



COSEL expands power solution for mid-size robotic controllers and factory automation with a triple isolated outputs 300W

Press Release
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- 300W Configurable, isolated, triple outputs
- Independent output with reinforced isolation - ideal for IGBT drive
- Certified to UL62368-1, EN62477-1 (OVC III) and complying with EN61558-2-16
- Extended UART communication interface option
- 24V and 48V output modules sustaining repetitive peak load
- High efficiency - up to 92%

Cosel Co, Ltd (6905: Tokyo) today announced the expansion of its leading RB series, designed for mid-size robotics and factory automation, with the addition of a 300W version. The RBC300F is an open-frame, configurable AC/DC power supply with triple outputs tailored for robotic controllers and factory automation. Based on a unique concept, the Cosel RBC300F series offers three configurable isolated outputs, with one having a reinforced isolation to power Intelligent Gate Bipolar Transistors (IGBT) or equivalent applications. Certified to EN62477-1 Over Voltage Category (OVC) III, by reducing the need for an extra isolation transformer when connected to a distribution panel, the RBC300F power supply simplifies the design process for systems architects while reducing costs. The RBC300F benefits from built-in digital control in the primary and an option featuring extended UART communication interface for control, monitoring and sequencing.

Designed for worldwide applications, the RBC300F accepts input voltages of 85 to 264VAC, single phase, and delivers an output power of 300W. To reduce complexity and to offer high flexibility, the RBC300F features three independent outputs. The master output (Slot 1) can deliver 240W and is available in three output versions: 12V/16A, 24/10A and 48V/5A. The second output (Slot 2) can host configured modules with single or dual outputs of 5V/3A ; 12V/1.3A ; 24V/0.65A ; +/-12V/0.6A ; +/-15V/0.5A ; 3.3V/5A ; 5V/5A ; 12V/2.5A ; 16.5V/1.9A ; 24V/1.3A ; 48V/0.65A ; +/- 12V/0.7A and +/-15V/0.7A with a power of 14.4 to 30W depending on the output voltage. The third output (Slot 3) can host any of the single output voltage modules in the same power level. For higher voltages,



outputs can be connected in series. All output voltages are adjustable via a built-in potentiometer.

Applications in robotics control are often powered by 24V or 48V bus voltage. In such applications the distribution bus might be subject to repetitive peak energy demand, requiring the power supply to sustain such load conditions. The RBC300F 24V and 48V output modules have been designed to operate efficiently in peak load conditions and can sustain up to 150% peak current.

The reinforced isolation of output three is suitable to supply voltages to IGBTs or IPMs, which reduces the number of power supplies required to power robotic controllers. By integrating a reinforced isolated output, the 'three in one' RBC300F has an equivalent footprint 40% lower than conventional solutions.

To optimize efficiency, the master output DC/DC converter is based on an LLC resonant topology when the second and third outputs are using Quasi-Resonant-Flyback topology.

The RBC300F has built-in inrush current limitation, overcurrent, overvoltage protections.

The RBC300F has an input to output isolation of 3,000VAC, and an input to ground isolation of 2,000VAC. The isolation voltage between the three outputs has been optimized for robotic controllers applications. Isolation between the master output and output two corresponds to a functional isolation of 500VAC when the isolation between the master output, output two and the third output is reinforced to 3,000VAC.

The product is designed for convection cooling and can be operated from -20 to +70 degrees centigrade. Depending on the final equipment assembling and cooling conditions, a derating may apply.

To accommodate application specific requirements, a number of options are available including Coating (C), Low leakage current (G), (S) (SN) different type of chassis and cover, (R) ON/OFF remote control, (T) Vertical screws on terminal block, (U1) External hold-up capacitor input.

For extended flexibility the RBC300F option (I3) features an Extended-UART (Universal asynchronous receiver-transmitter) digital interface supporting 49 commands for monitoring, controlling and sequencing. Operating data can be stored and locked inside the internal memory, and recorded error codes can be used for analysis and the recording of operational hours for preventive maintenance.

Option (U1) and (I3) will be available in Q4-2020



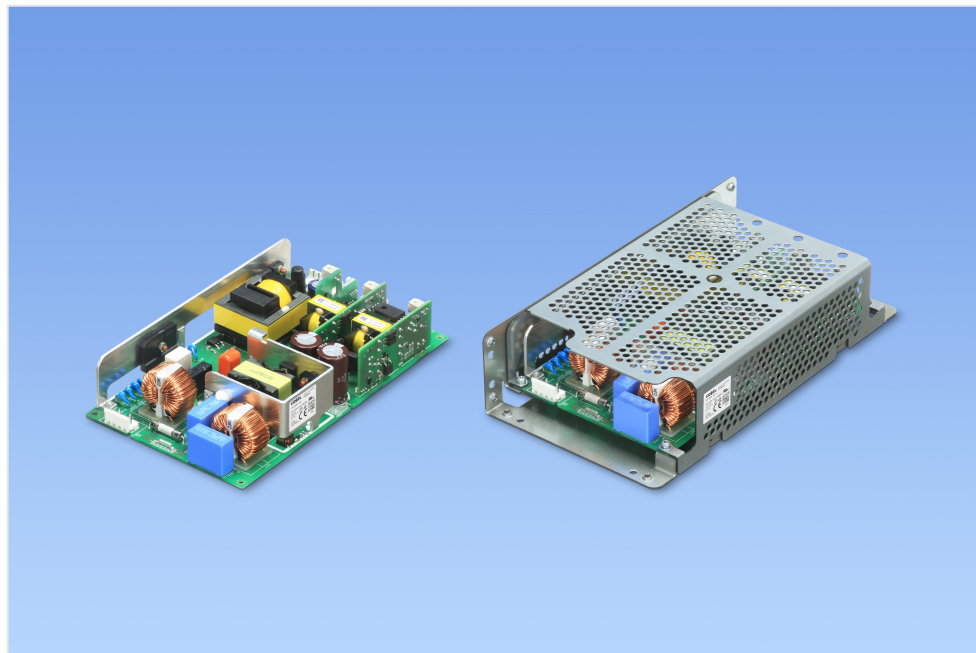
Certified to IEC/EN62477-1 OVC III and complying with EN61558-2-16, the RBC300F can be directly connected to the installation distribution panel, eliminating the need for an additional isolation transformer. The RBC300F is certified in accordance to UL62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), EN62368-1, EN62477-1 (OVC III) and complies with EN61558-2-16 (OVC III).

The RBC300F has a built-in active input filter, and conducted noise complies with FCC-B, VCCI-B, CISPR11-B, CISPR32-B, EN55011-B, EN55032-B and the harmonic current emission with the IEC61000-3-2 (class A).

The RBC300F measures 114 x 38.3 x 203mm [4.49 x 1.5 x 7.99 inches] (W x H x D), and has a weight of 710 grams max. An optional chassis with cover is available on request, as well as a vertical mounting terminal block.

The newly released RBC300F complements the world leading RBC200F series, offering a wide range of power solutions for robotics and industrial applications.

The RBC300F has a five-year warranty.



RBC300F triple isolated outputs ideal for robotic controllers and factory automation

Related links:

<https://www.coseleurope.eu/Products/AC-DC/RB>

**About Cosel:**

Established in Japan 1969, COSEL is one of the world's leading designers and manufacturers of high performance AC-DC Power Supplies, DC-DC Converters and EMI Filters. With quality, reliability & flexibility as our main focus, we pride ourselves on developing some of the highest quality and most reliable products seen anywhere in the world today. The Cosel Group is a \$253m global company employing some 810 staff with sales offices throughout Japan, Asia, Europe and North America. Our product range is aimed mostly at demanding applications within the Industrial, Factory Automation, Medical, Telecoms, Lighting, Audio/Broadcast & Renewable Energy sectors. A flexible approach with full in-house design means we deliver products using the very latest technology meeting the growing demands of our customers.

Note to the Editors:

The Cosel Group includes the European power specialist Powerbox International AB, which has been acquired June 25, 2018 by COSEL.

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