

C-2HD Tactor[†]

Product Data Sheet



[†] US patent 7,798,982

Specifications

<i>Physical Description</i>	1.2" (30.2 mm) diameter by 0.5" (13.0 mm) high
<i>Weight</i>	30 grams
<i>Exposed Material</i>	Aluminum, polyurethane, Delrin
<i>Electrical Wiring</i>	Flexible, insulated, twisted pair #26 AWG.
<i>Body Contactor</i>	0.38" (9.7 mm) diameter by 0.33" (8.4 mm) high
<i>Tactile Pulse Characteristics</i>	160-260 Hz, <2 ms rise time
<i>Electrical Characteristics</i>	11.0 ohms nominal, excluding wire length
<i>Recommended Drive</i>	Band pass audio or sine wave tone bursts 160 - 230Hz at 0.25A rms nominal with < 10% average duty cycle
<i>Recommended Controller</i>	EAI Universal Controller

Product Description

The C-2HD (High Displacement) tactor is a high force actuator that has been designed to provide high displacement output even when mounted against layers of padding (for example a seat) or over thick clothing. The C-2HD is designed for operation in a frequency band that is similar to the EAI C-2 tactor.

C-2HD tactors can be activated individually, sequentially or in groups, and used to provide intuitive “tactile” information to a user. EAI’s C-2HD tactor represents a state-of-the-art, high output vibrotactile transducer, suitable for a wide variety of research, military, biomedical and commercial applications.

Applications

- In-seat applications
- Aviation
- Automotive
- Entertainment
- Biomedical

Operation

The C-2HD tactor is a moving magnet linear actuator that has been optimized for high force and high displacement. The C-2HD 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. The C-2HD is designed with a primary resonance in the 160-260 Hz range that coincides with peak sensitivity of the skin's Pacinian corpuscles, the cutaneous mechanoreceptors that sense vibration. With a nominal 11 Ω impedance, the C-2HD can be driven by conventional audio drivers, and is compatible with EAI's Universal controller. When an electrical signal is applied, the contactor oscillates perpendicular to the body, creating a strong localized sensation. By varying the electrical drive parameters, a wide variety of tactile sensations can be created.

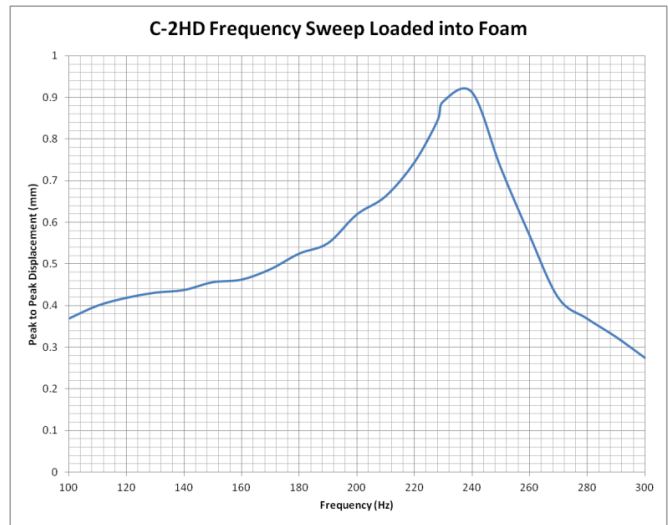
Magnetic Shielding

The C-2HD tactor can be provided with magnetic shielding in order to limit front radiated magnetic field to > 5 Gauss.

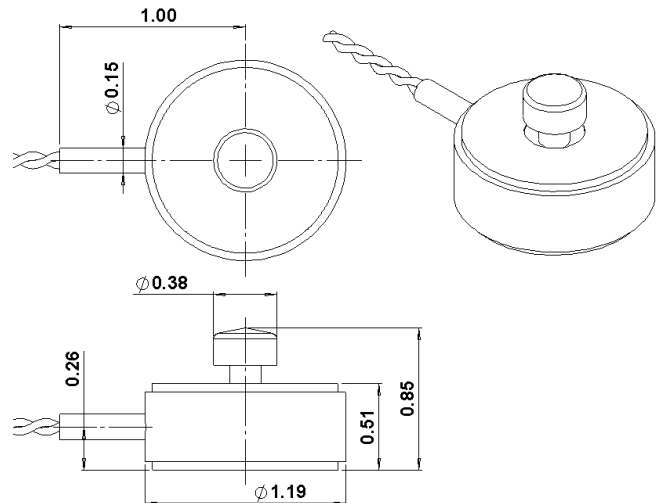
Contact EAI for additional information

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

Performance Data



Dimensions



C-2HD Tactor with extended plunger for in-seat applications [dimensions in inches]. Plunger can be customized for installation in polyurethane molded seats and restraints. Shown without magnetic shielding.