

InPro® 4250 and InPro® 4250 SG

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

Technical Data



InPro 4250

InPro 4250 SG

Short description

METTLER TOLEDO's combination pH electrodes with built-in temperature sensor InPro 4250 and InPro 4250 SG are designed for highly demanding chemical processes. These electrodes offer enhanced performance and a wider application field, especially in harsh chemical processes, due to improvements in the successful XEROLYT® polymer reference system.

The electrode InPro 4250, with the new XEROLYT® PLUS, provides the following advantages:

- High-performance measurement over a wider pH range, pH 0...14
- Increased electrode lifetime in the presence of organic solvents, acids and alkalis
- Low maintenance pH electrode-no refilling of electrolyte
- Integrated temperature sensor now positioned inside the glass membrane part offers increased performance
- 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
- Particularly efficient in sulfide-bearing media
- VarioPin (VP) connector (IP 68)
- Available with the option of an auxiliary platinum electrode for "Solution Ground" (SG): The platinum plated surface enables ORP measurements and advanced sensor diagnostics, as well as preventing measurement errors due to ground potentials
- Greater reliability due to a more voluminous glass membrane shape, impedes formation of disturbing air bubbles in the inner buffer
- Ex certification: II 1/2G EEx ia IIC/T6/T5/T4, SNCH 00 ATEX 3130X
- According to PED (Pressure Equipment Directive, 97/23/EC, Art. 3, Sec. 3)

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METTLER TOLEDO

Specifications

Measuring range	pH 0 ... 14 for InPro 4250 (SG) pH 1 ... 14 for InPro 4251/InPro 4252, with reduced lifetime at pH 12 ... 14
Temperature	0 ... 130 °C (32 ... 266 °F) Reduced lifetime and performance at temperatures over 110 °C/230 °F (InPro 4250), respectively over 80 °C/176 °F (InPro 4251/InPro 4252)
Pressure resistance	16 bar (25 °C), 8 bar (130 °C) 232 psi (77 °F), 116 psi (266 °F) according to PED (Pressure Equipment Directive, 97/23/EC, Art. 3, Sec. 3)
Reference system	XEROLYT PLUS (solid polymer), incl. KCl (patent pending)
Diaphragm	Open junction with direct contact with medium
Glass shaft	∅ 12 mm
Plug head	VarioPin (VP), Pg 13.5 thread
VP connector	IP 68
Auxiliary platinum electrode	Redox measurement (ORP), enhanced sensor diagnostics, solution grounding

Ordering information

pH electrodes

	Electrode length [a]	Order no.	Suitable housings
Temperature sensor Pt 100			
InPro 4250/120/Pt 100	120 mm	52 002 143	InFit 761e/762e
InPro 4252/120/Pt 100	120 mm	52 002 477	InFit 761e/762e
InPro 4250/225/Pt 100	225 mm	52 002 144	InTrac 777e
InPro 4251/225/Pt 100	225 mm	52 002 476	InTrac 777e
InPro 4252/225/Pt 100	225 mm	52 002 478	InTrac 777e
InPro 4250/425/Pt 100	425 mm	52 002 145	InTrac 777e

Temperature sensor Pt 1000

InPro 4250/120/Pt 1000	120 mm	52 002 146	InFit 761e/762e
InPro 4250/225/Pt 1000	225 mm	52 002 147	InTrac 777e
InPro 4250/425/Pt 1000	425 mm	52 002 148	InTrac 777e
InPro 4252/120/Pt 1000	120 mm	52 005 353	InFit 761e/762e
InPro 4252/120/Pt 1000	120 mm	52 002 477	InFit 761e/762e
InPro 4252/225/Pt 1000	225 mm	52 002 478	InTrac 777e

Solution Ground:

InPro 4250 SG/120/Pt 1000	120 mm	52 002 807	InFit 761e/762e
InPro 4250 SG/225/Pt 1000	225 mm	52 002 808	InTrac 777e

Cables (open ends)

Standard temperature (–30 to 80 °C / –22 to +76 °F)	Order no.
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

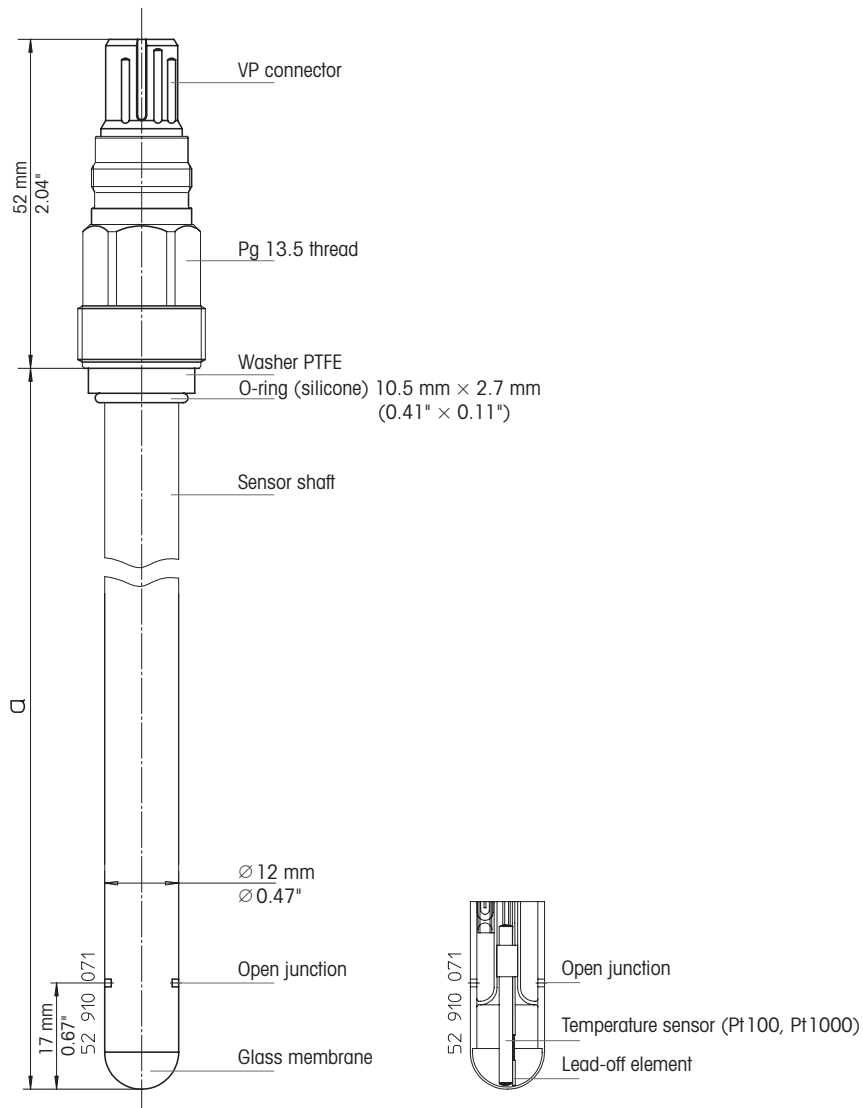
Buffer solutions			
	Order no. 1 × 250 ml	Order no. 6 × 250 ml	Order no. 1 × 1000 ml
pH buffer solution			
Buffer pH = 4.01 (red)	51 340 057	51 340 058	51 340 228
Buffer pH = 7.00 (green)	51 340 059	51 340 060	51 340 229
Buffer pH = 9.21 (blue)	51 300 193	51 300 194	51 340 230
Reference electrolyte			
Friscolyt™	51 340 053		

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® communication, of standard or explosion-proof (Ex) design.

Drawings

InPro 4250



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