

## Power Supply Product

# 12A POL DC-DC Converter Operates from 5V and 12V Bus Voltages

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October 2015

TDK Corporation announces the introduction of the 12 Ampere TDK-Lambda iCH series of POL (Point of Load) non-isolated DC-DC converters. Accepting a wide range input of 4.5 to 14Vdc, the series can operate from either a 5Vdc or 12Vdc bus.

The iCH series can provide output voltages from 0.7 to 8.5V, with efficiencies of up to 97%. A low internal power loss allows the iCH to deliver 12A output current, without forced air cooling, in ambient temperatures in excess of 70°C. The series is designed to meet a wide range of applications, including servers, routers and other Information & Communication Technology (ICT) equipment, semiconductor manufacturing equipment, measuring equipment and general industrial equipment.

The surface mount converters occupy only a 0.23 square inch of board space, measuring 0.48 x 0.48 x 0.335 inches (12.2mm x 12.2mm x 8.5mm) with a weight of just 2.5g. As with all TDK-Lambda's DOSA compatible footprint POLs, the iCH has an outstanding transient response without the need for externally mounted loop tuning components.

Product features include output trim adjustment, power good, remote sense and a choice of positive or negative logic remote on/off. Full protection, with auto-recovery, is provided against input under-voltage, output short circuit and over-temperature. All models are certified to UL/CSA 60950-1, IEC/EN 60950-1 and carry the CE mark for the Low Voltage and RoHS2 Directives.

More information can be obtained at the following TDK-Lambda Americas website, <http://www.us.tdk-lambda.com/lp/products/dosa2-series.htm>, or by calling 800-LAMBDA-4. Product availability for the iCH converters can be found via the link to TDK-Lambda's distributor network (see "Check Distributor Stock") at <http://www.us.tdk-lambda.com/lp/>.

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### Major applications

Servers, routers and other ICT equipment, semiconductor manufacturing equipment, measuring equipment and general industrial equipment

### Main features and benefits

- High efficiency (Up to 97%)
- Compact 12.2mm x 12.2mm x 8.5mm size
- Outstanding transient response
- No requirement for external tuning components

## Major specifications

Model		iCH12012A007V
Input voltage range	Vdc	4.5 to 14V
Output voltage range	Vdc	0.7 to 8.5V
Maximum output power	W	85W
Efficiency	%	97% (8.5V output, 12V input, 100% loading)
Mounting type	-	Surface Mount
Size (L x W x H)	mm	12.2 x 12.2 x 8.5

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## About TDK Corporation

TDK Corporation is a leading electronics company based in Tokyo, Japan. It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK's portfolio includes electronic components, modules and systems\* which are marketed under the product brands TDK and EPCOS, power supplies, magnetic application products as well as energy devices, flash memory application devices, and others. TDK focuses on demanding markets in the areas of information and communication technology and consumer, automotive and industrial electronics. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2015, TDK posted total sales of USD 9.0 billion and employed about 88,000 people worldwide.

\* The product portfolio includes ceramic, aluminum electrolytic and film capacitors, ferrites, inductors, high-frequency components such as surface acoustic wave (SAW) filter products and modules, piezo and protection components, and sensors.

## About TDK-Lambda Corporation

TDK-Lambda Corporation, a group company of TDK Corporation, is a leading global power supply company providing highly reliable power supplies for industrial equipment worldwide. TDK-Lambda Corporation meets the various needs of customers with our entire range of activities, from research and development through to manufacturing, sales, and service with bases in five key areas, covering Japan, Europe, America, China, and Asia.

For more details, please pay a visit to <http://www.tdk-lambda.com/>

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