
Submersible Depth and Level Transmitter

Model : L127 (Extension Cable Type)
L727 (Explosion Proof Head Type)

WISE®

Advantages

- High precision and fully submersible depth & level transmitters
- All stainless steel 316 construction
- Measuring ranges from 0.1 to 35kgf/cm²
- Two-wire loop powered 4~20mA DC output signal
- Excellent accuracy and long term stability
- 300% proof pressure
- Excellent urethane extension cable with vented tube

Applications

Any environment where reliable 4~20mA continuous level measurement in ;

- Ground and surface water monitoring
- Water supply and reservoirs controls
- Deep well measurements
- Geomorphological investigations of ground water elevation
- Well and borehole probe
- Water filtration plants and waste water treatment



L127

L727

Descriptions

L100 series submersible depth and level transmitters with a reliable vented cable meet IP68 requirements for permanent submersion. They are specially designed for applications where access for installation is restricted and continuous level measurement of liquids in various ranges to a maximum equivalent of 350 meters of hydrostatic water pressure such as deep wells or buried storage vessels. The transmitter has a perfect 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. The transmitters are available as absolute or relative pressure with either 2-wire current or 3-wire voltage output.

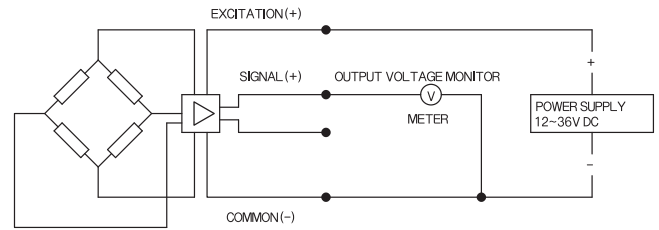
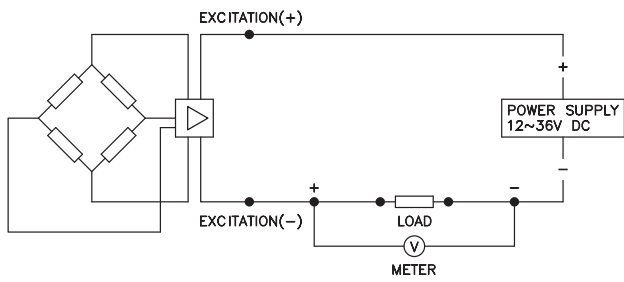
The pressure to be measured acts through thin corrosion resistant stainless steel 316L diaphragm on a silicon measuring element. The pressure transmitting medium is silicon oil. The measuring element contains diffused piezoresistive resistors which are connected into a Wheatstone bridge. The output signal of this bridge is temperature compensated and converted into a standardized current or voltage output signal.

Specification

Input	
Model	L127 / L727
Technology	Piezoresistive silicon pressure sensor
Pressure ranges	0~0.1 to 35kgf/cm ² relative pressure
	0~1 to 35kgf/cm ² absolute pressure
Pressure reference	Gauge, absolute
Overload	3x full scale without damage
Output	
Output signal	4~20mA current output
Electrical connection type	2-wire technique
Full scale output signal	20mA : $\pm 0.2\%$
Zero measured output	40mA : $\pm 0.2\%$
	Other signals available on request
Electrical Specification	
Excitation voltage	12~36V DC
Load resistance max@24V	500 Ω at 24V
Influence of excitation	0.01% FSO/V
Power ripple	$\leq 500\text{mV P-P}$
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%)	$\leq 2\text{milliseconds}$
Adjustment	$\pm 10\%$ FSO/zero and span
Performance Specification	
Accuracy	$\leq \pm 0.25\%$ FSO
Non-linearity	$\pm 0.100\%$ FSO typical
Repeatability	$\pm 0.015\%$ FSO typical
Pressure hysteresis	$\pm 0.010\%$ FSO typical
Long term stability	$\pm 0.3\%$ FSO over 6 month
Cutoff frequency(-3 d B)	$\leq 2\text{kHz}$
Reference temperature	35°C
Operating temperature range	-40~125°C
Compensated temperature range	0~82°C
Thermal sensitivity shift	$\leq \pm 0.2\%$ FSO
Thermal zero shift	$\leq \pm 0.2\%$ FSO
Thermal hysteresis	$\leq \pm 0.1\%$ FSO
Physical Specification	
Process connection	PF3/8" with removable stainless steel nose cone
	Weight or flange can be available
	Other connections available on request
Process media	Water and liquids compatible with
	Stainless steel 316
Materials wetted by process	Diaphragm : stainless steel 316L
	Housing : Aluminum die-casting terminal head
Construction of extension cable	Gasket O-ring : Viton (HNBR, CSM, etc.)
	4 core, shielded with vented tube
	$\phi 7.7\text{mm}$ diameter
	Vented Polyurethane cable
Enclosure rating	IP68
	Stainless steel extension pipe version available(optional)
Weight	Approx. 400g wiyhout cable
Options	General terminal head
	Local display unit

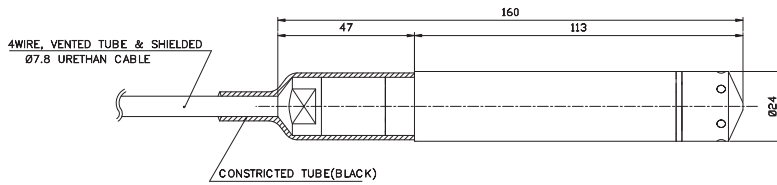
Note : It should be installed with a support wire over 200meter depth measurement.

System connection for 2-wire transmitter System connection for 3-wire transmitter



Dimension(mm)

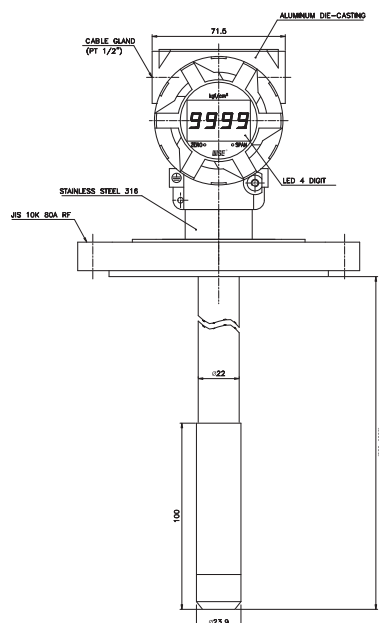
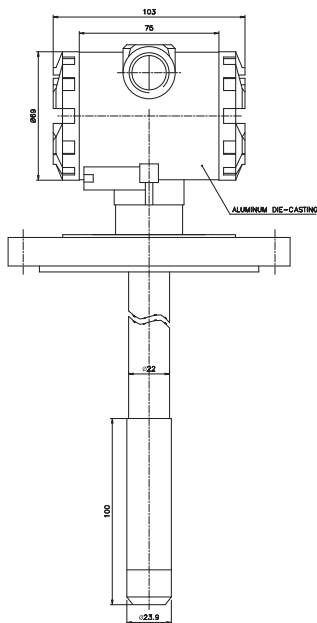
Electrical connection



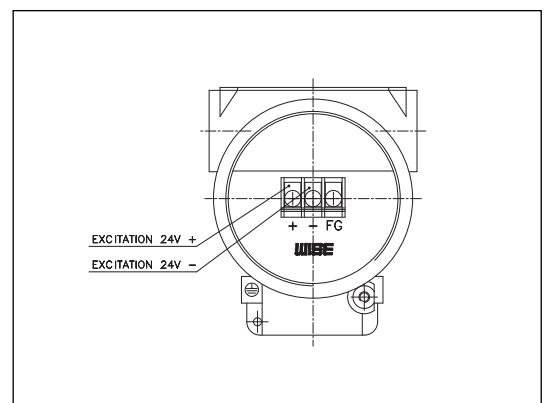
E : Excitation
S : Signal
C : Common

L127 cable version

System Color	2-Wire	3-Wire	4-Wire
1	E +	E +	E +
3	E -	C -	E -
4		S +	S +
2			S -
\bar{T}	Shielded	Shielded	Shielded



L727 Terminal head(pipe version)



Ordering Information

Submersible Depth And Level Transmitter

L127											Extension cable
L727											Explosion proof head
	C										Cable suspension version (standard)
	S										Stainless steel extension pipe version
		R									Relative pressure
		A									Absolute pressure
			D								With local display - only available with P727
			N								Without local display
				01							Measuring range 0~0.1 kgf/cm ²
				02							0~0.2
				03							0~0.5
				04							0~1
				05							0~2
				06							0~5
				07							0~10
				08							0~20
				09							0~35
				xx							Other calibration ranges available on request
					C						Nose cone (standard)
					W						Nose weight
						N					Mounting size Not required
						A					ANSI flange
						J					JIS flange
						T					PT thread
						F					PF thread
						X					Other mounting connection available on request
							0				Not required
							1				1"
							2				1.5"
							3				2"
							4				4"
							X				Other units available on request
							M				Calibration in mmH ₂ O
							K				Calibration in kgf/cm ²
							M				Calibration in MPa
							B				Calibration in meter
							P				Calibration in %
							X				Other units available on request
								C			4~20mA Current output signal
								V			1~5V Voltage output signal
								X			Other signals available on request
									10		10m cable(standard)
									20		20m cable
									30		30m cable
									50		50m cable
									70		70m cable
									100		100m cable
									XX		Extension cable available on request

L127	C	R	N	01	C	N	0	M	C	10	Sample ordering code
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Specifications subject to change without notice