

*Instrumentation designed  
with the user in mind.*

## **PRESSURE & LIQUID LEVEL TRANSMITTERS**

- ◆ **Breweries**
- ◆ **Chemicals**
- ◆ **Food Processing**
- ◆ **Pharmaceuticals**
- ◆ **Power Plants**
- ◆ **Pulp & Paper**
- ◆ **Water & Wastewater**

### **ADVANTAGES**

**Two-Wire Loop Powered 4-20 mA output**

**HART communication**

**Simple push-button programming**  
(with SAP-203 programming module)

**Stainless steel flush diaphragm**

**Wide variety of process connections**

**Great choice of ranges**

**Accuracy 0.25 %**

**Aluminium housing epoxy painted**

**IP 67 protection / NEMA 4X**

**ATEX certified versions I.S.**

SMARTPRESS™ flush diaphragm pressure and level transmitters/indicators provide simple and highly reliable solution for the continuous monitoring of the pressure and level of liquids and masses.

The flat surface of the diaphragm avoids the risk of material build up and the maximum medium temperature of 125 °C allows proper (CIP) cleaning required by the regular cleaning processes of the food industry and similar hygienic applications.



SMARTPRESS™ LP-D series is a 2-wire microprocessor controlled pressure and level gauge. The loop powered transmitter can be converted into indicator by the use of the plug in display module. The unit measures the hydrostatic pressure and for level gauging it compares the water head with the actual atmospheric pressure.

The piezoresistive sensor is protected by a flush diaphragm with silicon oil between the two for pressure transfer.

Its robust design, high overload capability and wide temperature range renders it applicable in the most arduous circumstances.

Smart electronics makes on site and HART communication remote programming possible.

EEx ia and EEx d certified models are also available.


*The only*

**10 Year  
Warranty**

*The longest in the industry!*

# Specifications

## Two-Wire SmartPress LP-D

Measurement	Level, pressure	
Sensor	Piezoresistive silicium sensor, with protection diaphragm	
Pressure transfer medium	Silicone oil; Food grade oil optional	
Turn down	~ 2 : 1	
Zero adjustment	50% of the range (10% of range for units with 1" process connection)	
Output	4 ... 20 mA (limit values 3.9 ... 20.5 mA); HART (minimum loop resistance 250 ohm)	
Damping	0 ... 30 seconds, selectable	
Error indication	22 mA or 3.8 mA	
Maximum load	$R_s = (U_s - 12 V) / 0,02 A$ , $U_s$ = voltage of the power supply	
Display module	6 digit LCD, engineering units and bargraph	
Power supply	10 ... 36 V DC	
Accuracy (linearity, hysteresis, repeatability)	0.25 % ( $p \leq 5.8$ psi $\pm 0.5$ %)	
Range of temperature compensation	0 °C ... 70 °C ( $p \leq 5.8$ psi 0°C ... 50°C)	
Ambient temperature	-40 °F ... +158 °F with display module: -13 °F ... +158 °F (-40 °C ... +70 °C with display module: -25 °C ... +70 °C)	
Medium temperature	-13 °F...+257 °F (-25 °C ... +125 °C)	
Electric protection	Class III	
Housing	IP 65 / NEMA 4 X	
Ex marking	 II 1 G EEx ia IIC T6 ... T4	
Intrinsical safety data	$U_{max}$ : 30 V, $I_{max}$ : 140 mA, $P_{max}$ : 1W, $C_i < 20$ nF, $L_i < 200$ $\mu$ H	
Housing	Epoxy coated aluminium or Plastic	
Material of wetted parts	Protection diaphragm:	stainless steel 316
	Process connection:	stainless steel 316

Accessory: SAP-203 Programmer / Local Display (functions with multiple units)

### ORDER CODE

(Not all combinations possible)

SMARTPRESS LP-D - **T**  -   1 -

PROCESS CONNECTION*	CODE
1" Triclamp	L
1½" Triclamp	M
2" Triclamp	N
1" NPT	S

ELECTRONIC HOUSING	CODE
Aluminium	5
Plastic	6

LEVEL RANGE (Feet of H <sub>2</sub> O)	PRESSURE RANGE (PSI)	MAXIMUM PRESSURE (PSI)	CODE
-14.5 to 0	0 to 1.45	43.5	0
0 to 3.3	0 to 3.00	7.5	1
0 to 6.9	0 to 5.00	14.5	2
0 to 11.5	0 to 8.00	14.5	3
0 to 18.4	0 to 14.5	43.5	4
0 to 33.3	0 to 23.0	43.5	5
0 to 52.9	0 to 34.0	87.0	6
0 to 78.2	0 to 58.0	87.0	7
0 to 133.4	0 to 87.0	290	8
0 to 200	0 to 145	290	9
	0 to 230	290	A
	0 to 360	870	B
	0 to 580	870	C
	0 to 870	1450	D
	0 to 1450	1740	E
	0 to 2300	3600	F
	0 to 3600	7250	G
	0 to 5800	7250	H
		8700	J

OUTPUT / Ex	CODE
4 to 20 mA	2
4 to 20 mA / HART	4
4 to 20 mA / EEx ia	6
4 to 20 mA / HART / EEx ia	8

### 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**

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