

Tank Mounted Level Pressure Transmitter

Advantages

- Capacitive ceramic measuring sensor
- Highly accurate Piezoresistive silicon measuring sensor
- Measuring ranges from 250mmH₂O to 35kgf/cm²
- Excellent accuracy and long term stability
- Extremely high over-pressure limit
- High accuracy level measurement with temperature stability
- Explosion protection Ex d IIC T6 and weather proofed

Applications

The hydrostatic level pressure transmitters can be used for a wide range of industrial applications for tank level measurement.

- Continuous level measurement in tanks, vessels, sumps or pits(liquid)
- Water and sewage treatment
- Process control for food and beverage industries
- Chemical and petrochemical industries

General Description



L700 series level pressure transmitters provide reliable measurement and control of the process level by sensing the hydrostatic pressure in a tank. The transmitter incorporates a capacitive or piezoresistive diaphragm sensor coupled to a proven design, and is 316L stainless steel on all wetted parts and is repairable. Additionally, an optional LED display allows the user an at-a-glance reading without the expense of additional gauges or digital meter. A compact and mass optimized design with a choice of corrosion resistant materials together with a wide variety of standard process connection options, makes it the ideal choice for simple application in many industries.

The transmitter has a water resistant, stainless steel housing for complete protection from harsh environments and its 4~20mA current output is ideal for remote monitoring of both primary and secondary process variables. It has been designed as an advanced device for measuring level pressure of water and liquids in industrial applications.

The pressure to be measured acts through thin corrosion resistant stainless steel 316L diaphragm on a silicon measuring element. The pressure transmitting medium is silicon oil. The measuring element contains diffused piezoresistive resistors which are connected into a Wheatstone bridge.

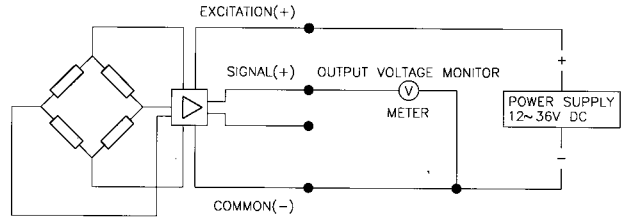
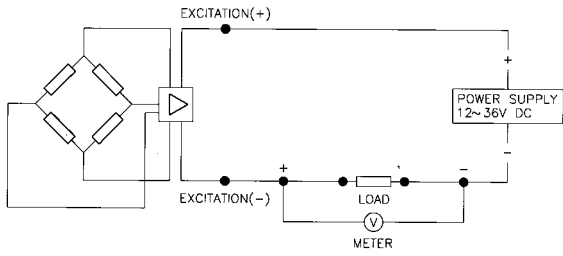
The output signal of this bridge is temperature compensated and converted into a standardized current or voltage output signal.

Input		
Model	L749	L729
Technology	Capacitive ceramic pressure sensor	Piezoresistive silicon pressure sensor
Pressure ranges	0~250mm H ₂ O to 35kgf/cm ² relative pressure	0~0.1 to 35kgf/cm ² relative pressure
	0~0.2 to 35kgf/cm ² absolute pressure	0~1 to 35kgf/cm ² absolute
Pressure reference	Relative	
Overload	6 × full scale without damage	3 × full scale without damage
Output		
Electrical connection	Terminal head with weather and explosion protection Ex d IIC T6	
Output signal	4~20mA DC or 1~5V DC	
	Other signals available on request	
Local display	LED 31/2 digit	
Electrical Specifications		
Excitation voltage	12~36V DC	
Load resistance max@24V	500 Ω at 24V	
Influence of excitation	0.01% FSO/V	
Power ripple	≤500mV P-P	
Reverse polarity	Protected	
Shock resistance	No change in performance after 10Gs for 11ms	
Vibration	0.1G (1 m/s/s) maximum	
Response time(10~90%)	≤1 milliseconds	≤ milliseconds
Adjustment	±20% FSO/zero and span	±10% FSO/zero and span
Performance Specifications		
Accuracy	≤±0.2% FSO	≤±0.25% FSO
Non-linearity	±0.15% FSO typical	±0.100% FSO typical
Repeatability	±0.10% FSO typical	±0.015% FSO typical
Pressure hysteresis	±0.10% FSO typical	±0.010% FSO typical
Long term stability	Max. annual error ±0.3% FSO	±0.3% FSO over 6 month
Cutoff frequency(-3 d B)	≤2kHz	
Reference temperature	25° C	35° C
Operating temperature range	-40~125° C	-40~125° C
Compensated temperature range	-20~80° C	0~82° C
Thermal sensitivity shift	≤±0.05%/ FSO typical	≤±0.2%/ FSO typical
Thermal zero shift	≤±0.10% FSO typical	≤±0.2%/ FSO typical
Thermal hysteresis	≤±0.10% FSO typical	≤±0.1%/ FSO typical
Physical Specifications		
Process connection	Flange mounting(ANSI, DIN, JIS)	
	Chemical sealed with Clamp, Flange, etc.	
	Other process connections available on request	
Process media	Gases and liquids compatible with	
	Ceramic Al ₂ O ₃ , 96%	Stainless steel 316
Materials wetted by process	Diaphragm : ceramic Al ₂ O ₃ , 96%	Stainless steel 316
	Housing : Stainless steel 316 and other materials available on request	
Enclosure rating	IP65	
Explosion protection	Ex d IIC T6	
Influence of mounting position	Not critical	Under 0.5kgf/cm ² , mounted vertically
Weight	Approx. 1500g	
Options	Remote sealed diaphragm	

Note

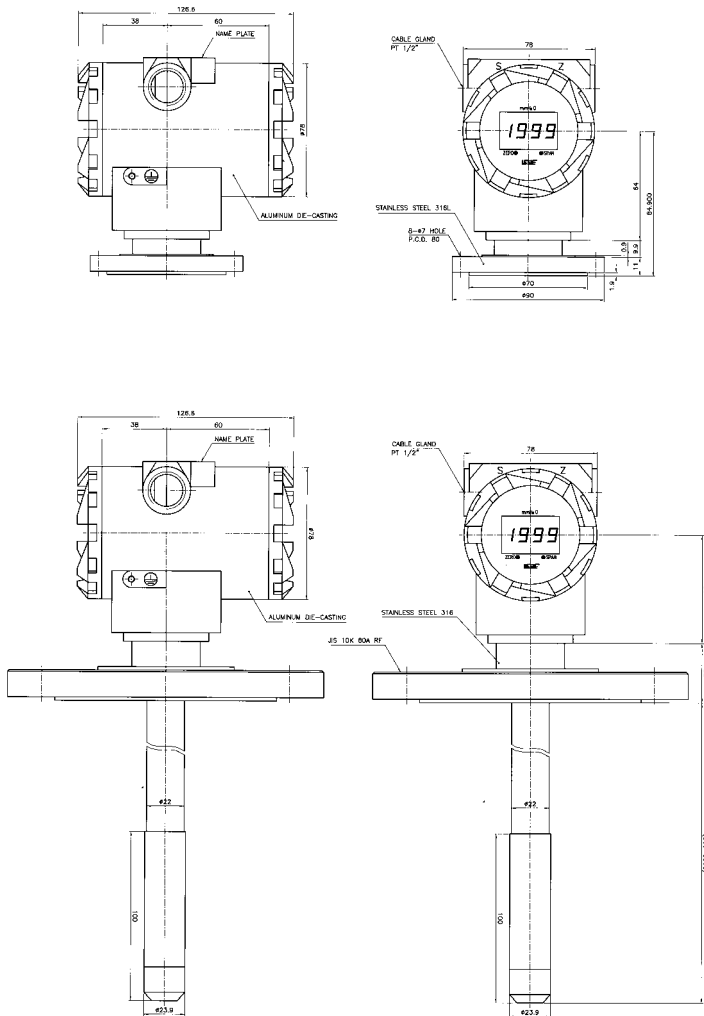
System connection for 2-wire transmitter

System connection for 3-wire transmitter

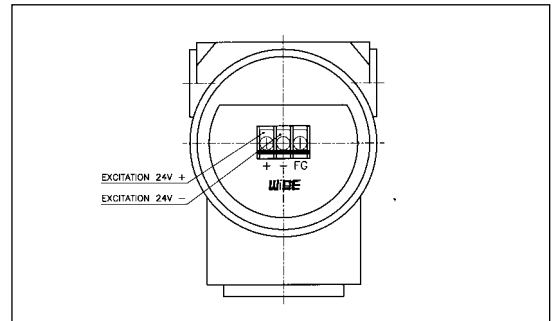
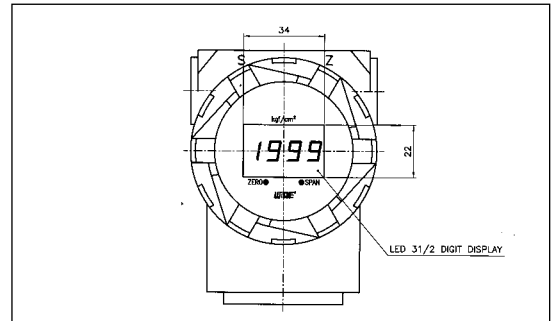


Dimension

Electrical connection



Terminal head



Tank Mounted Level Pressure Transmitter

L749									Capacitive ceramic sensor
L729									Piezo-resistive silicon sensor
	8								Tank side mounting version
	9								Tank top mounting version
		R							Relative pressure
		A							Absolute pressure
			J						Process connection : Flange per JIS
			A						Flange per ANSI
			D						Flange per DIN
			C						Clamp
			X						Other connection available on request
				xxx					Mounting size such as JIS10K80A
					01				Measuring range 0~250 mmH ₂ O
					02				0~500
					03				0~700
					04				0~1000
					05				0~2000
					06				0~5000
					07				0~1 kgf/cm ²
					08				0~2
					09				0~5
					10				0~10
					11				0~20
					12				0~35
					XX				Other calibration ranges available on request
						K			Calibration in kgf/cm ²
						H			Calibration in mmH ₂ O
						A			Calibration in MPa
						P			Calibration in psi
						X			Other units available on request
							C		4~20mA Current output signal
							V		1~5V Voltage output signal
							X		Other signals available on request
								N	None options
								R	Remote seled diaphragm
								P	Extenson pipe version

L729	8	R	J	10K80ARF	01	H	C	N	Sample ordering code
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Specifications subject to change without notice.

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