

MODEL EGAS-S398C PEDESTRIAN IMPACT ACCELEROMETER

SPECIFICATIONS

- Euro NCAP Certified for Pedestrian Testing
- DC Response, Fluid Damped
- $\pm 50g$ to $\pm 2000g$ Ranges
- Compliant to SAE-J211
- Compliant to ISO-6487

FEATURES

- Standard $<10mV$ ZMO
- Linearity $<1\%$
- Transverse Sensitivity $<1\%$
- 2-10Vdc Excitation
- 0.7 Critical Damping Ratio
- Flexible, Low Noise Cable

APPLICATIONS

- Pedestrian Impact Testing
- ATD Head Form Test
- Shock and Impact Testing
- Transient Drop Testing
- Helmet Impact Testing

The **Model EGAS-S398C Accelerometer** is a critically fluid damped accelerometer designed specifically for ATD pedestrian impact and head form testing. The accelerometer has been certified by Euro NCAP for dummy impact and head form test applications.

The accelerometer is available in ranges from $\pm 50g$ to $\pm 2000g$ and features silicon semiconductor strain gages in a half-bridge configuration with a nominal 1500Ω impedance. The design also incorporates integral mechanical over-range stops for high-g protection.

The model EGAS-S398C accelerometer is temperature compensated for low drift performance. The thermal compensation circuit is installed in an in-line cable module.

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PERFORMANCE SPECIFICATIONS

All values are typical at +24°C, 100Hz and 10Vdc excitation unless otherwise stated. TE Connectivity reserves the right to update and change these specifications without notice.

PARAMETERS

DYNAMIC							NOTES
Range (g)	±50	±100	±250	±500	±1000	±2000	
Channel Class Frequency	CFC180	CFC600	CFC1000	CFC1000	CFC1000	CFC1000	
Full Scale Output (mV)	54-72	54-72	54-72	54-72	54-72	54-72	@10Vdc Excitation
Frequency Response (Hz)							
Attenuation at Fh	180	600	1000	1000	1000	1000	±0.5dB
Attenuation at Fn	300	1000	1650	1650	1650	1650	+0.5dB / -2dB
Attenuation at2Fh	360	1200	2000	2000	2000	2000	+0.5dB / -4dB
Natural Frequency (Hz)	>1000	>1500	>2500	>4000	>6000	>10000	
Transverse Sensitivity (%)	<1	<1	<1	<1	<1	<1	Nominal
Non-Linearity (% of reading)	±1	±1	±1	±1	±1	±1	
Damping Ratio	0.7	0.7	0.7	0.7	0.7	0.7	
Shock Limit (g)	5000	5000	10000	10000	10000	10000	

ELECTRICAL

Zero Acceleration Output (mV)	<±10	Differential
Excitation Voltage (Vdc)	2 to 10	
Input Resistance (Ω)	1300 nominal	
Output Resistance (Ω)	1500 nominal	
Insulation Resistance (MΩ)	>100	@100Vdc
Residual Noise (μV RMS)	<10	
Ground Isolation	Isolated from mounting surface	

ENVIRONMENTAL

Thermal Zero Shift (%FSO/°C)	±0.02	From -10°C to +50°C
Thermal Sensitivity Shift (%/°C)	±0.05	From -10°C to +50°C
Operating Temperature (°C)	-20 to +80	
Storage Temperature (°C)	-20 to +80	
Humidity	Epoxy Sealed, IP62	

PHYSICAL

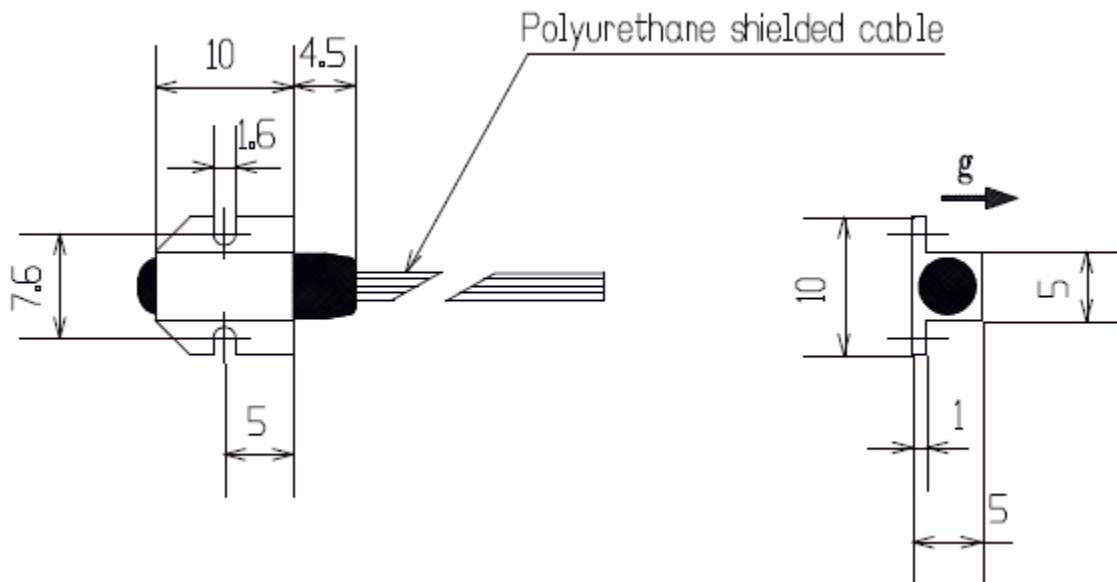
Case Material	Anodized Aluminum	
Cable	4x #32 AWG Leads, PTFE Insulated, Braided Shield, TPU Jacket	
Weight (grams)	<4	Cable not included
Mounting	Screw mounting	

¹ Output is ratiometric to excitation voltage

Optional accessories:	121	3-Channel Precision Low Noise DC Amplifier
	140A	Auto-Zero Inline Amplifier

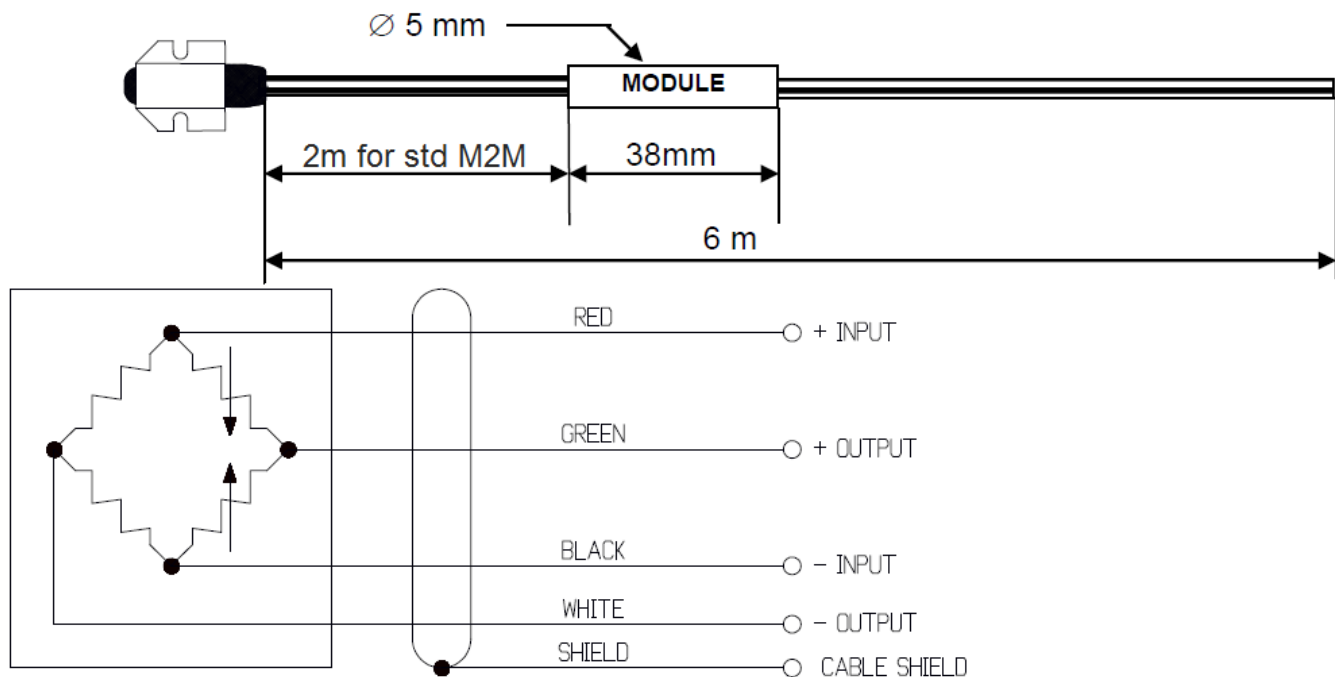
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DIMENSIONS



SCHEMATIC

- . Insulated shielded cable
- . Four conductors AWG32 PTFE insulated leads
- . TPU jacket (Diameter: 2.3 mm)



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ORDERING INFORMATION

EGAS-S398C	GGGG	/MXM	/LXM	/VY
Range 50 = 50g 100 = 100g 250 = 250g 500 = 500g 1000 = 1000g 2000 = 2000g				
Inline Module Location M2M = 2 meter which is standard				
Cable length Blank = 6 meter standard length L3M = 3 meter L9M = 9 meter				
Excitation Voltage Option Blank = 10Vdc V5 = 5Vdc				

Example;EGAS-S398C-500-/M2M
Model EGAS-S398C, 500g range, standard 6meter cable length

Example;EGAS-S398C-2000-/M2M/L3M/V5
Model EGAS-S398C, 2000g range, 3meter cable length, 5Vdc excitation