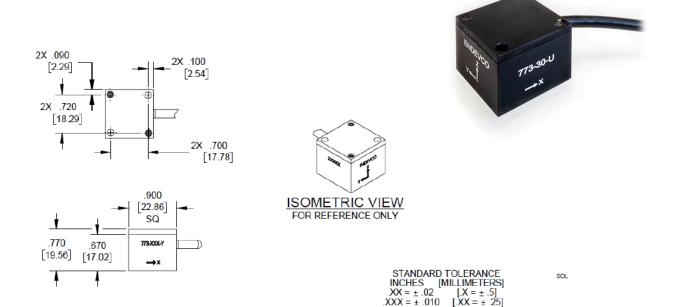


# **Triaxial low g DC accelerometer** Model 773



## Key features

- 10, 30, 50, 100 and 200 g ranges
- Each axis has separate power and ground
- Frequency response from DC up to 2,000 Hz
- Rugged housing and cable
- Operating temperature from 40° C to 100°C

## Description

The ENDEVCO® Model 773 is a triaxial low g DC accelerometer that utilizes unique variable capacitance microsensors. This accelerometer is designed for measurement of relatively low level accelerations in automotive ride quality, motorsports and high speed rail applications where measurement of whole body motion immediately after the accelerometer is subjected to a shock motion and in the presence of severe vibrational inputs is required.

The 773 accelerometer is available with a choice of two power options. One option (U) allows for operation from 7V to 36V. The second option (R) allows for operation at a regulated excitation voltage of 5V. The accelerometer provides single-ended output with a 2.5V output bias voltage.



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The following performance specifications conform to ISA-RP-37.2 (1964) and are typical values, referenced at +75°F (+24°C) and 100 Hz, unless otherwise noted. Calibration data, traceable to National Institute of Standards and Technology (NIST), is supplied.

Dynamic characteristics	Units	-10	-30	-50	-100	-200			
Range		±10	±30	±50	±100	±200			
Sensitivity	g mV/g	200	66	±30 40	20	10			
Jensitivity	iiiv/g	±10	±4	+0 ±2	±1.0	±1.0			
Frequency response (±5%, ref 100 Hz) typical	Hz	0-750	0-750	0-750	0-1000	0-1000			
Frequency response (±10/8, ref 100 Hz) max	Hz	0-1500	0-2000	0-2000	0-2000	0-2000			
Frequency response (±3dB, ref 100 Hz) typical	Hz	0-1500	0-2000	0-2000	0-2000	0-2000			
Zero measurand output	112	2500	2500	2500	2500	2500			
		±50	±50	±50	±50	±50			
Transverse sensitivity	%	3.0	3.0	3.0	3.0	3.0			
Thermal zero shift (max)	% %FSO [1]	±2.0	5.0 ±2.0	5.0 ±2.0	3.0 ±2.0	3.0 ±2.0			
	%F30 [1]	±2.0	±2.0	±2.0	±2.0	±2.0			
-40°C to +100°C (-40°F to 212°F)	%	±2.0	±2.0	±2.0	±2.0	±2.0			
Thermal sens shift (max)	70	±2.0	±2.0	±2.0	±2.0	±2.0			
-40°C to +100°C (-40°Fto +212°F)									
Combined non-linearity	% ESO	· 0 F	+0 F	+0 F	+0 F	+0 F			
(BFSL) and hysteresis	%FSO	±0.5	±0.5	±0.5	±0.5	±0.5			
Natural frequency, typ	Hz	2700	5500	5500	9800	9800			
Threshold (resolution) [2]	equiv. g's.	.001	.003	.005	.01	.02			
Electrical characteristics									
Excitation voltage									
For option "R" supply voltage	5 Vdc (Regulated 5V	supply required; I	Maximum 7V	without dam	nage)				
For option "U" supply voltage	7 to 36 Vdc (Maximu	11.5			5 /				
Current drain			- 3-7						
Output impedance	100 ohms max				8mA max each axis, 24 mA max total				
	10K ohms resistance minimum								
Load	10K ohms resistance	minimum							
Load									
	50 pF capacitance m	aximum	00 Hz						
Load Residual noise	50 pF capacitance m 50 μVrms typ, 100 u\	aximum /rms max; 0.5 to 10							
Residual noise	50 pF capacitance m 50 μVrms typ, 100 u 500 μVrms typ, 1.0 n	aximum /rms max; 0.5 to 10 nVrms max; 0.5Hz 1	to 10 kHz						
Residual noise Input voltage protection	50 pF capacitance m 50 μVrms typ, 100 u' 500 μVrms typ, 1.0 n Reverse polarity pro	aximum Vrms max; 0.5 to 10 nVrms max; 0.5Hz t tected (for "U" opt	to 10 kHz						
Residual noise Input voltage protection Insulation resistance	50 pF capacitance m 50 μVrms typ, 100 u 500 μVrms typ, 1.0 n	aximum Vrms max; 0.5 to 10 nVrms max; 0.5Hz t tected (for "U" opt	to 10 kHz						
Residual noise Input voltage protection Insulation resistance Case to leads shorted together	50 pF capacitance m 50 μVrms typ, 100 u' 500 μVrms typ, 1.0 n Reverse polarity pro	aximum Vrms max; 0.5 to 10 nVrms max; 0.5Hz t tected (for "U" opt	to 10 kHz						
Residual noise nput voltage protection nsulation resistance Case to leads shorted together Shield to leads shorted together	50 pF capacitance m 50 μVrms typ, 100 u' 500 μVrms typ, 1.0 n Reverse polarity pro	aximum Vrms max; 0.5 to 10 nVrms max; 0.5Hz t tected (for "U" opt	to 10 kHz						
Residual noise nput voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together	50 pF capacitance m 50 μVrms typ, 100 u' 500 μVrms typ, 1.0 n Reverse polarity pro	aximum Vrms max; 0.5 to 10 nVrms max; 0.5Hz t tected (for "U" opt	to 10 kHz						
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics	50 pF capacitance m 50 μVrms typ, 100 u' 500 μVrms typ, 1.0 n Reverse polarity pro	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz f tected (for "U" opi mum at 50 Vdc	to 10 kHz tion only)	ter					
Residual noise Input voltage protection Insulation resistance Case to leads shorted together	50 pF capacitance m 50 μVrms typ, 100 ư 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz f tected (for "U" opf mum at 50 Vdc able) plus cable at 2	to 10 kHz tion only)	ter					
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material	50 pF capacitance m 50 μVrms typ, 100 ư 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz f tected (for "U" opi mum at 50 Vdc able) plus cable at 2 lloy.	to 10 kHz tion only) 20 grams/me		with black PV	'C jacket.			
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type	50 pF capacitance m 50 μVrms typ, 100 u <sup>3</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz f tected (for "U" opi mum at 50 Vdc able) plus cable at 2 lloy. r, # 28 AWG PVC i	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type Mounting/torque	50 pF capacitance m 50 μVrms typ, 100 u <sup>3</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz f tected (for "U" opi mum at 50 Vdc able) plus cable at 2 lloy. r, # 28 AWG PVC i	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type Mounting/torque Environmental characteristics	50 pF capacitance m 50 μVrms typ, 100 u 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto Mounting 2x #4 or M	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz 1 tected (for "U" opi mum at 50 Vdc able) plus cable at 2 lloy. rr, # 28 AWG PVC i 13 Screws / 6 lb-in	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type Mounting/torque Environmental characteristics Shock Limit	50 pF capacitance m 50 μVrms typ, 100 u <sup>3</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz 1 tected (for "U" opi mum at 50 Vdc able) plus cable at 2 lloy. rr, # 28 AWG PVC i 13 Screws / 6 lb-in	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together <b>Physical characteristics</b> Weight (typical) Case material Cable type Mounting/torque <b>Environmental characteristics</b> Shock Limit Temperature	50 pF capacitance m 50 μVrms typ, 100 u <sup>1</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto Mounting 2x #4 or N	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz t tected (for "U" opi mum at 50 Vdc able) plus cable at 2 lloy. pr, # 28 AWG PVC i 13 Screws / 6 lb-in versine pulse)	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type Mounting/torque Environmental characteristics Shock Limit Temperature Operating Range	50 pF capacitance m 50 μVrms typ, 100 u <sup>1</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto Mounting 2x #4 or M 10000g (0.15 mS hav -40°F to +212°F (-40	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz t tected (for "U" opi mum at 50 Vdc able) plus cable at 2 lloy. rr, # 28 AWG PVC i 13 Screws / 6 lb-in versine pulse) °C to +100°C)	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise nput voltage protection nsulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type Mounting/torque Environmental characteristics Shock Limit Temperature Operating Range Storage Range	50 pF capacitance m 50 μVrms typ, 100 u <sup>1</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto Mounting 2x #4 or M 10000g (0.15 mS hav -40°F to +212°F (-40 -40°F to +212°F (-40	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz t tected (for "U" opi mum at 50 Vdc able) plus cable at 2 lloy. rr, # 28 AWG PVC i 13 Screws / 6 lb-in versine pulse) °C to +100°C)	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise nput voltage protection nsulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type Mounting/torque Environmental characteristics Shock Limit Temperature Operating Range Storage Range Humidity	50 pF capacitance m 50 μVrms typ, 100 u <sup>1</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto Mounting 2x #4 or M 10000g (0.15 mS hav -40°F to +212°F (-40	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz t tected (for "U" opi mum at 50 Vdc able) plus cable at 2 lloy. rr, # 28 AWG PVC i 13 Screws / 6 lb-in versine pulse) °C to +100°C)	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type Mounting/torque Environmental characteristics Shock Limit Temperature Operating Range Storage Range Humidity Calibration data	50 pF capacitance m 50 μVrms typ, 100 u <sup>1</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto Mounting 2x #4 or N 10000g (0.15 mS hav -40°F to +212°F (-40 -40°F to +212°F (-40 IP67	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz 1 tected (for "U" opf mum at 50 Vdc able) plus cable at 2 lloy. In # 28 AWG PVC i 13 Screws / 6 lb-in versine pulse) °C to +100°C) °C to +100°C)	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type Mounting/torque Environmental characteristics Shock Limit Temperature Operating Range Storage Range Humidity Calibration data Sensitivity	50 pF capacitance m 50 μVrms typ, 100 u <sup>1</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto Mounting 2x #4 or N 10000g (0.15 mS hav -40°F to +212°F (-40 -40°F to +212°F (-40 IP67 Measured at 10 g an	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz 1 tected (for "U" opf mum at 50 Vdc able) plus cable at 2 loy. In # 28 AWG PVC i 13 Screws / 6 lb-in versine pulse) °C to +100°C) °C to +100°C) °C to +100°C) d 100Hz	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			
Residual noise Input voltage protection Insulation resistance Case to leads shorted together Shield to leads shorted together Physical characteristics Weight (typical) Case material Cable type Mounting/torque Environmental characteristics Shock Limit Temperature Operating Range	50 pF capacitance m 50 μVrms typ, 100 u <sup>1</sup> 500 μVrms typ, 1.0 n Reverse polarity pro 100 Meg Ohms mini 24 grams (without ca Anodized aluminum a Integral 10 conducto Mounting 2x #4 or N 10000g (0.15 mS hav -40°F to +212°F (-40 -40°F to +212°F (-40 IP67	aximum Vrms max; 0.5 to 10 hVrms max; 0.5Hz 1 tected (for "U" opf mum at 50 Vdc able) plus cable at 2 lloy. in, # 28 AWG PVC i 13 Screws / 6 lb-in versine pulse) °C to +100°C) °C to +100°C) °C to +100°C) d 100Hz 0 to 10000 Hz	to 10 kHz tion only) 20 grams/me nsulated lead		with black PV	'C jacket.			

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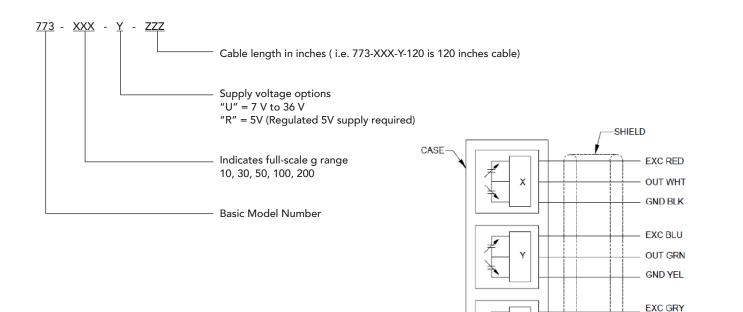
Accessories				
Product	Description	773		
EH864	4-40 Socket Head Cap Screw, 1" length, 2x	Included		
EHW289	Washer, 2x	Included		

## **Ordering information**

1. Maintain high levels of precision and accuracy using Endevco's factory calibration services. Call Endevco's inside sales force at 866-ENDEVCO for recommended intervals, pricing and turn-around time for these services as well as for quotations on our standard products.

#### Notes

- 1. Full scale output (FSO) is nominally 4 volts
- 2. Threshold = [2x Max residual noise, .5 to 100Hz] / sensitivity
- 3. Model number definition:



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GND ORG

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