

PEEK Inductive Conductivity Sensor TCSP 3020 Series



- Measurement from 10 $\mu\text{S}/\text{cm}$ to 2000 mS/cm
- PEEK construction
- Excellent chemical resistance
- Temperature: max. 125 °C
- Integrated PT100 sensor

APPLICATIONS

The TCSP 3020 sensor is mainly designed for applications requiring high chemical or temperature resistance:

- Monitoring at wastewater treatment plant outlets
- Acid and base concentration measurement
- Industrial process fluids: CIP/SIP solutions
- Industrial hot water circuits
- NaOH concentration measurement (0 to 10%)

DESCRIPTION

The TCSP 3020 sensor enables conductivity measurement over a range from 10 $\mu\text{S}/\text{cm}$ to 2000 mS/cm .

It operates according to an inductive (toroidal) measurement principle, ensuring complete galvanic isolation between the measurement electronics and the fluid. This technology ensures reliable measurement, even with fouling, corrosive or highly loaded fluids.

The sensor body is made of PEEK (unfilled polyether ether ketone), providing excellent chemical resistance as well as good thermal stability.

Installation

- Immersion installation: installation at the end of a 500 to 2000 mm immersion tube, with optional flange mounting
- In-line installation: installation in a DN50 tee on the pipeline

Measurement system

A complete measurement system includes:

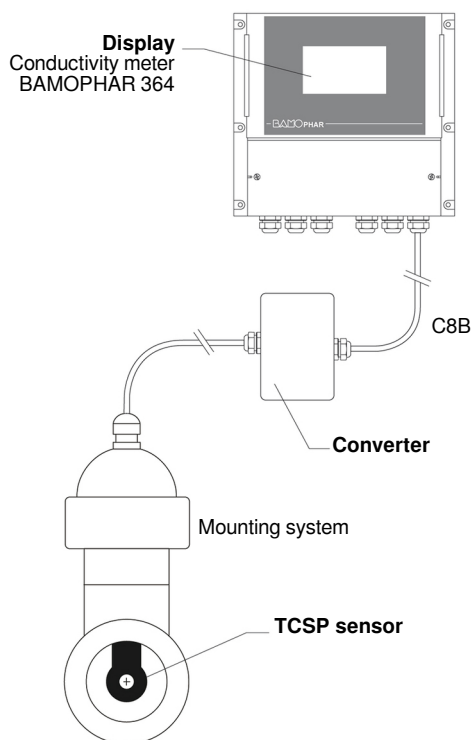
- One TCSP 3020 inductive conductivity sensor
- One mounting system for immersion or in-line installation
- One factory-calibrated measurement converter associated with the BAMOPHAR
- One C8B cable for connecting the converter to the BAMOPHAR
- One BAMOPHAR 364 conductivity meter

Display

The BAMOPHAR 364 is dedicated to inductive sensors. The programmable ranges are:

- 0- 2 mS/cm
- 0- 20 mS/cm
- 0- 200 mS/cm
- 0- 2000 mS/cm

Temperature compensation is provided via the integrated PT100 sensor, with a 4–20 mA output representing the measurement. Calibration is performed at the factory to ensure simple and quick commissioning on site.



Example of a complete assembly

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**PEEK Inductive Conductivity
Sensor
TCSP 3020 Series**

21-08-2026

D-364.06-EN-AC

RES

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TECHNICAL FEATURES

Measuring range	0... 2,000,000 µS/cm (0 ... 2000 mS/cm)
Body material	PEEK (polyether ether ketone)
Connection	3/4" MNPT
Temperature	Maximum 125 °C
Pressure	Maximum 20 bar
Temperature sensor	Integrated Pt100
Cable length	5 metres as standard (overmoulded)

CODES AND REFERENCES

Code	Reference	Description
Conductivity sensor		
364 057	TSCP 3020 PEEK	Conductivity sensor, PEEK construction / 3/4" NPT / 5 metres of cable
Mounting system		
364 153	T PPH-TCSP-DN50	PPH tee – DN50 plain end
364 201	T PVDF-TCSP-DN50	PVDF tee – DN50 plain end
364 351	SI-PPH-TCSP	Immersion sensor holder – PPH, length 1000 mm*
364 401	SI-PVDF-TCSP	Immersion sensor holder – PVDF, length 1000 mm*
130 112	9358	Adjustable PE flange Ø 50
Converter		
364 465	Converter for TCSP 3020 sensor, factory calibrated	
Extension cable		
368 108	C8B	8-core shielded cable
Conductivity meter for inductive sensor		
BAMOPHAR 364 : See data sheet 364-04		

*To facilitate installation of the immersion measurement holder, the use of the adjustable 9358 PE flange is recommended.

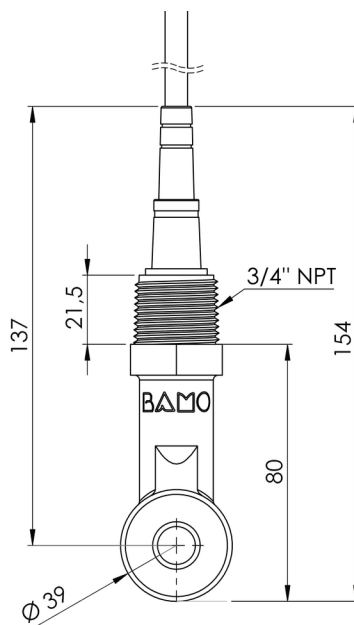
NOTE :

In all cases, the converter box shall be installed between the sensor and the BAMOPHAR 364 input.

This box shall be installed at the sensor head (immersion or flow-through installation).

A standard C8B measurement cable (code: 368 108) must be provided between the converter box and the BAMOPHAR 364.

DIMENSIONS



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