

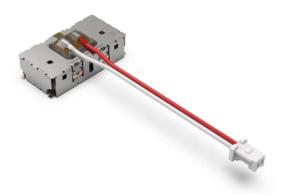
NEWS RELEASE

PR0125EN

Alps Alpine Launched Compact Haptic Reactor "U-Type"

- Achieving a 90% size reduction compared to previous models while maintaining high vibration performance.
- Creating new value in the automotive market.

Munich, Germany – January 16, 2025 – Alps Alpine has launched the compact Haptic Reactor "U-Type," that achieves approximately 90% size reduction (by volume) compared to its predecessors. Maintaining high vibration performance, this new model can be installed in tight spaces that were previously challenging. Mass production began in November 2024.



Background

This product was developed primarily for installation in automotive steering wheels and air-conditioning control units. Currently, push switches are commonly used in automotive control units. However, driven by the trend toward higher-quality interior design, touch panels are increasingly replacing traditional switches. While electronic sounds are often employed to confirm operations on touch panels, there is growing demand for vibration-based feedback as an alternative. This approach ensures intuitive usability while maintaining cabin quietness.



Alps Alpine has been providing haptic reactors as tactile feedback devices to meet such needs. However, conventional models, due to their larger size, were difficult to integrate into space-constrained areas like touch panel-based steering wheels and air-conditioning controls. To address this challenge, Alps Alpine developed the "U-Type," which significantly reduces size while maintaining high vibration performance.

Key Features

1. Compact Design

The reduced size allows installation in limited spaces.

New Product (U-Type): W 10mm × D 19mm × H 5mm

Conventional Product (Heavy Type): W 23.0mm × D 33.0mm × H 13.0mm

2. High Vibration Performance

By optimizing mechanical and magnetic designs, the "U-Type" achieves sufficient vibration force despite its smaller size. It provides an effective tactile response when used in steering wheels or air-conditioning control units.

Product Specifications

Item Specification

Dimensions W10mm x D19mm x H5mm

(excluding FPC, harness, and

connector)

Vibration Acceleration 4.9Gpp (at 100g)

Resonant Frequency 175Hz

Driving Voltage 5.5Vpp (sine wave, 30 cycles)

Terminal Resistance 6.5Ω

Operating Temperature $-40 \sim 85^{\circ}\text{C}$

Harness Length 35mm

Connector Molex 501330-0200

Use Cases

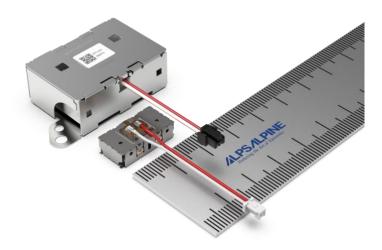
Operational Feedback for Automotive Control Devices. In addition, it can be used for warning vibrations during driving and vibration effects in gaming controllers. While the Hybrid Tough Type and



Heavy Type Haptic Reactor are also suitable for automotive control devices and gaming controllers, the U-Type is the optimal choice for applications requiring installation in confined spaces.

Feature Outlook

The demand for vibration devices is expected to expand beyond the automotive market into consumer and industrial equipment markets. Alps Alpine is committed to broadening its lineup with more variations in vibration strength, size, and shape to meet diverse customer needs. Through innovative products delivering "safety" and "inspiration," we aim to create new value continuously.



Comparison of Conventional Product (Left) and U-Type (Right) Sizes

Alps Alpine Co., Ltd., founded in 1948 in Japan, is one of the world's largest independent manufacturers of electromechanical components and in-vehicle infotainment products. Headquartered in Tokyo, Alps Alpine maintains ca. 100 group companies across the Americas, Europe, and Asia. With ultimate specialist knowledge and reliability, Alps Alpine develops, produces, and markets electromechanical components as well infotainment and next generation mobility lifestyle products such as Audio, Display, Communication and Drive Assist on a worldwide basis.



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