# InPro® 3200(SG) gel-electrolyte pH electrodes with integrated temperature sensor.





solution.

METTLER

TOLEDO

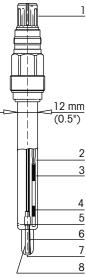
Combination electrodes with gel electrolyte and integrated temperature sensor for in-line pH measurements in a wide variety of applications, including harsh chemical processes, water and wastewater treatment, and sterile biotechnical fermentations.

INGOLD

Leading Process Analytics

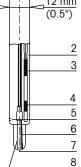
- Designed for use in tanks, open basins, transfer lines or in closed, lowpressure reactors and fermenters
- Multiple installation possibilities in stationary or retractable housings: InFit 761/762, InTrac 777/797, InFlow 751, InDip 502/550
- Pre-pressurized gel-electrolyte sensors for low-maintenance operation
- Integrated temperature sensor for automatic temperature compensation during calibration and measurement
- Patented silver-ion trap to prevent fouling of diaphragm in sulfidebearing media
- Sensor and connector design to allow autoclaving and in-situ sterilization where required
- Also available in an InPro 3200SG (solution ground) version with an additional platinum ring
- The SG wire in the cable can be connected to the transmitter to ground the measurement solution, for sensor diagnostics, or for simultaneous pH/ORP measurement

## InPro<sup>®</sup> 3200 (SG) gel-electrolyte sensors with RTD.



The InPro 3200 pH sensor, a further development of METTLER TOLEDO's well-proven DPA series of electrodes, has a temperature sensor type Pt100 or Pt1000 integrated in the electrode immediately behind the pH-sensitive glass. Simultaneous measurement of pH value and temperature facilitates operation and increases calibration and measurement accuracy, especially important in chemical processes with fluctuating temperatures. The robust Variopin (VP) connector to IP68 standard provides a reliable signal under harsh industrial conditions and is fully autoclavable, making this sensor ideally suited for applications involving small fermenters.

The InPro 3200 sensors also incorporate METTLER TOLEDO's unique design of the patented silver-ion trap and gel electrolyte pre-pressurized during manufacture to 2.5 bar (36 psi). The internal overpressure ensures a gradual outflow of electrolyte through the diaphragm, preventing the influx of process media into the reference system which could block the liquid junction and adversely affect results.



1 Connector VP 2 Reference electrolyte gel 3 Argenthal reference element 4 Silver-ion trap 5 Diaphragm 6 Lead-off element of glass electrode 7 pH sensitive glass 8 Temperature senso

## Specifications

pH range	014
Pressure range	From vacuum up to a process pressure of max. 2.5 bar (36 psi)
Temperature range	0100 °C (32212 °F) for operation
	0140 °C (32284 °F) for sterilization

Ordering informat	ion			
Sensor length	Designation	Order No.	Designation*	Order No.
120 mm (4.7")	InPro 3200/120/Pt100	52 001 418	InPro 3200SG/120/Pt100	52 001 813
120 mm	InPro 3200/120/Pt1000	52 001 419	InPro 3200SG/120/Pt1000	52 001 814
200 mm (7.9")	InPro 3200/200/Pt100	52 001 420		
200 mm	InPro 3200/200/Pt1000	52 001 421		
225 mm (8.9")	InPro 3200/225/Pt100	52 001 422	InPro 3200SG/225/Pt100	52 001 815
225 mm	InPro 3200/225/Pt1000	52 001 423	InPro 3200SG/225/Pt1000	52 001 816
325 mm (12.8")	InPro 3200/325/Pt100	52 001 424	InPro 3200SG/325/Pt100	52 001 817
325 mm	InPro 3200/325/Pt1000	52 001 425	InPro 3200SG/325/Pt1000	52 001 818
425 mm (16.7")	InPro 3200/425/Pt100	52 001 503		
425 mm	InPro 3200/425/Pt1000	52 001 504		
* InPro 3200SG w	ith solution around			

InPro 3200SG with solution ground

## For InPro 3200SG additionally

425 1 Pt-Ring for grounding of measurement solution

INTERNET				

## http://www.mtpro.com



Management System certified according to ISO 9001 / ISO 14001

### Suitable housinas Sen

Transmitters

Sensor	Chemical applications	Water applications	Biotech applications	
length			side mounting	top mounting
120 mm	InFit 761-25-CP	InDip 550	InFit 761-25BT(B)/70	
	InFit 762	InFlow 751	InFit 761-25CIP/70	
225 mm	InTrac 777-SL/100	InDip 502	InFit 761-25BT(B)/175	InFit 761-19BT/175
	InTrac 777-SPR/100			
325 mm			InTrac 797/75	InFit 761-19BT/275
425 mm	InTrac777-SL/200			InFit 761-19BT/375
	InTrac777-SPR/200			

Designation

Cables (without connector transmitter side)	
Designation	Order No.
standard –3080 °C	
(-22176 °F)	

communication, in standard or explosion-proof design.

Sales and service:

standard –3080 °C		high temperature –30130 °C	
(-22176 °F)		(-22266 °F)	
VP6-ST/ 3 m (9.8 ft)	52 300 108	VP-HT/ 3 m	52 300 1
VP6-ST/ 5 m (16.4 ft)	52 300 109	VP-HT/ 5 m	52 300 1
VP6-ST/10 m (32.8 ft)	52 300 110	VP-HT/10 m	52 300 11

METTLER TOLEDO offers a complete family of transmitters to complete the pH/ORP measurement system, including a 4-wire version for universal AC/DC power supply, or 2-wire versions with or without HART®

Mettler-Toledo GmbH, Process Analytics Industrie Nord, CH-8902 Urdorf Tel. + 41 1 736 22 11, Fax +41 1 736 26 36

Subject to technical changes © Mettler-Toledo GmbH 01/02 Printed in Switzerland, 52 001 521

Order No.

12

13

14