

Sense300 Series Water Quality Probes

Water Level · Dissolved Oxygen · pH · Conductivity



Probes for Pressure, Temperature & Water Quality

Analogue and Digital Transmitters

The devices come with analogue, digital or switching output, and can be outfitted for absolute pressure or gauge pressure measurements.

Analogue output options include voltage outputs ranging from 0...1V to 0...10V as well as current output signals 0...20mA and 4...20mA in two- or three-wire technology.

Optional Temperature Measurements

All water level probes can optionally be outfitted with the necessary electronics for temperature measurements. In this case the P-Sense320 probe provides a second analogue output. Probes for pH, conductivity and dissolved oxygen measure temperature by default in order to deliver compensated readings.

Sense300 probes have very compact dimensions and their entire circuitry is integrated into the stainless steel or POM housing which is completely submersible or can be attached to process fittings.

All three water quality models allow for user calibration and the replacement of their respective electrodes.



Submersible Probe
P-Sense320

P-Sense320-AG
1/8 Inch Screw-In Thread

The P-Sense transducers for pressure and temperature can be used both in air and in water or other fluids.

Potential fields of application are water level monitoring or fluid level measurements, e. g. in bodies of water or storage tanks.



PH/Temperature **pH-Sense330**
Conductivity/Temperature **μS-Sense340**



Diss. Oxygen/Temperature **O2-Sense355**

Features

- Robust housing made of stainless steel (pH-Sense & μS-Sense) and POM (O2-Sense)
- Piezo-resistive, media separated sensor for pressure + optional temperature sensor
- High accuracy due to 20bit analogue-to-digital conversion
- ASCII stream für computerized measuring systems and data loggers
- Low power demand (suitable for use with data loggers)
- Supply voltage (3...30 VDC)
- Polarity protection, lightning protection

Optional Relay Output

The probes can optionally be equipped with a switching output. You can either order your model with a preconfigured switching value or use the InfraLog for Windows software for configuration of the switching value and hysteresis.

RS485/RS232 Interface

Sense300 probes can be fitted with an RS485 interface (other options on request) instead of an analogue output which can be connected to a computer using a RS232 adapter. Connection and data transfer to a PC/notebook can be established with a terminal application.

Alternatively, we offer the InfraLog for Windows software with online graphs, capture tool and export options (e. g. to Excel).

Download of measurements can be done with pulled operations or automatically within regular intervals (2s...24hrs).

CTD-Sense 300



3 Parameter Probe CTD-Sense300

The CTD-Sense300 is a multi-parameter probe for measuring water level, temperature and also conductivity at the same time.

It can be ordered as one of two models: either with a built-in sensor for absolute pressure (option -A) or with a built-in sensor for relative pressure (option -R).

For conductivity and depth the CTD-Sense300 uses the same sensors as the μ S-Log3040 and P-Log3020. Hence its measuring range, accuracy and resolution are the same. Also, the conductivity electrode can be replaced by the user.

Features	
3 parameters (CTD) simultaneously	
Low power consumption for maintenance-free long-term operation	
Small diameter for use in 2" wells	

Specifications	
Mechanics	
Dimensions:	d= 36mm, l= 380mm
Weight:	ca. 800g
Housing:	POM, V4A optional
Electrics	
Measuring range & Accuracy:	see specs for pressure and conductivity on the next page
Power supply:	3 ... 30 VDC (voltage outputs) minimum 10V for current signals

Current drain:	< 1 mA (with 0...1V output) < 2 mA (other voltage outputs) < 20 mA (current output)
Analogue output:	0...20mA, 4...20mA (three-wire) 0...1V, 0...5V, 0...10V
Max. load:	500 Ohm (max.)
Standard cable:	PUR cable, 10m, 20m, 50m, 150m, custom lengths on request
Petrol resistance:	Optional

CTD-Sense 300 Order Code		
CTD-Sense300-MA-MBP-MBC-A-KL		
MA = Model	A	= Absolute pressure
	R	= Relative pressure
MBP = Meas. range (pressure)	06	= 600 mbar
	10	= 1 bar
	20	= 2 bar
	60	= 6 bar
	100	= 10 bar
MBC = Meas. range (conductivity)	001	= 0...1 000 μ S
	005	= 0...5 000 μ S
	100	= 0...100 000 μ S
	200	= 0...200 000 μ S
	XXX	= Custom range in mS
A = Output	232	= RS232 output
	485	= RS485 output
	CMOS	= CMOS-UART output
	10	= 0...10V*
	420D	= 4...20mA* three-wire
KL = Cable length	6	= 6m
	10	= 10m
	20	= 20m
	50	= 50m
	X	= Custom length in metres
* = 2 analogue outputs for depth and conductivity. Temperatur measurements are for compensation purposes.		

Specifications

Electrics

Power supply:	3...30 VDC (for voltage outputs) min. 10V for current outputs
Current drain:	<1 mA (with 0...1V output) <2 mA (other voltage outputs) <20mA (current output)
Analogue output:	0...20mA, 4...20mA (three-wire), 0...1V, 0...5V, 0...10V, 4...20mA (two-wire)
Max load:	500 Ohm (max)
Standard cable:	PUR cable, 10m, 20m, 50m, 150m custom lengths upon request
Petrol resistance:	Optional
Housing material:	V4A stainless steel (P-/µS-/pH-Sense) POM (O2-/CTD-Sense)

Dimensions:

P-Sense:	d = 25mm, l = 220mm
µS-Sense:	d = 25mm, l = 340mm (incl. PG gland)
pH-Sense:	d = 25mm, l = 405mm
O2-Sense:	d1= 36mm, l = 285mm (front piece, sensor head) d2= 50mm, l = 262mm (end piece) l = 547mm (entire probe)

Temperature

Measuring range:	0...70°C
Accuracy:	±0.2°C
Resolution:	better than 0.01°C

Pressure

Measuring range:	0...600mbar, 0...1bar, 0...2bar, 0...5bar, 0...16bar (Custom measuring ranges and scalings available without extra charge on request)
Accuracy:	±0.5% of range (±0.1% optional)
Resolution:	better than 0.002% of range
Long-term stability:	<0.1% of range
Overpressure:	min. 2 x FS

PH

Sensor:	Strong glass electrode (replaceable by user)
Measuring range:	1...14 pH
Resolution:	0.01 pH
Accuracy:	± 0.02 pH
Operating depth:	up to 100m

Conductivity

Sensor:	Conductometric two-electrode measuring cell (replaceable by user)
Measuring range:	0...1 000 µS/cm 0...5 000 µS/cm 0...100 000 µS/cm 0...200 000 µS/cm
Resolution:	0.2%
Accuracy:	2% of full-scale range
Operating depth:	up to 100m

Dissolved Oxygen

Sensor:	Optical O2 sensor
Measuring range:	0...30mg/l dissolved oxygen (0...100% dissolved oxygen in local air concentraion)
Resolution:	0.05%
Accuracy:	±1% of reading + 8ppb
Temperature compensation:	disabled by default, activatable
Operating depth:	up to 60m
Life expectancy:	DO electrode approx. 12 Months (replaceable by user)

Pressure / Water Level Probe Order Code P-Sense320-O1-O2-A-MB-MA-KL-O3-O4-KAL-O5

O1 = Option1	P	=	Pressure only
	PT	=	Pressure and temperature
O2 = Option2	S	=	Accuracy 0.5%
	V	=	Accuracy 0.1%
A = Ausgang	420Z	=	4...20 mA two-wire*
	420D	=	4...20 mA three-wire
	020	=	0...20mA
	01	=	0...1 V
	025	=	0...2.5V
	05	=	0...5 V
	10	=	0...10 V
	485	=	RS485 output
	232	=	RS232 output
	CMOS	=	CMOS-UART output
MB = Measuring range	06	=	600mbar
	10	=	1 bar
	20	=	2 bar
	50	=	5 bar
	160	=	16 bar
MA = Measuring mode	A	=	Absolute pressure
	R	=	Relative pressure
KL = Cable length	6	=	6m
	10	=	10m
	20	=	20m
	50	=	50m
	X	=	Custom length in metres
O3 = Option3	R	=	With relay output
	O	=	Without relay output
O4 = Option4	STD	=	Water level model
	AG	=	Connection thread model (G 1/8 Inch)
KAL = Calibration	STD	=	Calibrated for the specified range (MB)
	XXX	=	Custom calibration Specify as follows 0/500 for 0...500mbar
O5 = Cable	STD	=	Standard PUR cable
	20	=	Petrol-resistant cable

* = With two-wire current loop only 1 output is available.

Water Quality Probe Order Code

PH-Sense330-A-KL-O1 µS-Sense340-MB-A-KL-O1 O2-Sense355-A-KL-O1

MB = Measuring range	001	=	0...1000 µS/cm
(only µS-Sense 340)	005	=	0...5000 µS/cm
	100	=	0...100 000 µS/cm
	200	=	0...200 000 µS/cm
	XXX	=	Custom range in µS/cm
A = Output	420D	=	4...20 mA three-wire
	020	=	0...20mA
	01	=	0...1 V
	05	=	0...5 V
	10	=	0...10 V
	485	=	RS485 output
	232	=	RS232 output
	CMOS	=	CMOS-UART output
KL = Cable length	6	=	6m
	10	=	10m
	20	=	20m
	50	=	50m
	X	=	Custom length in metres
O1 = Option1	R	=	with relay output
	O	=	without relay output



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