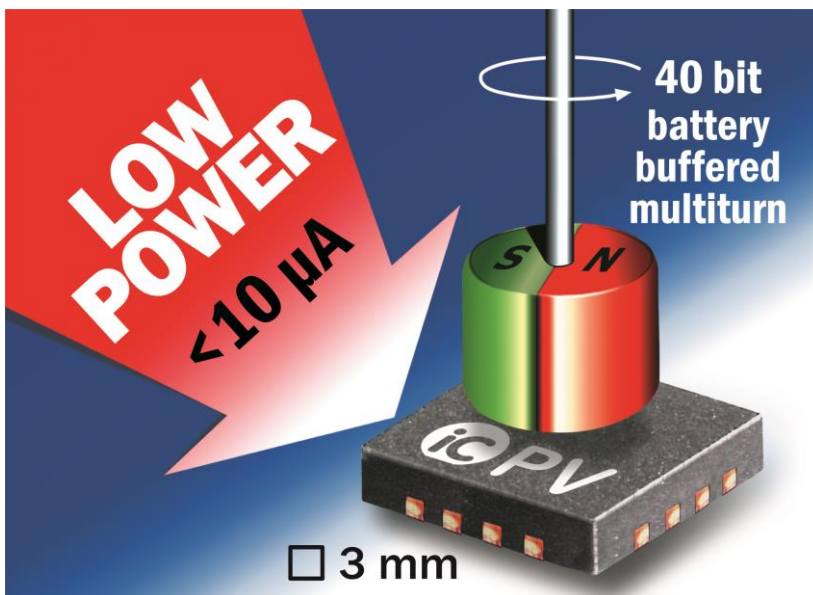


Battery-Buffered 40-Bit Multiturn Hall Encoder

Gearless Hall Multiturn Solution for Applications up to 12,000 rpm

The configurable Hall multiturn encoder iC-PV is a battery-buffered, cost-effective alternative solution to mechanical gear multiturn encoders. The low current consumption of 10 μ A allows a battery-powered operation over several years. In combination with singleturn encoder iCs with a multiturn interface, such as iC-MHM and iC-MU for magnetic encoders or the iC-LGC for optical encoders, multiturn resolutions up to 46 bit can be reached. In the case of Hall encoder iC-MHM operated together with the iC-PV, the same encoder magnet can be used.



Product photo of iC-PV, 3 x 3 mm QFN16 package

Download text and photo: http://www.ichaus.de/iC-Haus_PV_newsrelease_en

iC-PV automatically switches to battery operation at failure or undervoltage of the operation supply. Therefore, acquisition of the multiturn information is secured at all times, even in a powerless state of the application (power failure). After power-up, iC-PV continuously transmits the multiturn data to the singleturn device, which thereby provides the absolute position. The synchronization of multiturn data with the singleturn data occurs automatically with the CRC-secured transmission protocol to the singleturn encoder device. iC-PV monitors itself functionally (10-bit CRC protection of the configuration and count registers, magnetic field monitoring and supply voltage monitoring) and signals errors at the NERR output or at the serial transmission of multiturn data. iC-PV can also function as a singleturn encoder iC with an octal resolution of 3 bit and parallel data output.

Typical applications are:

- Gearless revolution counter
- Absolute magnetic multiturn encoder
- Magnetic period counter
- Electronic consumption counter
- Simple octal encoder with 10 μ A current consumption
- Digital control button with 40-bit resolution with ultra-cap buffering
- Magnetic hollow shaft encoder with 1-chip encoder iC-MU

At a supply of 3.0 to 5.5 V iC-PV functions in the industrial operating temperature range of -40 to +125 °C. The configuration data is loaded automatically from an external EEPROM after switching on.

Further information can be found at <http://www.ichaus.com/iC-PV>.

Introducing iC-Haus

iC-Haus GmbH is a leading, independent German manufacturer of standard iCs (ASSP) and customized ASiC semiconductor solutions with worldwide representation. For more than 25 years the company has been active in the design, production, and sales of application-specific iCs for industrial, automotive, and medical applications.

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>.

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