calibration	P-calibration	bar-calibration
L	Span Limits	1.3 to 5.3 kPa	10 to 40 mmHg	0.4 to 1.6 inHg	13 to 53 mbar
	Range Limits	0 to 9.3 kPa abs.	0 to 70 mmHg abs.	0 to 2.8 inHg abs.	0 to 93 mbar abs.
	O. P. Limits	0.7 MPa	7 kgf/cm ²	100 psi	7 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/11AL	Pneumatic absolute pressure transmitter.
Daiphram Capsule	-L	Low range capsule. Span: 1.3 to 5.3 kPa.
Body Material *1	S	Forged SUS 316 stainless steel.
Process Connections	1	JIS Rc1/4 female.
	2	JIS Rc1/2 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/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 Suppressed-Zero Ranges:

Permits adjustments up to range limits. Upper range-value must not exceed upper range-limit of capsule.
Option code: R.

Low Spans:

0.53 to 2.6 kPa, 4 to 20 mmHg, or 5.3 to 26 mbar.
Accuracy ±1.0 % of span. (Add 0.5 % with Option Code R)
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 temperatures 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 kgf/cm² 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 connectors.
Option code: SSB.

Oxygen Service Preparation:

Degrease cleansing treatment.
Option code: OSW

Calibration Units:

M-calibration (Unit: kgf/cm ²)	Option code: CAL-M
P-calibration (Unit: psi)	Option code: CAL-E
bar-calibration (Unit: bar)	Option code: CAL-B

Notes:

1. Teflon (PTFE): Trademark of E.I. DuPont de Nemours & Company (USA) for polytetrafluoroethylene.

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

Unit : mm

