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## Submersible Depth and Level Transmitter with Local Display

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

**WISE  
SENSOR**

### Advantages

- High precision and fully submersible depth & level transmitters
- All stainless steel 316 construction
- Measuring ranges from 0.1 to 35 bar
- 2-wire loop powered 4~20mA DC output signal
- Excellent accuracy and long term stability
- 300% proof pressure
- Excellent urethane extension cable with vented tube
- Auto zero calibration only L727 (Push the SET Button 3second)



L727

### 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

### Descriptions

L127/L727 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.

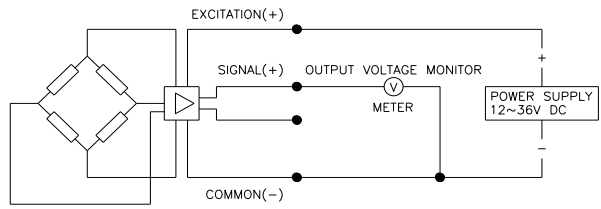
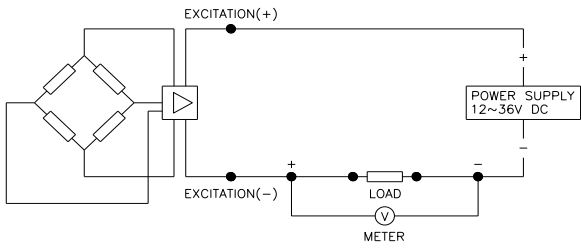
## Specification

Input	
Model	L127 / L727
Technology	Piezoresistive silicon pressure sensor
Pressure ranges	0 ~ 0.1 to 35 bar relative pressure
	0 ~ 1 to 35 bar absolute pressure
Pressure reference	Gauge, absolute
Overload	3x full scale without damage
Output	
Output signal	4~20mA DC or 1~5V DC
	Other signal available on request
Electrical connection type	2-wire technique
Full scale output signal	20mA : $\pm 0.2\%$ , 4mA : $\pm 0.2\%$
Local display	LED 4 digit (Only L727)
Electrical Specification	
Excitation voltage	12~36V DC
Load resistance max @ 24V	500 $\Omega$ 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%)	$\leq 2$ milliseconds
Adjustment	$\pm 10\%$ FSO / zero and span (Fixed value by default)
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	25 °C
Operating temperature range	-20~60°C
Storage temperature range	-40~70°C
Thermal sensitivity shift	$\leq \pm 0.2\%$ FSO in reference to 35 °C typical
Thermal zero shift	$\leq \pm 0.2\%$ FSO in reference to 35 °C typical
Thermal hysteresis	$\leq \pm 0.1\%$ FSO in reference to 35 °C typical
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	Diaphragm: Stainless steel 316
	Housing and process connection : stainless steel 316
	Terminal head for L727 Model : Aluminium Die-casting (ALDC)
	Gasket O-ring : Viton (HNBR, CSM, etc.)
Construction of extension cable	4 core, shielded with vented tube
	$\varnothing 7.7\text{mm}$ diameter
	Vented Polyurethane cable
	Stainless steel extension pipe version available(optional)
Enclosure rating	IP68
Weight	Approx. 400g (L127) , 800g (P727) without cable
Options	General terminal head
	Local display unit

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

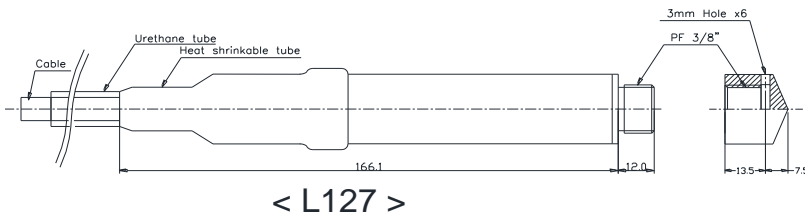
## System connection for 2-wire transmitter

## System connection for 3-wire transmitter



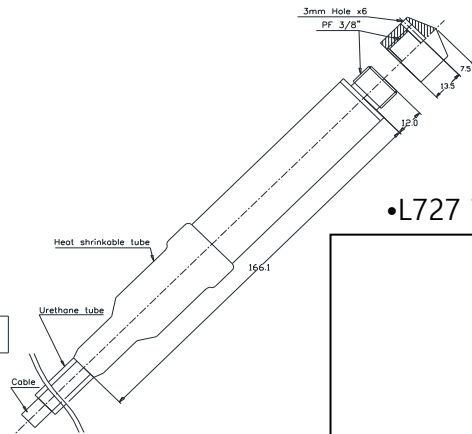
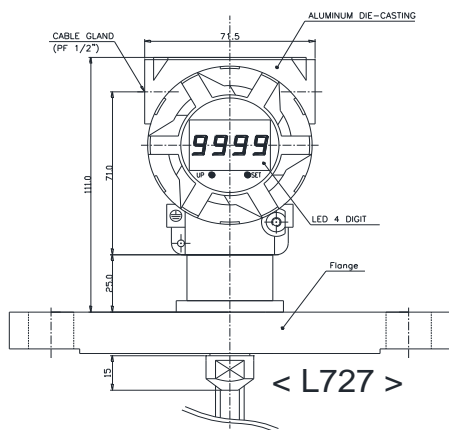
## Dimension (mm)

## Electrical connection

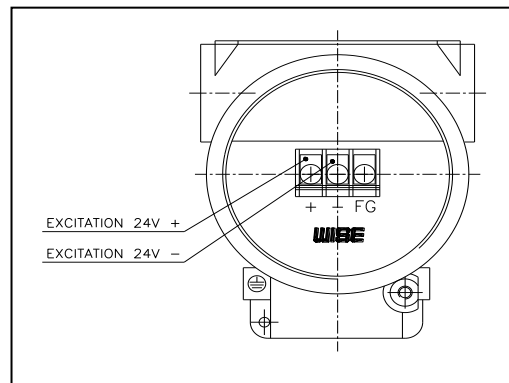


- L127 Wiring diagrams
- E : Excitation
- S : Signal
- C : Common

System Conn.	Wire		
	2	3	4
Red	E +	E +	E +
Black	E -	C -	E -
Green		S +	S +
White			S -
GND	Shielded	Shielded	Shielded



## •L727 Terminal Block



## Ordering Information

### Submersible Depth And Level Transmitter

#### 1. Base model

L127										Extension cable
L727										Head type (With display)

#### 2. Pressure reference

R										Relative pressure
A										Absolute pressure

#### 3. Mounting type (Only L727)

N										Not required
A										ANSI flange
H										JIS flange
T										PT thread
F										PF thread
X										Other mounting connection available on request

#### 4. Mounting size (Only L727)

0										Not required
1										1"
2										1/5"
3										2"
4										4"
X										Writing a flange specification

#### 5. Process connection

D										Cable suspension version (standard)
N										Stainless steel extension pipe version

#### 6. Accuracy

H										±0.25% F.S.O
K										±0.3% F.S.O

#### 8. Measuring range

01										0 ~ 500 mmH <sub>2</sub> O
02										0 ~ 700
03										0 ~ 1000
04										0 ~ 2000
05										0 ~ 5000
06										0 ~ 1 kg/cm <sup>2</sup>
07										0 ~ 2
08										0 ~ 5
09										0 ~ 10
10										0 ~ 20
11										0 ~ 35
xx										Other calibration ranges available on request

#### 9. Unit

M										Calibration in mmH <sub>2</sub> O
K										Calibration in kgf/cm <sup>2</sup>
A										Calibration in Mpa
B										Calibration in bar
P										Calibration in psi
X										Other units available on request

#### 10. Output signal / Electrical connection type

C										4~20mA, DC, 2-wire output
V										1~5V DC, 3-wire output
X										Other signal available on request

#### 11. Option (Cable length)

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

L727	R	H	2	D	H	04	M	C	10	Sample ordering code
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Specifications subject to change without notice