8 mm width Flow Sensor

8 mm width Flow Sensor (Non-linear analog output)

⚠ Safety instructions for this product
Safety instructions, Common safety instructions for each product category and Detailed safety instructions for each product are in the end of this catalog and our website.

Model Designation (Example)

FUS8 (1) – A (2) – F (3) 005 (4) – 4 (5) 4 (6) -3 (7) -NH (8)

(1) 8 mm width Flow Sensor

(2) Output type
A: Analog output (1V—5V)

(3) Flow direction

Code	F	R
Flow direction	Uni-direction	Bi-direction

(4) Flow rate range (Full scale flow rate)

Code	005	010	050	100
Flow rate range(l/min)	0.5	1	5	10

(5) Inlet port size (6) Outlet port size

Code	180(*1)	2(*2)	3	4	6
Size	ø1.8mm	ø2mm	ø3mm	ø4mm	ø6×ø4mm
Connection type	Push-in fitting				Barb fitting

Code	N4	N6	M5	No code
Size	ø4mm	ø6mm	M5×0.8	–
Connection type	Plug-in		Female thread	Sensor head alone

*1. Max. flow rate is 4 ℓ/min.
*2. Max. flow rate is 5 ℓ/min.
*3. Any inlet port and outlet port listed above can be combined .

(7) Connector cable

Code	No code	-3
Cable	Without cable	With cable (3 cores, 3 m)

(8) Mounting bracket

Code	No code	-NH
Mounting bracket	With mounting bracket	Without mounting bracket

* With bracket is not selectable when selecting Sensor head alone for inlet/outlet port in (5) and (6).

Model Designation of Connector cable

FUS8 (1) – C33 (2)

(1) 8 mm width Flow Sensor

(2) Cable
C33: 3 m of 3-core cable

Model Code for Mounting bracket

FUSH008P01 (1)

(1) Mounting bracket for 8mm width Flow sensor

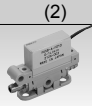
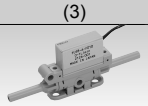
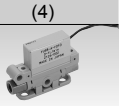
Characteristics

Ultra-small and light weight

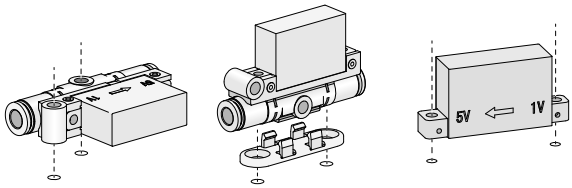
Width: 8.5mm, Height: 24mm, Length: 41mm, Weight: 10.7g (In the case of dia. 4mm push-in fitting equipped type)

A wide variety of connection methods

Various fitting combination for connection configuration is possible.

No.	(1)	(2)	(3)	(4)
Connection type				
	Push-in fitting	Barb fitting	Plug-in	Female thread
Size	ø1.8, ø2, ø3, ø4mm	ø6×ø4mm	ø4, ø6mm	M5×0.8

Three types of installation method are available.



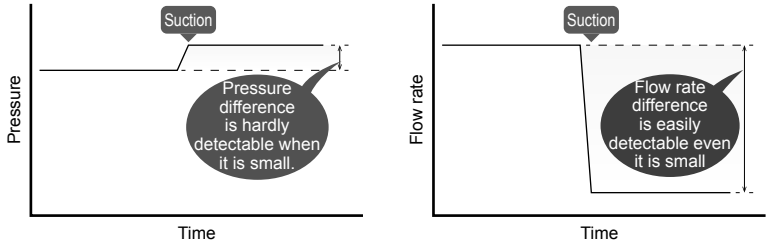
(1) Direct screw mounting

(2) Bracket mount
►Easy mounting and removal of the product

(3) Sensor head direct mount
►Installation in narrow space is possible.

Best suitable for suction verification

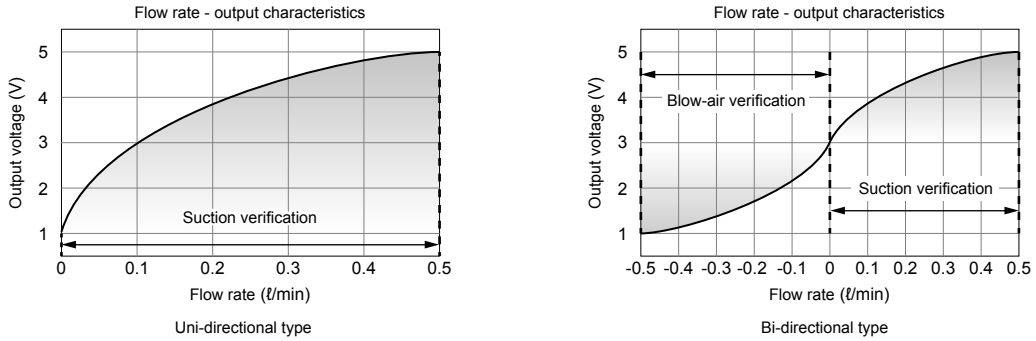
Non-linear characteristics of analog output is suitable for small suction flow verification.



Example applications
►Suction verification of small work pieces, which is hard to detect by a pressure sensor.
►Verification for which the piping is long and hard to detect by pressure sensor.
►When vacuum flow is narrowed in order to secure pressure difference and the tact time to suction lift verification becomes longer.

Bidirectional flow measurement type, best suitable for suction transportation, is available.

Bi-directional type can be used to confirm suction lift and release. Thus, best suitable for suction transport application.



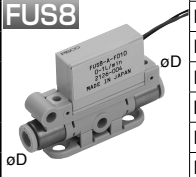
Specifications

Item \ Type	FUS8-A-R005	FUS8-A-R010	FUS8-A-R050	FUS8-A-R100	FUS8-A-F005	FUS8-A-F010	FUS8-A-F050	FUS8-A-F100
Flow rate range	-0.5 to 0.5ℓ/min	-1 to 1ℓ/min	-5 to 5ℓ/min	-10 to 10ℓ/min	0 to 0.5ℓ/min	0 to 1ℓ/min	0 to 5ℓ/min	0 to 10ℓ/min
Operating conditions: Fluid medium	Clean air (JIS B 8392-1.1.1 to 1.6.2.), Nitrogen gas							
Operating conditions: Operating pressure range	-0.09 to 0.2MPa							
Operating conditions: Proof pressure	0.3MPa							
Operating conditions: Operating ambient temp. and hum.	0 to 50°C, max. 80% RH							
Operating conditions: Operating fluid medium temp.	0 to 50°C (No dew condensation)							
Storage temp. range	-20 to 60°C (No dew condensation)							
Analog output accuracy(*): Linearity	Non linear analog output 1 to 5 V							
Analog output accuracy(*): Pressure characteristics	±5%.F.S.or less (-0.09 to 0.2MPa, Criteria: 25°C, 0.1 MPa)				±10%.F.S.or less (-0.09 to 0.2MPa, Criteria: 25°C, 0.1 MPa)			
Analog output accuracy(*): Temperature characteristics	±0.3%.F.S./°C or less (0 to 50°C, Criteria: 25°C)				±0.6%.F.S./°C or less (0 to 50°C, Criteria: 25°C)			
Analog output accuracy(*): Repeatability	±2%.F.S.or less							
Analog output accuracy(*): Power supply voltage fluctuation	±2%.F.S.or less (24VDC±10%)							
Response time	5ms or less			8ms or less	5ms or less			8ms or less
Current consumption	30mA or less							
Power supply voltage	24VDC±10%, ripple 1% or less							

* The analog output indicates 3 V for Bi-directional type and 1 V for Uni-directional type respectively when the flow rate is 0, and changes to 5 V when the fluid flows to the right (when the connector cable is to the right of the body).

RoHS2 (2011/65/EU+EU2015/863) compliant

Type	Model code FUS8-A-F4-5 6-7-8
Uni-directional type FUS8	FUS8-A-F005
	FUS8-A-F005-3
	FUS8-A-F005-5 6
	FUS8-A-F005-5 6-3
	FUS8-A-F005-5 6-3-NH
	FUS8-A-F010
	FUS8-A-F010-3
	FUS8-A-F010-5 6
	FUS8-A-F010-5 6-3
	FUS8-A-F010-5 6-3-NH
	FUS8-A-F050
	FUS8-A-F050-3
	FUS8-A-F050-5 6
	FUS8-A-F050-5 6-3
	FUS8-A-F050-5 6-3-NH
	FUS8-A-F100
	FUS8-A-F100-3
	FUS8-A-F100-5 6
	FUS8-A-F100-5 6-3
	FUS8-A-F100-5 6-3-NH



* The above picture is image of the one with push-in fittings, a connector cable and a mounting bracket.

Type	Model code FUS8-A-R4-5 6-7-8
Bi-directional type FUS8	FUS8-A-R005
	FUS8-A-R005-3
	FUS8-A-R005-5 6
	FUS8-A-R005-5 6-3
	FUS8-A-R005-5 6-3-NH
	FUS8-A-R010
	FUS8-A-R010-3
	FUS8-A-R010-5 6
	FUS8-A-R010-5 6-3
	FUS8-A-R010-5 6-3-NH
	FUS8-A-R050
	FUS8-A-R050-3
	FUS8-A-R050-5 6
	FUS8-A-R050-5 6-3
	FUS8-A-R050-5 6-3-NH
	FUS8-A-R100
	FUS8-A-R100-3
	FUS8-A-R100-5 6
	FUS8-A-R100-5 6-3
	FUS8-A-R100-5 6-3-NH

* The above picture is image of the one with push-in fittings, a connector cable and a mounting bracket.

Options

Type	Model code
Connector cable FUS8-C33	FUS8-C33

Type	Model code
Mounting bracket FUSH	FUSH008P01

Notes

* Please select a code for port size and connection type for 5 and 6 in model code., refferring to the Model Designation (Example) on plage 197.

Packaging specifications

1 pc. /bag