

ER-QA-03F Small Size And High Temperature Quartz Accelerometer

Introduction

ER-QA-03F is a small size accelerometer which is mainly used for oil well logging. The output current is linear with the force. The operator can select a reasonable sampling resistor according to the calculation to achieve the highest precision output. The product can also be used for static testing and dynamic testing, which is a standard vibration sensor.

Features

1. Excellent start repeatability
2. Good environmental performance
3. Analog output
4. Adjustable output range
5. Small dimensions

Specification

No	Parameters	ER-QA-03F1	ER-QA-03F2
1	Range	±30g	±30g
2	Threshold	30μg	30μg
3	Bias k_0/k_1	≤(±20mg)	≤(±20mg)
4	Scale factor k_1	1.8~2.4mA/g	1.8~2.4mA/g
5	Second-order non-linearity k_2/k_1	≤±20μg/g ²	≤±50μg/g ²
6	Bias composite repeatability σ_{K0} (1σ, one month)	≤150 μg	≤220 μg
7	Scale factor repeatability $\sigma_{K1/k1}$ (1σ,one month)	≤150ppm	≤220ppm

8	Non-linearity coefficient composite repeatability K2/K1(1 σ ,one month)	$\leq\pm 40\mu\text{g}/\text{g}^2$	$\leq\pm 50\mu\text{g}/\text{g}^2$
9	Bias Temp coefficient	$\leq\pm 80\mu\text{g}/^\circ\text{C}$	$\leq\pm 150\mu\text{g}/^\circ\text{C}$
10	Scale factor Temp coefficient	$\leq\pm 100\text{ ppm}/^\circ\text{C}$	$\leq\pm 200\text{ ppm}/^\circ\text{C}$
11	Noise	$\leq 8\text{mv}$	$\leq 8.4\text{mv}$
12	Natural frequency	350~800Hz	350~800Hz
13	Bandwidth	800~2500Hz	800~2500Hz
14	Vibration	25g (20-2000Hz)	25g (20-2000Hz)
15	Shock	1000g, 0.5ms, 1/2sin	1000g, 0.5ms, 1/2sin
16	Operating Temp range	-40~+150 $^\circ\text{C}$	-40~+180 $^\circ\text{C}$
17	Storage Temp range	-60~+180 $^\circ\text{C}$	-60~+200 $^\circ\text{C}$
18	Power	$\pm 12\sim\pm 15$	$\pm 12\sim\pm 15$
19	Current consumption	$\leq\pm 20\text{mA}$	$\leq\pm 20\text{mA}$
20	Size	$\Phi 18.2\times 16\text{mm}$	$\Phi 18.2\times 16\text{mm}$
21	Weight	$\leq 25\text{g}$	$\leq 25\text{g}$

Install dimension

