

Thermal Flow Switch PSF100



- ◆ Affordable price
- ◆ Operates in wide flow rates for water and oil
- ◆ Response time of only 15 seconds
- ◆ Enhanced microcontroller technology
- ◆ Easy programming and calibration
- ◆ Self-diagnostics and troubleshooting
- ◆ IP65 protection class
- ◆ Explosion-proof version available

COMECO's PSF100 flow switch is designed to operate with low-viscosity, non-viscous, clean or dirty liquids with moderate flow rates as water and water solutions, oil, and fuels. This model utilizes the well-know principle of thermal dispersion, based on the measurement of temperature difference deviation due to the flow rate via 2 temperature sensors immersed in the controlled medium. An output relay switches when the flow rate reaches the set-point value after a maximum of 15-second response time. An enhanced microcontroller design allows simple user calibration and continuous self-diagnostic.

Technical specifications

Input		Power supply	
Flow rate range:		Supply voltage	24 VDC ± 10%
- water	≈ 0.01...1.5 m/s	Admissible variations	0.5 Vp-p at 50 Hz
- oil	≈ 0.02...3 m/s	Consumption	max. 6 VA
Operating principle	temperature dispersion	Indication and controls	
ZERO calibration	max. 60 s, programmable	LEDs	green LED for output state, red LED for setting and calibration
SPAN calibration	max. 60 s, programmable	Programming button	for set-point adjustment and calibration
Output		Rotary switch	for set-point adjustment and calibration
Output type	relay 3A/250V w/ NO/NC contact	Operating conditions	
Output action	activates at flow rate over set point	Medium type	non-viscous, clean or dirty water or oil
Response time	≈ 15 s	Process temperature	0...100 °C
Switching hysteresis	≤ 10% from span	CIP temperature	up to 140 °C
Output delay (hold time)	2 s	Process pressure	up to 25 bar
Temperature drift	0.25% from span for 1 °C	Ambient temperature	-10...65 °C
Warm-up (preheating) time	max. 45 s	Ambient humidity	0...95 %RH

Model	PSF100
Specifications	
Process connection ('G')	G1", 1" NPT
Operating length ('L')	40...250 mm
Electrical connection	screw terminals inside the housing
Housing (protection) ⁽¹⁾	aluminum head type "G" (IP65) or ATEX-approved Ex 'd' head type "EG" (IP68) ⁽²⁾
Wetted parts	304 stainless steel (1.4301)
Weight	max. 500 g

⁽¹⁾ See Appendix for protective head dimensions.

⁽²⁾ Ask for availability!

Ordering code PSF100★ - G0.G6.G9

Code	Feature or option	Code values
★	Variant	W - for water (and water solutions), L - for oil (and fuels)
G0	Housing	G - head type "G", EG - head type "EG" ⁽²⁾
G6	Operating length 'L' [mm]	40...250
G9	Process connection	Q12 - G1", Q15 - 1" NPT