

InPro® 4260 (i) and InPro® 4281 (i)

The combination pH electrodes with built-in temperature sensor for higher performance

Technical Data



InPro 4260

InPro 4260i

InPro 4281i

Short description

The InPro 4260 (i) and InPro 4281 i electrodes feature the Xerolyt® Extra polymer reference electrolyte for precise pH measurement and longer lifetime, even under the most difficult industrial environments. The InPro 4260 (i) and InPro 4281 i electrodes come with an open junction, which solves the problem of diaphragm fouling often found in applications where sticky media, solutions with high particle content or sulfide-bearing solutions are present. Digital signal conversion ensures 100% signal integrity and stability. Intelligent Sensor Management (ISM®) technology simplifies sensor handling and reduces sensor lifecycle costs.

The InPro 4260 (i) and InPro 4281 i electrodes, with Xerolyt Extra, provide the following advantages:

- Insensitive to flow variations.
- Especially adapted for low ionic content media and organic solvents.
- Available with the option of an auxiliary platinum electrode for Solution Ground (SG): The platinum-plated surface enables redox (ORP) measurement (InPro 4260 (i) only) and advanced sensor diagnostics, as well as preventing measurement errors due to ground potentials.
- Particularly insensitive to anionic salt contents as nitrate, sulfate, carbonate.
- Increased electrode lifetime in the presence of organic solvents, acids and alkalis.
- Open junction between sample medium and reference electrolyte (no diaphragm – no clogging) allows reliable measurements in heavily contaminated process media, in suspensions and emulsions, and in solutions containing protein.

ISM technology provides the following advantages:

- Swift exchange of pre-calibrated sensors at the measuring point with the Plug and Measure feature.
- Advanced sensor self-diagnostics.
- Predictive maintenance functions.
- Monitor the ageing of the sensor in real time with the Dynamic Lifetime Indicator.
- Adaptive Calibration Timer determines when the next calibration will be due.
- Allow digital documentation of every measurement system with the Electronic Data Sheet.

InPro 4281i robust construction with titanium shaft

Featuring a titanium shaft and a stainless steel thread, the InPro 4281i has been designed to withstand not only the most aggressive process conditions, but also the common everyday knocks in industrial sites.

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METTLER TOLEDO

Technical data of the InPro 4260(i) & InPro 4281 i

pH range	InPro 4260(i): 0–14 pH InPro 4262(i), InPro 4281 i: 1–14 pH
Temperature	0 to 130 °C (32 to 266 °F)
Pressure	1 to 15 barg at 25 °C, 7 barg at 130 °C (217 psi at 77 °F, 101 psi at 266 °F)
Cable Connection	ISM: K8S; Analog: VP
Process Connection	Pg 13.5 thread
Reference system	Argenthal
Type of junction	Open junction with direct contact to media
Reference electrolyte	Xerolyt® Extra (patented)
Lengths	120 mm, 225 mm, 425 mm
Shaft diameter	12 mm
Shaft materials	InPro 426x(i): Glass; InPro 428x i: Titanium
Temperature sensor	ISM: Digital; Analog: Pt 100 or Pt 1000
Sterilizable	No
Autoclavable	No
pH membrane	Various by applications
Solution ground	InPro 426x(i): Platinum; InPro 428x i: Titanium
Certificates	METTLER TOLEDO Quality certificate, EN 10204-3.1 (InPro 4281 i) Pressure Equipment Directive guidelines (PED) 97/23/EC ATEX: Ex ia IIC T6/T5/T4/T3 Ga/Gb. FM: IS Cl. I,II,III Div 1, GR ABCDEFG/T6

Buffer solutions

	Order no. 1 × 250 ml	Order no. 6 × 250 ml	Order no. 1 × 1000 ml
pH buffer solution			
Buffer pH = 4.01 (red)	51 340 057	51 340 058	51 340 228
Buffer pH = 7.00 (green)	51 340 059	51 340 060	51 340 229
Buffer pH = 9.21 (blue)	51 300 193	51 300 194	51 340 230
Storage solution			
Viscolyte®	51 340 235		

Transmitters

A wide range of transmitters can be offered to complete the Mettler-Toledo Ingold measurement system, including a 4-wire version for universal AC/DC power supply, or alternatively in 2-wire versions, with or without HART® or PROFIBUS® or FOUNDATION fieldbus® communication, of standard or explosion-proof (Ex) design.

Ordering information

Cables (ISM sensors)			Order no.
Standard temperature (–30 to 80 °C/–22 to +76 °F)			
AK9	open	1 m (3.3 ft)	59 902 167
AK9	open	3 m (9.8 ft)	59 902 193
AK9	open	5 m (16.4 ft)	59 902 213
AK9	open	10 m (32.8 ft)	59 902 230
AK9	open	20 m (65.6 ft)	52 300 204
Cables (Analog sensors)			Order no.
Standard temperature (–30 to 80 °C/–22 to +76 °F)			
VP6-ST/3 m (9.8 ft)			52 300 108
VP6-ST/5 m (16.4 ft)			52 300 109
VP6-ST/10 m (32.8 ft)			52 300 110
High temperature (–30 to 135 °C/–22 to +275 °F)			Order no.
VP6-HT/3 m (9.8 ft)			52 300 112
VP6-HT/5 m (16.4 ft)			52 300 113
VP6-HT/10 m (32.8 ft)			52 300 114

Ordering Information/Drawings

InPro 4260 (i)/InPro 4281 i

Ordering information

ISM Electrodes	Length	Temp. Signal	Order Number
InPro 4260i/SG	120 mm	Digital	52 005 381
InPro 4260i/SG	225 mm	Digital	52 005 382
InPro 4260i/SG	425 mm	Digital	52 005 407
InPro 4262i/SG	120 mm	Digital	30 018 467

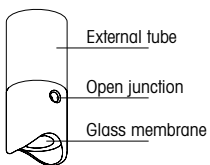
ISM Electrodes	Length	Temp. Signal	Order Number
InPro 4262i/SG	225 mm	Digital	30 018 468
InPro 4281 i/SG	120 mm	Digital	30 301 402
InPro 4281 i/SG	225 mm	Digital	30 301 403
InPro 4281 i/SG	425 mm	Digital	30 301 404

Analog Electrodes	Length	Temp. Signal	Order Number
InPro 4260	120 mm	Pt100	52 002 986
InPro 4260	120 mm	Pt1000	52 002 987
InPro 4260	225 mm	Pt100	52 002 988
InPro 4260	225 mm	Pt1000	52 002 989
InPro 4260	425 mm	Pt100	52 002 992
InPro 4260	425 mm	Pt1000	52 002 993
InPro 4260SG	120 mm	Pt100	52 003 545
InPro 4260SG	120 mm	Pt1000	52 003 546

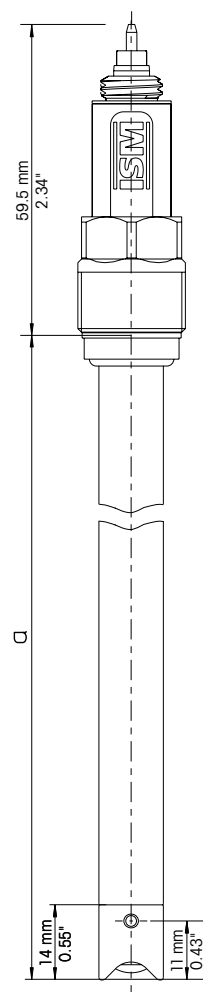
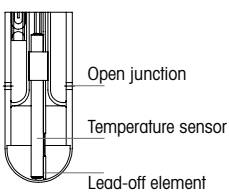
ISM Electrodes	Length	Temp. Signal	Order Number
InPro 4260SG	225 mm	Pt100	52 003 547
InPro 4260SG	225 mm	Pt1000	52 003 548
InPro 4262	120 mm	Pt100	52 003 549
InPro 4262	120 mm	Pt1000	52 003 550
InPro 4262	225 mm	Pt100	52 003 551
InPro 4262	225 mm	Pt1000	52 003 552
InPro 4262	425 mm	Pt100	52 003 553
InPro 4262	425 mm	Pt1000	52 003 554

Drawings

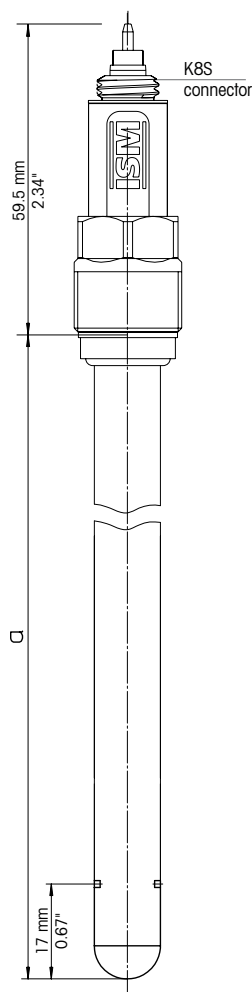
Sensor tip InPro 4281 i



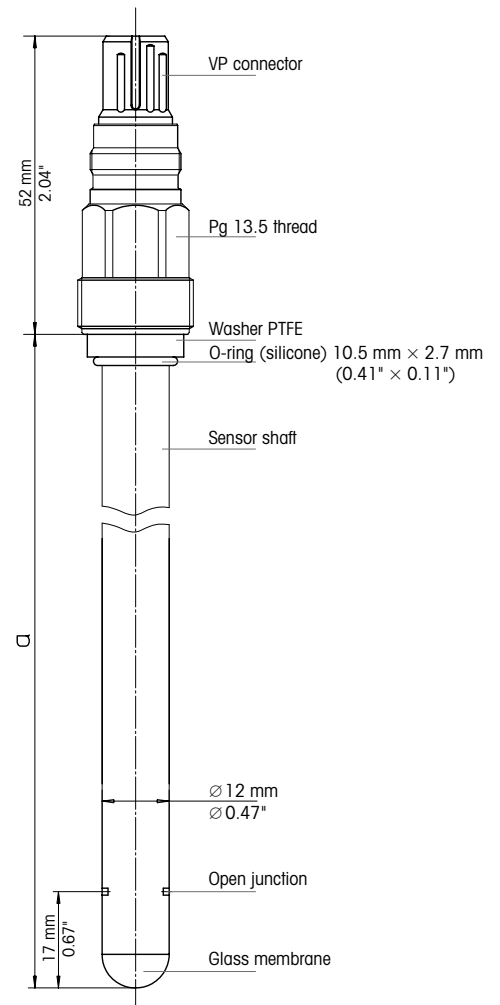
Sensor tip InPro 426X (i)



InPro 4281 i



InPro 426X i



InPro 426X

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