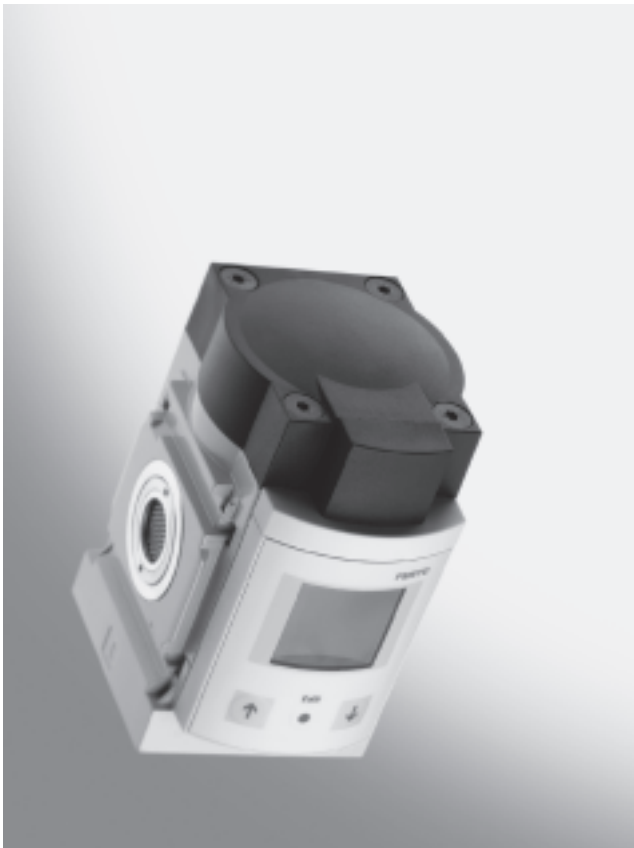


# Flow sensors MS6-SFE

Product overview



- Flow range 200 ... 5,000 l/min
- Switch outputs 2x PNP or 2x NPN
- Analogue output 0 ... 10 V or 4 ... 20 mA
- Freely selectable pulse output for consumption measurement
- Illuminated LCD display
- As an individual unit or for installation in MS series service unit combinations

Detailed product information

➔ [www.festo.com/catalogue/ms6-sfe](http://www.festo.com/catalogue/ms6-sfe)

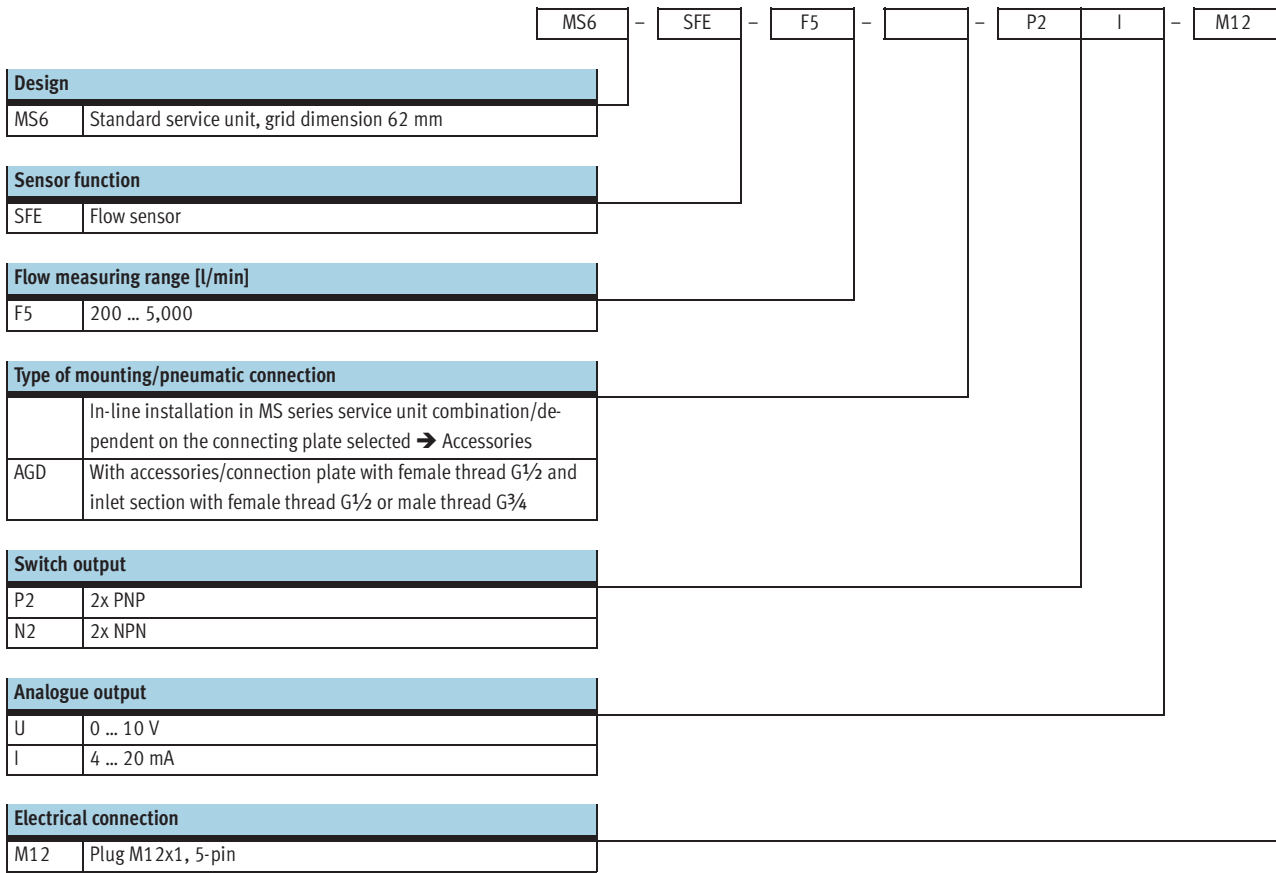
Product overview							
Method of measurement	Measured variable	Type of mounting	Flow measuring range [l/min]	Pneumatic connection 1	Pneumatic connection 2	Electrical output	
						Digital	Analogue
Flow sensor, thermal	Individual device						
	Flow Consumption	Via accessories	200 ... 5,000	G $\frac{1}{2}$ , G $\frac{3}{4}$ <sup>1)</sup>	G $\frac{1}{2}$	2x PNP	0 ... 10 V
							4 ... 20 mA
						2x NPN	0 ... 10 V
							4 ... 20 mA
	In MS series service unit combination						
Flow Consumption	In-line installation	200 ... 5,000	G $\frac{1}{2}$ , G $\frac{3}{4}$ <sup>2)</sup>	G $\frac{1}{2}$ , G $\frac{3}{4}$ <sup>2)</sup>	2x PNP	0 ... 10 V	
						4 ... 20 mA	
					2x NPN	0 ... 10 V	
						4 ... 20 mA	

1) Inlet section with female thread G $\frac{1}{2}$  and male thread G $\frac{3}{4}$

2) Dependent on connecting plate selected, must be ordered separately as an accessory ➔ 114

# Flow sensors MS6-SFE

Type codes



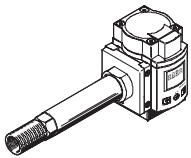

# Flow sensors MS6-SFE

Technical data

FESTO

Technical data		Individual device	In MS series service unit combination
<b>Design</b>			
Flow measuring range	[l/min]	200 ... 5,000 <sup>1)</sup>	
Pneumatic connection 1		G $\frac{1}{2}$ , G $\frac{3}{4}$ <sup>2)</sup>	G $\frac{1}{2}$ , G $\frac{3}{4}$ <sup>3)</sup>
Pneumatic connection 2		G $\frac{1}{2}$	G $\frac{1}{2}$ , G $\frac{3}{4}$ <sup>3)</sup>
Type of display		Illuminated LCD (optimised display)	
Accuracy <sup>4)</sup>		+/- (3% o.m.v. + 0.3% FS)	
<b>Electrical data</b>			
Switch output		2x PNP 2x NPN	
Analogue output	[V]	0 ... 10	
	[mA]	4 ... 20	
Switching element function		N/O contact N/C contact	
Switching function		Threshold value with variable hysteresis Window comparator	
Operating voltage range DC	[V]	15 ... 30	
Max. output current	[mA]	≤ 100	
Electrical connection		Straight plug, M12x1, 5-pin	
Protection against short circuit		Yes	
Protection class		IP65	
<b>Operating and environmental conditions</b>			
Operating pressure	[bar]	0 ... 16	
Operating medium		Filtered compressed air, unlubricated, grade of filtration 40µm Nitrogen Air quality class 5:4:3 to DIN ISO 8573-1	
Ambient temperature	[°C]	0 ... 50	
CE mark (see declaration of conformity)		In accordance with EU EMC directive	
Certification		C-Tick	
<b>Materials</b>			
Housing		Die-cast aluminium, reinforced polyamide	

- 1) Restricted at operating pressure < 5 bar, diagram → [www.festo.com](http://www.festo.com)
- 2) Inlet section with female thread G $\frac{1}{2}$  and male thread G $\frac{3}{4}$
- 3) Dependent on connecting plate selected, must be ordered separately as an accessory → 114
- 4) % o.m.v. = % of measured value  
% FS = % of measuring range's final value (full scale)

Ordering data						
Variant	Flow measuring range [l/min]	Analogue output	Switch output			
			2x PNP		2x NPN	
			Part No.	Type	Part No.	Type
<b>Individual device</b>						
	200 ... 5,000	0 ... 10 V	538 418	MS6-SFE-F5-AGD-P2U-M12	538 420	MS6-SFE-F5-AGD-N2U-M12
		4 ... 20 mA	538 417	MS6-SFE-F5-AGD-P2I-M12	538 419	MS6-SFE-F5-AGD-N2I-M12
<b>In MS series service unit combination</b>						
	200 ... 5,000	0 ... 10 V	538 422	MS6-SFE-F5-P2U-M12	538 424	MS6-SFE-F5-N2U-M12
		4 ... 20 mA	538 421	MS6-SFE-F5-P2I-M12	538 423	MS6-SFE-F5-N2I-M12

# Flow sensors MS6-SFE

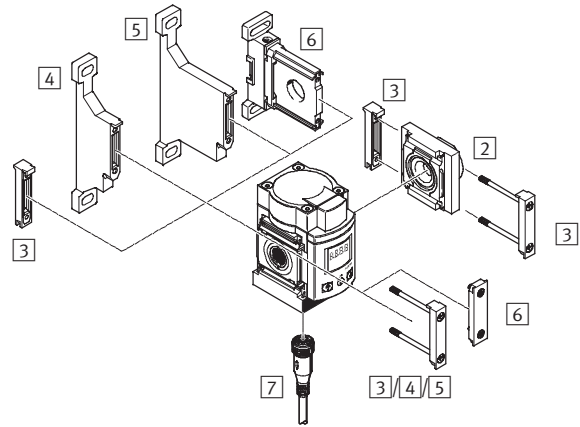
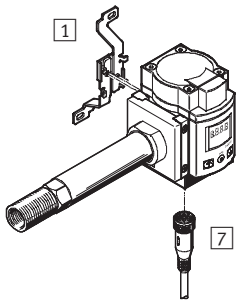
Peripherals overview, sample applications



## Peripherals overview

Individual device, with connecting plates and stabilizing attachment

For service unit combination, with laminar flow cartridge



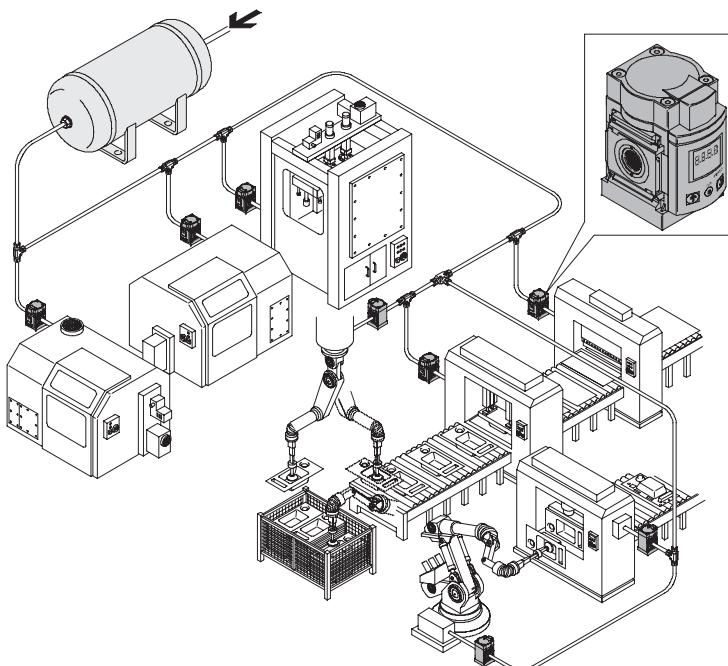
Accessories	
1	Mounting bracket MS6-WB
2	Connecting plate MS6-AG... (included in scope of delivery for individual unit)
3	Module connector MS6-MV

Accessories	
4	Mounting bracket MS6-WP
5	Mounting bracket MS6-WPB
6	Mounting bracket MS6-WPM
7	Connecting cable NEBU-M12G5

Ordering data – Mounting attachments		
	Part No.	Type
	532 196	MS6-WB
	526 082	MS6-AGD
	526 083	MS6-AGE
	532 799	MS6-MV
	532 195	MS6-WP
	526 074	MS6-WPB
	526 073	MS6-WPM-D
	532 186	MS6-WPM-2D

Ordering data – Connecting cables			Technical data → 261	
	Number of wires	Cable length [m]	Part No.	Type
M12x1, straight socket				
	5	2.5	541 330	NEBU-M12G5-K-2.5-LE5
	5	5	541 331	NEBU-M12G5-K-5-LE5

## Application example



- Compressed air consumption and function monitoring of various systems in the production process