FCST – Alignable Flow Sensors

Your Global Automation Partner

TURCK

FCST
Alignable Flow Sensors

	FCST-…NA	FCST-…A4	F(T)CST-…A4P
Sensor concept Remote probe	✓		
Sensor concept Compact		✓	✓
Monitoring Flow	✓	✓	FCST/FTCST
Monitoring Temperature	✓ [1]		FTCST
Sensing range Water	1…150 cm/s	1…150 cm/s	1…150 cm/s, 5…150 cm/s[2]
Sensing range Oil	3…300 cm/s	3…300 cm/s	3…300 cm/s
Temperature range Environment		-20…80 °C	-20…70 °C
Temperature range Medium	-20…80 °C, +10…120 °C[3]	-20…80 °C	-20…80 °C
Process pressure	≤ 100 bar	≤ 100 bar	≤ 100 bar
Response time	typ. 2 s	typ. 2 s	typ. 2 s, typ. 3 s[2]
Output type	PNP NO-NC/24 VDC[1], relay NO-NS/20…125 VDC[1], relay NO-NC/20…250 VAC[1], 4…20 mA[1], IO-Link[1]	PNP NO/24 VDC	PNP NO/24 VDC, relay NO-NC/24 VDC, relay NO-NC/115 VAC, relay NO-NC/230 VAC, 4…20 mA
Material Sensor	stainless steel 1.4571	stainless steel 1.4571	stainless steel 1.4571
Material Housing		stainless steel 1.4404	PBT
Screw-in adapter FCA-FCST G1/4	✓	✓	✓
Screw-in adapter FCA-FCST G1/2	✓	✓	✓
Screw-in adapter FCA-FCST G1/2 (L037)	✓	✓	✓
Screw-in adapter FCA-FCST N1/2	✓	✓	✓
Screw-in adapter FCA-FCST G3/4	✓	✓	✓

[1] depending on external processing unit FM…-IM
[2] linearized sensor type only for water
[3] depending on selected sensor type

28 subsidiaries and over
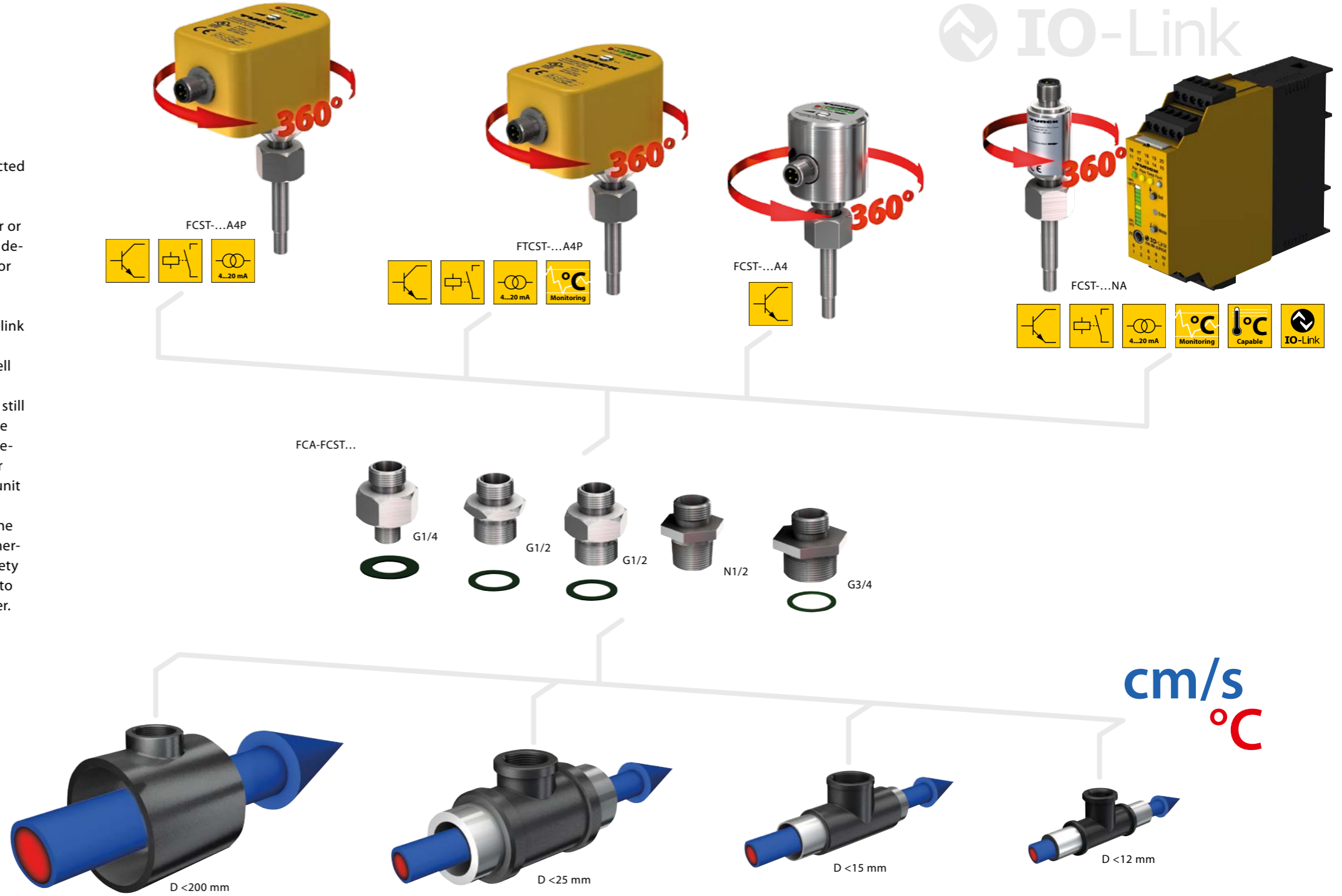60 representations worldwide!

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Flow monitoring of media plays an important role in many applications of factory and process automation. Flow sensors are mainly applied to control flow speeds. Precise and expensive measurement is not the aim but rather the control of limit values. Typical tasks are the monitoring of coolant circuits, run-dry protection of pumps or the flow control of exhaust air ducts and air conditioning systems.

In order to detect critical changes in flow and to indicate these to a control unit, electronic flow sensors are increasingly applied. In this context, high repeatability is the most important feature. The sensors not only detect limit values of flows but also flow patterns. That is, the increase or reduction of the flow velocity.

The electrical output signal can be selected according to the respective application requirements. You can choose between the classical switching signal, non-linear or rather linearized analog output signals, depending on whether you wish to monitor continuous flow or a limit value.

If you connect remote probes to the IO-link capable FM flow modules, you can also monitor the medium temperature as well as collect diagnoses. Despite the feature-packed functionality, this sensor is still easy to operate, either via the innovative Quick Teach button or via IO-Link. Whereby IO-Link allows you to transmit sensor parameters to the higher-level control unit and to remotely parametrize the sensor via the frame application PACTware™. The range of functions is completed by numerous diagnostic functions. The great variety of Turck flow sensors is ideally adapted to the automation requirements of the user.

FCST-…A4P

FTCST-…A4P

FCST-…A4

FCST-…NA

FCA-FCST…

G1/4   G1/2   G1/2   N1/2   G3/4

D <200 mm   D <25 mm   D <15 mm   D <12 mm

cm/s °C

360° – freely alignable
Thanks to the modular plug-in concept, they can be aligned freely within the flow channel, independent from the process connection. The modular concept makes installation and precise alignment of the sensor easy which is very important for flow monitoring.

Modular design
Our screw-in adapters, available in standard industrial thread sizes, offer a wide variety of possible combinations to the user. The sensor-adapter system can thus be adjusted easily to any application requirements.

Remote probes – IO-Link
If you connect the remote probes to the IO-Link capable FM flow modules, you can also monitor the medium temperature in addition to the flow velocity, as well as collect diagnoses. In addition to the process values you can also read/write all supported device parameters via IO-Link.

Temperature monitoring
In addition to the flow speed, the compact FTCST sensors also monitor the medium temperature. Special high-temperature remote probes monitor and evaluate medium temperatures of up to 120 °C via the flow modules.