KISTLER

Type 8772A5M10 ... 8772A50M10

8772A...M10 PiezoSMART™ CUBE ACCELEROMETERS

The 8772A...M10 accelerometer can operate both as a standard low impedance, voltage mode sensor with a conventional analog output signal or in a digital "PiezoSMART Sensor Mode" capable of providing pertinent information stored with in its memory module. Since the design of the accelerometer conforms to a universal standard (IEEE 1451.4), any commercially manufactured TEDS Signal Conditioner, along with a host computer, will address and retrieve the stored information.
The 8772A...M10 series is ideally suited for multichannel modal analysis applications, where the convenience of having sensor identification and specification readily available, now becomes an important test benefit. The convenient cubic configuration provides flexibility for installation. Any of three orthogonal surfaces can be used for adhesive attachment, allowing for quick removal and convenient orientation alignment. The small, lightweight design reduces mass loading in multichannel applications.
High sensitivity and high thermal rejection are featured in this series. These ground isolated accelerometers are housed in a hard anodized package for protection against adverse conditions. The PiezoSMART™ design produces outstanding phase response and

- Low impedance, voltage mode
- Incorporates "TEDS" smart sensor technology
- High sensitivity
- Small, cubic design
- Ideal for modal analysis
- Excellent thermal stability
- Conforming to CE

1:1

Technical Data	Units	8772A5M10	8772A10M10	8772A50M10
Acceleration Range	g	±5	±10	±50
Acceleration Limit	g_{pk}	±8	±16	±80
Threshold nom.	μg_{rms}	400	500	2000
Sensitivity ± 5% (at 100 Hz, 3 g_{rms})	mV/g	1000	500	100
Resonant Frequency mounted, nom.	kHz	20	20	20
Frequency Response ± 5%	Hz	1 ... 5000	1 ... 5000	1 ... 5000
Phase Shift, < 5°	Hz	2 ...3000	2 ...3000	2 ...5000
Amplitude Non-linearity, nom.	%FSO	±1	±1	±1
Time Constant nom.	s	1	1	1
Transverse Sensitivity	%	<5	<5	<5
Environmental:				
Base Strain Sensitivity @ 250 με	g/με	< 0.005	< 0.005	< 0.005
Shock Limit (0.2 ms pulse) max.	g_{pk}	5000	7000	7000
Sensitivity Shift typ. (for 2…8 mA)	%	±1	±1	±1
Temperature Coefficient of Sensitivity	%/°F	– 0.08	– 0.06	– 0.06
	%/ °C	– 0.15	– 0.10	– 0.10
Temperature Range Operating (4 mA supply current)	°F	32 ...150	32 ...150	32 ...150
	°C	0 ... 65	0 ... 65	0 ... 65
Storage	°F	–10 ... 200	–10 ... 200	–10 ... 200
	°C	– 23 ... 94	– 23 ... 94	– 23 ... 94
Output:				
Bias nom.	VDC	11	11	11
Impedance	Ω	<500	<500	<100
Voltage full scale	V		±5	
Current	mA		2	

1 g = 9.80665 m/s², 1 inch = 25.4 mm, 1 gram = 0.03527 oz, 1 lbf-in = 0.1129 Nm

Kistler Instrument Corporation reserves the right to discontinue or change specifications, designs or materials without notice consistent with sound engineering principles and quality practices.

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000-254e-12.01 (DBK8.8772M10e)

Technical Data	Unit	8772A...
Source		
Voltage	VDC	20 ... 30
Constant Current	mA	2 … 18
Impedance	kΩ	>100
Construction		
Sensing Element	type	ceramic/shear
Case	material	Al / hard anodized
Sealing housing/connector	type	epoxy
Connector	type	10-32 neg.
Ground Isolation min.	MΩ	10
Weight	g	8
Mounting	type	adhesive/wax

a wide frequency range. The 8772A...M10 is available in three ranges with sensitivities as high as 1000 mV/*g*.
The built-in charge converter provides low impedance, voltage output, allowing for high noise immunity and insensitivity to cable motion. Standard, low cost cables can be used because of the low impedance output.

TEDS Data Editing

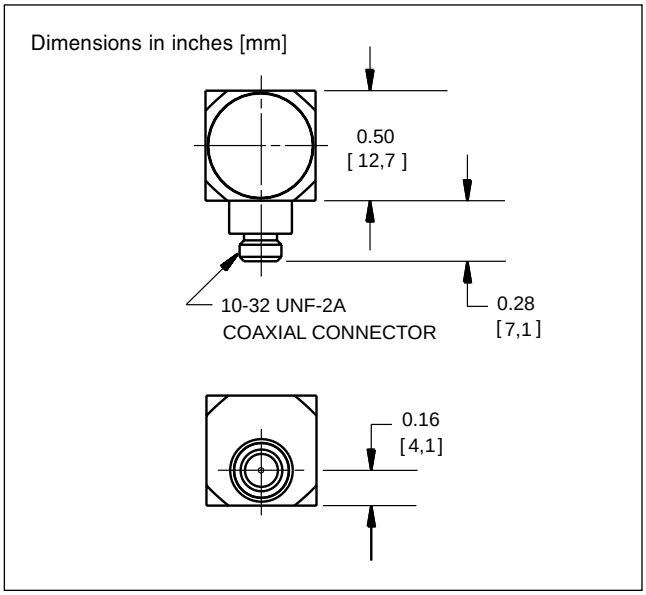
A 5142 smart sensor coupler/programming tool provides for con veniententry of the data fields that are defined during sensor installation or test preparation. Included with the system is Windows-based PC software, providing appropriate TEDS editing capability. This portable coupler is used to prepare the sensor for information handling by large TEDS capable analysis systems.

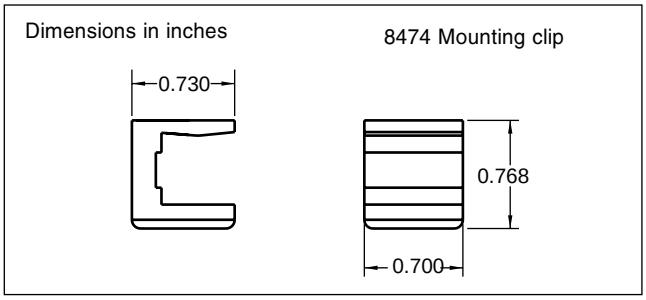
Applications

- Multichannel measurements
- Modal analysis measurements on automotive body and aircraft frames
- Structural analysis measurements

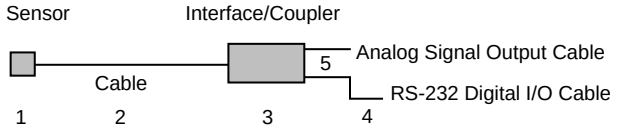
Related Products

8630C series	accelerometers, adhesive mount
8636C series	accelerometers, 5-40 stud mount
8690C series	accelerometers, triaxial cube
8692C series	accelerometers, triaxial
9720 series	impulse hammers
K-BEAM®	accelerometers for very low frequency measurements
8770	Impedance head
9712	load cells





Ordering Information



Specify:

1 - 8772...M10	PiezoSMART accelerometer, specify range
2 - 1761B...	low-cost cable, 10-32 pos. to BNC pos., specify length in meters
3 - 5142	PiezoSMART, IEEE 1451.4 interface/coupler
4 - 1500A20	cable RS-232, DB-9 male to DB-9 male, 6ft (1.8m)
5 - 1511...	output cable, BNC pos. to BNC pos., specify length in meters.
2860xxxx	software, TEDS Programer Editor

Supplied Accessory

8432 mounting wax, supplied

Optional Accessory

8474 mounting clip, optional, Black Derlin

000-254e-12.01 (DBK8.8772M10e)

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