

GAS & SPECIALTY SENSORS



CONDUCTIVITY TRANSMITTER 50000 CONDUCTIVITY SERIES

bürkert
Fluid Control Systems

DESCRIPTION

The **Bürkert transmitter 50000 series** is a compact transmitter designed for measuring the conductivity of fluids. The transmitter consists of a sensor, enclosure with cover, and an optional and removeable display. The sensor comprises a cell with two electrodes and a platinum 1000 ohm temperature probe. The sensor itself is available with three different cell constants; C = 0.01, 0.1, and 1.0. The C = 1.0 constant uses graphite electrode, while the other two incorporate stainless steel. The conductivity transmitter can operate independent of the display but the display is required for programming the transmitter. The 50000 Series is available with three fully programmable outputs (two transistor and one 4-20 mA analog output).

The 50000 "Neutrino" Series, a less featured conductivity transmitter, has only one 4-20 mA analog output and is not available with LCD display.

FEATURES

- **Programmable outputs: two transistor and single or dual analog 4-20 mA**
- **Removable backlighted display**
- **Universal process connection**
- **Three cell constants for covering a wide measuring range C = 0.01, 0.1 and 1.0 standard**
- **Diagnostic functions**
- **Additional material construction: PVC or PVDF**



559638



559168



560693



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Installation: The **50000 Series** conductivity transmitters is installed into the 560693 1" NPT PVC tee by screwing the external thread connection on the 559638 probe to the SO22 mating connection on the tee. For mounting on a tank or pipe, then use 561228, which has the SO22 connection for the probe and 1 1/4" male thread for connection to pipe or tank. For welding to tank or pipe, then use 561232, which has SO22 connection for the probe and a 1 3/16" male to slide in hole in pipe or tank.

SPECIFICATIONS	
Supply Voltage Accuracy	14-36 VDC reversed polarity protection Conductivity: $\pm 3\%$ of measured value Temperature $\pm 1.8^\circ\text{F}$ (1°C)
Supply Current	With Sensor: ≤ 1 A (with transistor loads) analog output: ≤ 25 mA (at 14 VDC without transistor loads, with current loop)
Signal Output Standard	Switch: Transistor, 1-36 VDC @ 0.5 A max. Current: 4-20 mA @ 610 Ω Current: 4-20 mA @ 610 Ω 1 nS/cm
Neutrino Resolution	1 nS/cm
Measurement Range	Conductivity: 0.05 $\mu\text{S}/\text{cm}$ to 10 mS/cm Temperature: -40° to 266°F (-40° to $+130^\circ\text{C}$)
Display Response Time	Grey dot matrix 128x64 with backlighting 150 ms (10 to 90%)
Materials Of Construction	Housing / cover: Stainless steel 1.4561, PPS / PC Seals / Screws EPDM / Stainless steel Fixed connector mounting plate: Stainless steel Fixed connector: Brass nickel plated Display / navigation key: PC / PBT Nut: PVC or PVDF Wetted part materials Conductivity sensor: PVDF, stainless steel 1.4571 (316Ti) Electrode: Stainless steel 1.4571 (316Ti) for cell constant C=0.01 or C=0.1 or graphite for cell constant C=1.0
Wiring Terminations	Single analog output: 1x 5-pin M12 male fixed connector
Fluid Pressure Limit	0 to 87 PSI (0 to 6 bar)
Maximum Pressure	58 psi (4 bar)
Media Temperature Range	PVC nut connection: 32° to 122°F (0° to $+50^\circ\text{C}$)
Operating Humidity	$\leq 85\%$, without condensation
Operating Temperature	Transmitter: 14° to 140°F (-10° to $+60^\circ\text{C}$); Probe 32° to 140°F (0° to $+60^\circ\text{C}$)
Enclosure Rating	NEMA 4, IP65 and IP67 with M12 cable plug mounted and cover tightened
Dimensions Standard	9.6"H x 2.6"W x 3.8" D (24.4 x 6.5 x 9.7 cm)
Neutrino	7.4"H x 2.4"W x 3.4"D (18.7 x 6.0 x 8.8 cm)
Weight Standard	0.88 lb (0.4 Kg) complete unit
Neutrino	0.52 lb (0.24 Kg) complete unit
Approvals	UL File E237737, CSA, CE
Warranty	1 year



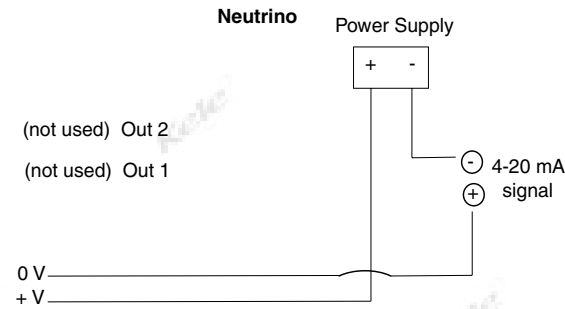
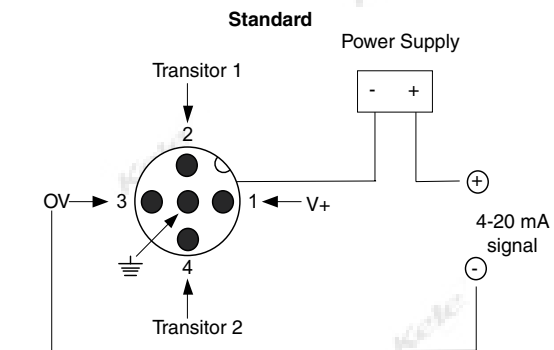
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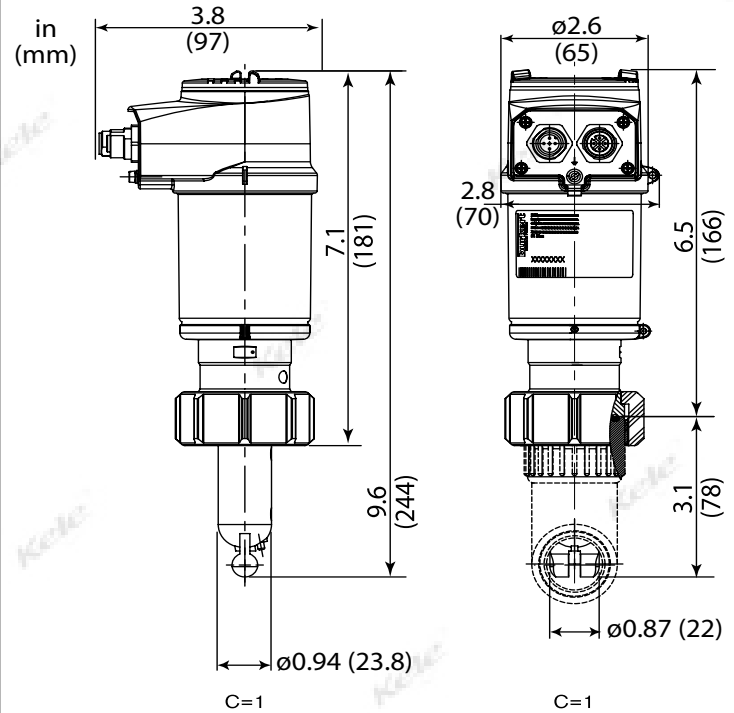
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WIRING



DIMENSIONS



ORDERING INFORMATION

Parts needed for unit with display and single 4-20 mA and two transistors

- 559168** Display programming module
- 559638** Standard transmitter constant C=1.0
- 560693** 1 in NPT mounting adapter tee
- 917116** Electrical plug

Parts needed for unit without display and single 4-20 mA

- 562549** Neutrino transmitter constant C=1.0
- 560693** 1 in NPT mounting adapter tee
- 917116** Electrical plug

RELATED PRODUCTS

- 561228** SO22 threaded adapter for use with threaded tank or pipe, 1 1/4" MNPT, PVC
- 561232** SO22 welded adapter for use directly on a pipe, Stainless steel/1 3/16 (33.4mm)

ACCESSORIES

- 440015** Buffer solution, 500 ml, 5 μ S
- 440016** Buffer solution, 500 ml, 15 μ S
- 440017** Buffer solution, 500 ml, 100 μ S
- 440018** Buffer solution, 500 ml, 706 μ S
- 440019** Buffer solution, 500 ml, 1413 μ S
- DCP-1.5-W** Power supply, 24 VAC IN to 24 VDC OUT
- DCPA-1.2** Power supply, 120 VAC IN to 24 VAC/24 VDC OUT