

# InPro® 7100 / InPro® 7100i

Conductivity sensors with VP/AK9-connector and 12 mm design for medium to high conductivity

## Technical Data

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InPro 7100

InPro 7100i

### Short description

#### InPro 7100-VP Series (analog)

4-electrode sensors for medium/high conductivity values for applications such as phase separation or CIP/SIP cleaning in the food & beverage industry and the pharmaceutical industry.

- WideRange™-technology for wide measuring range and cost-efficient installation.
- Optimal process safety due to Vario Pin connector and the quality of the materials used.

#### InPro 7100i AK9 Series (digital)

While the InPro 7100 gives an analog output signal, the InPro 7100i features our digital Intelligent Sensor Management (ISM) technology. The benefits of ISM include fast measurement start up thanks to Plug and Measure. This means that all relevant sensor data are stored on the microchip within the sensor's head and are automatically uploaded to the transmitter as soon as it is connected. The digital data transfer signal is not sensitive to noise and therefore ensures safety and reliability for your production processes.

Using the InPro 7100 series with static (InFit761e) or retractable (InTrac 785 or 787) housings provides a wide choice of installation options.

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**METTLER TOLEDO**

## Specifications InPro 7100 Series

	InPro 7100/InPro 7100i
Measuring principle	4-electrode sensor
Electrode material	SS 316L/1.4435 Hastelloy C22
Body material	PEEK (FDA)
RTD	Built-in Pt 1000/NTC 30k $\Omega$
Sensor diameter	12 mm (0.47")
Insertion length (for 120 mm version)	25/40/65 mm (0.98"/1.57"/2.56")
Max. sensor length	120 mm (4.72"), 425 mm (16.73")
Process connection	– Tri-Clamp 1.5" – Tri-Clamp 2" – Cap nut DN 25
Measuring range	See separate table on page 3
Cell constant nominal	0.31 cm <sup>-1</sup>
System accuracy	± 5.0% or better
ATEX	Ex II ½ G Ex ia IIB T6/T5/T4/T3*

\* ATEX pending

**Working conditions**

Pressure range	0 ... 20 bar (abs.) at 135 °C (0 ... 290 psi at 275 °F) 0 ... 10 bar (abs.) at 150 °C (0 ... 145 psi at 302 °F)
Measuring temperature range	–20 ... 150 °C (–4 ... 302 °F)
Temperature range (sterilization)	Sterilizable –20 ... 150 °C (–4 ... 302 °F)
Temperature accuracy at 25 °C (77 °F)	± 0.1 °C (± 0.18 °F)

**Design**

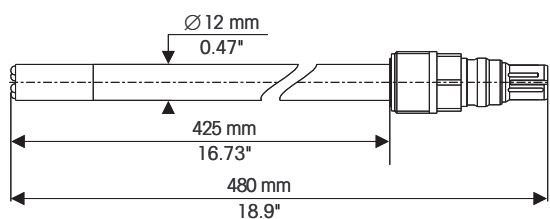
Temperature compensation	Pt 1000/NTC 30k $\Omega$ IEC class A
Cable connection	VarioPin (IP 68)/AK9(IP68)
<b>Wetted parts:</b>	
– Metals	SS 316L/1.4435 or Hastelloy C22
– Plastics	PEEK (FDA)

**Certificates**

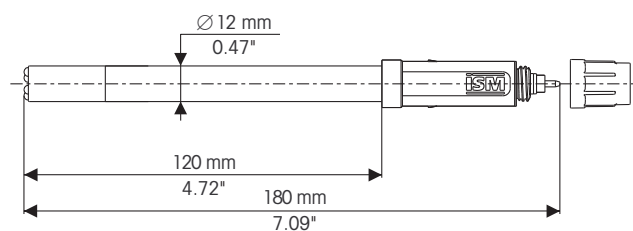
Cell constant	•
Material certificate	
EN 10204 3.1	• <sup>1</sup>
Material specification 2.1	•
ATEX	• <sup>2</sup>

1 on request, 2 pending

Drawing InPro 7100



Drawing InPro 7100i



Measuring ranges

Sensor \ Transmitter	M300	M300 ISM	M400	M420	M700	M800
InPro 7100 (mS/cm)	0,02–400	–	0,02–400	0,02–400	0,02–400	–
InPro 7100i (mS/cm)	–	0,02–500	0,02–500	–	–	0,02–500

Accuracy better than ± 5%

Recommended METTLER TOLEDO housings

Stationary housing	Order no.	Suitable sensor
InFit 761e with TC 1.5" or 2.0" (25 mm immersion)	various	InPro 7100/InPro 7100i/120 mm
InFit 761e with D00 cap nut (40 mm immersion)	various	InPro 7100/InPro 7100i/120 mm
InFit 761e with D00 cap nut (65 mm immersion)	various	InPro 7100/InPro 7100i/120 mm
InFit 761e with D00 cap nut (375 mm immersion)	various	InPro 7100/InPro 7100i/425 mm
Retractable housing		
InTrac 787 with adapter 52 402 701	various	InPro 7100/InPro 7100i/120 mm
InTrac 785 without protective cage	various	InPro 7100/InPro 7100i/425 mm

Please note that each housing is available in a wide variety of materials, process connections, etc. Please contact your distributor to get the right ordering information.

Ordering information

InPro 7100	Order no.	InPro 7100i	Order no.
InPro 7100/12/120/4435	52 003 571	InPro 7100i/12/120/4435	52 003 791
InPro 7100/12/120/C22	52 003 572	InPro 7100 i/12/120/C22_	52 003 792
InPro 7100/12/425/4435	52 003 793	InPro 7100 i/12/425/4435	52 003 880
InPro 7100/12/425/C22	52 003 794	InPro 7100 i/12/425/C22_	52 003 881

VP Conductivity Cables	Order no.	AK9 Coax Cables for ISM sensors	Order no.
1.5 m (5 ft)	58 080 201	1 m (3.3 ft)	10 000 0102
3.0 m (10 ft)	58 080 202	3 m (9.8 ft)	10 000 0302
4.6 m (15 ft)	58 080 203	5 m (16.4 ft)	10 000 0502
7.6 m (25 ft)	58 080 204	10 m (32.8 ft)	10 000 1002
15.2 m (50 ft)	58 080 205	20 m (65.6 ft)	53 300 204
22.9 m (75 ft)	58 080 206		
30.5 m (100 ft)	58 080 207		

Max. recommended cable length with M300/M400/M420/M700: 15 m (50 ft)  
 With all other transmitters: 60 m (200 ft)  
 For ISM sensors: 80 m (260 ft)

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