

weber
Sensors GmbH

captor[®]

SENSOR COMPETENCE AN OVERVIEW



MONITORING - MEASURING - CONTROLLING - REGULATING

We are ...

... represented on the global sensor market for over 60 years.

Under the **captor® brand**, we develop, produce and sell sensors for monitoring and measuring liquid and gaseous media as well as inductive proximity switches and hot metal detectors for the steel industry, metal and mining, air conditioning technology, renewable energy, transportation, water treatment and food production, among others.

weber Sensors GmbH in Germany, the main production site, is certified in accordance with DIN EN ISO 9001:2015.

The following companies have been our loyal business partners for many years:



Measuring flow limit switch

The **flow-captor** is a high-precision, compact and robust flow sensor (blade or monitor) for liquid media. It works according to the calorimetric principle meter and switch and is superior to other methods, especially at low velocities flow.



**flow-captor
4120.13**

- ▶ Insertion and inline version for small pipe diameters
- ▶ Range and switch point can be set separately
- ▶ Analog display of flow rate and switch point
- ▶ High reliability and long-term stability
- ▶ Wide media temperature range
- ▶ High compressive strength
- ▶ Robust industrial design (fully encapsulated)
- ▶ Fully electronic without moving parts
- ▶ Optionally with additional temperature output



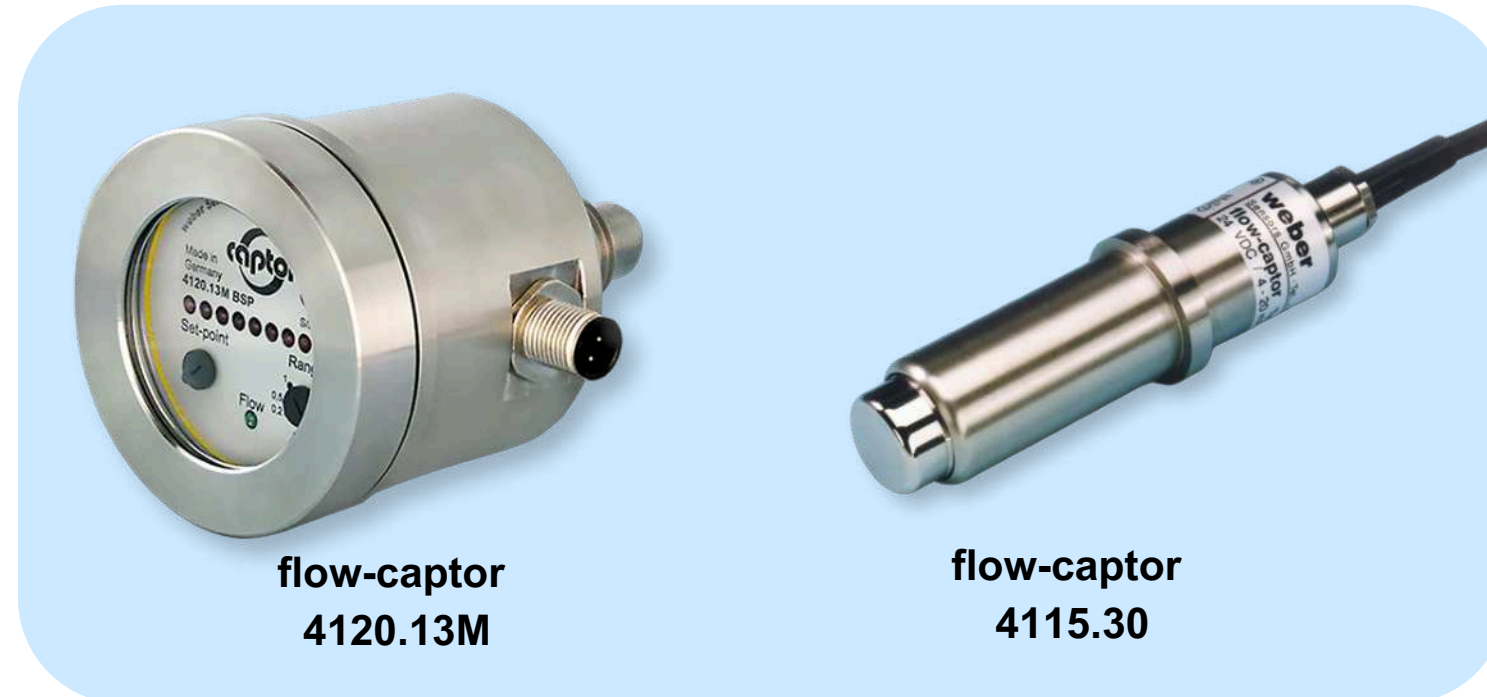
**Inline flow-captor
4320.13**

The **flow-captor** for liquid media

The **flow-captor** for liquid media

The robust metal versions

- ▶ Robust industrial design in stainless steel housing (fully encapsulated)
- ▶ Optionally with additional temperature output
- ▶ Inline version in various pipe sizes
- ▶ Standard industrial plug M12 x 1 and fixed cable
- ▶ AC and DC versions
- ▶ Sturdy screw cap
- ▶ High degree of protection IP67
- ▶ Special materials such as **Titanium** and **Hastelloy**



**flow-captor
4120.13M**

**flow-captor
4115.30**

The flow meters with analog output

- ▶ Available with additional analog temperature output
- ▶ High measuring accuracy even in the lower flow range
- ▶ Robust industrial design (fully encapsulated)
- ▶ Housing and sensor head in stainless steel
- ▶ Analog output (4-20 mA)

The sensor tube

The sensor tube (length 200 mm) is made of stainless steel AISI 316 and is an integral part of the inline flow-captor. This sensor type is available with sensor tubes in the following sizes (in mm):

- ▶ 6 x 1; 8 x 1; 12 x 1
- ▶ 8 x 1,5; 18 x 1,5; 22 x 1,5; 28 x 1,5



**Inline flow-captor
4320.13M**

The smart meter for large pipe diameters

- ▶ Precise, linear flow measurement even in the lower flow range
- ▶ High flexibility of use thanks to infinitely adjustable, easy-to-use adjustment mechanism
- ▶ Analog output (4-20 mA)
- ▶ For pipes up to 24" (600 mm)



The **flow-captor** for liquid media

The **flow-captor** for liquid media

Flow meter inline version

- ▶ High measuring accuracy even in the lower flow range
- ▶ Available in various pipe diameters
- ▶ Optionally with additional temperature measurement
- ▶ Robust industrial design (fully encapsulated)
- ▶ Stainless steel sensor tube



**Inline flow-captor
4311.30**

Flow monitor with simultaneous temperature monitoring

- ▶ Factory setting of the temperature switching point according to customer specification
- ▶ Sensor heads made of electropolished stainless steel
- ▶ For aggressive media, special materials such as titanium or Hastelloy can be used



**flow-captor
4220.1xF/.1xT xx °C**

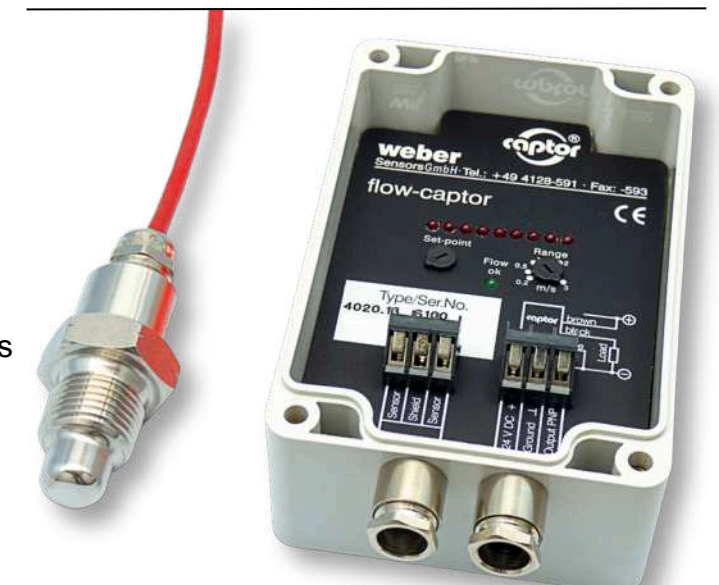
Flow switch for TRI-CLAMP® system

- ▶ TRI-CLAMP clamping connection - ideal for the food industry and sanitary applications
- ▶ EHEDG certified
- ▶ **High precision:** Reliable switching accuracy, even with slow flows
- ▶ **Simple monitoring:** LED chain to display the flow and the switching point
- ▶ **Robust design:** Fully electronic, without moving parts, with special encapsulation for industrial use.



**flow-captor
4120.13A S114/50.5**

The flow-captor system 4120 S100 + 402x.1x S100 is a separate system and is used where special protection of the electronics is required.



**flow-captor System
4120 S100 + 402x.1x S100**

The **flow-captor** • Application examples

The **flow-captor** sensors are used in various industries to monitor fluid flows. They monitor coolant and lubricant circuits to ensure safe and efficient operations.



Wind turbines



Railroad



Ships



Production facilities



Mine construction



Food industry

Advantages of flow captors in the industry:

- ▶ **Calorimetric measuring principle:**
No moving parts, therefore durable and low-maintenance.
- ▶ **Robust construction:**
Suitable for harsh environments with high temperatures or aggressive media.
- ▶ **Precise monitoring:**
Early detection of leaks, blockages or irregularities.
- ▶ **Energy efficiency:**
Reduction of unnecessary fluid consumption and operating costs.
- ▶ **Simple integration:**
Compact design enables flexible retrofitting in existing systems.

The **vent-captor** for air and other gases

Flow monitor / flow meter

The **vent-captor** is a compact, electronic flow sensor that works according to the calorimetric measuring principle. It detects the flow velocity of the air and converts this into electrical signals.



- ▶ Robust industrial design (fully encapsulated)
- ▶ For higher temperatures in separate design
- ▶ Measuring ranges from 0-5 m/s to 0-50 m/s
- ▶ Insertion and inline version
- ▶ Detection of the smallest flows
- ▶ High accuracy and reproducibility
- ▶ No mechanically moving parts

The **vent-captor 3201.5x** is suitable for operating voltages of 115 VAC and 230 VAC.



**vent-captor
3201.5x**

The **vent-captor** for air and other gases

The **vent-captor** for air and other gases

Air flow meter for compressed air up to 10 bar

Air flow monitor with 2 switching points

- ▶ Stainless steel housing
- ▶ Pressure max. 10 bar
- ▶ Versions also for higher Medium temperature up to max. 100° C
- ▶ Also available with positioning groove

**vent-captor
3205.30/xx**



vent-captor 3205.30/xx S102



**vent-captor
3202.12/.13 S300**

- ▶ 2 adjustable switching points
PNP n.c. / PNP n.o.
- ▶ Switching range: 0-30m/s

Inline devices for small pipe diameters



**vent-captor
3202.30**

- ▶ Detection of low flow quantities
- ▶ Stainless steel sensor tube
- ▶ The sensor tubes are available in the following standard sizes (in mm):
8 x 1; 12 x 1; 18 x 1.5
22 x 1.5; 28 x 1.5
- ▶ Practically no cross-sectional impairment

Separate systems are used where special protection of the electronics is required.

- ▶ Standard version up to 130 °C / 266 °F
- ▶ PEEK head up to 205 °C / 392 °F
- ▶ with 2 m shielded silicone cable

Separate system



The **vent-captor** - Application examples

The **vent-captor** sensors are used in various industries to monitor air and gas flows. They monitor cooling circuits, for example, to ensure safe and efficient operation.



Air conditioning / ventilation systems

**Transportation
Railway / Buses**

Food industry



Mining

Building technology

Renewable energies

Advantages of vent-captors in the industry:

- ▶ **Precise measurements:**
Thanks to the calorimetric measuring principle, the sensor provides accurate flow data, which is essential for process control.
- ▶ **Robust construction:**
The vent-captor is designed for industrial use and can withstand harsh environmental conditions.
- ▶ **Easy installation and handling:**
Its compact construction and well thought-out design enable uncomplicated integration into existing systems.
- ▶ **Low maintenance:**
With no moving parts, maintenance requirements are significantly reduced, which lowers operating costs.

Power supplies

This power supply enables the operation of 24 VDC sensors, such as our flow and vent captors, on AC voltage networks. It contains an integrated 24 VDC power supply unit as well as a switching stage with optocoupler output and potential-free switching contact. An LED signals the switching status.



Two variants for different sensor types:

Type 8010:
For PNP sensors or sensors with analog output

Type 8011:
For NPN-switching sensors

Evaluation units with digital display

The CUB 5PB00 is a digital display for all analog flow and vent captors. The display value (e.g. l/min, m³/h) is freely configurable and the display range can be individually adjusted by scaling.

Highlights:

- ▶ CD with red/green, dimmable backlighting
- ▶ easy programming via front buttons
- ▶ Memory for minimum and maximum values
- ▶ Optional switching output
- ▶ RS232/RS485 interface optionally available

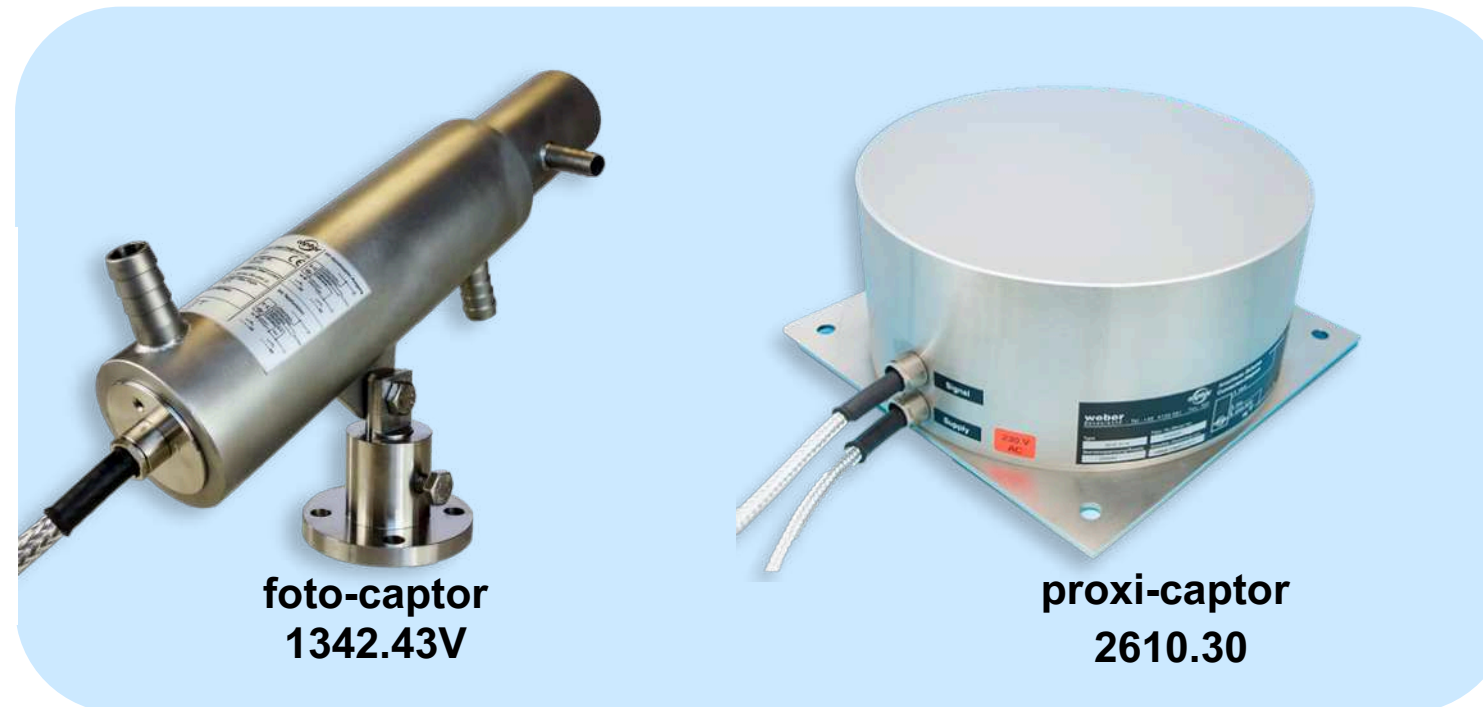


The **foto-captor** for the steel-industry

The **foto-captor** is a static infrared switch that has been developed for harsh operating conditions, especially in the steel industry. Wherever electrical switching commands can be triggered by the inherent radiation of hot rolled material, foto-captors have proven themselves under the harshest environmental conditions.

- ▶ For steel mill applications
- ▶ Suitable for a variety of different operating conditions
- ▶ Minimum response temperature from 200° C to 800° C
- ▶ Robust industrial design
- ▶ Fully electronic - no moving parts
- ▶ Compact devices or separate systems

Advantages of foto-captors in the steel industry:



- ▶ **Robustness:**
The sensor is designed for harsh environmental conditions and works reliably in demanding industrial applications.
- ▶ **Versatility:**
Thanks to various models with different response temperatures and viewing angles, the foto-captor can be flexibly adapted to specific requirements
- ▶ **Compactness:**
The integration of electronics and optics in one unit enables space-saving installation and simplifies installation in existing systems

The **proxi-captor** - proximity switch

The **proxi-captor** is an inductive proximity switch or distance meter developed for non-contact metal object detection and measurement. It is mainly used in the steel industry.

- ▶ Adjustable
- ▶ Robust and reliable
- ▶ Housing made of stainless steel, with aluminium or plastic
- ▶ For high ambient temperatures up to 200° C
- ▶ Compact devices
- ▶ Individual solutions possible

Advantages of the proxi-captor:

- ▶ **High precision:**
The sensor provides accurate measured values, which are essential for process control.
- ▶ **Robust construction:**
Specially designed for harsh industrial environments, it withstands high temperatures and mechanical stress.
- ▶ **Versatility:**
With switching distances of up to 140 mm and temperature resistance of up to 200 °C it is suitable for various applications.
- ▶ **Easy integration:**
Thanks to its compact design and standardized interfaces, the sensor can be easily integrated into existing systems.

Weber worldwide

captor products are sold worldwide directly and through an authorized network of distributors.

You can find **captor sales partners** in the following countries:

Europe		Asia	North America	South-Amerika
Germany	Romania	China	Alabama	Argentina
Belgium	Sweden	Hong Kong	Arizona	Brazil
Denmark	Switzerland	India	Colorado	Colombia
Finland	Spain	Iran	Illinois	Peru
France	Portugal	Israel	California	
Greece		Japan	Canada	
Italy	Africa	Malaysia	Massachusetts	Oceania
Netherlands	South Africa	Saudi-Arabia	Ohio	Australia
Norway		Singapore	Pennsylvania	New Zealand
Austria		South Korea	South Carolina	
England		Taiwan	West Virginia	
		Turkey		

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