

*Instrumentation designed  
with the user in mind.*

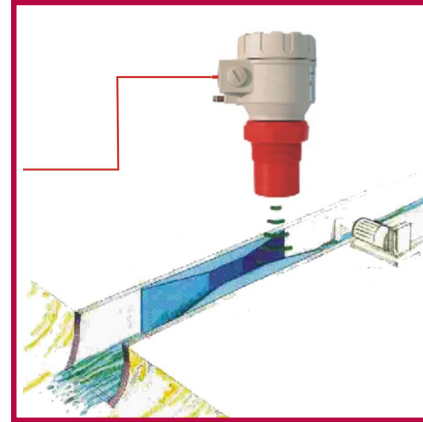
## ULTRASONIC OPEN CHANNEL FLOWMETER

- ◆ Parshall flumes
- ◆ Palmer-Bowlus flumes
- ◆ Rectangular weirs
- ◆ Trapezoidal weirs
- ◆ Bottom step weir
- ◆ V-notch weir
- ◆ Thomson weir
- ◆ Circular weir
- ◆ Khafagi Venturi flume
- ◆ and more....

## ADVANTAGES

- Built-In Flow Equations
- Self-Contained Module
- NEMA 4X Enclosure
- Two wire or Four wire
- Narrow Beam Angle
- Push-button Programming

## Narrow Beam Technology



### All-In-One Sensor, Signal Conditioner, Microprocessor & Totalizer

The standard method for determining open channel flow is to measure the height or HEAD of the liquid as it passes over a weir or flume.

Princo's **SmartSonic™** Open Channel Flowmeter transmitter has built-in programmed characterization for virtually every standard weir or flume.

The **SmartSonic™** transmitter uses unique narrow beam technology, which enables extremely reliable, accurate operation. Optional HART® communication protocol is available.

Princo's **SmartSonic™** Open Channel Flowmeter includes field proven innovative advanced, process adaptive signal processing software to identify and validate the surface signal.

With its innovative and patented technology, Princo's **SmartSonic™** is the best ultrasonic open channel flowmeter on the market today.

*The only*

# 10 Year Warranty

*The longest in the industry!*

# Specifications

## SmartSonic L4660 Open Channel Flowmeter

### Transducer materials

Polypropylene (PP), Kynar (PVDF)  
or Teflon (PTFE)

### Housing material (2 versions)

Plastic: PBT fibreglass reinforced  
Aluminium: Powder paint coated

### Temperature

Process -4 °F ... +176 °F PP & PVDF  
-22 °F ... +194 °F PTFE  
Ambient -22 °F ... +158 °F  
With SAP-X00 -13 °F ... +140 °F

### Pressure (Absolute)

0.5\*\* ... 3 bar (0.05 ... 0.3 MPa)

### Seals: PP transducer:

EPDM

### PVDF transducer:

FPM (Viton)

### Enclosure:

Sensor ~ NEMA 6;  
Housing ~ NEMA 4X

Display: 6 digits, icons and bargraph  
(SAP-X00 display module only)

### Power Supply

2-WIRE Version 12 ...36 VDC / 48 ...720 mW  
electrically isolated; transient & surge protected  
4-WIRE AC version 85 to 255 VAC, 6 VA  
4-WIRE DC version 10.5 to 40 VDC, 3.6 W

Accuracy\*  $\pm$  0.2% of the measured distance  
plus 0.05% of the range

### Resolution (Dependent upon measured distance)

< 80 inches: 0.04 inches  
80...198 inches: 0.08 inches  
16.4... 26 feet: 0.2 inches

Dead Band - 10"

### Output

Analog: 4 ...20 mA  
Digital: HART protocol (optional)  
Relay: SPDT, 250 VAC, 3A (4-wire version)

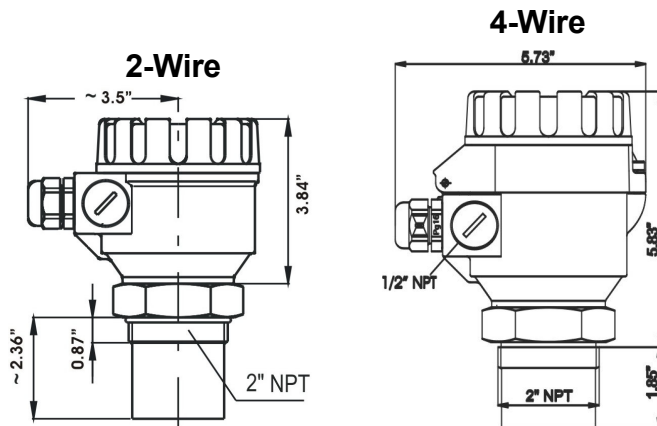
\* Under optimal reflection conditions and stabilized transducer temperature.  
\*\* At pressures under 1 bar absolute, consult Princo.

## ORDER CODE

L4660 S [ ] [ ] - 3 [ ] [ ] - [ ]

TYPE	CODE	TRANSDUCER / HOUSING	CODE	RANGE*	CODE	MOUNTING	CODE	SUPPLY / OUTPUT	CODE
4-Wire Transmitter	T	PP / Aluminium	A	20 ft.	8	NPT thread	N	4-Wire AC version 85 to 265 VAC	
4-Wire Transmitter with local indicator	B	PVDF / Aluminium	B					4...20 mA+Relay	1
2-Wire Transmitter	E	PTFE / Aluminium	T					4...20 mA+HART+Relay	3
2-Wire Transmitter with local indicator	G	PP / Plastic	P					RS485+Relay	5
		PVDF / Plastic	V					4-Wire DC version 10.5 to 40 VDC	
		PTFE / Plastic	F					4...20 mA+Relay	2
								4...20 mA+HART+Relay	4
								RS485+Relay	6
								2-Wire version 10.5 to 40 VDC	
								4...20 mA	2
								4...20 mA+HART	4

\* For measuring ranges of PTFE (teflon) and St.St.(stainless steel) versions, see Technical Data table



### 10-YEAR WARRANTY

All PRINCO level control instruments are backed by a 10-year warranty. PRINCO will repair or replace, at our option, any instrument that fails under normal use for up to 10 years after purchase.

**PRINCO™**

1020 Industrial Highway  
Southampton, PA 18966-4095, U.S.A.  
(800) 221-9237 ~ (215) 355-1500 ~ FAX (215) 355-7766  
[www.PrincoLevelControls.com](http://www.PrincoLevelControls.com)

Copyright Princo Instruments, Inc. 2003 - 2008  
Rev 2/13/08