

## 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

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

Model	PSF100
<b>Specifications</b>	
<b>Process connection ('G')</b>	G1", 1" NPT
<b>Operating length ('L')</b>	40...250 mm
<b>Electrical connection</b>	screw terminals inside the housing
<b>Housing (protection) <sup>(1)</sup></b>	aluminum head type "G" (IP65)
<b>Wetted parts</b>	304 stainless steel (1.4301)
<b>Weight</b>	max. 500 g

<sup>(1)</sup> See Appendix for protective head dimensions.

### Ordering code PSF100★ - G0.G6.G9

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