

PWM driver halves the power dissipation of solenoids
Power-saving energizing of inductive loads

PWM solenoid drivers iC-GE and iC-GE100 enable the optimum energizing of magnetic solenoids in valves, relays, and other actuators, thus saving power. The solenoids are driven by a regulated current of between 100 mA and 1 A (iC-GE100: 10 to 100 mA). Active power control permits the devices to be used in a wide supply voltage range of between 10 and 36 V.



Press photo of iC-GE

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With this type of inductive load a higher energizing current is usually required than the ensuing hold current. The energizing current is thus regulated down to a (lower) hold setting after approximately 50 ms. By reducing this to two thirds of the energizing current, for instance, the power dissipation in the solenoid is cut by over 50%.

Both the energizing and hold currents can be individually set using their respective external resistors. In iC-GE the delay between energize and hold can be prolonged across a wide range by an external capacitor.

The PWM drive uses an internal 80-kHz oscillator as a time base and is thus beyond audible range.

These devices also include diagnostic functions which can flash any solenoid defects, fractured wires, and/or overtemperature in the iC to the LED output (typically 2.4 Hz).

A synchronization input also permits relays to be switched in zero load current so that contacts are preserved.

Further information is available at <http://www.ichaus.de/iC-GE> and <http://www.ichaus.de/iC-GE100>.

Introducing iC-Haus

iC-Haus GmbH is a leading independent German manufacturer of standard iCs (ASSP) and customized ASiC semiconductor solutions. The company has been active in the design, production, and sales of application-specific iCs for industrial, automotive, and medical technology since more than 25 years and is represented worldwide. The iC-Haus cell libraries in CMOS, bipolar, and BCD technologies are fully equipped to realize the design of sensor, laser/opto, and actuator ASiCs. The iCs are assembled either in standard plastic packages or using the iC-Haus chip-on-board technology to manufacture complete microsystems, multichip modules and optoBGA™, the latter in conjunction with sensors. Further information is available at <http://www.ichaus.com>.

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