SENSSET
SENSOR SEQUENCE

SSA-P4LF1S

IEPE low-frequency measurement-type acceleration sensor

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PRODUCTS FEATURES

- Selected ultra-low frequency built-in integrated circuits
- Specially designed for low frequency test and measurement
- Memory alloy fasteners, shear structure, stable and reliable
- Multiple output and mounting options
- Top M5 connector output

1. Performance parameters for SSA-P4LF1S1:

Table 1. Characteristics for SSA-P4LF1S1

Parameters	Value	Units
Sensitivity	100	mV/g
Measurement Range	±50	g
Frequency response ±5%	0.1~6000	Hz
Frequency response ±10%	0.05~7000	Hz
Magnitude linearity	≤1	%
Lateral Sensitivity	≤5	%
Installation of resonant frequency	≥25	kHz
Time constants	≤1	s
Resolution	0.001	grms
Base strain	0.0008	g/ε
Hitting the Limits[1]	1000	gpK
Maximum vibration[2]	400	grms
Sensitivity temperature coefficient	-0.01	%/°C
Operating temperature	-40~120	°C
Constant voltage supply	20~30	VDC
Constant current supply	2~20	mA
Full-scale voltage	±5	V
Maximum over-range output	±6	V
DC bias	8~12	V
Output Impedance	≤100	Ω
Sensitive components	PZT-5 Piezoelectric Ceramic	
Housing Material	Stainless Steel	
Seal form	Laser welding IP68	
Output connector	M5 Top	
Mounting form	M5	
Quality	24	g
Recommended mounting torque	3.0	N*m

Note: 1,2: refers to the sensor in the non-energized state, the mechanical structure is not damaged, and not the working state.

2. Performance parameters for SSA-P4LF1S2:

Table 2. Characteristics for SSA-P4LF1S2

Parameters	Value	Units
Sensitivity	1000	mV/g
Measurement Range	±5	g
Frequency response ±5%	0.06~1000	Hz
Frequency response ±10%	0.04~1500	Hz
Magnitude linearity	≤1	%
Lateral Sensitivity	≤5	%
Installation of resonant frequency	≥8	kHz
Time constants	≥10	s
Resolution	0.00001	grms
Base strain	0.0008	g/ε
Hitting the Limits[1]	100	gpK
Maximum vibration[2]	50	grms
Sensitivity temperature coefficient	-0.1	%/°C
Operating temperature	-40~120	°C
Constant voltage supply	20~30	VDC
Constant current supply	2~20	mA
Full-scale voltage	±5	V
Maximum over-range output	±6	V
DC bias	8~12	V
Output Impedance	≤100	Ω
Sensitive components	PZT-5 Piezoelectric Ceramic	
Housing Material	Stainless Steel	
Seal form	Laser welding IP68	
Output connector	M5 Top	
Mounting form	M5	
Quality	60	g
Recommended mounting torque	3.0	N*m

Note: 1,2: refers to the sensor in the non-energized state, the mechanical structure is not damaged, and not the working state.

3. Performance parameters for SSA-P4LF1S3:

Table 3. Characteristics for SSA-P4LF1S3

Parameters	Value	Units
Sensitivity	1000	mV/g
Measurement Range	±5	g
Frequency response ±5%	0.06~2000	Hz
Frequency response ±10%	0.04~3000	Hz
Magnitude linearity	≤1	%
Lateral Sensitivity	≤5	%
Installation of resonant frequency	≥13	kHz
Time constants	≥10	s
Resolution	0.00001	grms
Base strain	0.005	g/ε
Hitting the Limits[1]	100	gpK
Maximum vibration[2]	40	grms
Sensitivity temperature coefficient	-0.1	%/°C
Operating temperature	-40~120	°C
Constant voltage supply	20~30	VDC
Constant current supply	2~20	mA
Full-scale voltage	±5	V
Maximum over-range output	±6	V
DC bias	8~12	V
Output Impedance	≤100	Ω
Sensitive components	PZT-5 Piezoelectric Ceramic	
Housing Material	Stainless Steel	
Seal form	Laser welding IP68	
Output connector	M5 Top	
Mounting form	M5	
Quality	60	g
Recommended mounting torque	3.0	N*m

Note: 1,2: refers to the sensor in the non-energized state, the mechanical structure is not damaged, and not the working state.

4. Mechanical dimensions

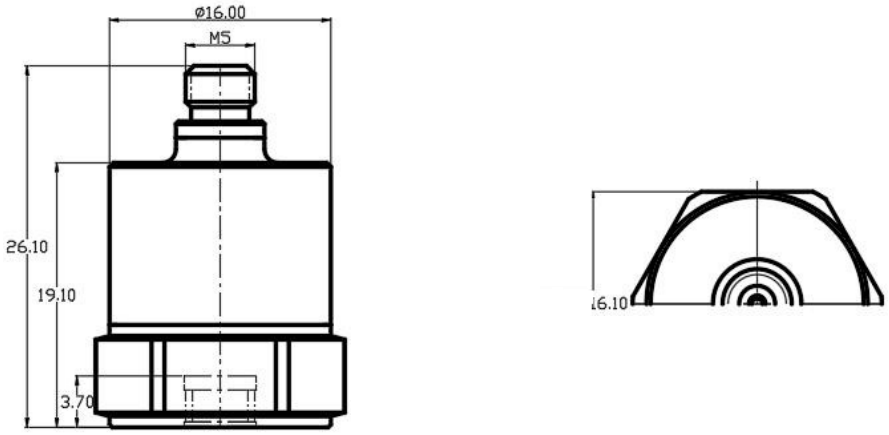

Figure 4.1. Mechanical dimensions for SSA-P4LF1S1

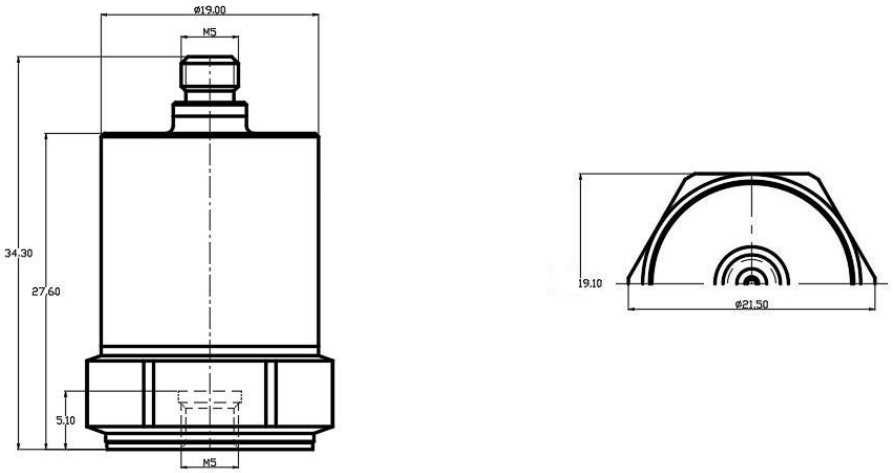

Figure 4.2. Mechanical dimensions for SSA-P4LF1S2/3

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www.sensset.ru

8 (812) 309-58-32 доб. 150
info@sensset.ru

198099, г. Санкт-Петербург
ул. Калинина, дом 2, корпус 4, литера А.

Development, production and supply of high-tech sensors