

# UltraPro-500 SERIES

## Ultrasonic Continuous Level Transmitter

Order from:  
**C A Briggs Company**

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- Corrosion Resistant- PVDF
- Narrow Beam Technology
- Simple Programming

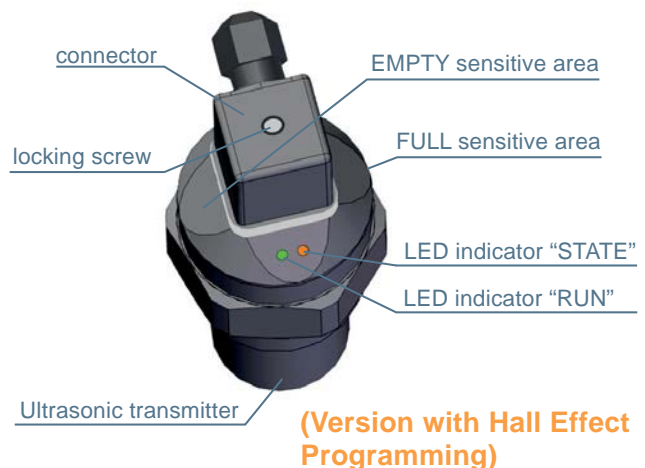
The UltraPro Ultrasonic level Sensors are 2-Wire loop powered sensors designed provide reliable accurate level measurement, flow monitoring, and volume of liquid in tanks, pits, sumps and open channels. The UltraPro series are very reliable and offer both 4-20mA analog output with HART® protocol or output RS-485 Modbus

**Key Applications: Chemical Storage Tanks, Waste Sumps, Bulk Storage, Tanker Truck, Day Tank, Process Tank, Neutralization Tank, Open Channel, chemical feed and clarifier applications.** The UltraPro Series are designed to work with most types of remote instrumentation and provide enhanced functionality such as remote displays and remote monitoring solutions.



### FEATURES

- Accurate Continuous Level Measurement of liquids - Tanks -Sumps-Non Contact- Ranges up to 65 Feet
- NO FOB'S or Computer Programs Required
- All Plastic Body Design- Completely Corrosion Resistant
- Industry's Easiest to Program- 2 Clicks
- Program Sensor to Meet Your Application-
- Adjustable Low (4mA) and High (20mA)
- Automatic Temperature Compensation
- Explosion Proof -Class 1 Div 1 - Available
- Analog Current output (4 -20 mA) with HART® protocol or output RS-485 Modbus
- On Tank/Sump Programming-(Under 2 mins)



### ORDERING

Size	Part Number	Material
1M	UPS-500-01	PVDF
2M	UPS-500-02	PVDF
6M	UPS-500-06	PVDF
10M	UPS-500-10	PVDF
20M	UPS-500-20	PVDF

## TECHNICAL SPECIFICATIONS

Measuring range 1)	UPS-500_01_-- UPS-500_02_-- UPS-500_06_-- UPS-500_10_-- UPS-500_20_--	0.1 ... 1 m 0.2 ... 2 m 0.2 ... 6 m 0.4 ... 10 m 0.5 ... 20 m
Supply voltage	UPS-500N_--_-- UPS-500Xi_--_--I	18 ... 36 V DC 18 ... 30 V DC
Current supply	UPS-500N(Xi)_--_--	4 ... 20 mA / max. 22 mA
Output	UPS-500_--_--_--I UPS-500_--_--_-- M	4 ... 20 mA (Limit values 3.9 ... 20.5 mA), HART® RS-485 with protocol Modbus RTU
Current output UPS-500_--_--_--I Voltage output UPS-500N_--_--U Modbus output UPS-500N_--_--M		4 ... 20 mA (limit values 3.9 ... 20.5 mA) 0 ... 10 V (limit values 0 ... 10.2 V) Modbus RTU protocol
Resolution		< 1 mm
Accuracy (within the total range)	UPS-500_01_ in area 0,1-0,2 m / 0,2-1,0 m UPS-500_02_;-06 UPS-500_10_;-20	0,3 % / 0,2 % 0,15 % 0,2 %
Temperature error		Max. 0,04% / K
Beamwidth (-3 dB)	UPS-500_01_--_ ; 02_--_ ; 10_-- UPS-500_06_-- UPS-500_20_--	10° 14° 12°
Ambient temperature range	UPS-500_01_--_ ; 02_--_ ; 06_-- UPS-500_10_--_ ; 20_--	-30 ... +70°C -30 ... +60°C
Measuring period	UPS-500_01_--_ ; 02_-- UPS-500_06_--_ ; 10_-- UPS-500_20_-- UPS-500_--_--M	0,5 s 1,2 s 5,0 s adjustable via Modbus RTU
Averaging (can be modified according to agreement)	ULM-500_--_-- ULM-500_--_--M	4 measurement adjustable via Modbus RTU
Short time temperature stress resistance		+90°C / 1 hod.
Max. operation overpressure (on transmission surface)		0,1 MPa
Max. internal values 2) (for the Xi version only)		Ui=30 V DC; li=132 mA; Pi=0,99 W; Ci=370 nF; Li=0,9 mH
Failure indication	echo failure – basic mode echo failure – inverse mode level in dead zone – basic mode level in dead zone – inverse mode	3,75 mA (0 V) 22 mA (10,5 V) 22 mA (10,5 V) 3,75 mA (0 V)
Protection class		IP67
Recommended cable		PVC 2 x 0,75 mm <sup>2</sup> (3 x 0,5 mm <sup>2</sup> )
Maximal current output load resistance	at U = 24 V DC at U = 22 V DC at U = 20 V DC	R <sub>max</sub> = 270 Ω R <sub>max</sub> = 180 Ω R <sub>max</sub> = 90 Ω
Minimal voltage output load resistance		R <sub>min</sub> > 1 kΩ
Delay between supply power rise time and first measurement	UPS-500_01_--_ ; 02_--_ ; 06_-- UPS-500_10_--_ ; 20_--	5 s 9 s
Process connection	UPS-500_01_-- UPS-500_02_-- UPS-500_06_-- UPS-500_10_-- UPS-500_20_--	thread ¾" thread 1" thread 1½" thread 2¼" aluminium alloy flange
Weight	UPS-500_01_-- UPS-500_02_-- UPS-500_06_-- UPS-500_10_-- UPS-500_20_--UPS-500_10_-- ; 20_--	0,20 kg 0,20 kg 0,25 kg 0,65 kg 2,80 kg

1) In case the level of bulk-solid materials is measured, the measurement range is reduced.

2) Allowed pressure range in the zone 15 PSI