

InPro 3100 (i) Versatile and Robust



InPro 3100

InPro 3100i

The InPro 3100 (i) is a combined pH electrode and temperature sensor designed specially for in-line pH measurements in bio-processes where CIP and SIP are used. This rugged gel-filled electrode leads the industry for fast and precise measurements, even after repeated autoclaving or sterilization cycles at 140 °C (284 °F). The electrode utilizes METTLER TOLEDO's silver-ion trap, keeping the reference junction clear even in the presence of sulfide-bearing solutions. With the InPro 3100 (i) UD, upside-down mounting is possible.

Specifications

pH range	0–14 pH	
Temperature	InPro 3100 (i):	0 to 80 °C (32 to 176 °F) for operation 0 to 140 °C (32 to 284 °F) for sterilization
	InPro 3100 (i) UD:	0 to 80 °C (32 to 176 °F) for operation 0 to 130 °C (32 to 266 °F) for sterilization
Operating pressure	0 to 6 barg @ 140 °C (0 to 87 psig @ 284 °F)	
Cable connection	ISM: K8S; Analog: VP	
Process connection	Pg 13.5 thread	
Reference system	Argenthal with silver-ion trap	
Type of junction	Ceramic junction	
Reference electrolyte	Gel	
Lengths	120 mm, 150 mm, 225 mm, 325 mm, 425 mm	
Shaft diameter	12 mm	
Temperature sensor	ISM: Digital;	
	Analog: Pt 100 or Pt 1000	
Sterilizable	Yes	
Autoclavable	Yes	
pH membrane	High alkali glass (HA)	

Certificates and Approvals METTLER TOLEDO Quality Certificate, 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

Intelligent Sensor Management (ISM)

pH electrodes with integrated ISM functionality allow Plug and Measure and advanced diagnostics. ISM simplifies the installation, handling and maintenance of measurement equipment. For more information see ISM introduction pages 10–11.

Features Overview

- Fully autoclavable or sterilizable in-situ
- Gel electrolyte reduces maintenance
- Resistant to poisoning substances
- EHEDG certified
- Pressure resistant up to 6 barg (87 psig)
- Watertight connector (IP 68)
- Integral temperature sensor permits automatic temperature compensation



Also available for upside-down installation as InPro 3100 (i) UD.

► www.mt.com/InPro3100

Ordering Information

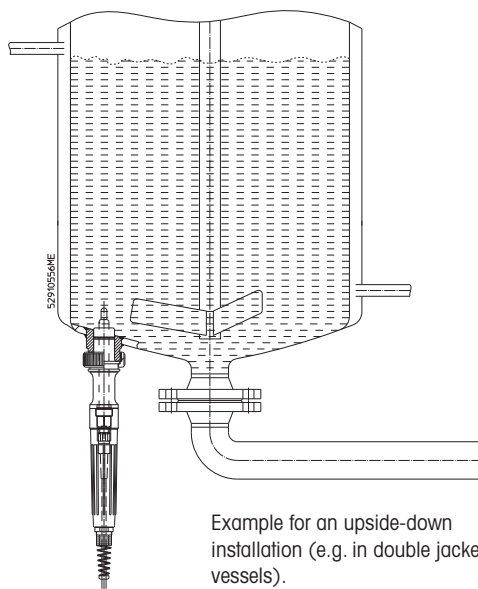
ISM Electrodes	Length	Temp. Signal	Order Number
InPro 3100i/SG	120 mm	Digital	52 003 515
InPro 3100i/SG	150 mm	Digital	52 003 516
InPro 3100i/SG	225 mm	Digital	52 003 517
InPro 3100i/SG	325 mm	Digital	30 090 877
InPro 3100i/SG	425 mm	Digital	30 091 063
InPro 3100iUD	120 mm	Digital	52 005 433
InPro 3100iUD	225 mm	Digital	52 003 583
Analog Electrodes			
InPro 3100	120 mm	Pt 100	52 000 656
InPro 3100	120 mm	Pt 1000	52 000 658
InPro 3100UD	120 mm	Pt 100	52 002 531
InPro 3100UD	120 mm	Pt 1000	52 002 752
InPro 3100	150 mm	Pt 100	52 000 659
InPro 3100	150 mm	Pt 1000	52 000 660
InPro 3100	225 mm	Pt 100	52 000 661
InPro 3100	225 mm	Pt 1000	52 000 662
InPro 3100UD	225 mm	Pt 100	52 005 354
InPro 3100	325 mm	Pt 100	52 000 663
InPro 3100	325 mm	Pt 1000	52 000 664
InPro 3100	425 mm	Pt 100	52 000 665
InPro 3100	425 mm	Pt 1000	52 000 666



Did You Know

All pH electrodes, even those with gel or solid polymer reference systems, contain a liquid electrolyte in the pH half cell which must be in contact with the internal silver wire in order for the sensor to measure accurately.

Sensors therefore must be installed at least 15° from horizontal to prevent air bubble interference. Exception: the InPro 3100 (i) UD “upside-down” electrode.



Example for an upside-down installation (e.g. in double jacket vessels).

Suitable Housings

	p.
InFit 761e	112
InFit 762e	118
InDip	120
InTrac 777e	127
InTrac 797e	128
InTrac 781	129
InTrac 785/787	130