Sentron

ConeFET pH probe

3280-010

Highlights

- ISFET = glass-free
- Fast response time
- Extremely robust
- Easy handling

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General purpose ISFET pH probe

Sentron offers a comprehensive line of high quality meters and probes for glass-free pH measurement. The SI meter and probe line is created around our proprietary ISFET pH sensor that offers accurate and reliable pH measurement for demanding applications.

The ConeFET pH probe is a general purpose probe with a conical tip designed to be used for a wide range of pH sensing applications. For example, the ConeFET can be used in the laboratory for sampling of liquids, with a wide range of viscosities, in a flask or beaker. It is also well suited for use in the field or in industry. Applications for which Sentron's customers use ConeFET probes include laboratory testing, environmental water quality monitoring, food quality monitoring and monitoring of pH in pharmaceutical / nutritional processes.

ISFET = glass-free

The ConeFET probe contains Sentron's non-glass ISFET (Ion Sensitive Field Effect Transistor) pH sensor. This sensing component is Sentron's proprietary design and has been improved continuously over the past 15 years.

In contrast to conventional glass pH electrodes, ISFET pH sensors are robust and do not require wet storage. This makes them well suited for many environmental, food and pharmaceutical applications. Even in areas like education or in laboratories, where glass pH electrodes can be used, ISFET pH measurement technology offers a much more durable and reliable solution.

Fast response time

ISFET pH sensors are fast because they measure directly at the surface. Sentron's SI series probes can give stable readings in under 5 seconds for almost all samples.

Extremely robust

Sentron probes are built from high quality ABS, PVC and PEEK materials. They are resistant to many aggressive solutions and can withstand rugged use. At the same time, they are light weight and easy to handle.

The probes have a polymer body snap-on type connector. Unlike DIN and bayonet type connectors, there are no moving parts nor screw thread that can be damaged.

The position of the ISFET and reference electrode has been designed to be clog and pollution resistant. In the event debris has accumulated on the sensor it can be easily cleaned with water and a brush.

Sentron probes are provided with protection against Electrostatic Discharge (ESD) ensuring measurements continue even in harsher electrostatic environments.

Easy handling

The ergonomic design makes the probe easy to hold. Its reduced weight and soft flexible cable allow it to be used in long flasks and/or low beakers without tipping the container.

Comprehensive probe line

The ConeFET is part of a comprehensive probe line that meets a broad range of pH measurement needs.

ConeFET: *3280-010*	Robust general purpose probe.
CupFET: *3200-010*	Probe for measurements of small liquid samples.
LanceFET: *2270-010*	Steel tipped probe for penetration and measurement of non-liquids such as meat and fruit.
LanceFET+H: 2274-010	Equal to LanceFET but with large handle for additional grip.
MiniFET: *9202-010*	Compact and sturdy probe with a 5mm (0.2") diameter barrel, ideal for embedded application.
MicroFET: *9270-010*	Laboratory probe with a very small 3mm (0.1") diameter barrel that fits test tubes and mini-cuvettes.

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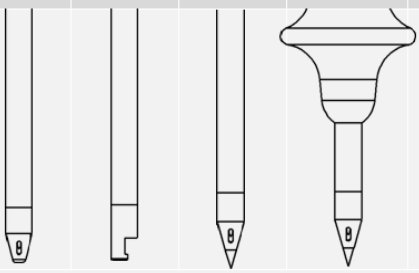
About Sentron

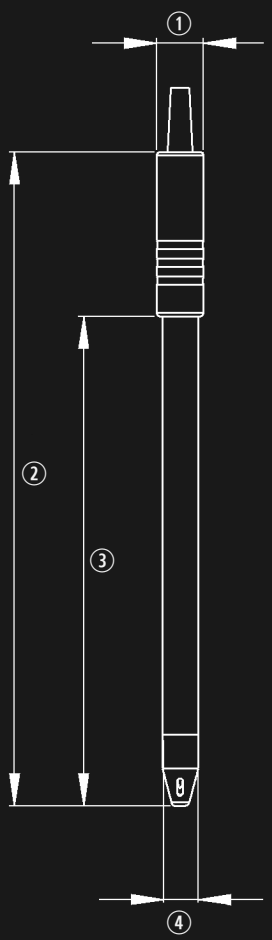
Sentron is an innovative Dutch technology company specialized in the development and production of small sensors for medical and analytical applications. The company leverages more than 15 years of experience to develop and produce its high quality ISFET pH and pressure sensors. Peripheral equipment for the sensors, such as measurement instruments, are designed, developed and produced in house as well.

Sentron is ISO 13485 and 9001:2008 certified for the development and manufacturing of sensors for the determination of physical and chemical values in the field of engineering and life science.

Please contact one of our distributors or visit our website for more information about the company, potential applications and for probes and accessories available for this meter.

Specifications

	ConeFET 3280-010	CupFET 3200-010	LanceFET 2270-010	LanceFET+H 2274-010	MiniFET 9202-010	MicroFET 9270-010
General description						
General fluids *(low viscosity)*	✓	✓	✓	✓	✓	✓
Semi fluids *(low to medium viscosity)*	✓	✓	✓	✓	✓	
Pastes and semi solids *(medium to high viscosity)*	✓		✓	✓		
Piercing applications *(normal to medium force penatration)*			✓	✓		
(high force and stabbing penatration)				✓		
General beakers and containers	✓	✓	✓	✓	✓	✓
Deep containers (up to 140 mm)	✓	✓	✓			✓
Small sample volumes (one drop ~20 µl)		✓				✓
Narrow vials / test tubes (as small as Ø 3 mm)						✓
pH						
Sensor	Glass-free Ion Sensitive Field Effect Transistor (ISFET) semiconductor					
Range	pH 0.00...14.00					
Drift	less than 0.14 pH/24h					
Reference system						
Type	non-flow					non-flow
Diafragm	porous PTFE					ceramic
Reference solution	gelled KCl					gelled KCl
Temperature						
Sensor	PT1000					
Range	0...80 °C (32...176°F)					
Physical properties						
Tip						
Dimensions						
Total length	183 mm (7.2")	183 mm (7.2")	190 mm (7.5")	223 mm (8.8")	83 mm (3.3")	157 mm (6.2")
Barrel length (immersible)	137 mm (5.4")	134 mm (5.3")	144 mm (5.7")	52 mm (2.0")	36 mm (1.4")	110 mm (4.3")
Barrel diameter	10 mm (0.4")	10 mm (0.4")	10 mm (0.4")	10 mm (0.4")	5 mm (0.2")	3 mm (0.1")
Cable length	1600 mm (63")	1600 mm (63")	1600 mm (63")	1600 mm (63")	1600 mm (63")	1600 mm (63")
Materials						
Tip/barrel	PEEK / ABS		PEEK / ABS + Stainless steel point		PEEK / ABS	PEEK
Handle and strain relief	PVC		PVC		PVC	PEEK
Cable	PVC		PVC		PVC	PVC
Weight	35 gr. (1.2 oz)	35 gr. (1.2 oz)	35 gr. (1.2 oz)	165 gr. (5.8 oz)	8 gr. (0.3 oz)	8 gr. (0.3 oz)
Protection rating	IP68 (connector IP67)					
Connector	5-pin, push-pull type connector					
Meter compatibility	SI meter series					



①	13 mm	0.5”
②	183 mm	7.2”
③	137 mm	5.4”
④	10 mm	0.4”