

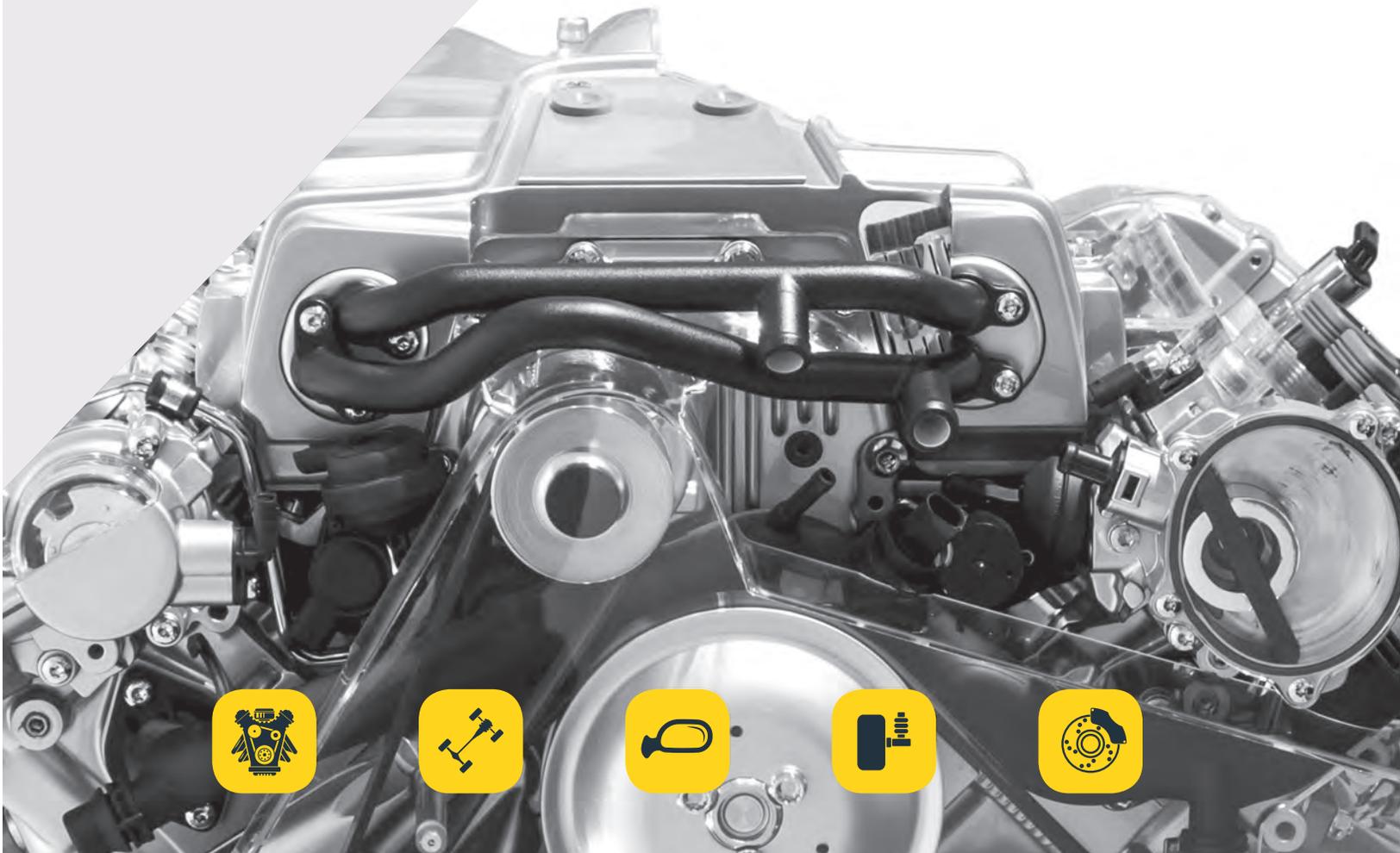
# Automotive testing

Endevco accelerometers are used in vehicle dynamic testing of engines, exhaust systems, components and suspension systems due to their miniature packaging, high temperature performance and rugged construction. Endevco pressure transducers are used in automotive testing systems such as Anti-Lock Brake Systems (ABS), transmissions, fuel and oil systems due to their wide frequency response and high level of output in a compact housing, making it ideal for use in places traditionally inaccessible due to size constraints.

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- > TEDS enabled for high channel count applications
  - > Static and dynamic pressure measurements
  - > Hermetically sealed
  - > Miniature size

## Applications

- > Road load
- > Powertrain
- > Transmission testing
- > Modal/chassis design
- > Component qualification testing
- > Noise, Vibration, and Harshness (NVH)





## Road load

Model number	7290G / 7290FM5	770A / AF	773
<b>Description</b>	Wide bandwidth/ DC response High stability/ Watertight to IP67 PFA Cable/ Temperature compensated	Low g DC measurement Rugged Al housing 28 AWG cable	Triaxial Low g DC Rugged Al housing Separate power & ground
<b>Linear range g</b>	±2 / ±5 / ±10 / ±30 / ±50 / ±100 / ±200	±2/±10/±30/±50/±100/±200	±2/±10/±30/±50/±100/±200
<b>Sensitivity mV/g typical</b>	1000 / 400 / 200 / 66 / 40 / 20 / 10	1000/200/66/40/20/10	1000/200/66/40/20/10
<b>Frequency response ±5%, Hz</b>	0-15 / 0-30 / 0-500 / 0-1000 / 0-2000 / 0-2000 / 0-2000	0-200 / 0-900 / 0-900 / 0-900 / 0-1500 / 0-1500	0-200 / 0-750 / 0-750 / 0-750 / 0-1000 / 0-1000
<b>Non linearity % FSO typical</b>	0.2 / 1.0 (100g)	0.5	0.5
<b>Shock limit g</b>	5000 (2g / 5g / 10g) / 10,000	10,000	10,000
<b>Operating temperature C (°F)</b>	-55 to +121 (-67 to +250)	-40 to +100 (-40 to +212)	-40 to +100 (-40 to +212)
<b>Dimensions mm (in)</b>	25.4 x 21.6 x 7.6 (1.00 x 0.85 x 0.30)	15.24 (0.6) cube (A) 15.24 x 22.88 x 15.24 (0.600 x 0.885 x 0.600) (F)	22.86 x 22.86 x 19.56 (0.900 x 0.900 x 0.770)
<b>Weight gram</b>	10	6	24
<b>Excitation voltage Vdc</b>	8 to 40	7 to 36 or 5V (R option)	7 to 36 or 5V (R option)
<b>Mounting method</b>	Screw 4-40	Adhesive (A); 2-56 screws (F)	4-40 screws



## Component quality testing

Model number	25A	35C	27BLPF
<b>Description</b>	Ultra miniature Lightweight	Ultra-miniature triaxial Hermetically sealed	Lightweight teardrop High temperature Integrated low-pass filter
<b>Sensitivity mV/g typical</b>	5	2 / 5 / 10	10
<b>Range g</b>	±740	±2800 / ±1400 / ±700	±500
<b>Shock limit g</b>	2000	5000	5000
<b>Frequency response ±5% Hz</b>	2-8000	2-8000 / 2-8000 / 2-6000 (±5%)	2-1000 (2 kHz filter) 2-5000 (10 kHz filter)
<b>Resolution (equiv.g rms)</b>	0.007	2000 / 1600 / 2700	0.008
<b>Operating temperature °C (°F)</b>	-55 to +125 (-67 to +257)	-55 to +125 (-67 to +257)	-55 to +175 (-67 to +347)
<b>Signal/ground isolation</b>	Yes	No	No
<b>Hermetic seal</b>	No	Yes	Yes
<b>Weight gram (without cable)</b>	0.2	0.76	0.8
<b>Dimensions mm (in)</b>	Ø 0.381 x 2.54 [Ø 0.15 x 0.10]	5.97 cube (0.235 cube)	Ø 6.35 x 6.6 [Ø 0.25 x 0.26]
<b>Mounting method</b>	Adhesive	Adhesive	Adhesive
<b>Cable included</b>	Integral	Integral	3053VM1-120



## Noise, vibration, and harshness (NVH)

Model number	65 / 65M1	66	67	7250B	7251A
Description	Triaxial	Triaxial TEDS	Triaxial High temperature High sensitivity	Ultra wide bandwidth Thru-hole mount	Thru-hole mount
Sensitivity mV/g, typical	10 / 100	5 / 10 / 100	10 / 100	2 / 10	10 / 100 / 500
Range	±500 / ±50	±1000 / ±500 / ±50	±500 / ±50	±2500 / ±500	±500 / ±50 / ±10
Shock limit g	10,000	10,000	5000	10,000	5000
Frequency response ±5% Hz	0.4-10,000 / 1.5-6000	0.4-7000 / 0.4-14,000 / 1.5-10,000	0.15-10,000 / 0.5-10,000	1 to 40,000 (±3 dB)	2-10,000 (±10%)
Broadband noise (µg rms)	800 / 400	6000 / 800 / 400	1400 / 450	3500 / 1000	1000 / 250 / 150
Operating temperature °C (°F)	-55 to +125 (-67 to +257)	-55 to +125 (-67 to +257)	-55 to +175 (-67 to +347)	-55 to +125 (-67 to +257)	-55 to +125 (-67 to +257)
Signal/ground isolation	65: No / 65M1: Yes	No	No	Yes	Yes
Hermetic seal	Yes	Yes	Yes	Yes	Yes
Weight gram (without cable)	5	5	14	1.9	10.5
Dimensions mm (in)	65: 10 cube (0.39 cube) 65M1: 11.2 cube (0.44 cube)	10 x 10 x 13 (0.39 x 0.39 x 0.52)	14.81 cube (0.58 cube)	Ø 9.65 x 6.2 (Ø 0.381 x 0.25)	Ø 15.2 x 8.9 (Ø 0.60 x 0.35)
Mounting method	Stud / adhesive	Stud	Stud	Screw	Screw
Cable included	3027AM3-120	3027AM3-120	3027AVM13-84 / 3027AM3-36	3091F-120	3061A-120



## Powertrain

Model number	65HT	65HTLPF
Description	Triaxial High temperature	Triaxial High temperature Integrated low-pass filter
Sensitivity mV/g, typical	0.5 / 1 / 10	10
Linear range g	±10,000 / ±5000 / ±500	±500
Shock limit g	15,000 / 10,000 / 10,000	10,000
Frequency response ±5% Hz	5-6000 (z axis) / 5-5000 (x, y axis)	5-1000 [2 kHz filter] / 5-5000 [10 kHz filter]
Resolution (equiv.g rms)	0.008 / 0.004 / 0.001	0.004
Operating temperature °C (°F)	-55 to +175 (-67 to +347)	-55 to +175 (-67 to +347)
Signal/ground isolation	No	No
Hermetic seal	Yes	Yes
Weight gram (without cable)	5	5
Dimensions mm (in)	10 cube [0.39 cube]	10 cube [0.39 cube]
Mounting method	Stud	Stud
Cable included	3027AVM13-84; 3027AM3-36	3027AVM13-84; 3027AM3-36

## Brake line pressure

Model number	8510B
Description	Gage Vent tube Temp compensation
Full scale pressure psi	1 / 2 / 5 / 200 / 500 / 2000
Sensitivity mV/psi	200 / 100 / 60 / 1.5 / 0.6 / 0.15
Resonance frequency kHz	55 / 70 / 85 / 320 / 500 / 900
Non linearity (typ) %FSO	0.5
Operating temperature °C (°F)	-54 to +121 (-65 to +250)
Burst pressure psi	25 / 40 / 100 / 1000 / 2500 / 10,000
Face diameter mm (in)	3.86 (0.152)
Weight gram	2.3
Mounting method	10-32 UNF-2A

### **A** Frame

Mounted on components and the structural frame during safety testing, the damped 726CH accelerometer is specified for its' small size and ruggedness.



### **D** Brakes

Used in the development and testing of anti-skid brake systems, the 8510B pressure transducer's miniature size allows easy installation and accurate measurement of dynamic brake line pressure.



### **B** Transmission and airbag

The small size and high output of 8530B pressure transducers facilitate transmission fluid pulse measurements during shifting and expansion pressure measurements following airbag ignition.



### **E** Powertrain

Rugged enough to measure vibrations from engine blocks, fuel lines and other "under-the-hood" components, the 65HT Isotron accelerometer provides high temperature operation and wide frequency response.



### **C** Component reliability

The tiny size of the 35C is ideal for measuring vibration in all three axes on small automotive components, like mirrors and door handles, during ride testing and component reliability testing.



### **F** Suspension

The 7290G accelerometer provides the high level output, rugged construction and wide operating range required in road simulators and at proving grounds, leading to improved suspension systems and ride performance.



**Endevco's product range has the highest quality sensors for measuring shock, vibration, and pressure, giving the engineer the most accurate data possible. The durability of our products provides exceptional value.**

