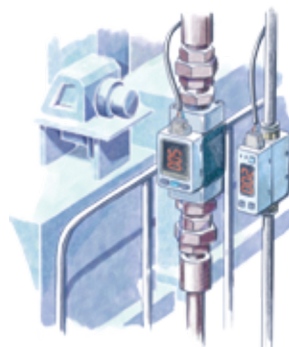




The PF2MC7 is a 3 colour display digital flow switch for dry air and N₂.



FEATURES & BENEFITS

- Flow ratio 100:1
- Digital display of flow rate
- Compact and space saving
- IP65
- Accumulated total display
- Min/Max value display
- Display rotates for easy viewing
- Tri-colour display
- IO-Link option

PRODUCT CONFIGURATION

1 MATERIAL

Aluminium body - IP65 housing

2 OPERATING FLUID TEMPERATURE

┌ 2% F.S (15 to 35°C) ┐ 5% F.S (0 to 50°C)

3 FLUID

Dry air, N₂

4 RATED FLOW RANGE

5 to 500 l/min
10 to 1,000 l/min
20 to 2,000 l/min

5 FUNCTIONS

Output operation, display colour, reference condition, setting of response time, display mode, selection of display on sub screen, external input function, accumulated valve hold, forced output function, analogue output free range function, selection of display OFF mode, peak/bottom value display, keylock function, error display function, orientation correction function.

6 RATED PRESSURE RANGE

0 to 8 Bar

7 SETTING

Digital

8 POWER SUPPLY VOLTAGE

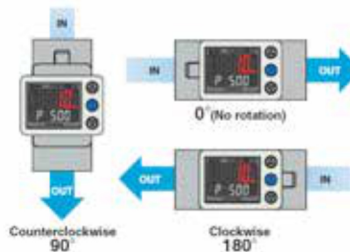
12 to 24 V DC±10%

9 OUTPUT

NPN/PNP open collector for
Alarm or pulse output
Analogue voltage or current output
Optional IO-Link

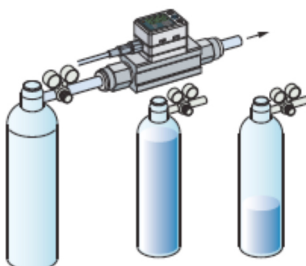
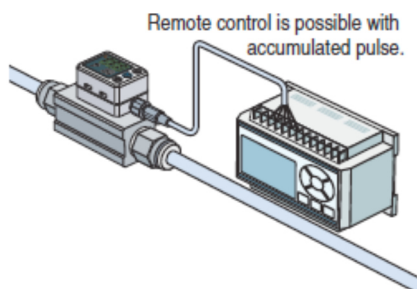
10 REPEATABILITY

±3% F.S. - Fluid: Dry and air



APPLICATIONS

- Accumulated indication shows the operating flow rate or residual amount (of N₂ etc) in a gas cylinder
- Flow control of equipment
- Flow control of the air for spray painting



SPECIFICATIONS



Model			PF2MC7501	PF2MC7102	PF2MC7202
Fluid	Applicable fluid		Dry air,N ₂		
	Fluid temperature range		0 to 50°C		
Flow	Detection method		Thermal type		
	Rated flow range		5 to 500 L/Min	10 to 1000 L/Min	20 to 2000 L/Min
	Set point range	Instantaneous flow	5 to 525 L/Min	10 to 1050 L/Min	20 to 2100 L/Min
		Accumulated flow	0 to 999,999,990 L		
	Smallest settable increment	Instantaneous flow	1 L/Min		
		Accumulated flow	10 L		
	Accumulated volume per pulse (Pulse width =50 ms)		1 L/pulse	10 L/pulse	
Accumulated value hold function		Intervals of 2 mins or 5 mins can be selected.			
Pressure	Rated pressure range		0 to 0.8 MPa		
	Proof pressure		1.2 MPa		
	Pressure loss		Refer to “Pressure Loss” graph.		
	Pressure characteristics		±5% F.S.(0 to 0.8 MPa,0.6 MPa standard)		
Electrical	Power supply voltage		12 to 24 VDC±10% Ripple (p-p) 10% or less		
	Current consumption		55 mA or less		
	Protection		Polarity protection		
Accuracy	Display accuracy		±3% F.S.		
	Analog output accuracy		±3% F.S.		
	Repeatability		±1% F.S.(±2% F.S.when response time is set to 0.05 s)		
	Temperature characteristics		±5% F.S.(0 to 50°C,25°C standard)		
Switch output	Output type		NPN open collector PNP open collector		
	Output mode		Select from Hysteresis,Window comparator,Accumulated output or Accumulated pulse output modes.		
	Switch operation		Select from Normal or Reversed output.		
	Max.load current		80 mA		
	Max.applied voltage (NPN only)		28 VDC		
	Internal voltage drop (Residual voltage)		NPN output type:1 V or less (at load current of 80 mA) PNP output type:1.5 V or less (at load current of 80 mA)		
	Response time ^{*3}		Select from 0.05 s,0.1 s,0.5 s,1 s, or 2 s		
	Hysteresis ^{*4}		Variable from 0		
Analog output ^{*5}	Protection		Short circuit protection		
	Output type		Voltage output:1 to 5 V,Current output:4 to 20 mA Output impedance:Approx.1 kW		
	Impedance	Voltage output	Maximum load impedance at power supply voltage of 24 V:600 W, at power supply voltage of 12 V:300 W		
		Current output	Minimum load impedance:50 W		
External input ^{*7}	Response time		Linked with the response time of the switch output.		
	External input		Input voltage:0.4 V or less (Reed or Solid state) for 30 ms or longer		
	Input mode		Accumulated value external reset,Peak/Bottom value reset		
Display	Reference condition		Select from Standard condition or Normal condition.		
	Unit ^{*9}	Instantaneous flow	L/Min, CFM		
		Accumulated flow	L, CF		
	Display range	Instantaneous flow	-25 to 525 L/Min (Displays [0] when value is within -4 to 4 L/min range.)	-50 to 1050 L/Min (Displays [0] when value is within-9 to 9 L/min range.)	-100 to 2100 L/Min (Displays [0] when value is within -19 to 19 L/min range.)
		Accumulated flow	0 to 999,999,999 L		
	Minimum display unit	Instantaneous flow	1 L/Min		
		Accumulated flow	10 L		
	Display		LCD,2-screen display (Main screen/Sub screen) Main screen: Red/Green, Sub screen: White Main screen:4 digits,7 segments,Sub screen:6 digits,11 segments		
Environment	Indicator LED		LED ON when switch output is ON. (OUT1/OUT2: Orange)		
	Enclosure		IP65		
	Withstand voltage		250 VAC for 1 min between terminals and housing		
	Insulation resistance		2 MW or more (50 VDC measured via mega ohmmeter) between terminals and housing		
	Operating temperature range		Operating:0 to 50°C,Stored:-10 to 60°C(No condensation or freezing)		
Standards			Operating/Stored:35 to 85% RH (No condensation or freezing)		
Piping specification			CE, UL (CSA), RoHS		
Materials of parts in contact with fluid			Rc1/2,NPT1/2,G1/2 Stainless steel 304, PPS, Aluminium alloy, HNBR, Si, Au, GE4F		
Weight	Piping specification	Rc thread	160 g		240 g
		NPT thread	170 g		245 g
	Lead wire Bracket	G thread	170 g		245 g
				+80 g	
			+25 g		+30 g

ORDERING CODES



PF2MC 7

501 – F 04 – B – M – –

Rated flow range

501	5 to 500 l/min
102	10 to 1000 l/min
202	20 to 2000 l/min

Thread type

-	Rc
N	NPT
F	G

Port size

Symbol	Port size	Rated flow range		
		501	102	202
04	1/2	●	●	-
06	3/4	-	-	●

Output specification

Symbol	OUT1	OUT2
A	NPN	NPN
B	PNP	PNP
C	NPN	Analogue (1 to 5 V)
D	NPN	Analogue (4 to 20 mA)
E	PNP	Analogue (1 to 5 V)
F	PNP	Analogue (4 to 20 mA)
G	NPN	External input
H	PNP	External input

Note 2) Made to Order

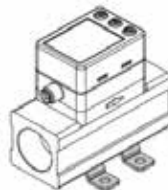
Note 3) Can be selected from accumulated flow external reset and peak/bottom reset

Calibration certificate

-	None
A	Yes

Option 2

-	No bracket
R	With bracket



Note 6) Each option is not assembled with the product, but shipped together.


Unit specifications

-	Unit selection function
M	SI unit only

Note 5) Fixed unit: Instantaneous flow: l/min, Accumulated flow: L

Option 1

-	With lead wire and M8 connector (3 m)
N	Without lead wire and M8 connector



Note 4) Each option is not assembled with the product, but shipped together.

Service & Warranty: For technical assistance, warranty replacement or repair contact your distributor:

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