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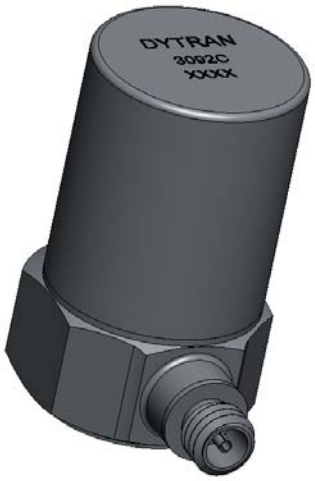
OG3092C
Rev A, ECN 5201

OPERATING GUIDE

MODEL 3092C HIGH TEMPERATURE CHARGE MODE

ACCELEROMETER



This manual includes:

1) Specifications, Model 3092C
2) Supplemental operating guide Model 3092C
3) Outline/Installation Drawing Model 3092C

DYTRAN INSTRUMENTS, INC.

SPECIFICATIONS, MODEL 3092C CHARGE MODE ACCELEROMETER

SPECIFICATION	VALUE	UNITS
PHYSICAL		
WEIGHT	42	grams
SIZE , FLANGE X HEIGHT X LENGTH	.63 x 1.10 x .91	inch
MOUNTING PROVISION	10-32 MOUNTING HOLE, C'BORE DIA.25 IN	
CONNECTOR, SIDE MOUNTED	10-32	
CASE /CONNECTOR MATERIAL	304L/KOVAR	
PERFORMANCE		
SENSITIVITY, ± 1.0 (NOM)	5	pC/g
RANGE F.S.	1000	g's
FREQUENCY RESPONSE, +/- 5%	[1] to 5000	Hz
MOUNTED RESONANT FREQUENCY, NOM.	30	kHz
AMPLITUDE NON-LINEARITY (ZERO BASED BEST FIT ST.LINE METHOD)	2.0	% F.S., MAX.
TRANSVERSE SENSITIVITY, MAX.	5	%
STRAIN SENSITIVITY @ 250/με	.06	g/με
ENVIRONMENTAL		
MAXIMUM VIBRATION	±1000	g,
MAXIMUM SHOCK	2000	g pk
TEMPERATURE RANGE	-65 TO +900	°F
THERMAL SENSITIVITY COEFFICIENT	<.005	%/°F
SEAL	WELDED/CERAMIC TO METAL HERMETIC	
ELECTRICAL		
CAPACITANCE, NOM. PIN A-B	60	pF
OUTPUT SIGNAL POLARITY FOR ACCELERATION TOWARD TOP	NEGATIVE	

NOTES:

[1] LOW FREQUENCY RESPONSE IS A FUNCTION OF THE CHARGE AMPLIFIER DISCHARGE TIME CONSTANT.

SUPPLIED ACCESSORIES:

MODEL 6200S (10-32 TO 10-32 STAINLESS STEEL MOUNTING STUD).

SUPPLEMENTAL OPERATING GUIDE

MODEL 3092C HIGH TEMPERATURE CHARGE MODE ACCELEROMETER

INTRODUCTION

Model 3092C is a charge mode accelerometer designed to measure vibration of surfaces at temperatures up to 900°F. This accelerometer uses an ultra stable piezoelectric crystal in its self-generating seismic element.

Model 3092C may be used with various charge amplifiers of the vibration type (as opposed to the DC coupled electrostatic types.)

DESCRIPTION

Refer to Outline/Installation drawing 127-3092C.

Model 3092C is packaged in a hermetically sealed 304L housing and features a transverse mounted ceramic-to-metal sealed connector (10-32 UNC-2A thread). The unit is installed by use 6200s mounting stud (supplied). The mounting screws thread into a matching threaded hole which must be provided in the mounting surface.

INSTALLATION

To mount Model 3092C, it is necessary to drill and tap a 10-32 mounting. For best high frequency response, the contact area of the accelerometer must be selected or prepared to be flat to .001 TIR. The holes must be drilled perpendicular to the mounting surface to within 2 degrees of angular error.

After drilling and tapping, clean the area to remove all traces of cutting oil and machining chips.

Spread a thin layer of silicone grease on the three contact surfaces of the 3092C. Thread the mounting stud into the tapped holes and torque to 15 pound inches.

Inspect the mating surfaces to ensure that the accelerometer is snugged down tightly in intimate contact with the test surface.

If the surfaces appear to be meeting squarely, the accelerometer is ready for connection of the cable.

MAINTENANCE AND REPAIR

Should you experience a problem with your system, contact the Dytran factory for technical assistance in analyzing and trouble shooting the problem. If the product must be returned for evaluation and/or repair, you will be given an RMA (returned materials authorization) number and instructions for returning the instrument to the factory. Do not return the instrument without first obtaining this authorization to return.