

**NEWS RELEASE**

PR2407E

**ALPS Develops 35mm Size Hollow Shaft,  
Composite Operation Type Encoders***Industry first combines encoder and self-return switch in one dial*

Duesseldorf, Germany, December 19, 2007 – ALPS ELECTRIC EUROPA GmbH has developed the EC35B Series of 35mm size hollow shaft, composite operation type rotary encoders. Intended for a wide range of digital products, including automotive products and consumer electronics, the first commercial samples will be shipped from December 2007.

Hollow shaft rotary encoders are electronic components used, for example, to select specific songs stored in audio devices. The latest digital devices, such as car audio and car navigation systems, are fitted with high-capacity recording media such as hard disks, making it possible to store large amounts of music and information. In addition to the need to enable the easy selection of stored items by rotating the dial, there is a demand for current systems to have a fast forward/reverse function that will allow the rapid retrieval and selection of desired items from the huge amounts of music and information.

The EC35B Series of hollow shaft encoders brings to fruition an industry first: an encoder and self-return switch incorporated in a single, dual-function dial.

With the new dial, switching between the encoder and self-return switch is carried out by pushing in and holding down the encoder dial while rotating the switch either to the right or the left to the “on” position. Releasing the dial returns the control to the (self-return) “off” position. Alps Electric has composite the two mechanisms utilizing the software of the set product element; if the dial is rotated without being pressed down, the control serves

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as an encoder for the assured selection of single items, and, if held down while being rotated, the control provides a fast forward/reverse function to, for example, jump several items.

In addition, by making the encoder's shaft hollow, the EC35B Series allows more freedom of set design. In recent years, digital devices have come to feature single controls with multi-function capabilities, and the trend has been for these controls to be illuminated by LEDs to make the dial more easily visible under low-light conditions. The use of a hollow shaft design enables the placement of the switch and LED in the center of the control.

The operating feeling of the set product and user interface controlling these operating parts is also an important design element from the perspectives of quality and use. The EC35B Series dial has a high rotation torque setting, offering the user good rotation operating feeling.

## Features

1. EC35B Series of 35mm size hollow shaft, composite operation type encoders developed, realizing an industry first of encoder and self-return switch on one dial
2. The combination of encoder and self-return switch allows individual item selection as well as fast forward/reverse mode
3. The placement of the switch and LED inside the hollow shaft allows increased freedom of set design
4. Offers users good rotation operating feeling thanks to its high rotation torque

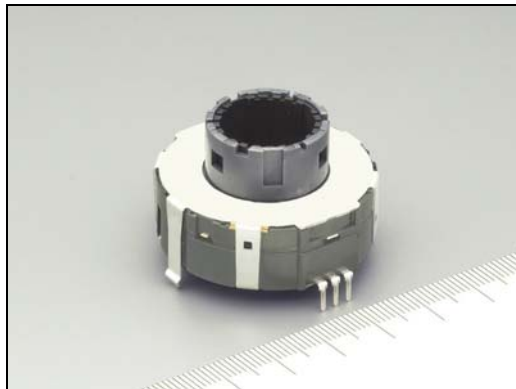
## Principal Applications

Consumer electronics, including microwave ovens, car audio equipment and car navigation systems

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## Specifications

Product name		EC35B Series
Rating (max.)(resistance load)		10mA 5V DC
Operating temperature range		-40°C to +85°C
Encoder	Number of detents	30
	Number of pulse	15
	Detent torque	20mN· m (±10mN· m)
	Operating life	30,000 cycles
Switch	On travel	15°(±5°)
	Rotational torque	40mN· m (±25mN· m)
	Push operating force	3.8N (±1.5N)
	Operating life	15,000 cycles



For more information on the EC35B series please visit  
[http://www3.alps.co.jp/npv\\_product/1214\\_EC35B/EC35B\\_E.PDF](http://www3.alps.co.jp/npv_product/1214_EC35B/EC35B_E.PDF)

### ALPS Electric Co., Ltd.

Since its establishment in 1948 ALPS has grown as a comprehensive manufacturer of electronic components. At present ALPS is creating innovative high-value-added products in its main business segments – Components, Magnetic Devices, Communications, Peripheral Products, and Automotive Electronics – which are contributing to the advance of a digital society. ALPS is a global company that carries out its operations with 23 production bases in 9 countries as well as 57 sales bases in 14 countries. Consolidated net sales in the year ended March 31, 2007 amounted to YEN 708 billion.

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**ALPS ELECTRIC EUROPA GmbH**, a subsidiary of ALPS Electric Co., Ltd., was established in 1979. Since 1989, the European Head Office has been located in Düsseldorf, where a team of specialists works in Sales, Marketing, and Product Engineering. The activities of our branch offices in Munich, Paris and Milton Keynes, our sales office in Milan and our European distribution work are co-ordinated from Düsseldorf. ALPS Nordic AB, a 100 percent subsidiary of ALPS ELECTRIC EUROPA GmbH, is based in Sweden and services the Scandinavian market.

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