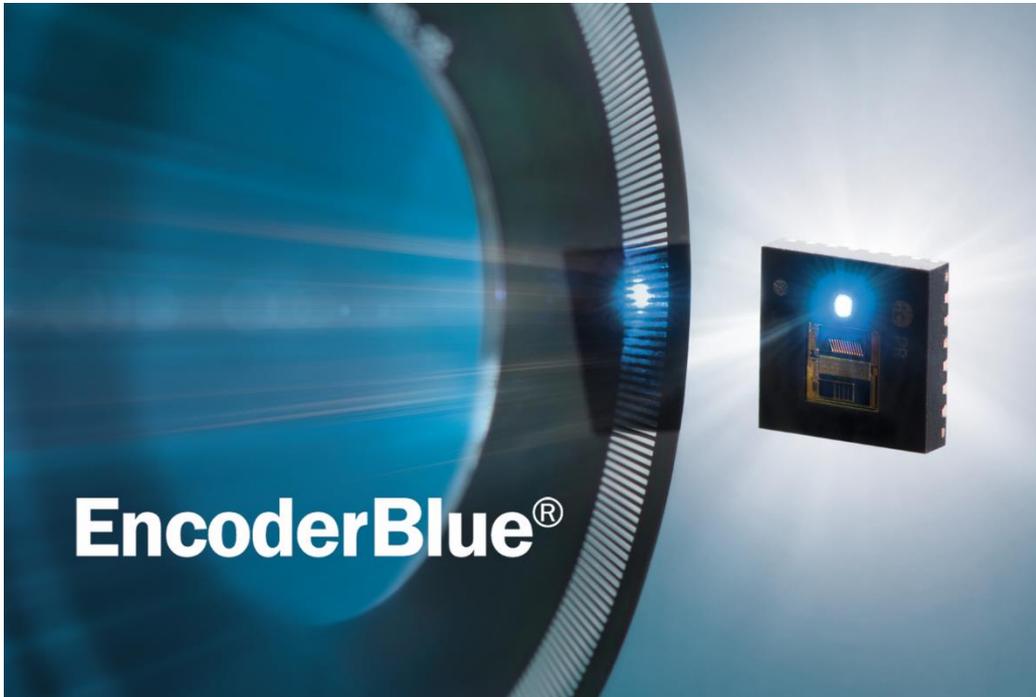


Innovation Award for EncoderBlue®



Product photo: EncoderBlue® – innovation in position sensor technology: blue, reflexive, lens-free

Innovation with Market Potential

iC-Haus GmbH was awarded the Innovation Award 2017 in Rhineland-Palatinate for the development and successful market introduction of the innovative reflexive position sensor, EncoderBlue®.

The optical position sensor transmits the performance data of machine tools, robots, and power trains. While under pricing pressure, products were required with high resolution, in wide temperature ranges, small packages, and for high rotational velocities. The demand exists especially in countries with a high amount of automation. Until now, improvements in mechanics, electronics, and optics have only been reached gradually. Established transmissive processes with a code disc between the LED light source and detector oppose the necessary trend to miniaturization and cost reduction. Reflexive systems with simple optics are a break-through, especially for regulated, small drives.

The innovative microsystems unite a specific CMOS chip and a blue LED light source, integrated as a flip chip, with a 4 x 4 mm² housing for the reflexive detection of linear and rotative movements. The first use of blue light in a lens-free housing offers a high resolution for especially flat, incremental and absolute encoders in regulated electronic motors. EncoderBlue®, with the combination of “blue, reflexive, and lens-free“, offers innovation and significant impact for the encoder and drives market in the areas of automation, as smart sensors, and Industry 4.0. EncoderBlue® is recognized as a brand

iC-Haus News Release
EncoderBlue[®]
Innovation Award 2017 Rhineland-Palatinate



of iC-Haus and its technical achievement has resulted in filed patents. EncoderBlue[®] becomes unique by using characteristics and parameters, which break free of the limits of conventional technology in terms of signal quality, resolution, build volume, and operating temperature. Aging and temperature effects are compensated for within the component. Encoder systems for electronic motors of build height of bare millimeters can now be reached, while also using cost-effective plastics and metals.

Reflexive EncoderBlue[®] position sensors have analog and digital outputs, selectable interpolation factors, and a high optical resolution. They deliver low-jitter encoder quadrature signals and analog sine and cosine signals with an index. The index operation and the resolution are selected easily according to their respective pins. High signal output frequencies of up to 1.6 MHz allow motor rotational frequencies of 20 000 RPM. By using a small sensor area and a blue LED chip, the current consumption of the reflexive encoder module is reduced.

The smart-sensor components autonomously regulate the LED and compensate changes due to aging and temperature effects. The use of a lens-free package simplifies the placement of SMD components and widens the operating temperature range for reflexive encoder chips. Because of these characteristics, the components reach enhanced industrial applications, e.g. stepper motors, electric actuators, and miniaturized motion control systems.

iC-Haus delivers eval-boards with compatible, reflective code discs for simplified experimental testing.

Introducing iC-Haus

iC-Haus GmbH is a leading, independent German manufacturer of standard iCs (ASSP) and customized ASiC semiconductor solutions with worldwide representation. The company has been active in the design, production, and sales of application-specific iCs for industrial, automotive, and medical applications for more than 30 years.

The iC-Haus cell libraries in CMOS, bipolar, and BCD technologies are specifically suited to realize the design of sensor, laser/opto, and actuator ASiCs, amongst others. The iCs are assembled in standard plastic packages or using the iC-Haus chip-on-board technology to manufacture complete microsystems, multichip modules, and optoBGA/QFN in conjunction with sensors.

Further information is available at <http://www.ichaus.com>.

For any queries, please contact:

Dr. Heiner Flocke

iC-Haus GmbH, Am Kuemmerling 18, 55294 Bodenheim, Germany

Tel. +49 6135/9292-0

Web: www.ichaus.de

Fax +49 6135/9292-192

E-Mail: heiner.flocke@ichaus.de