



## COSEL announces high power density 300W and 1000W power supplies with extended communications bus for demanding medical and industrial applications

Press Release  
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- Ultra-compact design combined with high power density
- Analog control of output voltage/current without additional circuit design
- Digital interface for monitoring/setting/controlling of parameters with up to 83 commands
- Medical (2 x MOPP Isolation and 4th Edition compliance) and Industrial approved
- 5 year standard warranty
- Temperature regulated fan

Cosel Co, Ltd (6905: Tokyo) today announced the release of two new models of high power density, 300W and 1000W power supplies with extended communications I/O for demanding medical and industrial applications. The addition of the 300W PCA300F and 1000W PCA1000F to the existing 600W PCA600F complements and expands the family of power supplies to cover a much larger range of applications. The PCA series have a built-in extended-UART (Universal Asynchronous Receiver –Transmitter) interface supporting up to 83 commands to monitor and control the whole range of power supply parameters. A PMBus version will be available in Q4-2019. Complying with stringent medical standards EN/IEC 60601-1, the PCA300F and PCA1000F feature a reinforced input to output isolation of 4,000VAC and a grade of 2X Means of Patient Protection (2xMOPP). The PCA series offer a universal input voltage of 85 to 264VAC, as well as a DC input of 88 to 370VDC. Exhibiting flexibility, the output can be operated in constant voltage (CV) or constant current (CC) mode with either analog or digital control. All PCA series power supplies are built-in 1U height housings and utilize Cosel's high-density, integrated packaging with optimized cooling.

Available in six different output voltages, the PCA series covers the whole range of applications from 5V to 48V and embraces 5, 12, 15, 24, 32 and 48V. All output



voltages can be adjusted to near zero volts and operated in constant voltage or constant current mode. In addition to the main output, an independent isolated auxiliary voltage of 12V is provided which is adjustable in the range of 4.7 -12.6V DC using digital control.

Designed for demanding applications, and in line with their predecessor, the PCA600F, the PCA300F and PCA1000F combine the benefits of constant voltage and constant current, simplifying designers' task when developing power systems requiring both modes without adding external circuitry e.g. lead acid battery charging requiring constant current charging up to 90%, and constant voltage above that.

For flexibility, the PCA300F and PCA1000F include analog and digital interfaces - the analog interface includes current adjustment (ITRM), voltage adjustment (VTRM), remote control ON/OFF, voltage sensing, LED alarms and current monitoring. For extended flexibility, the extended-UART digital interface supports 83 commands for monitoring and control. 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.

All parameters can be programmed and monitored via COSEL's extended-UART control panel GUI, which can control up to seven units. Extended UART is built-in as standard, and a PMBus option will be available in Q4-2019.

The PCA series can easily be connected in series or parallel for extra power, and in parallel redundant mode N+1 for improved system reliability and availability.

The PCA300F and PCA1000F are rated for operation at temperatures from -20 to +70 degrees C. Cooling is achieved by an internal intelligent fan, the speed of which adjusts automatically to match and work alongside environmental conditions. The fan can also be set to maximum (fixed) speed manually via the digital interface.

The PCA300F and PCA1000F include inrush current limiting, over-current protection, thermal protection, and output status alarm. For safety, they have an IN/OUT isolation of 4,000VAC (2MOPP) and IN/FG of 2,000VAC (1MOPP). Output isolation to FG and other functional pins is 500VAC.

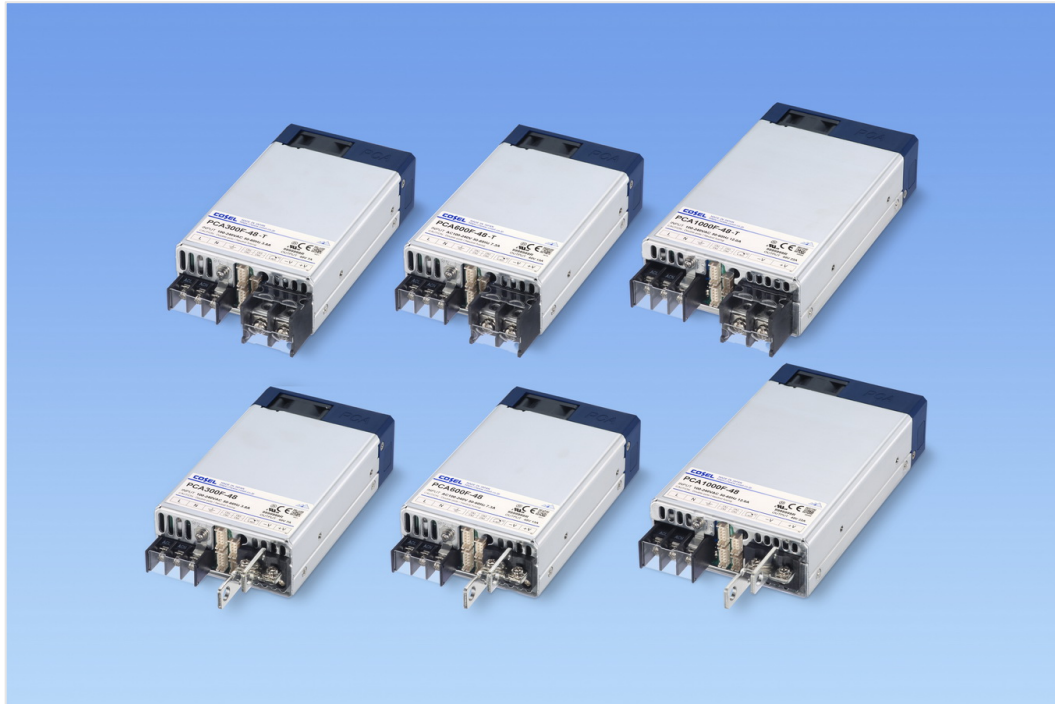


The PCA300F and PCA1000F models come with agency approvals UL62368-1, EN62368-1, C-UL (equivalent to CAN/CSA-C22.2 No.62368-1), ANSI/AAMI ES60601-1, EN60601-1 3rd, C-UL (equivalent to CAN/CSA-C22.2 No.60601-1), and comply with IEC60601-1-2 4th Ed. Conducted noise for PCA300 complies with FCC Part15 class B, VCCI-B, CISPR32-B, EN55011-B, EN55032-B and PCA1000 complies with FCC Part15 class A, VCCI-A, CISPR32-A, EN55011-A, EN55032-A. The harmonic attenuator of both models complies with the IEC61000-3-2 (class A).

All units come in 1U height (41mm, 1.61 inch) Including fan. The PCA300F has a length of 152mm (5.98 inches) and a width of 89mm (3.50 inches), while the PCA1000F has a length of 178mm (7.01 inches) and a width of 102mm (4.02 inches). The PCA300F weighs 840g maximum and the PCA1000F, 1.2kg.

To accommodate application specific requirements, a number of options are available including Coating (C), Low leakage current (G), Terminal block style (T), PMBus interface (I), Reverse air exhaust type (F2), Master/Slave operation (P3), and Modified alarm function (W1).

The PCA300F and PCA1000F have a five-year warranty and conform to the European RoHS Directive, REACH Directive, CB-Report and CE Marking.



Designed for demanding applications, the PCA300F, PCA600F and PCA1000F combine the benefits of constant voltage, constant current and digital interface, simplifying designers' task when developing power systems.

**Related links:**

PCA300

<https://www.prbx.com/product/pca300f-series/>

PCA600

<https://www.prbx.com/product/pca600f-series/>

PCA1000

<https://www.prbx.com/product/pca1000f-series/>

**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 \$284m global company employing some 790 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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**Reference :**

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