

NEWS RELEASE

PR1311E

ALPS Develops “RDC90 Series” Compact Long-Life Rotary Sensor*100 Million Cycle Durability Achieved*

Duesseldorf, Germany, July 01, 2011 – ALPS ELECTRIC EUROPE GmbH has developed the high-durability RDC90 Series resistive rotary sensor. Samples will be available from August 2011.

Control of internal mechanisms inside robots, controllers and other commercial equipment needs to be optimized to ensure greater safety, convenience and energy efficiency. This requires detection of the mechanism’s current status, including parameters such as position and angle. Position and angle detection requires a sensor with high precision, for accurate detection of mechanism movement, and high durability, for withstanding repetitive movements and vibrations. Sensors include magnetic and optical non-contact types, and resistive contact types. Resistive sensors are widely used due to the following merits: easy output processing and mounting, low susceptibility to the effects of external noise, and convenience in that a return to an original position is not required since position can be detected as soon as power is turned on.

The RDC90 Series is a resistive-type rotary sensor which, while compact, achieves high durability of 100 million dither cycles, or 10 million full cycles. Position sensors, when used together with an equipment-controlling motor actuator, are constantly influenced by the motor’s vibrations. Although slight, these vibrations wear away the pivotal resistive elements, affecting position detection accuracy. The RDC90 Series fulfills the durability requirement by incorporating a long-lasting resistive

element used successfully in the past for automotive applications such as throttle position sensors.

The RDC90's long-lasting resistive element has a specular surface, meaning friction applied to brushes sliding over the element is low, thereby minimizing noise and achieving micro-linearity (linearity in weak signal regions) within +/-0.1%.

Features

Compact resistive-type rotary sensor realizing high durability and high precision

1. High durability of 100 million dither cycles, or 10 million full cycles, achieved by incorporating long-lasting resistive element.
2. Minimal noise and microlinearity within +/-0.1%.

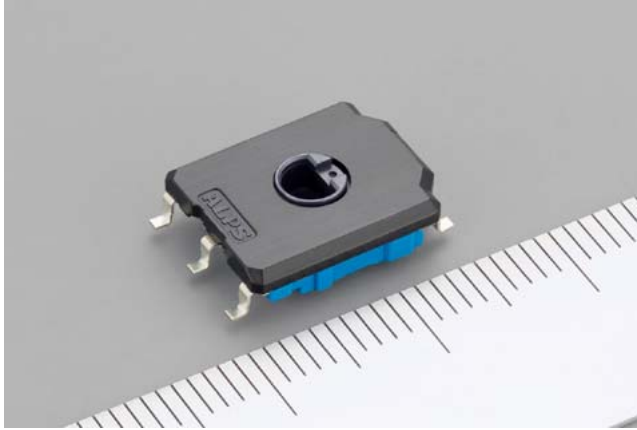
Principal Applications

1. Stick controllers for radio control
2. Angle detection for robot joints
3. Position/angle detection for commercial equipment

Specifications

Product name	RDC90 Series
Dimensions (W × D × H)	11.0mm x 13.7mm x 3.2mm
Total resistance	3.3 kΩ +/-30%
Effective electrical angle	+/- 40deg
Durability	100 million dither cycles 10 million full cycles
Linearity	+/- 2.2% (2.5V reference point)
Micro-linearity (±3deg. @100Hz)	+/-0.1% max.

For more information on the new product please visit
http://www.alps.com/products/e/npv_product/110623_RDC90/RDC90_E.PDF



ALPS Electric Co., Ltd.

ALPS Electric (Tokyo: 6770) is a leading global manufacturer of high-quality electronic components for mobile devices, home electronics, vehicles and industrial equipment. With the philosophy of "Perfecting the Art of Electronics" ALPS Electric supplies over 40,000 different components to about 2,000 companies all over the world. For more information, visit www.alps.com.

ALPS ELECTRIC EUROPE 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, Milton Keynes, Stockholm, Gothenburg, and our sales office in Milan are coordinated from Düsseldorf.

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