

# GAS & SPECIALTY SENSORS



## PH OR ORP TRANSMITTER 50000 PH & ORP SERIES

### DESCRIPTION

The **Burkert 50000 pH and ORP transmitter** is a compact device designed for measuring the pH or oxidation-reduction potential (ORP) in clean liquids or liquids that may have low conductivity. The transmitter consists of a replaceable standard 120 mm pH or ORP probe screwed in a probe holder with integrated Pt1000 temperature sensor.

This assembly is then mated to an enclosure containing the electronic module and a removable display for a quick and easy installation. The pH/ORP transmitter can operate independent of the display, but it will be required for programming the transmitter and also for visualizing the measured and processed data.

The **50000 Standard** is available with either two transistors and one 4-20 mA output or two transistors and two 4-20 mA outputs. The **50000 Neutrino Series** is a cost effective less featured product measuring pH and ORP but with one 4-20 mA output and is not available with an LCD display.

NEW!



559168  
w/ 561025



559168



560693

**bürkert**  
Fluid Control Systems



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**Principles of Operation:** The 50000 device can be used as a pH or a ORP transmitter according to the probe version mounted into the holder. The pH or redox probe is a glass membrane with variable selectivity according to the pH or the redox, which must be calibrated with buffer solution before the installation of the transmitter into the pipe.

When a pH probe is immersed into the solution a difference in potential is formed due to ions (H+) between the glass membrane and the solution. This difference in potential measured in relation to a reference electrode is directly proportional to the pH value.

### FEATURES

- **Programmable outputs:** two transistor and single or dual analog 4-20 mA
- **Removable backlighted display**
- **Universal process connection**
- **Compatible with pH/ ORP probes**
- **Diagnostic functions**
- **Additional material construction:** PVC or PVDF

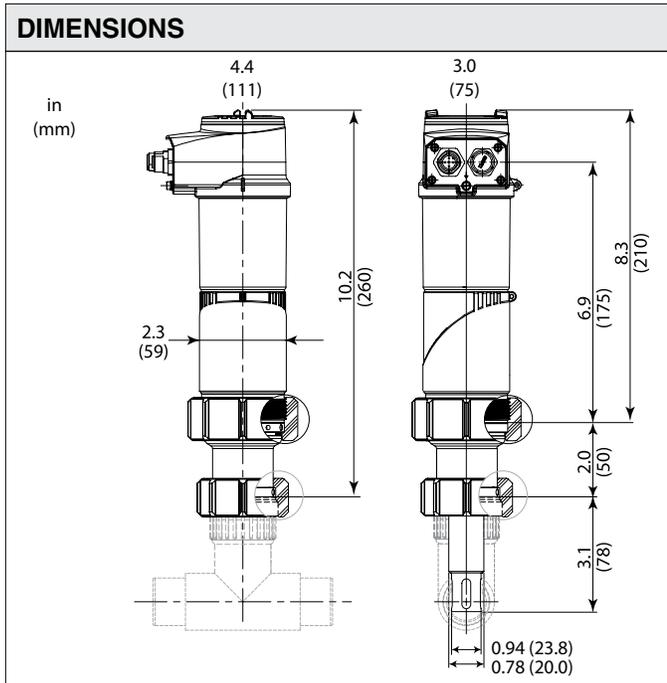
### SPECIFICATIONS

<b>Supply Voltage</b>	14-36 VDC reversed polarity protection	<b>Fluid Pressure Limit</b>	0 to 87 PSI (0 to 6 bar)
<b>Supply Current</b>	With Sensor: ≤ 1 A (with transistor loads) analog output: ≤ 25 mA (at 14 VDC without transistor loads, with current loop)	<b>Maximum Pressure</b>	58 psi (4 bar)
<b>Signal Output Standard</b>	Switch: Transistor Current: 4-20 mA	<b>Media Compatibility pH</b>	Contaminated fluids (viscous, suspended solids, small volumes)
<b>Neutrino Maximum Output Impedance mA Accuracy</b>	Current: 4-20 mA 610 Ω at 24 V DC	<b>ORP</b>	Clean (cooling-water, waste water or slightly contaminated)
<b>pH ORP Resolution</b>	±0.02 pH or 0.5 mV ± 3 mV temperature: ±1°C (1.8°F)	<b>Media Temperature Range pH</b>	32° to 176°F (0° to +80°C) 14° to 122°F (-10° to +50°C)
<b>pH ORP Temperature Measurement Range</b>	0.1°C (0.18°F) -2 to 16 pH or -580 to +580 mV -2000 to +2000 mV	<b>Operating Humidity</b>	≤ 85%, without condensation
<b>pH ORP Temperature Display</b>	-40 to +130°C (-40 to 266°F) Grey dot matrix 128x64 with backlighting	<b>Operating Temperature Transmitter</b>	14° to 140°F (-10° to +60°C)
<b>Response Time</b>	150 ms (10 to 90%)	<b>Probe (Flatrobe)</b>	32° to 140°F (0° to +60°C)
<b>Wiring Terminations</b>	Single analog output: 1x 5-pin M12 male fixed connector	<b>Enclosure Rating Standard</b>	IP65 and IP67 with M12 cable plug mounted and cover tightened also includes NEMA 4X and NEMA 6P
		<b>Neutrino</b>	
		<b>Dimensions</b>	12"H x 3"W x 4.4"D (30.5 x 7.6 x 11.2 cm)
		<b>Approvals</b>	UL file E27737, CAN/CSA-C22
		<b>Warranty</b>	1 year

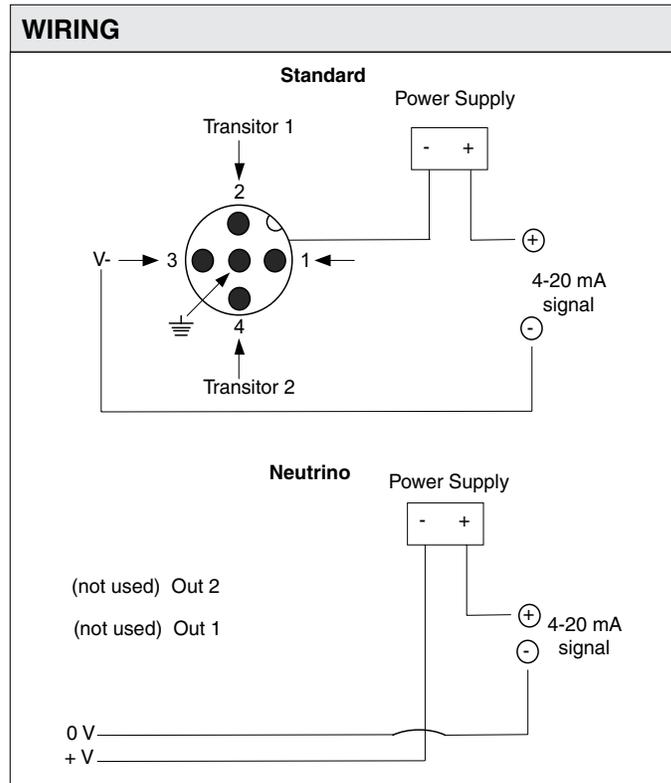
NEW!



## PH OR ORP TRANSMITTER 50000 PH & ORP SERIES



**Installation:** The 50000 series pH/ORP transmitter can be installed into 560693 Tee. Install it in a vertical position with an angle no greater than 75° from the vertical center line.



### ORDERING INFORMATION

Parts needed for unit with display and single 4-20 mA and two transistors	
559168	Display programming module
559634	Standard pH transmitter, PVC mounting nut
560693	1 in NPT mounting adapter tee
917116	Electrical plug
561025	pH probe 0 to 14 pH
<b>For ORP, order 561027 probe instead of pH probe listed above</b>	
Parts needed for unit without display and single 4-20 mA	
562557	Neutrino pH transmitter, PVC mounting nut
560693	1 in NPT mounting adapter tee
917116	Electrical plug
561025	pH probe 0 to 14 pH
<b>For ORP, order 561027 probe instead of pH probe listed above</b>	

RELATED PRODUCTS	
561228	SO22 threaded adapter for use with threaded tank or pipe, 1 1/4" NPT, PVC-U/FKM, EPD
561232	SO22 welded adapter for use directly on a pipe, Stainless steel/FKM, EPD

ACCESSORIES		PAGE
418540	Buffer solution, 500 ml, pH = 4	
418541	Buffer solution, 500 ml, pH = 7	
418543	Buffer solution, 500 ml, pH = 10	
418555	Buffer solution, 500 ml, ORP = 475 mV	
418557	Storage solution for probes (KCl 3M), 500 ml	
560949	Cleaning solution set for probes, 3x 500 ml	
DCP-1.5-W	Power supply, 24 VAC IN to 24 VDC OUT	995
DCPA-1.2	Power supply, 120 VAC IN to 24 VDC/24 VDC OUT	994