

## Single-Use pH, DO, and Conductivity Sensors

Wide application ranges, reliable performance



### Electrochemical pH Sensor

- Long-term signal stability thanks to glass pH/reference electrodes
- One sensor for many applications
- Dry storage capability simplifies bag handling



### Optical DO Sensor

- Stable performance in long fermentation runs
- Short pre-conditioning phase reduces start-up time



### 4-E Conductivity Sensor

- Hygienic design ensures process safety
- Easy start-up due to factory cell constant



### Unified, Safe Installation

- Designed for 1" Eldon James port disc
- Ideal for welding to bag stock



### Single-Use Solution

#### Reusable Sensor Performance

The InSUS x07 sensor series for single-use technology bioprocesses covers pH, dissolved oxygen (DO), and conductivity measurement. All three sensors have been designed especially for deployment in single-use bags. The unified design allows safe and easy installation in a standard 1" Eldon James port disc. All sensors are characterized by their long-term measurement stability and suitability for use in a broad range of applications including fermentation, media/buffer preparation, and virus inactivation. For example, the electrochemical measurement technology used in the InSUS 307 pH sensor covers a pH range from 3...10, and eliminates the need of using two or more optical pH spots.

All wetted polymer materials are made of USP class VI certified materials in order to ensure the highest process safety. The sensor output signals are identical to the ones of reusable analytical sensors from METTLER TOLEDO. Consequently, seamless integration into an existing transmitter, or bio controller process environment, is straightforward.

**Technical data for the InSUS x07 series**

**General**

Shaft material	High density polyethylene, USP 88 class VI
O-ring material	EPDM, USP 88 class VI
Process connection	Eldon James 1" port disc, with retainer
Gamma ray sterilizable	25 ... 45 kGy
Operating temperature	5 ... 60°C (41 ... 140°F)
Storage temperature	5 ... 25°C (41 ... 77°F)
Mechanical pressure resistance	2 barg / 40 °C (29 psig / 104 °F), 1 barg / 60 °C (15 psig / 140 °F)
Approvals	USP 88 class VI for all wetted polymer parts, factory calibration

**InSUS 307 pH Electrode**

Sensing elements	Glass pH and reference electrodes, lead-free
Integrated temperature probe	Pt 1000
Measuring range	pH 3 ... 10
Zero point	7.20 ± 0.25 pH
Calibration	1-point process

**InSUS 607 Dissolved Oxygen Sensor**

Sensing element	Optical spot (fluorescence quenching)
Integrated temperature probe	Pt 1000 (integrated in reusable optical fiber extension)
Measuring range	0 ... 100% air
Calibration	1-point air

**InSUS 707 Conductivity Sensor**

Sensing elements	Electropolished stainless steel electrodes
Integrated temperature probe	Pt 1000
Measuring range	5 ... 200 mS/cm
Calibration	Cell constant, factory calibrated

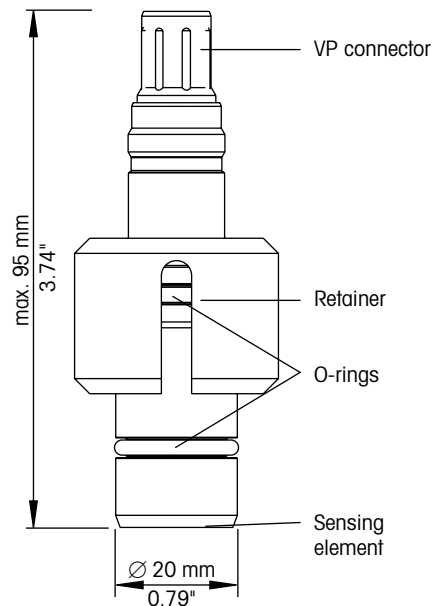
**Additional information**

**Compatible transmitters**

M300 single- and dual-channel versions
M400 types 1, 2, and 3 (types 2 and 3 for InSUS 607)

**Other components**

Sensor head for InSUS 607
Optical fiber extension for InSUS 607, 1.0 or 1.5 m
VP6 cable for InSUS 307, VP8 cable for InSUS 707, 1 ... 10 m



**Multi-parameter transmitter series**

One user-friendly platform for METTLER TOLEDO single-use and reusable sensors



InSUS 607 sensor head and glass fiber extension for connection to M400 Type 2 or 3 transmitters

[www.mt.com/pro](http://www.mt.com/pro)

For more information

Sales and service:



Management System certified according to ISO 9001 / ISO 14001

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