

imc Uni- & Triaxial Accelerometers: imc AD series



These all-purpose IEPE (ICP) accelerometers are based on a piezoelectric sensor element according to the shearing principle and enable measurement of dynamic accelerations, vibrations and solid-borne noise.

The scope of application possibilities includes the fields of endurance strength testing, machine dynamics, modal- and structural analysis as well as vibration analysis and acoustics.

Both uni- and triaxial types are available, respectively in the measurement ranges ± 60 g and ± 600 g, where the housing of the uni-axial version consists of stainless steel, while that of the triaxial version is constructed of aluminum. The active sensors can be operated at any IEPE (ICP)-compatible imc measurement amplifier having current feed and AC-coupling.

In conjunction with the integrated TEDS-chip, reliable and error-free "Plug'n'Play" operation is ensured..

Features

- low noise
- high bandwidth, up to 23 kHz
- low temperature coefficient
- compact and low-weight
- well suited to vibration-, spectral-, modal- and structural analysis
- built-in TEDS (IEEE 1451.4)
- isolated housing, M5 screws
- direct connection to all imc voltage amplifiers having IEPE inputs (constant feed current)

Technical Specs - imc AD series

Sensor types

Type designation	Unit	AD1E060	AD1E500	AD3A060	AD3A600
Orientation / Channels		uni-axial		tri-axial	
Measurement range	±g	60	500	60	600
Sensitivity	mV/g	100 ±10 %	10 ±10 %	100 ±10 %	10 ±10 %
Linear frequency range ¹	Hz	0.2...20.000	0.65...23.000	0.15...>7.000	0.15...>7.000
Destruction limit	±g	4.000	4.000	3.000	7.000
Non-linearity	% FSO			2	
Transverse sensitivity	%	<5			
Operation point voltage	V DC	12...14,5			
Constant current supply ²	mA	2...20			
Output impedance	Ω	<100			
Spectral noise density	µg/√Hz	0,8	2	0,8	8
Residual noise ³	µV	400	1.000	<400	<4.000
Temperature jump sensitivity	mg/°C	0.008	0.01	0.013	0.2
Temperature coefficient ⁴	%/°C	0.1	0.1	0.02	0.01
Operating temperature	°C	-40 to +120		-30 to +100	
Sensor element		Piezo			
TEDS		yes			
Isolation to ground		yes			
Socket		UNF 10-32		¼-28 UNF	
Housing material		stainless		aluminum	
Weight without cables	g	11.3	10.3	9	6.2
Fasteners		M5			
Tightening torque	Nm	≤2			
Included accessories		1.5 m cable 2x UNF 10-32, UNF/BNC adapter, sticky wax, M5 threaded shaft , magnetic clamp M5		3 m cable ¼-28 UNF to Binder 711, 0.5 m Binder 711 to BNC adapter, sticky wax, M5 threaded shaft , magnetic clamp M5	

Remarks

¹ Linear frequency range -3 dB

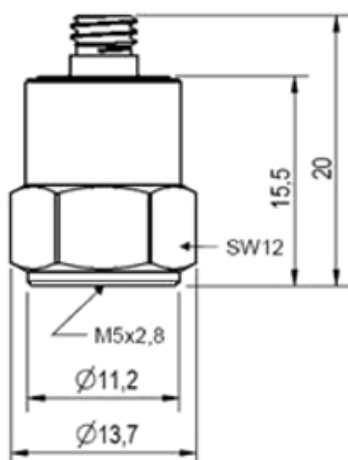
² compatible with imc measurement amplifiers with ICP input (current feed, AC-coupling)

³ RMS, 0.5 Hz .. 20 kHz

⁴ drift of sensitivity

Dimensions

- AD1AXXX



- AD3AXXX

