3-Color Display

Digital Flow Switch for Large Flow

Applicable fluid Air, N_2

RoHS

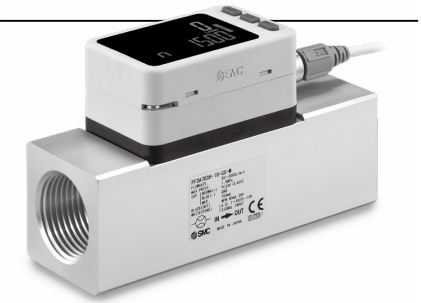
IP65

IO-Link

IO-Link

The flow rate value and the device status can be figured out easily via the process data.

Diagnostic contents	Over current error, Rated/Accumulated flow error, Flow/Temperature sensor failure, Internal product malfunction



How to Order

PF3A 7 03 H – □ 10 – L Q – M □

Type

7	Integrated display

Rated flow range

03	30 to 3000 L/min
06	60 to 6000 L/min
12	120 to 12000 L/min

Large flow type

Thread type

Nil	Rc
N	NPT
F∗1	G

∗1 ISO 1179-1 compliant

Port size

Symbol	Port size	Rated flow range		
		03	**06**	**12**
10	1	●	—	—
14	1 1/2	—	●	—
20	2	—	—	●

Output specification

Symbol	OUT	FUNC∗2	Applicable monitor unit model
L	IO-Link: Switch output (N/P)	—	—
L3	IO-Link: Switch output (N/P)	Analog voltage output∗3 ⇔ External input∗4	PFG300 series
L4	IO-Link: Switch output (N/P)	Analog current output ⇔ External input∗4	PFG310 series

∗2 Analog output or external input can be selected by pressing the buttons. Analog output is set as default setting. Output signal "L" cannot be used as the FUNC terminal is not connected.

∗3 1 to 5 V or 0 to 10 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 reset.

Options

Nil	With lead wire and M12 connector (3 m)∗5
N	Without lead wire and M12 connector
Q	Lead wire and M12-M12 connector (3 m)∗6

∗5 Option is shipped together, but not assembled.

∗6 The lead wire has an M12 (female) connector on one side and an M12 (male) connector on the other side.

Unit specification

Nil	Units selection function∗7
M	SI unit only∗8

∗7 This product is for overseas use only. (The SI unit type is provided for use in Japan in accordance with the New Measurement Act.)

∗8 Fixed unit: Instantaneous flow: L/min
Accumulated flow : L

Calibration certificate∗9

Nil	None
A∗10	Yes

∗9 The certificate is in both English and Japanese.

∗10 Made to order

Options/Part Nos.

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
ZS-49-A	Lead wire and M12-M12 connector	Male/female conversion Length: 3 m

For flow switch precautions and specific product precautions, refer to the Operation Manual on the SMC website.

Specifications (Integrated Display)

Model			PF3A703H-L	PF3A706H-L	PF3A712H-L
Electrical	Power supply voltage	When used as a switch output device	24 VDC ±10%		
		When used as an IO-Link device	18 to 30 VDC ±10%		
Switch output	Output type		Select from NPN or PNP open collector output.		
	Output mode		Select from Hysteresis, Window comparator, Accumulated output, Accumulated pulse output, Error output, or Switch output OFF modes.		
	Max. applied voltage		30 V (NPN output)		
	Internal voltage drop (Residual voltage)		1.5 V or less (at load current of 80 mA)		
	Delay time*1		3.3 ms or less, variable from 0 to 60 s/0.01 s increments		
Analog output	Response time*2		Linked to the set value of the digital filter		
Display	Display		LCD, 2-screen display (Main screen/Sub screen) Main screen: Red/Green, Sub screen: Orange Main screen/Sub screen: 9 digits (7 segments 7 digits, 11 segments 2 digits)		
	Digital filter*3		Select from 1 s, 2 s, or 5 s.		
Standards			CE marking (EMC Directive, RoHS Directive)		

∗1 The time from when the instantaneous flow reaches the set value to when the switch output operates can be set.
∗2 The time from when the flow is changed by a step input (when the flow rate changes from 0 to the maximum value of the rated flow range instantaneously) until the analog output reaches 90% of the rated flow rate.
∗3 The time for the digital filter can be set to the sensor input. The response time indicates when the set value is 90% in relation to the step input.

Communication Specifications (IO-Link mode)

IO-Link type	Device
IO-Link version	V 1.1
Communication speed	COM2 (38.4 kbps)
Configuration file	IODD file*1
Minimum cycle time	3.3 ms
Process data length	Input data: 4 bytes, Output data: 0 byte
On request data communication	Yes
Data storage function	Yes
Event function	Yes
Vendor ID	131 (0 x 0083)
Device ID*2	PF3A703H-□□-L□-□□ : 400 (0 x 0190)
	PF3A703H-□□-L3□-□□: 401 (0 x 0191)
	PF3A703H-□□-L4□-□□: 402 (0 x 0192)
	PF3A706H-□□-L□-□□ : 403 (0 x 0193)
	PF3A706H-□□-L3□-□□: 404 (0 x 0194)
	PF3A706H-□□-L4□-□□: 405 (0 x 0195)
	PF3A712H-□□-L□-□□ : 406 (0 x 0196)
	PF3A712H-□□-L3□-□□: 407 (0 x 0197)
	PF3A712H-□□-L4□-□□: 408 (0 x 0198)

∗1 The configuration file can be downloaded from the SMC website, https://www.smcworld.com
∗2 The device ID differs according to each product type (output specification).

Other specifications that are not listed are the same as those of the standard product. For details, refer to the **Web Catalog**.