

Alpha 500 Series

2-wire Transmitters

• pH / ORP • Conductivity • Dissolved Oxygen

Feature-packed for optimal performance



- Galvanically Isolated Output
- Push-button Calibration / Setup
- Hold Current Indicator
- Scalable 4/20 mA output with 3.8 mA out-of-range indicator
- ATC with PT 100 (2 or 3 wire system) / MTC
- Panel or Wall-mountable (IP65 weatherproof housing)
- 12 ~ 24 VDC power requirement

EUTECH
INSTRUMENTS
Technology Made Easy ...

αpha 500

2-wire Transmitter
pH / ORP • Conductivity

The new Eutech αpha 500 series transmitters feature improved circuitry design with galvanically isolated output that provides high reliability in the measurement of pH, ORP, Conductivity and Dissolved Oxygen. With advanced diagnostic capabilities, excellent flexibility and minimal maintenance, the αpha 500 series transmitters are the perfect instruments to complete your systems in aquaculture, chemical processing or water and wastewater treatment industries.

EASY INSTALLATION AND OPERATION

Advanced diagnostics like 'out-of-range' and 'hold' indicators help in monitor and process control. Clear annunciators and easy-to-read dual-line display enables instantaneous view of measured readings and set-up configurations for effortless installation and operation. In addition, scalable 4 to 20 mA current output resolution ensures better resolution at chart recorder or other peripheral devices. Suitable for indoor and outdoor use with its IP65-rated weatherproof housing, the αpha 500 series transmitter can be wall or panel mounted according to industrial requirements.

USER FRIENDLY, EASY MAINTENANCE

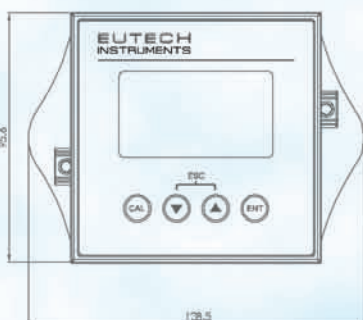
Intuitive push-button user-interface ensures easy calibration and set-up for everyone. The offset adjustment feature enables you to correct readings conveniently without the need to remove the electrode on-site.

OPTIMAL PERFORMANCE IN DEMANDING APPLICATIONS

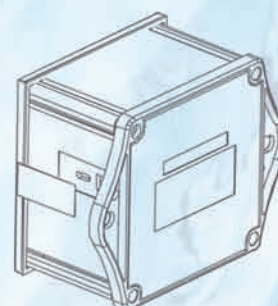
The αpha 500 series transmitter prevents output interference due to electrical noise or leakage from the input source. Cross-talk between multiple transmitters in a serial loop is eliminated for better accuracy. In addition, operations are not disrupted even if one unit requires maintenance as the transmitters operate on a 12 to 24 V D.C. power supply.

WARRANTY

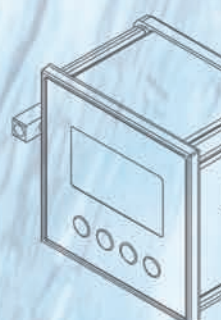
Eutech Instruments warrants its meters to be free from manufacturing defects for a period of one year and electrodes for six months.



Dimensions in mm



Wall Mount



0 Series

Transmitter –
pH • Dissolved Oxygen

Meter Specifications

alpha pH/ORP 500			
pH	Range	Resolution	Accuracy
	0.00 to 14.00 pH	0.01 pH	± 0.01 pH
mV	-1000 to 1000 mV	1 mV	± 2 mV
Temperature	-10.0 to 110.0 °C	0.1 °C	± 0.5 for °C
Temp. Compensation	Auto (Pt 100) / Manual (from 0 to 100 °C)		
Calibration points	2		
Calibration buffers	USA : 4.01, 7.00, 10.01; NIST : 4.01, 6.86, 9.18		
Inputs	Asymmetrical / Symmetrical		
alpha CON 500			
Conductivity	Range	Resolution	Cell Constant
	R1: 0 - 19.99 µS/cm	0.01 µS	k = 0.1, 1.0
	R2: 0 - 199.9 µS/cm	0.1 µS	k = 0.1, 1.0, 10.0
	R3: 0 - 1999 µS/cm	1 µS	k = 0.1, 1.0, 10.0
	R4: 0 - 10.00 mS/cm	0.01 mS	k = 0.1, 1.0, 10.0
	R5: 0 - 19.99 mS/cm	0.01 mS	k = 0.1, 1.0, 10.0
	R6: 0 - 199.9 mS/cm	0.1 mS	k = 1.0, 10.0
Accuracy	± 1% of full scale reading in respective range		
Calibration points	1 point		
Temperature Range	0.0 to 100.0 °C		
Resolution / Accuracy	0.1 °C / ± 0.5 for °C		
Temp. Compensation	Auto (Pt 100) / Manual (from 0 to 100 °C)		
Temp. Coefficient	0 to 10% (Selectable)		
Normalization Temp.	20.0 °C or 25.0 °C (Selectable)		
alpha DO 500			
Dissolved Oxyge	Range	Resolution	
	0.00 to 19.99 mg/l or 0.00 to 19.99 ppm	0.01 mg/l or 0.01 ppm	
	00.0 to 199.9 % saturation	0.1%	
Relative accuracy	1.5 % of full-scale reading for both ranges		
Temperature measuring range	0.0 to 100.0 °C (Meter only)		
	0.0 to 50.0 °C (DO probe)		
Resolution	0.1 °C		
Relative accuracy	0.5 °C		
Sensor	Pt100 (2 wire or 3 wire)		
Temperature Compensation	Automatic or Manual (0 to 50°C)		
Pressure Compensation	0.74 to 3.00 bar; 55 to 225 cmHg; 10.7 to 43.5 PSI (Manual setting and automatic correction)		
Salinity Compensation	0.0 to 50.0 ppt (Manual setting and automatic correction)		
Common Specifications of alpha 500 Series			
Transmitter Output Range	4.0 to 20.0 mA		
Over / Under range Current output (Out-Of-Range output current indicator)	3.8 mA : 'ON' select 3.8 mA 'OFF' select 4 mA (under range) select 20 mA (over range)		
HOLD current output (HOLD output current indicator)	22 mA : 'ON' select 22 mA 'OFF' select last measured current value		
Display	Custom Dual Display LCD		
Power Requirements	12 to 24 VDC		
Load Resistance	Max. 600 W		
Ingress Protection	IP65 protection against dust and water jets (Wall or panel mount)		
Dimension / Weight	96 x 96 x 66 mm / 210 g		



Electrodes

pH / ORP • Conductivity • Dissolved Oxygen

pH and ORP Electrode	EC100GTSO-05B	ECARGTSO-05B	ECARHTTSO-05B	ECARTSOHF-05B	ECARTSO-05B	DA9350605B	ECHTAUTSO-05B	ECHTPTTSO-05B
Range	0 to 14 pH						-999 to 1000 mV	
Sensor	Glass membrane		High temp	HF resistant	Glass membrane		Gold	Platinum
Reference	Annular Teflon®, double junction					Annular ceramic ring, double junction	Annular Teflon®, double junction	
Reference electrolyte	Saturated KCl, polymerized gel					Saturated KCl, liquid-fill	Saturated KCl, polymerized gel	
Operating temperature	0 to 80 °C		0 to 110 °C	0 to 80 °C		0 to 50 °C	0 to 80 °C	
Pressure tolerance	6 bar		9 bar	6 bar		1 bar	6 bar	
Temperature sensor	Pt 100	N.A.						
Potential matching pin	Platinum		N.A.		Platinum	N.A.	Platinum	
Material	PPS (Ryton)					ABS plastic	PPS (Ryton)	
Thread	¾" NPT					N.A.	¾" NPT	
Cable	Integral 5m low-noise semi-conductor screened							
Connector	BNC							
Dimensions : Length* Diameter**					151mm 26mm			
Weight	650g		430g				500g	

Conductivity and DO Electrode	ECCONSEN88X	ECCONSEN89X	ECCS10-0-1S	ECCS10-1-0S	ECDOGEN	ECDOTPII	
Conductivity range	0.01 to 2 mS/cm	0.1 to 200 µS/cm		up to 100 mS/cm	N.A.		
Dissolved Oxygen range	N.A.			0.50 to 20 ppm		0.03 to 20 ppm	
Type	N.A.			Galvanic			
Flow rate	N.A.			5 cm/s (dependent on temperature and O ₂ level)			
Response time	N.A.			40 to 50 s to attain 95% of actual reading			
Cell constant,k	1.0	0.1		1.0	N.A.		
Temperature sensor	Pt100						
Pressure rating	1 bar		6 bar				
Material	Graphite		SS 316		Delrin housing		
Membrane	N.A.				HDPE		
Thread	N.A.		½" NPT	¾" NPT	N.A.		
Cable	Integral 7.5m, 6-wire double-shielded, tinned ends				Integral 3m water-resistant, tinned ends		
Dimensions : Length* Diameter**	132 mm 12 mm		168 mm 12.8 mm		152.4 mm 58.4 mm		
Weight	316 g		595 g		670g		

*Excludes cable ** External

Ordering Information

Order No.	Item
ECPHCTP0500	αpH pH500, pH/ORP, 2-wire transmitter
ECDA93506-05B	Submersible Combination pH electrode
ECARTSO-05B	Combination pH electrode, general purpose
ECARGTSO-05B	Combination pH electrode, Liquid ground (PMP)
EC100GTSO-05B	Combination pH electrode, Pt100, Liquid ground (PMP)
ECHTPTTSO-05B	Combination platinum ORP electrode, Liquid ground (PMP)
ECHTAUTTSO-05B	Combination gold ORP electrode, Liquid ground (PMP)

Order No.	Item
ECCONCTP0500	αpH CON 500, Conductivity, 2-wire transmitter
ECCONSEN88X	Epoxy-body graphite sensor, 1.0 cell constant, Pt100
ECCONSEN89X	Epoxy-body graphite sensor, 0.1 cell constant, Pt100
ECCS10-0-1S	SS316-body sensor, 0.1 cell constant, Pt100
ECDOTPII	αpH DO500, Dissolved Oxygen 2-wire transmitter
ECDOGEN	General Purpose Dissolved Oxygen Probe, 0.5-20 ppm, Pt100
ECDOTPII	Low Dissolved Oxygen Probe, 0.03 to 20 ppm, Pt100

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Note: Eutech Instruments reserves the rights to make changes, improvements and modifications to products shown, without prior notice.

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