Variable area flow meter

DUO-PX

Duo flow

■ Variable-area flow meter with analog output capability



Model number selection				
Base For gas Val		Fluid Units Full Design pr name scale Temper	essure Option	Specialized item(s)
Base model For gas Val	ve Output type Output 1 Output 2 Base model	name scale Temper	B Stand (Self-standing SW Tube fitting *3 V Metal gasket face se FKM Fluoroelastomer 0-r Display Provide option symbol 1 atm/20°C Design pressure / Fluid to C. Max. flow rate selected from the available flomin in min	type) *3 al fitting *3 ing ol for display when pairing with this product *4 emperature *2
	20	40 – 500 NmL/min 0.1 – 1 NL/min 0.2 – 2 NL/min 0.4 – 5 NL/min 1 – 10 NL/min 2 – 20 NL/min 10 – 40 NL/min	Rc1/8	BSBM
	25	20 – 90 NL/min	Rc1/4	SS316

 $[\]boldsymbol{*}$ 1: For specialized items, specify them at end of Model number selection in order.

^{* 2:} Refer to Technical note in this catalog, if applying any design pressure and temperature other than 1 atm and 20 °C. * 3: Available on DUO-PX25G

^{* 4:} Display is paired with this product at Factory. Refer to "Digital meter / Converter" pages for more details of option symbols * Flow range is valid for volumetric flow rate of AIR under conditions of 1 atm /20 °C [0 MPa(G)]

^{*}Analog output signal is proportional to flow rate.

e.g.) 4 mA: 0 L/min, 20 mA: Full scale. (Flow accuracy is ensured for flow ranges we specify)

Specifications

Flow accuracy	ccuracy ±5 % of F.S.	
Output accuracy	±5 % of F.S.	
Pressure limit	0.8 MPa(G)	
Fluid temperature limit 60 °C		
Operating temperatures	0 – 50 °C (Non condensing)	
	4 - 20 mA Load resistance: $≤ 400$ Ω	
Output signals	1 − 5 VDC Load resistance: ≧ 50 kΩ	
	1 − 10 VDC Load resistance: ≧ 50 kΩ	
Output resolution	Approx.152	
Power source ※	12 – 24 VDC ±10 %, max. 90 mA	
Cable length	2 m	

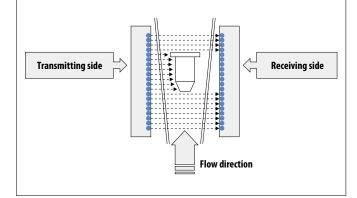
 $[\]mbox{\%}$ Power source for analog output signal of 1 - 10 VDC is 24 VDC ± 10 %, max. 90 mA.

Cable specifications

Function	Wire color	Wire gauge
+12 - 24 VDC	Red	
0 VDC	White	AWG 24
Analog Output	Yellow	AWG 24
Outer sheath shield	Green	

Measurement overview

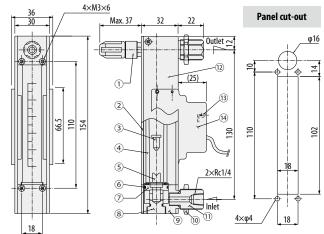
There are 20 infrared IR emitters and 20 phototransistors on light-transmitting and light-receiving sides, respectively. Float placed between them blocks light, and phototransistors react to changes in shadow intensity, turning ON or OFF. Shadow created by float is read as a height difference, which is processed into analog output.



Outline drawing

DUO-PX20 4×M3×6.5 Panel cut-out Max. 37 Outlet 2 (25) 66.5 3 4 99 45 99 26 <u>(5)</u> 6 inlet 2×Rc1/8

DUO-PX25



 $\ensuremath{\text{\%}}$ Making a cut-out for $\phi 16$ is not required for product with no needle valve

Materials

No.	Part name	Material	Remarks
1	Needle valve	SS316	
2	Case	Al	Black anodized
3	Front plate	PMMA	Clear
4	Tapered tube	Heat-resistant glass	
5	Float	SS304	
6	Stopper	PTFE	
7	0-ring	NBR	
8	Retainer	BSBM	Plated
9	Сар	BSBM	Plated
10	Fitting	BSBM	Plated
11	Power LED	_	
12	Linear sensor	PBT, etc.	

Materials

No.	Part name	Material	Remarks
1	Needle valve	SS316	
2	Front plate	PMMA	Clear
3	Float	SS316	
4	Tapered tube	Heat-resistant glass	
5	Stopper	PTFE / SS316	
6	0-ring	NBR	
7	Retainer	SS316	
8	Сар	SS316	
9	Fitting	SS316	
10	Locknut	BSBM	Plated
11	Fitting	SS316	
12	Case	Al	
13	Power LED	_	
14	Linear sensor	PBT, etc.	