

General Specifications

Y/15A Pneumatic Differential Pressure Transmitter

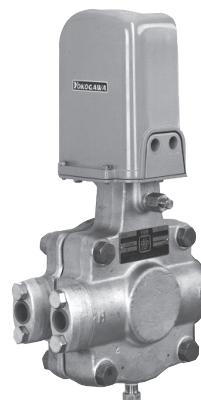
P10 Series

GS 02C01C01-00EN

Model Y/15A Pneumatic Differential Pressure Transmitters measure differential pressure in spans from 1.25 to 6.2 kPa at static pressure to 3.5 MPa. The instruments transmit 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 Capability.
- Versatile Applications Capability for Flow, Liquid Level, and Density Measurements.



■ 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.

Static Pressure Limits:

Refer to Table 1.

Output Signal:

Refer to Table 1.

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, 1.4 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 Connections:

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

Table 1. Span, Range and Static Pressure Limits.

Capsule		—	M-calibration	P-calibration	bar-calibration
L	Span Limits	1.25 to 6.2 kPa	125 to 635 mmH ₂ O	5 to 25 inH ₂ O	12.5 to 62 mbar
	Range Limits	-12.5 to 12.5 kPa	-1.27 to 1.27 mH ₂ O	-50 to 50 inH ₂ O	-125 to 125 mbar
	S. P. Limits	3.5 MPa	35 kgf/cm ²	500 psi	35 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

Wetted Parts Material:

Body: Forged JIS SUS316 stainless steel.
 Process Connectors: SCS14A (equivalent to SUS316 Stainless Steel casting)
 Capsule (Body): SUS316L stainless steel.
 Forced Bar: SUS316 stainless steel.
 Forced Bar Seal: Cobalt-nickel alloy.
 Process Connector Gasket: Teflon (PTFE).
 Capsule Gasket: SUS316L 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 connectors.

Cover:

Cast aluminum, finished with gray polyurethane paint.

Degrees of Protection:

IP53 (Equivalent to NEMA3)

Approximate Weight:

15 kg (33 lb).

■ MODEL AND SUFFIX CODES

Model	Suffix Codes	Description
Y/15A	Low differential pressure use.
Diaphragm Capsule	-L	Low range capsule. Span: 1.25 to 6.2 kPa.
Body Material *1	S	Forged SUS316 stainless steel.
Process Connection	1 2 3*2 4*2	JIS Rc1/4 female. JIS Rc1/2 female. ANSI 1/4 NPT female. ANSI 1/2 NPT female.
Options	/□/□	
Combination	//□/□	

- *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 connections.

■ OPTIONS

Item	Description		Code
Kit for elevated-zero or suppressed-zero ranges	Permits adjustments up to range limits of capsule. Upper range-value must not exceed upper range-limit of capsule.	Elevated-zero	L
		Suppressed-zero	R
Air set	Supply pressure: 0.2 to 1 MPa, 2 to 10 kgf/cm ² or bar, or 30 to 150 psi. Output pressure: 140 kPa, 1.4 kgf/cm ² or bar, or 20 psi. Maximum operating temperature: 80 °C (180 °F). Refer to Table 2.		GAS-F□ NAS-F□
Low differential span	0.5 to 3.1 kPa, 50 to 318 mmH ₂ O, 5 to 31 mbar, or 2.5 to 12.5 inH ₂ O Accuracy: ±0.5% of span, ±1.0% of span with code R or L		LD
Cover color other than standard finish	Specify in color block □ by color code. Refer to GS22D01F01-00E.		SCF-□
Coating other than standard finish	Epoxy resin-baked coated.		EPF
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).		DG5
Oxygen service preparation	Degrease cleansing treatment.		OSW
	Degrease cleansing treatment with fluorinated oilfilled capsule		OSFC
High damping capsule	Filled with high viscosity fluid (time constant is approximate 2.6 sec)		HVC
Stainless steel bolts and nuts	JIS SUS630 bolts and nuts for the body and JIS SUS630 bolts for process connectors		SSB
	JIS SUS630 bolts and nuts for the body and JIS SUS630 bolts for process connectors and sealant (liquid silicone rubber) are coated on surface of SUS630 nuts.		SSB-S
Ammonia service	Force bar gasket: Neoprene rubber		AMM
Stainless tube	Tube and connectors between air-set (fixed pressure regulator with filter) and transmitter are made by stainless steel. However, connection of pressure gauge remains as standard material (Bs-Ni3).		SST
Tropicalization	When there is a possibility to generate rusts using under the condition of high temperature and high humidity area, silicone grease is coated on whole screws. Silicon grease which has stronger oil film feature.		PSG
M-calibration	Output signal: 0.2 to 1.0 kgf/cm ²		CAL-M
P-calibration	Output signal: 3 to 15 psi		CAL-E
bar-calibration	Output signal: 0.2 to 1.0 bar		CAL-B
Stainless Tag plate	Stainless Tag plate fixed with screws. Up to 16 characters.		TP-S
Force bar seal gasket*1	GF Teflon		GFT
Reverse output signal*2	Reverse output signal		ROUT

*1: Not applicable for option code DG5, OSW, and OSFC.

*2: Not applicable for option code EPF.

Table 2. Air set

Air Connection	Gauge Scale	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
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

<Reference>

Teflon: Trademark of E.I. DuPont de Nemours & Co.

■ COMBINATION

Item	Description	Code
Integral flow orifice	Refer to GS 06P01E01-00E	IFO

■ ORDERING INSTRUCTIONS

Specify the following when ordering:

1. Model and suffix codes.
2. Option codes.
3. Calibrated range.
4. Tag number.

■ RELATED INSTRUMENTS

Integral Flow Orifice Refer to GS 06P01E01-00E.

■ DIMENSIONS

Unit: mm

