T-Easic FTS

Clever dry-run protection in pumps

SICK
Sensor Intelligence.

Advantages

One sensor, two measurements.

The T-Easic® FTS thermal flow sensor offers flow monitoring and including empty pipe detection and temperature measurement in just one device. This means a single measuring point is sufficient for both measurements. This saves time during commissioning and reduces the risk of contamination to the bare minimum.

Versatile – flow monitoring and temperature measurement
The sensor measures the flow and temperature of virtually any liquid using the calorimetric measurement principle.

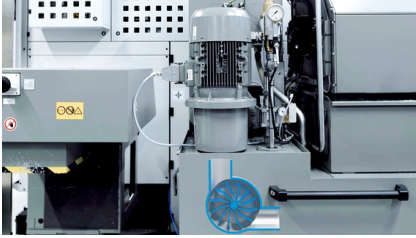**Two housings – hygienic and industrial variants**
The T-Easic® FTS is available in two variants. The hygienic variant with stainless-steel housing withstands the challenging conditions in CIP and SIP systems. The industrial version with rugged VISTAL® housing offers an OLED display and operating buttons to read the measured values directly on site.

Thanks to the two specific housing variants, the T-Easic® FTS can be integrated into a wide range of application environments and offers flow monitoring and temperature measurement in one device.

Solves a wide range of measuring tasks for pump monitoring and control

In many plants, transporting liquids with pumps is an important process step. If the pump does not work at the desired operating point, this can impair the process and the product quality and, in the worst case, lead to plant shutdowns. For example, if too little coolant is transported in machine tools, the workpiece can overheat and get damaged. To prevent this, the T-Easic® FTS flow sensor monitors and controls flows based on defined limit values.

Optimal pump protection thanks to empty pipe detection

The sensor detects the pipe as "full" as soon as its probe tip touches the medium and outputs this information as a switching signal. This is how pumps can be reliably protected against idling.

Reliable limit value and flow monitoring

The T-Easic® FTS features two push-pull digital outputs that can be configured either as a switching output for limit monitoring, a pulse output for volume detection or a digital input.

Automated measurement system via analog output or IO-Link

Process monitoring is simple and user-friendly thanks to continuous measurement using the optional analog output or IO-Link. The flow sensor can be parameterized via IO-Link or the display.

➕ **Clever and multifunctional – the T-Easic® FTS makes various tasks possible: Empty pipe detection, pump protection and monitoring, flow measurement, temperature measurement as well as volume detection and monitoring.**

Save time and money thanks to quick and flexible installation

Sound details such as different probe lengths and practical T-connectors enable flexible mounting and quick commissioning of the T-Easic® FTS. Pre-calibration is also helpful for water and oil. Other media can also be taught in, which makes the sensor suitable for a wide range of applications.

The right probe length depending on the pipe size

Three different probe lengths allow for flexible adaptation to the respective pipe diameter. This makes it possible to integrate the T-Easic® FTS into a wide range of applications. This saves on storage costs.

Save time during mounting

Suitable mounting adapters and T-connectors are available for the most varied system conditions. Advantage of the T-connector: The probe tip is always optimally aligned in the center of the pipe.

Pre-calibrated and versatile teach-in options

Water and oil are taught in at the factory, other liquids can easily be added via teach-in.

➕ **Thanks to a wide range of probe lengths and practical mounting accessories, the T-Easic® FTS can be integrated flexibly into different applications.**

T-Easic FTS

Technical data overview

Measurement principle	Calorimetric measurement process
Medium	Water and oil-based liquids
Output signal	2 push-pull digital outputs (Q2 configurable for IO-Link; Q2 configurable as pulse output / digital input) for flow and temperature 2 push-pull digital outputs (Q1 configurable for IO-Link; Q2 configurable as analog output (4 ... 20 mA) / pulse output / digital input) for flow and temperature

Product description

The T-Easic® FTS thermal flow sensor measures flow and temperature of liquids in accordance with the calorimetric principle. Available as an industrial variant with VISTAL® housing and display or as a hygienic stainless-steel variant, the T-Easic® FTS is suitable for a wide range of applications. Depending on the requirements, the sensor features two digital outputs for limit value monitoring, a pulse output for volume recording or an analog output for continuous recording of measured values. A special feature is integrated empty pipe detection for optimal dry-run protection in pumps. Parameterization can be done via IO-Link or the display. Media taught-in at the factory such as oil and water accelerate commissioning; other liquids can be calibrated quickly and easily.

At a glance

- Flow monitoring and temperature measurement in one sensor
- Optimized for water and oil; teach-in option of other liquids
- IP 67/IP 69 enclosure rating and IO-Link 1.1
- Industrial design in VISTAL® housing with 180°-rotatable OLED display
- Stainless steel hygienic variant, completely CIP-/SIP-capable, process temperatures up to 150 °C

Your benefits

- One sensor, two measurements – reduces costs and hygiene risk thanks to a unique installation point
- Optimal pump protection thanks integrated empty pipe detection
- Automated measurement data acquisition via analog output or IO-Link
- Volume recording thanks to configurable pulse output
- Cost savings thanks to speedy installation via mounting adapter and T-connectors
- Time savings due to easy commissioning without calibration for taught-in media
- User-friendly industrial version with intuitive menu guidance and display for fast commissioning
- Reduced storage needs thanks to flexible adjustment to the pipe diameter
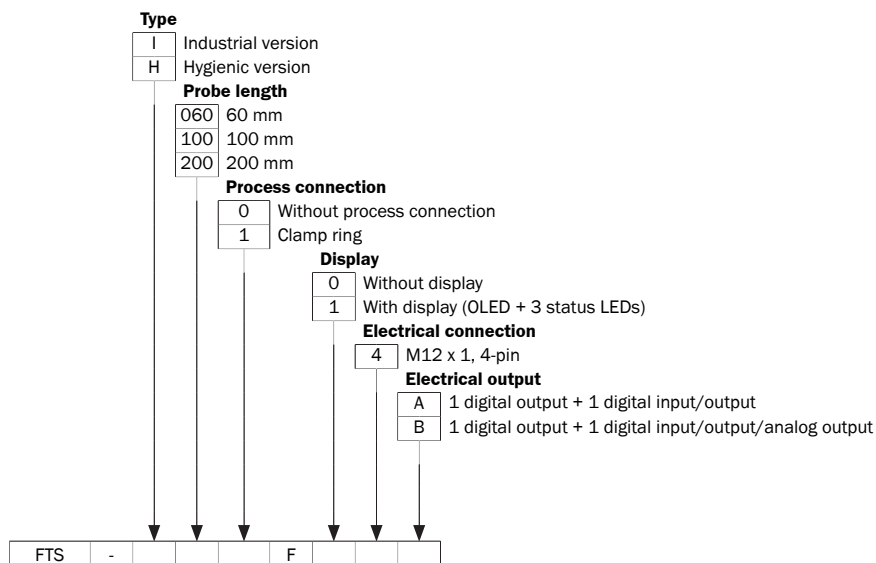- Low downtimes thanks to low-maintenance system

Fields of application

- Flow monitoring in cooling lubricant circuits and cleaning machines
- Flow and temperature detection in the food industry and in CIP cleaning systems
- Pump protection and monitoring
- Contamination monitoring of filters
- Performance measurement of rinsing and spraying processes

Type code

Other models and accessories → www.sick.com/T-Easic_FTS

Type code

Type	
I	Industrial version
H	Hygienic version

Probe length
060	60 mm
100	100 mm
200	200 mm

Process connection
0	Without process connection
1	Clamp ring

Display
0	Without display
1	With display (OLED + 3 status LEDs)

Electrical connection
4	M12 x 1, 4-pin

Electrical output
A	1 digital output + 1 digital input/output
B	1 digital output + 1 digital input/output/analog output

FTS	-				F			

Ordering information

Other models and accessories → www.sick.com/T-Easic_FTS

- **Wetted parts:** stainless steel 1.4404 (Ra ≤ 0,8 µm)
- **Process temperature:** –40 °C ... +150 °C
- **Process pressure:** –1 bar ... 100 bar, 40 bar (with SICK T-connector DN15, DN25), 25 bar (with SICK T-connector DN40), 20 bar (with SICK T-connector DN50)

Process connection	Output signal	Probe length	Type	Part no.
Permanently installed clamping ring (only in conjunction with SICK T-connectors)	2 push-pull digital outputs (Q1 configurable for IO-Link; Q2 configurable as analog output (4 ... 20 mA) / pulse output / digital input) for flow and temperature	60 mm	FTS-H061F04B	1114956
			FTS-I061F14B	1114952
		100 mm	FTS-H101F04B	1114958
			FTS-I101F14B	1114954
	2 push-pull digital outputs (Q2 configurable for IO-Link; Q2 configurable as pulse output / digital input) for flow and temperature	60 mm	FTS-H061F04A	1114955
			FTS-I061F14A	1114951
		100 mm	FTS-H101F04A	1114957
			FTS-I101F14A	1114953
Without process connection (adapter needed for installation)	2 push-pull digital outputs (Q1 configurable for IO-Link; Q2 configurable as analog output (4 ... 20 mA) / pulse output / digital input) for flow and temperature	60 mm	FTS-H060F04B	1114235
			FTS-I060F14B	1114232
		100 mm	FTS-H100F04B	1114233
			FTS-I100F14B	1114230
		200 mm	FTS-H200F04B	1114234
			FTS-I200F14B	1114231

Process connection	Output signal	Probe length	Type	Part no.
	2 push-pull digital outputs (Q2 configurable for IO-Link; Q2 configurable as pulse output / digital input) for flow and temperature	60 mm	FTS-H060F04A	1091149
			FTS-I060F14A	1091146
		100 mm	FTS-H100F04A	1091147
			FTS-I100F14A	1091144
		200 mm	FTS-H200F04A	1091148
			FTS-I200F14A	1091145

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is "Sensor Intelligence."

WORLDWIDE PRESENCE:

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