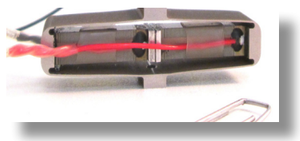
>> AMPLIFIED PIEZO ACTUATORS APA600M



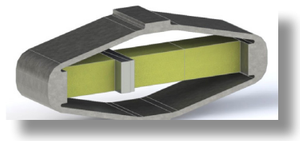
Description: The APA 600M is the middle stroke and force version of the APA M Series. This APA is only dedicated to static working condition.

Performance: Stroke (µm): 618; Blocked force (N): 26.3; Resonance frequency (Hz): 318; Dimensions (mm): 14.60*48.5*12

Available options: Strain Gages; Vacuum; Specific Interface

Status: Standard

>> AMPLIFIED PIEZO ACTUATORS APA200ML



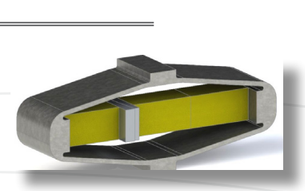
Description: The APA 200ML is the middle stroke and force version of the APA ML Series.

Performance: Stroke (µm): 227; Blocked force (N): 797.9; Resonance frequency (Hz): 1021; Dimensions (mm): 33.06*78.61*20

Available options: Strain Gages; Vacuum; Specific Interface

Status: Standard

>> AMPLIFIED PIEZO ACTUATORS APA300ML



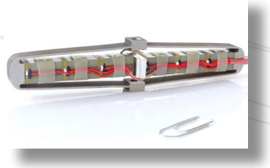
Description: The APA 300ML is the highest stroke version of the Amplified Piezo Actuator ML series.

Performance: Stroke (µm): 304; Blocked force (N): 546; Resonance frequency (Hz): 763; Dimensions (mm): 31.20*78.79*20

Available options: Strain Gages; Vacuum; Specific Interface

Status: Standard

>> AMPLIFIED PIEZO ACTUATORS APA1500L



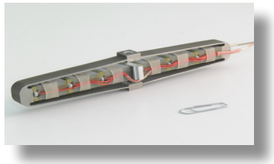
Description: The APA 1500L is the second highest stroke version of the Amplified Piezo Actuator L series.

Performance: Stroke(µm): 1480; Blocked force(N): 121; Resonance frequency(Hz): 141; Dimensions(mm): 29.90*140.65*20

Available options: Strain Gages; Vacuum; Non magnetic; Specific Interface

Status: Standard

>> AMPLIFIED PIEZO ACTUATORS APA2000L



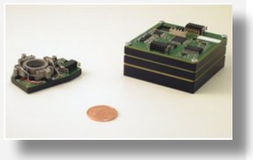
Description: The APA 2000L is the highest stroke version of the Amplified Piezo Actuator L series.

Performance: Stroke(µm):1967; Blocked force(N): 66.5; Resonance frequency(Hz): 87; Dimensions(mm): 26*139*20

Available options: Strain Gages; Vacuum; Non magnetic; Specific Interface

Status: Standard

>> EMBEDDED ALL-IN-ONE 2 AXIS CONTROLLER CCBu20



Description: The Compact Controller Board CCB is an embedded all-in-one controller for piezo actuators. It features everything to drive and control a 2 axis piezo-mechanism in position loop. In standard, its integrated dual channel SG conditioner allows reading the position of the two axis of the mechanism. A powerful processor realizes closed-loop control at high refresh rate, and the controller can be tuned by the user. Thanks to a compact design, it has dimensions of only 92x78x35mm, making it suitable for embedded applications, or industrial applications where the volume is an issue.

Performance: DC voltage between +12V to +28V, analog or digital commands, SPI or RS422 protocol, up to 2 axis in push pull; Output voltage : -20+150V ; Output max current : 0.2A

Available options: 0-5V analog sensor input, Advanced controller

Status: Customised & Preliminary standard

>> CSA96 COMPACT LARGE POWER SWITCHING AMPLIFIER FOR LINEAR MAGNETIC ACTUATOR

Description: The CSA96 is a compact high power switching amplifier for linear/rotary magnetic actuators. It features a wide bandwidth current controller. It runs with an external DC supply but optionally, it can include a dedicated Internal power supply. It includes energy recovery for achieving high efficiency.

Performance: Input = +/-200V max ; Max output current & voltage : up to 20A, +/- 200V ; Output powers : Up to 4kVA, up to 660W ; (**IS** option : Input = 110 / 230V AC ; Output current & voltage : up to 20A, +/- 96V ; Output power: 2kVA) Bandwidth >1kHz ; Dimensions (w x l x h): 130x210x70.8mm3, DIN rail mountable. Commands : Analog or digital (via **UCC96** option); Full galvanic isolation; External brake resistor (TBD) ;

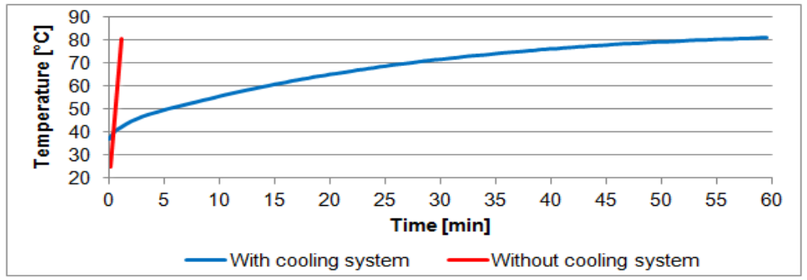
Available options: **IS option :** The Internal Supply IS allows to operate the CSA96 on the mains.

UCC96 option : The CSA96 features also an optional fast digital UCC96 Controller & Conditioner in the same volume. This digital controller can perform any type of control (position, speed, force,…), with simple control strategies (PID + filters), or advanced control strategies (upon request). It has multiple feedback capabilities for conditioning different sensors (quadrature encoder, Strain gages, Eddy current, Analog inputs). It features digital communication to configure the system and send commands. Alternatively, commands can also be sent using analog input.

>> ENCAPSULATED OPTION FOR PIEZO ACTUATORS PPA AND APA®

Encapsulated PPA80L-E

Encapsulation will not become a standard option on all the products range. It is a technology that can be used to answer to specific needs of our customers working at high frequency or in hard environment. Encapsulation cooling enables the PPA80L to run continuously at 230Hz (it performed more than 170 million cycles), whereas it cannot suffer more than 2 minutes at this rate without. When adding forced air flow, it can even run up to 1000Hz continuously.



Heat up curves of the PPA actuators with and without cooling system driven at 230Hz.

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