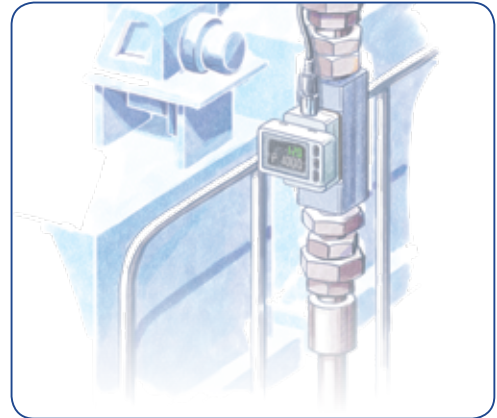




**PF3 Digital Flow Switch For Large Flow**  
Suitable for Air and N<sup>2</sup>

**FEATURES & BENEFITS**

- Flow ratio 100:1
- Improved drainage and resistance to foreign matter
- Compact and space saving
- Display rotates 90° and can be reversed
- Smallest settable increment - 2 L/min
- Grease Free
- Monitor remote lines
- Pressure loss reduction by 75%
- Easy screen switching




**PRODUCT CONFIGURATION**



- |  |  |  |
|--|--|--|
| <p><b>1 MATERIAL</b><br/>Enclosure - IP65 Monitor Unit</p> <p><b>2 OPERATING FLUID TEMPERATURE</b><br/>±2% F.S (15 to 35°C)<br/>±5% F.S (0 to 50°C)</p> <p><b>3 FLUID</b><br/>Dry air N<sub>2</sub></p> <p><b>4 RATED FLOW RANGE</b><br/>30 to 3,000 l/min<br/>60 to 6,000 l/min<br/>120 to 12,000 l/min</p> | <p><b>5 FUNCTIONS</b><br/>Output operation, simple setting mode, display colour, reference condition &amp; response time</p> <p><b>6 RATED PRESSURE RANGE</b><br/>0.1 to 1.5 MPa</p> <p><b>7 SETTING</b><br/>Digital</p> | <p><b>8 POWER SUPPLY VOLTAGE</b><br/>24 V DC ±10%</p> <p><b>9 OUTPUT</b><br/>NPN/PNP open collector<br/>Accumulated pulse output<br/>Analog voltage output<br/>Analog current output</p> <p><b>10 REPEATABILITY</b><br/>±1% F.S.</p> |
|--|--|--|

**Other Options**

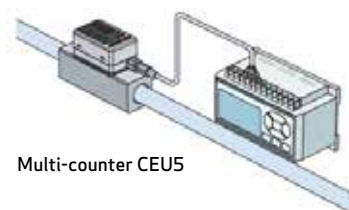
Integrated display type/remote type	Flow range
	30 - 3000 60 - 6000 120-12000
PF3A7H	Thermal Type with platinum sensor

**APPLICATIONS**



Flow control of equipment, main line, and branch line

Remote control is possible with accumulated pulse.



Multi-counter CEUS





SPECIFICATIONS



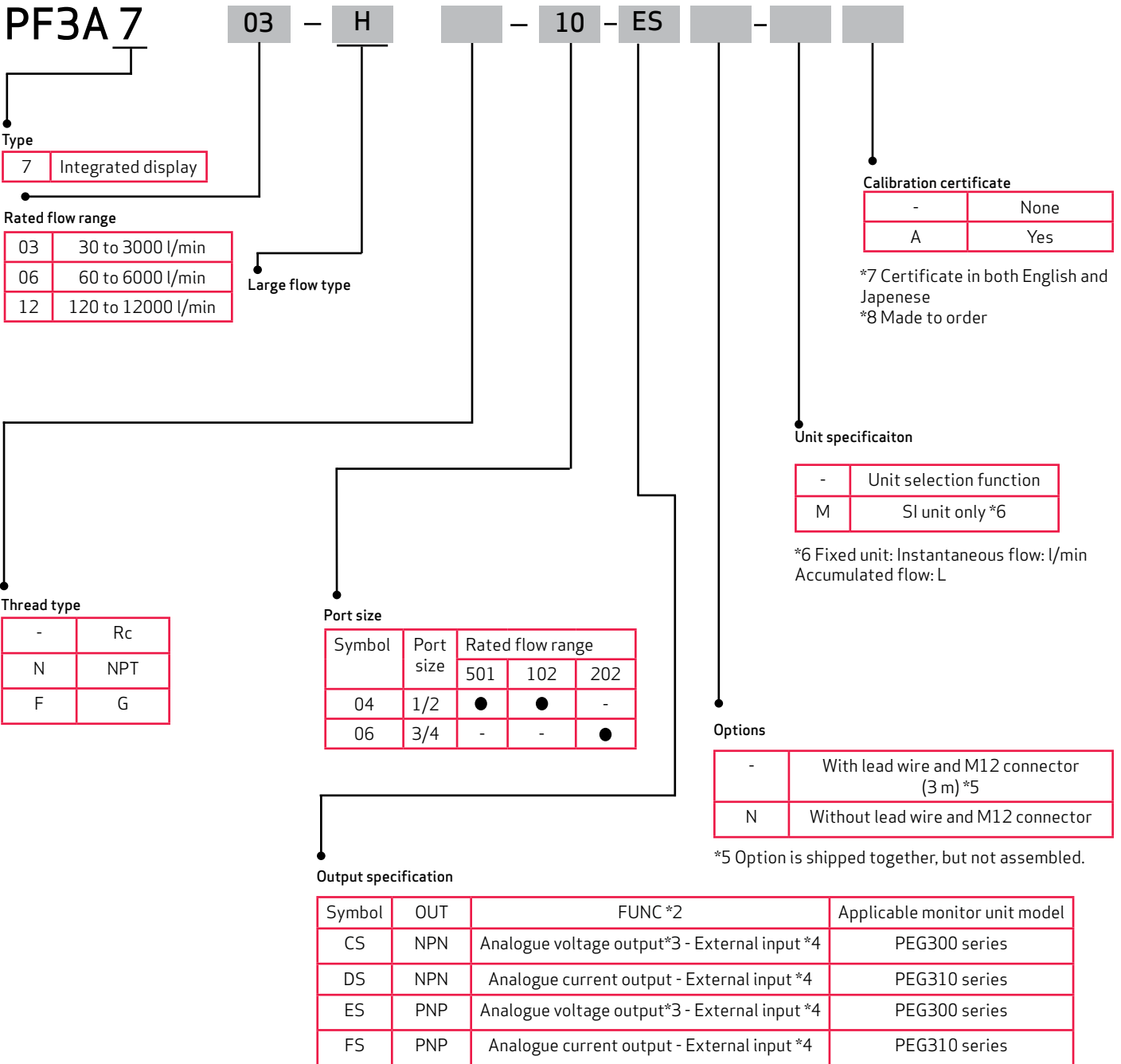
Model		PF3A703H	PF3A706H	PF3A712H		
Fluid	Applicable fluid	Air, Nitrogen				
	Fluid temperature	0 to 50°C				
Flow	Detection method					
	Rated flow range	30 to 3000 L/min	60 to 6000 L/min	120 to 12000 L/min		
	Set point range	Instantaneous flow	30 to 3150 L/min	60 to 6300 L/min	120 to 12600 L/min	
		Accumulated flow	0 to 999,999,999,990 L			
	Smallest settable increment	Instantaneous flow	2 L/min	5 L/min	10 L/min	
		Accumulated flow	10 L	100 L		
	Accumulated volume per pulse (Pulse width = 50 msec.)	Select from 100 L/pulse or 1000 L/pulse.				
Accumulated value hold function	Interval of 2 or 5 minutes can be selected.					
Pressure	Rated pressure range	0.1 to 1.5 MPa				
	Proof pressure	2.25 MPa				
	Pressure loss	Refer to "Pressure Loss" graph.				
	Pressure characteristics	±2.5% F.S. (0.1 to 1.0 MPa, 0.5 MPa standard)				
Electrical	Power supply voltage	24 VDC ±10%				
	Current consumption	150 mA or less				
	Protection	Polarity protection				
Accuracy	Display accuracy	±3.0% F.S.				
	Analog output accuracy	±3.0% F.S.				
	Repeatability	Switch output/Display: ±1.0% F.S. Analog output: ±1.0% F.S.				
	Temperature characteristics	±5.0% F.S. (Ambient temperature of 0 to 50°C, 25°C standard)				
Switch output	Output type	NPN open collector PNP open collector				
	Output mode	Select from Instantaneous output (Hysteresis mode or Window comparator mode), Accumulated output, or Accumulated pulse output.				
	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: 2 V or less (at load current of 80 mA)				
	Response time	Select from 1 s, 2 s, or 5 s.				
	Hysteresis	Variable from 0				
	Protection	Over current protection				
	Analog output	Output type	Voltage output: 1 to 5 V (0 to 10 V can be selected*), Current output: 4 to 20 mA			
Impedance		Voltage output	Output impedance: Approx. 1 kΩ			
		Current output	Maximum load impedance: Approx. 600 Ω			
Response time	Linked with the response time of the switch output.					
External input	Input type	No-voltage input: 0.4 V or less				
	Input mode	Select from Accumulated flow external reset or Peak/Bottom reset.				
	Input time	30 ms or more				
Display	Reference condition	Select from Standard condition or Normal condition.				
	Unit	Instantaneous flow	L/min, CFM (ft <sup>3</sup> /min)			
		Accumulated flow	L, ft <sup>3</sup>			
	Display range	Instantaneous flow	0 to 3150 L/min (Flow under 30 L/min is displayed as "0")	0 to 6300 L/min (Flow under 60 L/min is displayed as "0")	0 to 12600 L/min (Flow under 120 L/min is displayed as "0")	
		Accumulated flow	0 to 999,999,999,990 L			
	Minimum display unit	Instantaneous flow	2 L/min	5 L/min	10 L/min	
		Accumulated flow	10 L	100 L		
Display	LCD, 2-screen display (Main screen/Sub screen) Main screen: Red/Green, Sub screen: Orange Main screen: 5 digits, 7 segment, Sub screen: 6 digits, 7 segment					
Indicator LED	OUT indicator: Red LED is ON when output is ON					
Environment	Enclosure	IP65				
	Withstand voltage	1000 VAC for 1 minute between terminals and housing				
	Insulation resistance	50 MΩ (500 VDC measured via megohmmeter) between terminals and housing				
	Operating temperature range	Operating: 0 to 50°C, Stored: -10 to 60°C (No freezing or condensation)				
Operating humidity range	Operating/Stored: 35 to 85%RH (No condensation)					
Standards	CE, RoHS					
Piping	Piping specification	Rc1, NPT1, G1	Rc1 1/2, NPT1 1/2, G1 1/2	Rc2, NPT2, G2		
Main materials of parts in contact with fluid	Aluminum alloy, PPS, HNBR [Sensor: Pt, Au, Fe, Lead glass (exempted from the RoHS application), Al <sub>2</sub> O <sub>3</sub> ]					
Weight	Length of lead wire with connector	3 m				
		Piping specification	Rc	610 g	1190 g	1680 g
			NPT	610 g	1190 g	1680 g
	G	630 g	1220 g	1720 g		
Lead wire with connector	+90 g					



ORDERING CODES



PF3A 7



Calibration certificate

-	None
A	Yes

\*7 Certificate in both English and Japanese  
\*8 Made to order

Unit specification

-	Unit selection function
M	SI unit only *6

\*6 Fixed unit: Instantaneous flow: l/min  
Accumulated flow: L

Options

-	With lead wire and M12 connector (3 m) *5
N	Without lead wire and M12 connector

\*5 Option is shipped together, but not assembled.

\*2) Analogue output or external input can be selected by pressing the buttons. Analogue output is set as default setting.

\*3) 1 to 5 V or 0 to 1 0 V can be selected by pressing the button. The default setting is 1 to 5 V

\*4) The accumulated value, peak value, and bottom value can be re-set.

Option/Part No.

When only optional parts are required, order with the part number listed below.

Part no.	Option	Note
ZS-37-A	Lead wire and M12 connector	Length: 3 m



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

UK Flowtechnik Ltd. 1 Central Park, Lenton Lane, Nottingham, NG7 2NR, UK.

Tel: +44 (0) 115 901 7111. Email: sales@ukflowtechnik.com. Web: www.ukflowtechnik.com