

# CLF-AN Actuator<sup>†</sup>

## Product Data Sheet



<sup>†</sup> US patent 7,798,982 and patents pending

### Specifications\*

<i>Physical Description</i>	1.25" (31.8 mm) diameter by 1.32" (33.5 mm) high
<i>Weight</i>	98 grams (actuator only)
<i>Exposed Material</i>	Steel, polycarbonate, ABS
<i>Electrical Wiring</i>	Flexible, insulated, twisted pair #24 AWG
<i>Body Contactor</i>	0.5" (12.7 mm) diameter by 0.1" (2.5 mm) high
<i>Tactile Pulse Characteristics</i>	20-80 Hz, <12 ms rise time
<i>Force Constant</i>	8 N/A
<i>Electrical Characteristics</i>	8.0 ohms nominal, excluding wire length
<i>Recommended Drive</i>	Low pass audio or sine wave tone bursts 20-80Hz at 0.4A rms nominal with < 10% average duty cycle
<i>Recommended Controller</i>	Audio amplifier, 20 W

\*Actuator only (excluding housing)

### Product Description

The CLF-AN actuator is a very high force actuator that has been designed to provide high displacement output when mounted in layers of padding (for example a seat). The CLF-AN is designed for operation at very low frequencies and is primarily intended for use as a haptic actuator.

### Applications

- In-seat applications
- Aviation
- Automotive
- Entertainment
- Biomedical Research
- Haptic feedback

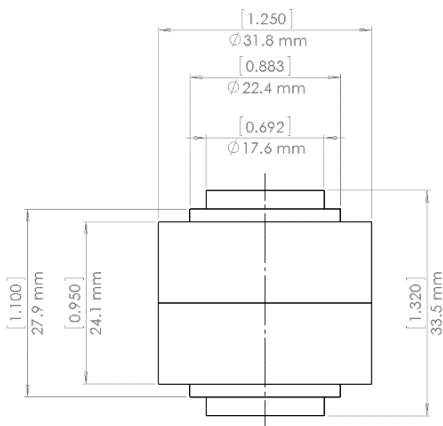
### Mounting

The CLF-AN is available in various standard and custom housing to allow easy integration polyurethane molded and foam upholstered seats and restraints.

# CLF-AN Actuator

## Operation

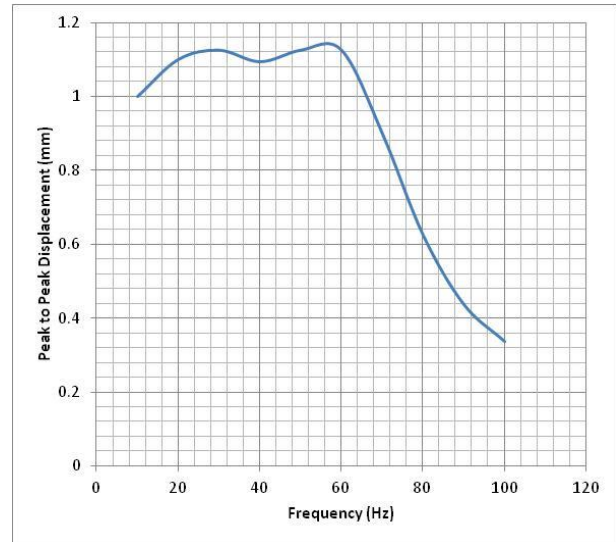
The CLF-AN factor is a moving magnet linear actuator that has been optimized for high force and high displacement. The CLF-AN incorporates a raised, moving contactor (or plunger) that can be customized for mounting in a seat or against the body through multiple layers of padding. With a nominal  $8 \Omega$  impedance, the CLF-AN can be driven by conventional audio drivers, and is compatible with EAI's Universal controller, when used with a filter matching circuit and auxiliary audio amplifier. When an electrical signal is applied, the contactor oscillates perpendicular to the CLF-AN body, creating a strong localized vibration. By varying the electrical drive parameters, a wide variety of tactile sensations can be created.



Contact EAI for additional information

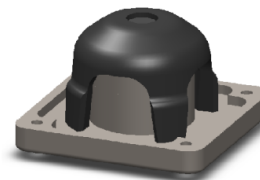
EAI offers complete turnkey vibrotactile systems and a wide range of tactor products. Please contact us for details.

## Performance Data

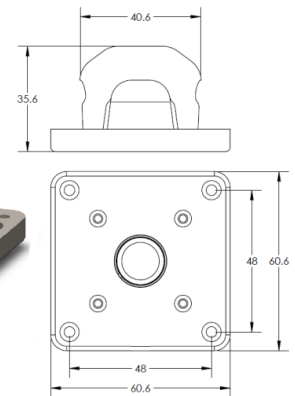


## Dimensions

Standard "CF" version:



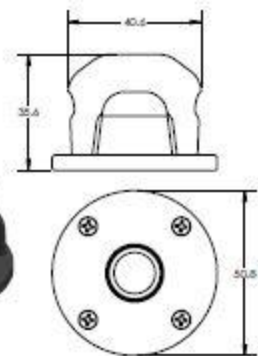
DIMENSIONS IN mm.



Standard "BR" version:



DIMENSIONS IN mm.



Other mounting options available. Contact EAI for details



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