

**Product Information**

**OMNIPLUS-F**

**Thermal flow sensor  
 OMNIPLUS-F**



- Flow transmitter for water and other liquids with integrated temperature measurement
- Fast response time
- Integrated volume meter with preset
- Measuring method without moving parts, no wear
- Stainless steel material coming into contact with medium
- 1 analog output (20 mA / 10 V)
- 2 versatile configurable switching outputs
- IO-Link interface
- High-resolution graphic LCD
- Parameters programmable with multifunction ring
- Waterproof all-metal housing (IP67)
- Mineral glass front, scratch-proof and chemically resistant

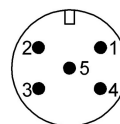
**Technical data**

<b>Measuring principle</b>	calorimetric / thermal	
<b>Measurement media</b>	Liquids Media configurable on the device	
<b>Measuring range</b>	Flow: 0,02...3 m/s Temperature: -20...+90 °C (100°C)	
<b>Measurement uncertainty</b>	Flow: ±(7 % measurement value +2 % FS) <sup>1</sup> Temperature: ± 2 °C (at flow speed > 2 cm/s)	
<b>Temperature drift (flow)</b>	≤ 0,5 cm/(s*K) <sup>1</sup>	
<b>Response time</b>	in water (25 °C) at an average flow speed of approx. 1-2 sec.	
<b>Operating pressure</b>	<b>Connection type</b>	<b>PN</b>
	008, 015	PN100 (PN200 on request)
	013, 018	up to PN100 (depending on T-piece)
	012	up to PN40 (depending on assembly material)
<b>Media temperature</b>	<b>Connection type</b>	
	008 ; 013 ; 015 ; 018	-20°C...+ 90°C
	012	-20°C... 100°C

<b>Ambient temperature</b>	-20...+70 °C	
<b>Storage temperature</b>	-30...+80 °C	
<b>Wetted materials</b>	Stainless steel 1.4571 Fluoro rubber (O-ring for connection type 013)	
<b>Other materials</b>	Housing	Stainless steel 1.4305
	Glass	Mineral glass, hardened
	Magnet	NeFeB
	Ring	POM
<b>Supply voltage</b>	18...30 V DC	
<b>Current consumption</b>	< 130 mA (SIO mode, outputs not under load)	
<b>IO-Link Specification</b>	IO-Link correction	V1.1
	Bit rate	COM2 (38400 Bit/s)
	Minimum cycle time	20 ms
	SIO mode	yes
	Port class	A compatible
	Block parameterisation	yes
	Data storage	yes
<b>Analog output</b>	Applicable for flow or temperature output type configurable on the device: <b>Current:</b> 4...20 mA / 0...20 mA <b>Voltage:</b> 0...10 V / 2...10 V / 0...5 V / 1...5 V / 0.5...4.5 V	
<b>Switching outputs</b>	2 Push-pull transistor outputs, parameterisable as NPN o.c. resistant to short circuits and polarity reversal I <sub>out</sub> = 100 mA max. per output	
	Configurable on the device as <ul style="list-style-type: none"> <li>● Limit switch</li> <li>● Frequency output</li> <li>● Pulse output</li> <li>● Signal output for preset counter</li> </ul>	
<b>Signal input</b>	Reset input for volume meter (alternative to switch output at Pin 5)	
<b>Display</b>	graphic 1.2 inch LCD (transflective) 128 x 64 pixel white backlight, red backlight on alarm notification	
<b>Electrical connection</b>	Round plug connector M12x1 / 5-pin	
<b>Protection rating<sup>2</sup></b>	IP65 / IP67	
<b>Weight</b>	approx. 0.30 kg	
<b>Conformity</b>	CE	

**Connection diagram**

round plug connector M12 x 1 Pin assignment



- 1 - auxiliary voltage
- 2 - analog output
- 3 - 0 V
- 4 - switch signal 1 and IO Link
- 5 - switch signal 2

<sup>1</sup> Reference conditions: pipe diameter DN25 (DIN 2448), water, vertical installation in the pipe. Sensors tip ≥ 15mm from pipe inner diameter, probe alignment to the flow as per 5.1, fully filled pipe without air bubbles, velocity from 10 cm/s to 300 cm/s, inlet zone > 10 DN, outlet zone > 5 DN, 23 °C ± 1 °C, 2 bar ± 1 bar; Accuracy may deviate for other media and installation positions

<sup>2</sup> Only with M12 circular metric connectors connected

