C-MF Tactor†

Product Data Sheet
EAI Tactor

† US patent 7,798,982

Specifications

Physical Description:	0.92" (23.4 mm) by 1.09" (27.6 mm) by 0.45" (11.4 mm) high
Weight:	8 grams (excluding lead)
Exposed Material:	Polycarbonate, Aluminum, PVC
Electrical Wiring:	Flexible, insulated, #26 AWG tinsel
Body Contactor:	0.2" (5.1 mm) diameter, pre-loaded on skin
Tactile Pulse Characteristics:	180-280 Hz, <2 ms rise time
Electrical Characteristics:	10 ohms nominal with 18" wire
Recommended Drive:	Sine wave tone bursts 250Hz at 0.25A rms nominal, 0.5A max for very short durations. Duty cycle < 10%.
Recommended Controller:	EAI Universal Controller, C15-8 Controller

Product Description

The C-MF tactor is a miniature vibrotactile transducer optimized for use on the fingertip. The housing is shaped to locate the fingertip over a small vibrating contactor. EAI's C-MF series Tactors are state-of-the-art, wearable vibrotactile transducers, suitable for a wide variety of biomedical and research applications.

Applications

- Tactile Research
- Tactor gloves
- Wearable tactile feedback
- Haptic feedback
- Virtual reality
- Medical
- Entertainment
- Gaming

Operation

The C-MF series tactors incorporate a moving "contactor" that is lightly preloaded against the fingertip. The C-MF housing is shaped with a convex curve to center the finger and the fingertip. The C-MF is intended to be pressed against the finger using a stretchable glove, finger cot or tape strap wound around the fingertip.

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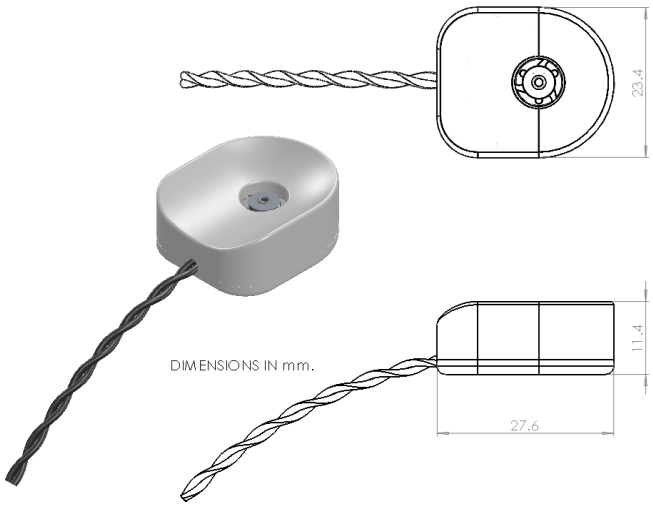
When an electrical signal is applied, the "contactor" oscillates perpendicular to the skin, while the surrounding skin area is "shielded" with a passive housing. Thus, unlike most vibrational transducers (such as common eccentric mass motors that simply shake the entire device), the C-MF provides a strong point-like sensation that is easily felt and localized.

The C-MF has contactor that is sized so as to optimize the impedance transfer between the actuator and mechanical impedance of the fingertip.

To improve efficiency, the C-MF series tactors have a mechanical resonance in the 200-300 Hz range that coincides with peak sensitivity of the Pacinian corpuscle; one of the skin's mechanoreceptors that sense vibration.

The C-MF series are recommended for use in applications requiring tactile feedback or stimulation of the fingertips.



Contact EAI for Additional Information

EAI offers complete turnkey vibrotactile systems and a range of tactors products – please contact us for details.

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