AVNET ABACUS

New product introductions from Avnet Abacus: Power solutions edition, Winter 2020

Highlighting the latest products from our industry-leading power linecard

Avnet Abacus offers an extensive portfolio of industry-leading AC-DC power supplies, DC-DC converters, Point of Load and Switching regulators and LED drivers for a wide range of industries including industrial, ICT, medical, defense, lighting, robotics, energy and transportation.

This quarterly bulletin from Avnet Abacus will keep you up to date on the latest products released by leading suppliers in the power market. Each edition will highlight a selection of products – to view our full linecard and further resources including specific supplier and application brochures, please visit avnet-abacus.eu/power

Our technical specialists are on hand to discuss how the most recent developments in the power market can improve your designs. To discuss your project, or to find out more, get in touch with our team in your local language at avnet-abacus.eu/ask-an-expert

Content

Avnet Abacus power solutions linecard

	Enclosed and open frame	Board or chassis mounted	Conduction cooled and fanless	DIN rail	LED drivers and system accessories	Modular	Railway and rugged	Adaptors and chargers	Front end and high power	Miniature, industrial and bricks	Digital brick and PoL	PoL, PIM and power block	Switching regulators	Transportation and railway	DIN rail and chassis mount	LED	Medical	High voltage input	Filter boards	IGBT and MOSFET driver
	AC-DC									DC-DC										
ABB	•		•			•			•	•	•	•	•						•	
Aimtec	•	•		•	•					•			•	•	•	•	•	•		•
Artesyn	•		•	•	•	•		•	•	•	•	•		•	•		•	•		
Bel Power/Melcher	•		•	•		•	•		•	•	•	•		•	•		•		•	
Cyntec												•								
Datel										•		•	•	•			•			
Delta	•	•	•	•	•		•	•	•	•	•	•	•	•	•		•	•	•	•
Excelsys	•		•			•			•											
Flex Power										•	•	•		•						
Fulham			•		•											•				
MEAN WELL	•	•	•	•	•	•	•	•	•	•			•	•	•	•	•	•		•
Murata Power Solutions	•	•	•						•	•	•	•	•	•			•			•
TDK											•	•								

External power supplies and chargers

BEL – PFE3000

The PFE3000 series is a 3000W AC-DC Power-Factor-Corrected (PFC) and DC-DC power supply that converts standard AC mains power or high voltage DC bus voltages into a single main output of either 12VDC for powering Intermediate Bus Architectures (IBA) in high performance and reliability servers, routers, and network switches or 360VDC for powering high voltage DC equipment.

Features and benefits

- Wide input voltage range: 90VAC to 305VAC
- DC input voltage range: 180VDC to 400VDC
- High density design: 30.5W/in3
- Small form factor
- Safety-approved to IEC/EN 60950-1 and UL/CSA 60950-1 2nd ed.
- AC input with power factor correction
- Hot-plug capable
- Parallel operation with active current sharing through analog bus
- Full digital controls for improved performance

Applications

- High performance servers
- Routers
- Switches

DELTA – DRL-24V75W1AZ

Delta's LYTE DIN rail power supply series is designed for cost sensitive users who need to fulfill essential features needed for many general industrial applications, without compromising on quality and reliability. The convection-cooled LYTE series will operate between -20°C to +70°C, with full rated power available from -20°C to +50°C at 230VAC. The overcurrent protection is designed to operate in constant current mode, which makes the LYTE series suitable for inductive and capacitive load applications.

Features and benefits

- Universal AC input voltage range
- Built-in constant current circuit for reactive loads
- Up to 88% efficiency
- Full power from -20°C to +50°C with -30°C cold start
- Compliance to SEMI F47 @ 200VAC
- Conformal coating on PCBAs to protect against common dust and chemical pollutants

Applications

- Industrial

External power supplies and chargers

DELTA – PJL SERIES

Delta's newest PJL series of open frame power supply is specifically targeted for lighting applications. The two models come with 48V constant voltage in 200W (PJL-48V200WBAA) and 400W (PJL-48V400WBAA) output power. The built-in active PFC products are designed in a small standard industrial 76.2mm x 127mm footprint and have a wide operating temperature from -40°C up to +80°C (+70°C for 200W) across the entire input voltage range of 85VAC to 305VAC based on a convection cooled design. It features low earth leakage current <500µA as well as low inrush current <20A. Its optimum thermal management allows for high power efficiency up to 90%.

Features and benefits

- Universal AC input voltage range
- 200W with fan cooled and up to 150W convection cooled
- 400W with fan cooled and up to 200W convection cooled
- Standard industrial footprint of 76.2mm x 127mm
- Low inrush current <20A and low earth leakage current <500µA
- Conforms to harmonic current IEC/EN 61000-3-2, class C
- Up to 90% efficiency
- Extreme low temperature operation at -40°C
- Lighting approvals to UL 8750, IEC 61347-2-13 and other approvals to IEC/EN/UL 60950-1, IEC/EN/UL 62368-1

Applications

- Lighting

DELTA – PMT2 35~350W SERIES

PMT2 series, designed based on a low profile of <30mm, is the latest series of panel mount power supply for household appliance approvals for pollution degree 3 to IEC/EN 60335-1, IEC/EN 61558-1 and IEC/EN 61558-2-16 from Delta. This series for over voltage category OVC III is currently available in 50W, 100W, 150W and 350W output power with 12V and 24V output voltage. They offer a wide operating temperature range from -30°C to +70°C and can withstand shock and vibration requirements (in accordance to IEC 60068-2-27 and IEC 60068-2-6 respectively). The PMT2 series is designed for cost competitive applications without compromising on quality and reliability. The products have an expected life time of 10 years.

Features and benefits

- Safety approval IEC 60950-1, IEC 60335-1, IEC 61558-1 and IEC 61558-2-16
- Universal input and selective switch input for 150W
- No load power consumption <0.2 for 50W, <0.3 for 100W and <0.5 for 150W
- Low leakage current <0.75mA @ 240VAC/50Hz
- Low profile design: <30mm height
- Conforms to harmonic current IEC/EN 61000-3-2, class A

Applications

- Household appliances, equipment or apparatus
- HVAC applications
- Profesional coffee machines

External power supplies and chargers

EXCELSYS - COOLX1000

The CoolX®1000 modular power supply provides up to 1000W in a compact U-channel, 254mm x 165mm x 39.1mm design. It's fanless design and lack of base-plate cooling requirements help eliminate acoustic noise, making it a smart choice for scientific, medical, and vibration-sensitive applications. It offers extreme flexibility and helps eliminate process disruption. And you can easily monitor and control performance via analog and digital communications (PMBus™).

Features and benefits

- High power density: 1000W in a 254mm x 165mm x 39.1mm U-channel package
- Intelligent digital power: access maximum flexibility with analog and digital control (PMBus™)
- User- and field-configurable: configure outputs to setpoint voltages; connect in parallel/series for higher output current and/or voltages

Applications

- Medical
- Industrial
- Hi rel

MEAN WELL - IRM-90

IRM-90 is a 90W miniature (87mm x 52mm x 29.5mm) AC-DC PCB-mount module type power supply, ready to be soldered onto the PCB boards of various kinds of electronic instruments or industrial automation equipments. This product allows the universal input voltage range of 80VAC to 305VAC. The 94V-0 flame retardant plastic case and the fully-potted silicone enhance the heat dissipation and meet the anti-vibration demand up to 5G; moreover, it provides the fundamental resistance to dust and moisture.

Features and benefits

- 87.12mm x 52.07mm compact size
- PCB,chassis or screw terminal mounting version
- Universal input 80VAC to 305VAC
- No load power consumption <0.21W
- EMI EN55032 class B without additional components
- Wide operating temperature rage -30°C to +80°C

Applications

- Industrial electrical equipment
- Mechanical equipment
- Factory automation equipment
- Handheld electronic device

External power supplies and chargers

MEAN WELL – WDR-60

MEAN WELL's 180VAC to 550VAC wide input range DIN rail family now includes the WDR-60 to cover more common applications at the 60W range. MEAN WELL WDR-60~480 family is the most complete 180VAC to 550VAC wide input DIN rail product line on the market. WDR-60 series can accept 180VAC to 550VAC ultra-wide input, and they are suitable for installation on a single-phase 230VAC power line or single-phase out of a 3-phase 330VAC to 550VAC power system, thus greatly increasing the system application flexibility.

Features and benefits

- 180VAC to 550VAC ultra-wide input range
- Narrow width (32mm)
- Compliant to heavy industrial immunity (EN61000-6-2)
- -30˚C to +85˚C ultra-wide operating temperature (>+60˚C de-rate)
- Built-in DC-OK relay contact
- SVR for adjusting output voltage (100% to 120%)
- Protections: short circuit/overload/over voltage/over temperature

Applications

- Industrial control system
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

MEAN WELL – GE40

MEAN WELL launched the 40W wall-mount type green adaptor with interchangeable AC plugs ~GE40 series. The main power body of this product can pair with one of the four types of interchangeable AC plugs, which are European type, U.S. type, UK type, and Australian type that are easy to change and use all over the world. GE40 series complies with the latest global energy efficiency (EISA 2007.DoE level VI) and EU ErP that it is one high quality, long lifespan and energy saving industrial grade adaptor. GE40 series is highly suitable to be used with various types of consumer electronic devices, portable electronic devices for business travelers or electronics equipment sold around the globe.

Features and benefits

- Interchangeable AC plugs
- Universal AC input/full range
- No load power consumption <0.075W
- Energy efficiency level VI
- Comply with EISA 2007/DoE, EU ErP and meet CoC version 5
- Class power (without earth pin) II
- Protections: short circuit/overload/over voltage
- Pass LPS: -30°C to +70°C wide range working temperature
- Fully enclosed plastic case
- LED indicator for power on

Applications

- Consumer electronic devices
- Telecommunication devices
- Office facilities
- Industrial equipments

External power supplies and chargers

MEAN WELL – GEM06I

MEAN WELL has launched the 6W GEM06I series in order to meet the lower output wattage application demands. This series follows the features of GEM family, accepting 80VAC to 264VAC full range input, providing complete 5V to 24V output models. The design is approved for IEC60601-1 3rd edition, ANSI/AAMI ES60601-1, ES60601-1-11 and EN60601-1/EN60601-1-11 household medical regulations; the fulfillment of 2xMOPP level and the ultra-low leakage current make GEM06I suitable for BF (direct contact with patients) medical equipment; in addition, it is compliant with the international energy-saving standards (EISA 2007/DoE level V) and EU ErP. This series is thus high safety, high quality, high reliability, high convenience, and energy-saving medical adaptors, perfectly fit the use with various types of household medical appliances, portable medical devices for business travelers, or medical equipment which need the power supplies with interchangeable AC plug as part of the globally promoted solutions.

Features and benefits

- 80VAC to 264VAC input with interchangeable AC plug (plug kit and adaptor sold separately)
- 2xMOPP level, ultra low leakage current, suitable for BF application
- In compliance with the international energy-saving standards (EISA 2007/DoE level V) and EU ErP
- No load power consumption
- Working temperature: -20˚C to +70˚C
- Protections: short circuit/overload/over voltage

Applications

- Blood glucose meter
- Blood pressure meter
- Nebuliser
- Inhaler
- Portable medical device
- Sleep apnea devices

MEAN WELL – PHP-3500

PHP-3500 is a 3.5kW single output enclosed type AC-DC water-cooling power supply which adopts fully digitalised design and possesses rich features such as 96% high efficiency, programmable output, support communication, multiply output power in parallel connection, in 60mm low profile and 18W/inch3 power density. This series can operate at both 90VAC to 264VAC and 120VDC to 370VDC input voltage and offers models with 24VDC to 48VDC outputs mostly demanded by the industry. Unique water-cooling technology offers the most effective heat dissipation to each mode.

Features and benefits

- Water-cooled heat dissipation technology
- High efficiency up to 96% (48V model)
- Universal AC-DC Input
- Output voltage and constant current level programmable
- Support PMBus communication protocol (CANBus optional)
- Built-in active PFC
- Support PSUs in parallel connection
- Active current sharing, total system power up to 14,000W (3+1)
- -30˚C to +70˚C wide range operating temperature

Applications

- Industrial automation machinery
- Industrial control system
- Mechanical and electrical equipment
- Electronic instruments, equipments or apparatus
- Household appliances

External power supplies and chargers

MEAN WELL – CSP-3000

MEAN WELL has expanded its high-power enclosed types from low voltage to high voltage output, therefore releasing the 3000W high output voltage power supply, CSP-3000. This is MEAN WELL's first high voltage output product, and there are not many similar products on the market. Many customers expressed great interest during the development phase.

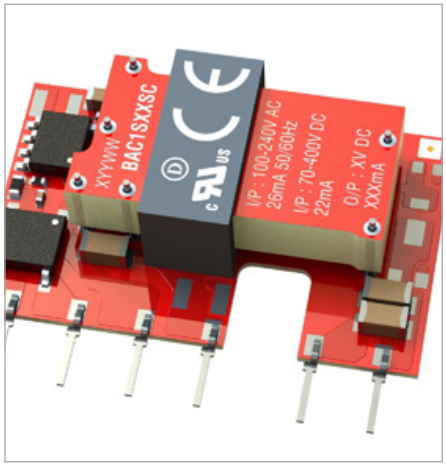
Features and benefits

- 180VAC to 264VAC input
- Built-in active PFC function
- High efficiency up to 93%
- Built-in DC fans for forced air cooling
- Output voltage/current programmable
- Active current sharing up to 7200W (2+1)
- Built-in remote ON/OFF control and power OK signal
- Auxiliary power 12V@ 0.4A
- Dimensions (LxWxH): 278mm x 177.8mm x 63.5mm

Applications

- Factory control or automation apparatus
- Test and measurement instrument
- Laser related machine
- UV curing equipment
- Fish lamp
- Burn-in facility

MURATA – BAC1 SERIES



The Murata's BAC1 series is the first series release from the BAC family of board mount AC-DC converters. The BAC1 series operates over the wide industrial temperature range of -40°C to +85°C, supporting operation in still air for the most demanding environments. All models deliver full power to +85°C, and operate from -40°C. The BAC1 has ultra low standby power consumption for demanding energy and cost saving applications.

Features and benefits

- UL60950-1 recognised
- EN60950-1 certified
- UL60335-1 recognition pending
- ANSI/AAMI ES60601-1, 1 MOPP/2 MOOP's recognition pending
- Operating temperature range: -40°C to +85°C
- 4kVAC isolation 'hi pot test'

Applications

- LED lighting
- Sensing
- Smart buildings
- Metering

External power supplies and chargers

MURATA – PQU650

The PQU650 series products are rated at 650W employing a U channel construction to operate with natural convertion or forced airflow. The PQU650 series is a 6 x 4 format capable of providing a continuous 650W outpout, with a constant current overland characteristic, and 800W power boost at output start to deliver transient loads. The compact form factor offers an impressive 450W of natural convection cooled power at +50˚C. Provision of an adjustable main outpout, plus auxiliary/standby and fan outputs, will enable this technically superior solution to be deployed across multiple market sectors, complemented by safety certification applicable to medical/audio/video/communication and ITE standards.

Features and benefits

- Compact high density design and thermal performance operation to:
  - > 450W convection at +50˚C; no derating with input line voltage
  - > 650W with forced airflow at +50˚C; no derating with input line voltage
  - > 800W power boost (at output start-up)
- Voltage (+15%) 3 adjustment of main V1 output
- +5V aux./standby and 12V fan outputs

Applications

- Industrial
- Medical

Isolated DC-DC converters

AIMTEC – AMFW24-NZ

Aimtec's EMC filter modules are extremely useful in reducing noise in sensitive analog circuit applications. Filters connected on the input of DC-DC converters can ensure system compliance with EMC requirements according to IEC/EN61000-4 and CISPR32/EN55032 standards. Aimtec's DC-DC converter modules can be paired with the new generation of Aimtec's EMC filters to achieve the required compliance. The Aimtec EMC line can currently offers solutions up to 30W output power.

Features and benefits

- Available in board and chassis mount
- Wide input: 10VDC to 36VDC
- Operating temperature: -40°C to +85°C
- High isolation voltage: 500VAC
- Input reverse voltage protection
- Build-in soft-start function

Applications

- Power grid
- Industrial
- Telecom
- Instrumentation

Isolated DC-DC converters

ARTESYN – AGQ500-48S50

The AGQ500 series quarter-brick isolated DC-DC converters provides a single, regulated and low noise output. The AGQ500-48S50 has a 50V/10A output. It has a telecom input range of 36VDC to 75VDC and is designed primarily for use with standard 48V telecommunications equipment supplies. The converter's main application area is in low power and Remote Radio Head (RRH) telecommunications applications. Rated at 500W and with an ultra high conversion efficiency of >95% at half load, the converter can operate over an ambient temperature range of -40°C to +85°C, continuing to deliver full power up to a baseplate temperature of +100°C.

Features and benefits

- Delivers up to 10A output current
- Ultra-high efficiency 94% typ. at full load
- Wide input range: 36V to 75V
- Excellent thermal performance
- No minimum load requirement
- Basic isolation
- High power density
- Low output noise
- Trim function: 50% to 114%

Applications

- Distributed power architectures
- Intermediate bus voltage applications
- Industrial computing

MEAN WELL – ERDN20/40 AND DRDN20/40 SERIES

MEAN WELL's next generation DIN rail type of DRDN20/40 series can be quickly installed and the screw fixed enclosed type ERDN20/40 series are planned at the same time. The detailed differences between the old and new generations are as follows. DRDN20/40 and ERDN20/40 series are a series of 20A to 40A power supply parallel redundancy modules, which can be used with the backup power supply to improve the stability and reliability of the overall system. The product key features include: supports system 1+1 and 1+N redundancy, applies 5V (ERDN20 only), 12V, 24V and 48V system voltage, two DC input contacts and single output, built-in two channels DC-OK relay contacts for monitoring power status, adopt MOSFET technology to reduce heat loss and reduce the voltage difference between input and output voltage, -40°C to +80°C ultra-wide working temperature.

Features and benefits

- Support 1+1 and N+1 redundancy system
- 2 channels input and 1 output
- Suitable for redundancy operation of 5V, 12V, 24V and 48V system
- Output current up to 20A
- Cooling by free air convection
- -40°C to +80°C ultra-wide operating temperature (+60 derating)
- Built-in 2 channels DC-OK signal and alarm relay contact

Applications

- Industrial control system
- Semiconductor fabrication equipment
- Factory automation
- Electro-mechanical apparatus

Isolated DC-DC converters

MURATA – UWS-Q12

The world of brick DC-DC converters has seen a steady size reduction. The UWS-Q12 series makes another dramatic size shrink down to a sixteenth brick width while still retaining a high power output and full 2250VDC I/O isolation. The converter family accepts 9VDC to 36VDC inputs and delivers fixed regulated outputs. The UWS converters are ideal for mobile applications, datacom and telecom applications, cell phone towers, data centers, server farms and network repeaters.

Features and benefits

- High efficiency, up to 91%
- 9VDC to 36VDC wide input range
- Single output of 3.3V, 5V, 12V, 15V or 24V
- Up to 54W total output power
- 33.02mm x 22.86mm x 9.144mm open-frame package
- Industry standard DOSA sixteenth-brick format and pinout
- Small footprint DC-DC converter, ideal for high current applications
- Pre-bias start-up protection

Applications

- Distributed power architectures
- Intermediate bus voltage applications
- Industrial computing
- Battery systems
- Rail applications
- Industrial controls

Point of load and switching regulators

ABB – FKX003 AND FKX006 SERIES

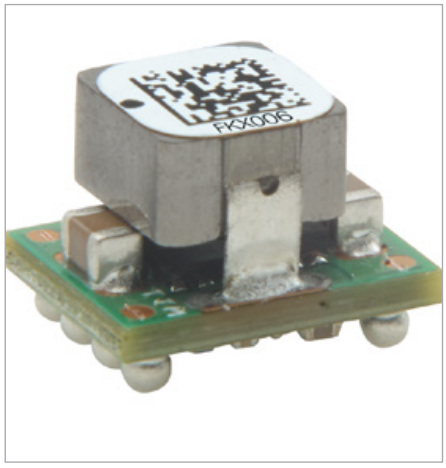


ABB has announced its 6.76mm x 9mm Femto DLynx IITM voltage regulators. The FKX003 and FKX006 DLynx II buck converters offer ABB's smallest PoL footprint to date and are available in either 3A or 6A modules. With the addition of the two converters, ABB's DLynx II product family can now be used to power customer applications with loads from 3A to 170A.

Features and benefits

- Femto DLynx IITM buck converters available in 3A and 6A modules
- Small, complete module in a footprint of only 6.76mm x 9mm
- Small footprint frees up valuable board space

Applications

- Distributed power architectures
- Intermediate bus voltage applications
- Telecommunications equipment
- Servers and storage applications
- Networking equipment
- Industrial equipment

Point of load and switching regulators

BEL – ORCP-D4T12L

The Bel Power Solutions 0RCP-D4T12x is an isolated DC-DC converter that operates from a nominal 48V source. This unit provides up to 240W of output power from a nominal 48V input. This unit is designed to be highly efficient and low cost. Features include remote ON/OFF, short circuit protection, over current protection, undervoltage lockout and over-temperature protection, pre-bias startup and power management bus. The converter is provided in an industry standard eighth brick package.

Features and benefits

- Input voltage: 38VDC to 75VDC
- Output voltage: 12VDC
- Power: 240W
- Size: 58.42mm x 22.86mm x 12.7mm
- Ambient temperature: -40°C to +85°C
- Isolated

Applications

- Distributed power architectures
- Intermediate bus voltage
- Servers and storage applications
- Networking equipment
- Industrial equipment

CYNTEC – POL MODULE (AUTOMOTIVE)

Cyntec has launched both MUN12AD03-SE and the VUN12AD02-KMH, to show their capability again on shrinking sizes on their full integrated micro point of loads: first a 4.5V to 17Vin, 0.6V to 5.5Vo 3A in a cases size of no more than 3mm x 2.8mm x 1.5mm and resp. a 4V to 36Vin, 0.9V to 8Vo 2A for AECQ-100 automotive applications in a size of only 6mm x 6mm x 2.6mm. Cyntec uses their bare-die embedding packaging that helps them decrease the size and create space on top of the controller for the passive components. Cyntec uses their propriety magnetics for the inductors to further limit the overall sizes.

Features and benefits

- Smaller body: >70% board space reduction
- Reduced parasitic L/C improving power loss an minimising signal distortions
- Optimised thermal performances

Applications

- PCIe, COM and SOM platforms
- Xilinx FPGA reference designs
- Networking equipment
- Industrial equipment
- Automotive applications AECQ-100 certified

Point of load and switching regulators

FLEX – BMR 490

Flex has launched the BMR490, a non-isolated digital IBC (Intermediate Bus Converter) DC-DC converter with an output power of 1300W in the quarter-brick form factor. The converter combines very high power density with excellent thermal performance in a price-sensitive design, making it ideal for demanding applications such as data centres.

Features and benefits

- Industry standard low profile quarter-brick 58.4mm x 36.8mm x 14.5mm
- High efficiency, typ. 97.7% at 51 Vout, half load
- Input to output non-isolated
- Baseplate to enhance thermal performance
- UL 62368 certificated
- Pin in paste soldering supported
- MTBF over 6 million hours

Applications

- Distributed power architectures
- Intermediate bus voltage
- Telecommunications equipment
- Servers and storage applications
- Networking equipment

FLEX – PNA SERIES

The Flex's PNA converter is an analog device with a small form factor 12mm x 12mm x 6.5mm and delivers up to 6A. The main application area is the industrial sector due to its input voltage range of 9V to 32V. The output voltage range is 0.9V to 5.5V. The PNA converter has max. power of 33W and the efficiency lies at 89.7% at 24 Vin and 3.3 Vout.

Features and benefits

- Allows soft start and tracking
- Power Good (PG)
- Synchronisation to an external clock
- Voltage tracking
- Cost-efficient solution

Applications

- Networking equipment
- Industrial equipment
- Distributed power architectures
- Intermediate bus voltage

Point of load and switching regulators

FLEX – PKM-NH

The PKM-NH series power modules are fully regulated DC-DC converters, offering extreme high power 864W in a quarter brick size, using advanced regulation for high power efficiency, high current double output pinning together with evolved thermal management, which makes this series products very suitable for a wide range of demanding applications.

Features and benefits

- Input: 40V to 60V, 36V to75V
- Output: 10.8V, 12V
- Output power: up to 80A/864W or up to 50A/600W
- 2250V input to output functional isolation
- Input overvoltage suppression
- Soft-start for handling of high capacitance loads
- Delayed hiccup OCP, OTP, OVP and under voltage lockout

Applications

- Distributed power architectures
- Intermediate bus voltage
- Servers and storage applications
- Networking equipment
- Industrial equipment

MURATA – PICOBK

The PicoBK MYRGC series are 18V operation synchronous step-down DC-DC converter ICs with a built-in high-side/low-side driver transistor. The MYRGCseries has operating voltage range of 3V to 18V and it can support 0.5A as an output current with high-efficiency. Compatible with low ESR capacitors such as ceramic capacitors for the load capacitor (CL). 0.75V reference voltage source is incorporated in the IC, and the output voltage can be set to a value from 1V to 15V using external resistors (RFB1, RFB2). 1.2MHz can be selected for the switching frequency. In PWM/PFM automatic switchover control, IC can change the control method between PWM and PFM based on the output current requirement and as a result can achieve high efficiency over the full load range. MYRGC has a fixed internal soft start time which is 1ms (typ.), additionally the time can be extended by using an external resistor and capacitor.

Features and benefits

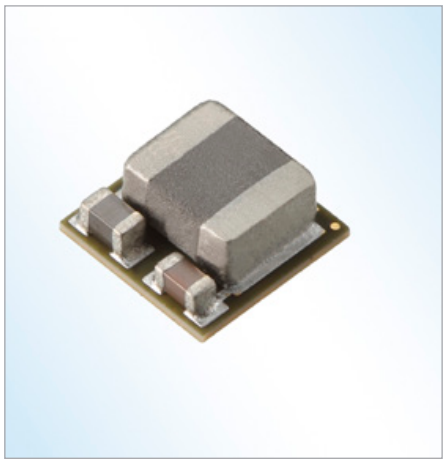
- Input voltage range: 3V to 18V (max. 20V)
- FB voltage: 0.75V ±1.5%
- Switching frequency: 1.2MHz
- Output current: 0.5A
- Control methods:
  - > PWM control (MYRGC075050P/Q)
  - > PWM/PFM automatic (MYRGC075050R/S)
  - > Efficiency: 85% @12V→5V, 1mA
- Soft-start time: adjustable by RC

Applications

- PCIe, COM and SOM platforms
- Distributed power architectures
- Intermediate bus voltage applications
- Recorders, camcorders
- Video camera surveillance
- Low power systems

Point of load and switching regulators

TDK – FS1400



TDK has announced the series of µPOL™ DC-DC converters, the industry's most compact and highest power density point-of-load solutions for applications such as big data, machine learning, Artificial Intelligence (AI), 5G cells, IoT and computing enterprise. Rather than using side by side discrete Integrated Circuit (IC) and discrete inductor (L) the FS series integrates the IC and inductor in a compact configuration which offers a high-density solution for space-constrained applications requiring a low-profile power source.

Features and benefits

- µPOL™ package with output inductor included
- Small size: 3.3mm x 3.3mm x 1.5mm
- Continuous 6A load capability, 0.6V to 2.5V
- Plug-and-play: no external compensation required
- Programmable operation using the I^2C serial bus (fast mode and fast mode plus)
- Wide input voltage range: 4.5V to 16V for single supply and 2.5V to 16V for dual supply
- Industrial

LED drivers

ARTESYN – IHP12

The Artesyn iHP12 configurable intelligent power system is designed to provide high accuracy, resolution and stability as a programmable voltage or current source for industrial and healthcare applications. Configurable for up to eight outputs using a wide variety of hot-swappable modules, it can provide up to 12kW in 3kW increments and address a large range of voltages and currents.

Features and benefits

- Multi output intelligent and modular high power system
- Standard 19" rack
- Outputs parallel up to 1600A
- Outputs series up to 1000V
- 100% digital control
- Outputs program as voltage or current

Applications

- Flexible control interfaces
- Air cooled
- SEMI F47 compliance
- Field upgradeable firmware
- Programmable slew rate
- Fast current slew rate up to 200Hz
- Active power factor correction
- User defined command profiles
- Medical safety approved

LED drivers

DELTA – LNE SERIES

Delta's latest range of 600W LED drivers comes rigorously tested for both indoor and outdoor lighting requirement. As part of the LNE series, the 600W design can withstand high surge immunity single pulse of 10kV for both common and differential mode. The 600W LED driver meets IEC 61000-4-2 level 4 criteria A, and IEC 61000-4-5 (common 6kV, differential 4kV). It comes in 36V (LNE-36V600WBGA) and 48V (LNE-48V600WBGA) output voltages. The products offer a wide operating temperature from -40°C to +70°C with convection cooling. The efficiency levels up to 96% and IP67 design makes the Delta LNE series an essential part of an energy efficient LED lighting power solution for sports arena lighting and agricultural lighting.

Features and benefits

- International AC input voltage with worldwide certified cable use
- Up to 96% efficiency
- 10kV common mode and 10kV differential mode surge immunity
- IEC/EN 61000-4-2, level 4 criteria A, 15kV air discharge, 8kV contact discharge
- IP67 mechanical design for indoor and outdoor applications

Applications

- LED lighting, both indoor and outdoor applications

FULHAM – ESB01KITT01B KIT

Fulham has created 4 kits of simple, easy-to-install components that connect to an existing 0V to 10V driver to add SIG qualified Bluetooth® mesh capability. The kits contain a 600W Bluetooth SmartBridge, a PiR sensor and an EnOcean wireless rocker switch as an ideal solution for manufacturers looking to develop their Bluetooth product lines or contractors seeking to provide wireless lighting options in the field. The set complies to the standby power requirement of less than 1W. Compatible with Fulham's eliteBlue commissioning software, which provides an intuitive set of tools for commissioning and monitoring qualified Bluetooth mesh lighting devices. Using simple web and iOS apps, users can easily customise lighting control parameters in accordance with site-specific needs and building energy codes.

Features and benefits

- Kits contain: 1 or 2 SmartBriges, 1 PiR sensor and a single or double rocker EnOcean battery-less wire-less switch
- Complies to the standby-power requirement of <1W
- Works with iOS iPad and iPhones plus Fulham EliteBlue commisioning software
- Works with every excisting 0V to 10V dimmable LED driver
- Video tutorials and user manuals

Applications

- Smart homes and offices
- Meeting rooms
- Forms good combination with Fulham 0V to 10V dimmable LED drivers
- Forms good combination with Fulham's linear LED modules with lenses

MEAN WELL – LCM BLE 25~60 SERIES

MEAN WELL has integrated the Casambi Bluetooth mesh module with the LCM-25/40/60BLE series. All you need to do is download an Android or iOS app, which you can use to set up any grouping/scenes, timer schedules, etc. The LCM-25/40/60BLE series includes one freely assignable AC mains (push) input. Using the traditional wall rocker, this can be programmed to control not only the driver being wired but also to some or all of the available luminaries—including groups and scenes— in the air to achieve flexible lighting control. MEAN WELL and Casambi supports the installation by video tutorials.

Features and benefits

- 3 models: 25W, 40W and 60W
- Output driver current adjustable by dip switch
- Plastic housing and class II design without FG
- Built-in active PFC function and efficiency up to 90%
- Dimming functions with Bluetooth mesh and push input
- Protections: short circuit/over voltage/over temperature
- Surge protection with 2KV (L-N)
- Lifetime >50,000hrs

Applications

- Indoor lighting

MEAN WELL – HVGC-1000

MEAN WELL has launched the HVGC-1000 series (1000W) with wide AC input from 180VAC to 528VAC for high power LED luminaire application. The HVGC-1000 series can operate with single phase 230VAC input or one phase 347VAC to 380VAC distributed from three phase input, a vantage to horticultural lighting and stadium lighting applications. Furthermore, HVGC-1000 series adopts constant power mode design and reaches high efficiency up to 96%. Others include high surge protection with standing 8kV (L/N-FG)/4kV (L-N), wide working temperature range (-40˚C to +90˚C) for industrial environment.

Features and benefits

- Wide input range 180VAC to 528VAC
- Constant power mode output
- Metal housing with class design I
- Surge protection with 8kV to 4kV
- Built-in active PFC function
- IP67 design for indoor or outdoor installations
- Dimming options: 3 in 1 dimming (dim-to-OFF); smart timer dimming and DALI 2.0

Applications

- Harbour lighting
- LED high-bay lighting
- Parking lot lighting
- LED fishing lamp
- Horticulture lighting
- Stadium lighting
- Type HL for use in class, division 2 hazardous (classified) location

MEAN WELL – SLD-50

The MEAN WELL ultra-slim SLD-50 series is released after the SLD-80 series. With the launch of SLD-50 series, the whole linear type product line of MEAN WELL is fully completed. The SLD series is especially suitable for decorative lighting/advertising light boxes and linear luminaires. In addition to ultra-slim size features, this series also meets SELV and isolation circuit design, which is suitable for usage in various indoor lighting fixtures. Another key point is the 56V model adopts the constant power output design, applicable for LED design in the range of 30V to 56V. It also provides adjustable current Io function to reduce design compatible issue and greatly reduce the stock number.

Features and benefits

- Wide input range 110VAC to 305VAC
- Slim and linear housing design
- Built-in active PFC function and efficiency up to 90%
- Design with class 2/II and SELV
- Protections: short circuit/over voltage/over temperature

Applications

- Lighting: indoor and outdoor

MEAN WELL – SPD-20HP-277S/480S

The MEAN WELL SPD-20PH thermally protected surge protective device is a self-protected device which is specially designed to be used in outdoor and commercial LED lighting fixtures for overvoltage protection. It is construted with thermally protected varistor technology. Its built-in thermal disconnect function provides additional protection to prevent catastrophic failure and fire hazard even under the extreme circumstances of varistor end-of-life or sustaining over voltage conditions. The SPD-20HP provides coordinated surge protection with more LED drivers than other SPDs due to its exceptionally low Measured Limiting Voltage (MLV) and voltage protection level (Up). This lower clamping voltage can also help to extend the life-time of the luminaire. It also features a built-in LED indicator that notifies when replacement of the module is needed.

Features and benefits

- Series connection style
- UL1449 type 4 component assemblies
- Line to ground and line to line protected
- 20kA maximum discharge current (Imax.), 8μs to 20μs
- Low MLV/U
- Thermally protected
- Double insulation cable wire
- LED status indicator

Applications

- Outdoor and commercial LED lighting
- Roadway lighting
- Traffic lighting
- Digital signage
- Wall wash lighting
- Parking garage/IoT lighting
- Flood lighting
- Tunnel lighting
- Street lighting

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