

Standard Power Module

(DC/DC and AC/DC Converter)

DCBU

Delta Electronics, Inc.

November 2018





Delta Introduction

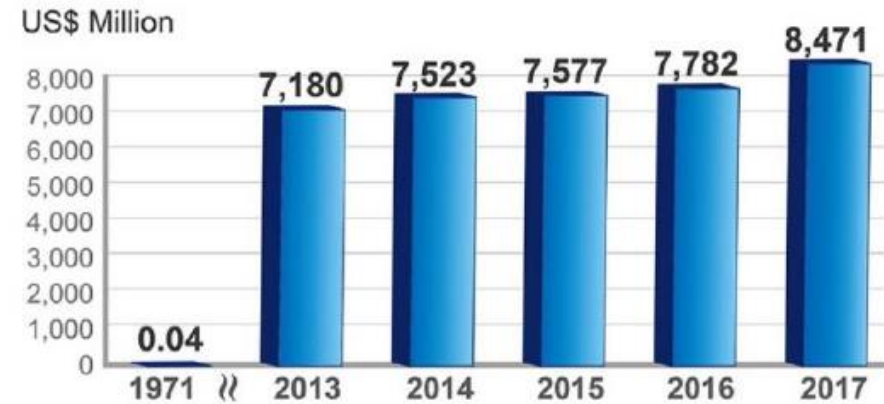
- The largest power solution provider worldwide
- More than 25M PSU manufactured per month
- Power range from 1W to 10MW
- High power density
- Providing up to 98,7% efficiency power solution
- Over 9000 R&D engineers worldwide
- 6~7% group sales revenue devoted to R&D

World's No. 1 in:

- Switching Power Supplies since 2002
- DC Brushless Fans since 2006

Leading in:

- Telecom Power Systems
- Industrial Automation
- Renewable Energy Solutions
- Datacenter Infrastructure
- Passive and Magnetic Components
- Networking Products





Power Electronics

- Components
- Embedded Power
- Fans & Thermal Management
- Automotive Electronics
- Merchant & Mobile Power

vivitek **Innergie**

Automation

- Industrial Automation
- Building Automation

Infrastructure

- ICT Infrastructure
- Energy Infrastructure

Power Electronics Components



Power Chokes
for Portable Devices / Cloud Computing / Automotive
Ultra Small Sizes down to $1.25 \times 1.0 \times 1.0 \text{ mm}^3$
Max Operating Temp. 165°C



Optical Transceiver
Modules



RF Modules



Li-ion Battery Cells



48V HV Li-ion Batteries



EMI Filters / Solenoids



Power Magnetic Components
for Portable Devices / Industrial Applications



Current Sensing Resistors
for Portable Devices / Automotive /
Industrial Applications
Small Sizes down to 0201mm
High Wattage up to 9W



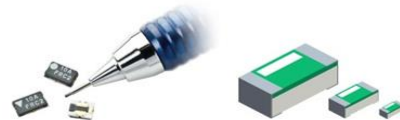
48V LV Li-ion
Batteries (3U Rack)



24V Li-ion Batteries



Power Module for Portable Devices /
Cloud Computing / Industrial Applications
Smallest Sizes down to $2.0 \times 2.5 \times 1.0 \text{ mm}^3$



Miniaturization Fuse Resistance Protectors
Small Sizes down to $4.0 \times 3.0 \times 0.85 \text{ mm}^3$



Energy Storage System
Containers (40ft / 20ft)



Energy Storage Cabinets



Power Electronics

Embedded Power



Server Power Supplies



Enterprise Server
Power Supplies



Networking and Storage
Power Supplies



Industrial Electric Vehicle Products



DCDC Converters
for Communication / Computing
/Networking / Industrial
Applications



Personal Computer and Workstation
Power Supplies



Industrial Power Supplies



Home Appliance Motor Controllers



Aerospace DCDC Converters



Power Electronics

Merchant & Mobile Power

Mobile Power



AC Adapters



Power Network Boxes
(for Flight Entertainment)



Power Supplies
(Robot Charging)

Industrial Power



High Voltage and
Precision Power Supplies



Industrial Power Supplies



Programmable Power Sources

Medical Power



Medical Power Supplies



X-ray Generators



Power Electronics

Fans & Thermal Management



Ventilation Fans



Portable Device Fans and Blowers



Automotive, Server, Storage, Industrial
and Consumer Fans and Blowers



Electronically Commutated Fans



Cabinet Thermal Solution Products
Air Conditioners and Heat Exchangers



Thermal Management Products

Power Electronics

Automotive Electronics



Battery Disconnect Units



Traction Motors



Traction Inverters



Auxiliary Power Modules



Onboard Charging Modules



Electric Vehicle
Communication Controllers



High Power Charge
Contactor Assemblies



Power Electronics

Merchant & Mobile Power

Display & Visualization



Business Projectors



LED Displays

Seamless DLP Video Walls

Distributive Vision
Control Systems
(DVCS)



NovoConnect Collaboration Solutions



NovoDS Digital Signage Systems

Healthcare Devices



Blood Glucose
Monitoring Systems



Fingertip Pulse
Oximeters



Micro CTs



Mesh Nebulizers

Power Electronics

Vivitek & Innergie

vivitek
A brand of 



Innergie
A brand of 



Pocket and Personal Projectors



Portable Projectors



Home Cinema Projectors



6000mAh Dual
USB-C Power Bank



24W Dual 2.4A
USB Wall Charger



24W Dual 2.4A
USB Car Charger



3-port Mobile
Super-speed Charging Hub



Multimedia Projectors



Education Projectors



Large Venue Projectors



65W Universal Laptop Adapter
for World Travelers



45W USB-C
Laptop Adapter



65W Ultra Slim
Universal
Laptop Adapter



90W Universal
Laptop Adapters



Automation

Industrial Automation

Manufacturing Operation
Management

Equipment Control &
Visualization

Network



Industrial Energy Management System (IEMS) DIAEnergie
Manufacturing Execution System (MES)



Equipment IoT Platform DIALink
SCADA System DIAView
Block Control System (BCS)



IIoT Industrial Cloud Routers /
Industrial Fieldbus Solutions



Industrial Network Solutions

Automation

Industrial Automation

Control

Drive & Motion



Industrial PCs (IPC & PPC)



PC-Based Motion Controllers (PAC)



AC Motor Drives



Servo Systems



Human Machine Interfaces (HMI)



Programmable Logic Controllers (PLC)



CNC Controllers



Power Regeneration



Linear Stages and Modules for Motion Control



Automation

Industrial Automation

Field Device

Robot

Automation Equipment



Machine Vision Systems



Smart Sensors



SCARA Robots



Robot Workstations



Rotary Optical Encoders



Pressure Sensors



Temperature Controllers



Power Meters



Articulated Robots



Production AOI
Customized Applications

Production Automation
Customized Applications



Automation

Building Automation

Building Management & Control

Delta
CONTROLS
A Delta Group Company

LOYTEC
A Delta Group Company



Building Management



Building Controls



Room Automation



Lighting Controls



Access Controls



Touch Panels

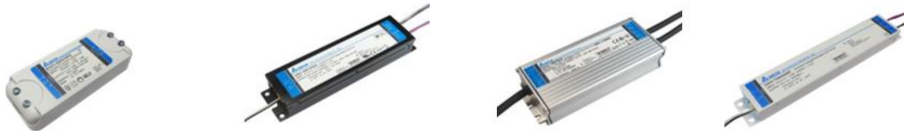
Automation

Building Automation

LED Lighting



LED Street Lights



LED Drivers



LED High Bay Lights

Intelligent Surveillance



Video Management Systems



Intelligent Video Systems

Infrastructure

ICT Infrastructure

Telecom Power Systems

Networking Systems



Outdoor Individual Rectifiers



High Efficiency Rectifiers



Controllers



Inverters



Eltek Rectifier HE
230V / 1500VA
48V / 1200W



Power Shelf



Outdoor Telecom Power Systems



Renewable Hybrid Power Systems



Indoor Telecom Power Systems



SOHO Wireless Routers



VPN Routers



SMB / Enterprise Wireless APs



Smart Grid Data Concentrators



Industrial Switches



Datacenter Ethernet Switches



SMB / Enterprise Ethernet Switches



Chassis Ethernet Switches



Infrastructure

ICT Infrastructure

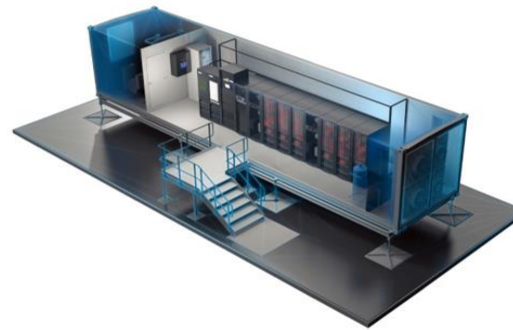
UPS & Datacenter Infrastructure



Micro Datacenter



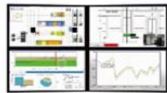
Modular Datacenter



Containerized Datacenter



Prefabricated Datacenter



Datacenter Infrastructure Management (DCIM)



AC Power



Eltek Converged Power Systems



Precision Cooling



Power Shelf



Racks



Power Distribution Units (PDU)



Infrastructure

Energy Infrastructure

EV Charging

Energy Storage System



150kW DC Ultra-Fast
EV Charger



50kW DC Quick
EV Charger



25kW DC Wallbox EV Charger



Site Management Systems



AC Mini EVSE



Power Conditioning Systems



Energy Storage Cabinets

Infrastructure

Energy Infrastructure

Renewable Energy

High Power Motor Drives



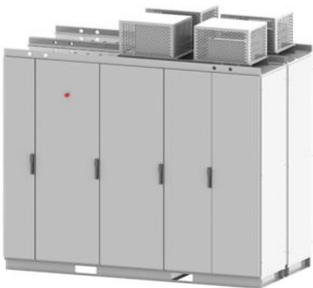
DFIG Wind Turbine Converters
(2MW / 2.5MW / 3MW)



PV 3 Phase String inverters
for Commercial and Utilities



Residential PV inverters



Full Power Wind Turbine Converters
(2MW / 2.5MW / 3MW / 6MW)

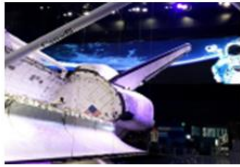


PV Central Inverter for Utilities



Medium Voltage Drives

Success Stories



LED display for the Space Shuttle Atlantis attraction at NASA's Kennedy Space Center



Solar tracking systems for a power plant in the U.S.



Building management solutions provided by subsidiary Delta Controls for more than 180 buildings at a university in the eastern U.S.



Outdoor telecom power solutions with integrated PV systems for a telecom operator in Africa



Renewable energy solutions featuring subsidiary Eltek's Rectifier for 104 Hospitals in Zimbabwe under the UNDP's program



DALI lighting systems provided by subsidiary LOYTEC for Manchester Airport in the UK



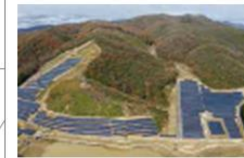
PV inverters for 75.4MW solar energy project in Denmark



EV charging solutions installed in Northern and Western Europe



InfraSuite datacenter solution for a web-hosting company in Berlin that serves a large German shopping website



4.6 MW distributed solar power system with energy storage system in Ako, Japan



Smart LED street lighting solution in New Taipei City, Taiwan



Delta BMCS helped build a smart building for Hongtai Square in Ningbo, China



CNC solutions applied to a world-class manufacturing company's production in China



Modular datacenter infrastructure solution built into an IDC datacenter for China Unicom Henan



Articulated robots applied for function tests for SCARA robots to shorten testing time



Smart monitoring and power management solution for a country-wide ATM network in India



LED-based DLP Video walls for the first traffic management center in Bangalore, India



The world's largest video wall with 324 LED DLP 80" cubes and DVCS system in China



Global Operations



	Asia-Pacific (China)	Americas	EMEA	Total
 Sales Offices	104 (61)	20	39	163
 Plant Sites	32 (19)	4	3	39
 R&D Centers	43 (23)	9	12	64

DCBU Global Operations



● **Amsterdam, the Netherlands**



● **Taipei, Taiwan**
Sales / Marketing



● **Shanghai, China**
R & D



DELTA STANDARD POWER MODULES

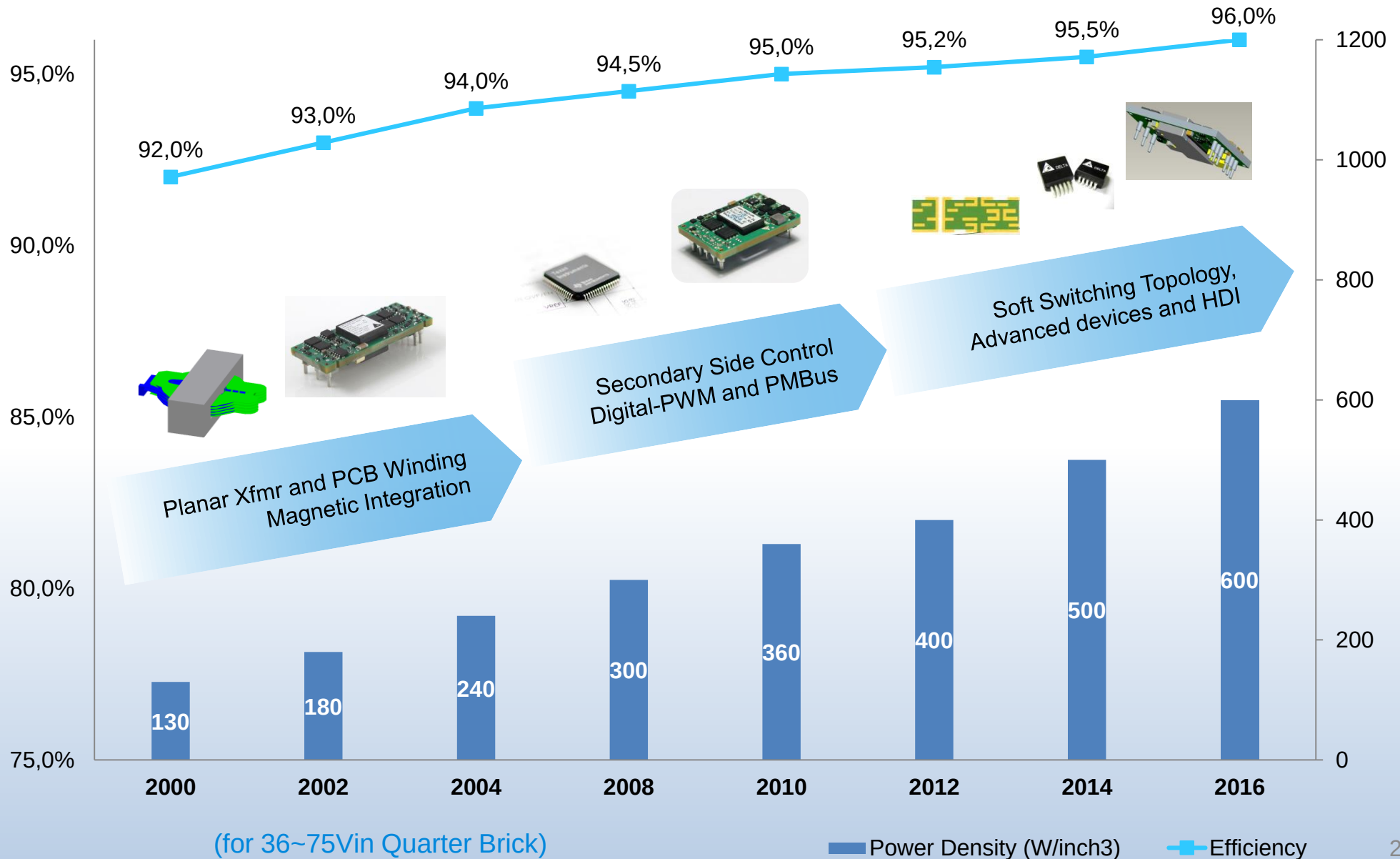
- Introduction DC/DC Converters
- Product Overview Delta Power Modules
- Applications
 - Railway
 - Non-Automotive Transportation
 - Industrial
 - Medical
 - Telecom
- Product Selection Guide
- Benefits
- Sales Channels and Support

[Download Catalogue](#)

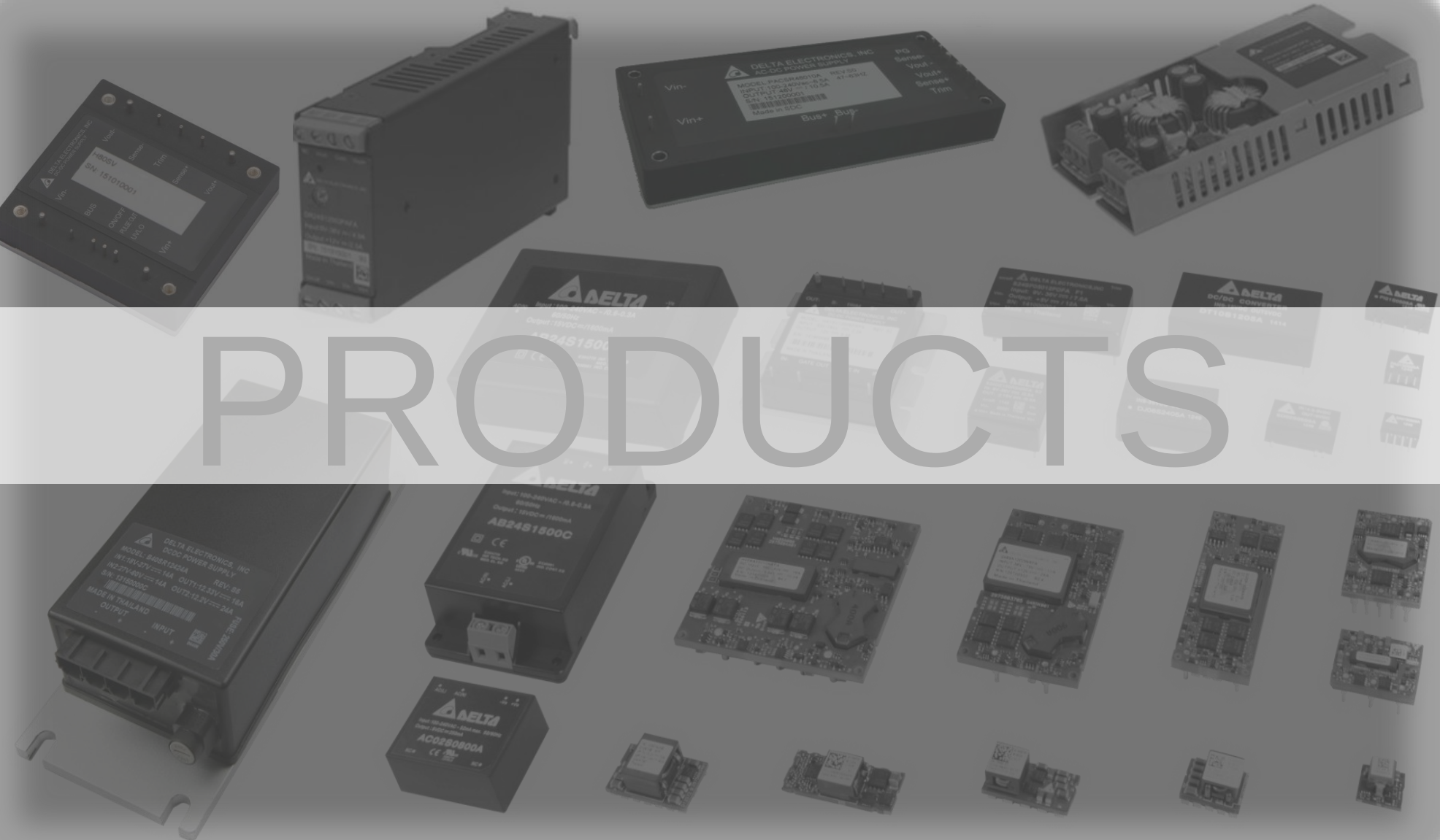


Standard Power Module
DC/DC Converters & AC/DC Modules

Product Catalog 2018 / 2019



PRODUCTS



STANDARD POWER MODULES AC/DC



COMING
SOON

AC/DC Box Type IP65

Power: 600-800W (FACSR)
Vout: 12V, 28V, 48V with aux power
BACSF series



AC/DC On-Board

Power: 300-500W
Vout: 12V, 24V, 28V, 48V
PACSR series



COMING
SOON

AC/DC On-Board

Power: 800W
Vout: 12V, 28V, 48V
FACSR series



AC/DC On-Board

Power: 4-60W
Vout: 3,3V, 5V, 9V, 12V
15V, 24V, 36V, 48V
Dual and Triple outputs
AA series



AC/DC On-Board

Power: 24-60W
Vout: 5V, 9V, 12V, 15V
24V, 48V, $\pm 12V$, $\pm 15V$
EN 60601 Medical approval
AB series



AC/DC On-Board

Power: 2W
Vout: 3,3V, 5V, 8V, 14V, 24V
Dual outputs
AC series

STANDARD POWER MODULES Off-Board



DC/DC Panel Mount

Power: 200W
Vin: 16,8-160V
Vout: 12V, 15V, 24V, 48V, 54V
PM80S series



DC/DC Panel Mount

Power: 15-60W
Vin: 9-36V
Vout: 5V, 12V, 15V, $\pm 12V$, $\pm 15V$
PM24S series **PM24D** series



DC/DC DIN Rail

Power: 15-60W
Vin: 9-36V
Vout: 5V, 12V, 15V, $\pm 12V$, $\pm 15V$
DR24S series **DR24D** series



DC/DC Box Type IP67

Power: 300-360W
Vin: 18-60V, 18-106V, 36-106V
Vout: 12V, 13,7V, 24V
B40SR series **B62SR** series **B70SR** series



DC/DC Box Type IP67

Power: 500W
Vin: 32-96V
Vout: 12V, 13,7V, 24V
B70SP series

STANDARD ON-BOARD DC/DC MODULES ENCAPSULATED



DC/DC High-Voltage Full-Brick

Power: 1200W
 Vin: 200-400V, 400-800V
 Vout: 14V, 28V, 54V
FB7SR series **FG5SR** series



DC/DC HV Quarter Brick

Power: 750W
 Vin: 360-400V
 Vout: 12V
QC8SC series



DC/DC Half-Brick (non-isolated)

Power: 3000Wmax (50A)
 Vin: 9-60V
 Vout: 0-60V trim range
H60SB series



DC/DC Quarter Brick

Power: 150W
 Vin: 14,4-170V
 Vout: 5V, 12V, 24V, 54V
Q80SV series



DC/DC Half-Brick

Power: 100-200W
 Vin: 16,8-160V
 Vout: 12V, 15V, 24V, 48V, 54V
H80SV series



DC/DC Quarter Brick

Power: 240W
 Vin: 9-36V
 Vout: 5V, 12V, 24V, 48V
Q24SE series



DC/DC Half-Brick

Power: 300W
 Vin: 40-160V
 Vout: 13,8V
HA0SP series



DC/DC Eighth-Brick

Power: 150W / 120W
 Vin: 9-36V / 9-60V
 Vout: 5V, 12V, 24V, 48V
E24SE series **E35SE** series

STANDARD ON-BOARD DC/DC MODULES ENCAPSULATED



DC/DC 2"x1"

Power: 40-60W

Vin: 9-36V

Vout: 5V, 12V, 15V, 24V

S24SP series



DC/DC 1"x1"

Power: 10-30W

Vin: 9-36V, 18-75V

Vout: 3,3V, 5V, 12V, 15V, $\pm 12V$, $\pm 15V$

S24SE series **S24DE** series **S36SE** series



DC/DC DIP and SMD

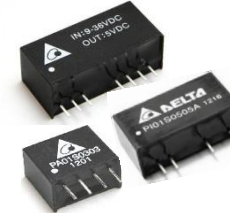
Power: 1-6W

Vin: 5V, 9-36V, 18-75V

Vout: 3,3V, 5V, 9V, 12V, 15V, 24V

$\pm 5V$, $\pm 9V$, $\pm 12V$, $\pm 15V$

D series **S** series



DC/DC SIP

Power: 1-3W

Vin: 3,3V, 4,5-18V, 9-36V, 18-75V

Vout: 3,3V, 5V, 9V, 12V, 15V

$\pm 5V$, $\pm 9V$, $\pm 12V$, $\pm 15V$

P series

STANDARD ON-BOARD DC/DC MODULES OPEN FRAME



DC/DC Half-Brick

Power: 80-1650W

Vin: 18-75V, 36-75V, 38-60V

Vout: 3,3V, 12V, 15V, 24V, 28V, 48V, 54V

H36S / H48S series



DC/DC Quarter Brick

Power: 60-1600W

Vin: 9-36V, 18-75V, 36-75V, 40-60V

Vout: 1V, 1,2V, 1,5V, 1,8V, 2,5V, 3,3V, 5V
7V, 12V, 24V, 28V, 48V, 54V

Q24S / Q36S / Q48S / Q54S / Q55S series



DC/DC Eighth-Brick

Power: 50-480W

Vin: 9-36V, 18-36V, 18-75V, 36-75V, 40-60V

Vout: 1V, 1,2V, 1,5V, 1,8V, 2,5V, 3,3V, 5V
7V, 12V, 24V, 28V, 48V, 50V

E24S / E36S / E48S / E54S series



DC/DC 1/32 Brick

Power: 25W

Vin: 36-75V

Vout: 3,3V, 5V

T48SR series



DC/DC 2"x1"

Power: 25-33W

Vin: 18-60V, 36-75V

Vout: 3,3V, 5V, 12V

S36SA series **S48SA** series



DC/DC 1"x1"

Power: 15-35W

Vin: 18-75V, 36-75V

Vout: 3,3V, 5V, 7V, 12V, 15V

S36SE series **S48SP** series



DC/DC (fixed ratio solution)

Power: 500-1000W

Vin: 10,8-13,2V **Vout:** 4xVin (40-56V)

Vin: 40-60V **Vout:** Vin/8, Vin/6

U12SU / V50SU / U50SU series

COMING
SOON

STANDARD ON-BOARD DC/DC MODULES NON-ISOLATED



DC/DC Switching Regulator

Power: 0,5A
Vin: 4,75-32V, 11-32V, 18-32V
Vout: 1,5-V, 1,8V, 2,5V, 3,3V, 5V
 6,5V, 9V, 12V, 15V

PM05 series



DC/DC POL DOSA I

Power: 3-30A
Vin: 2,4-5,5V, 6-14V, 8,3-14V
Vout: 0,75-5V trim range

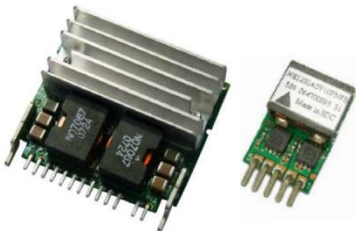
DNx series



DC/DC POL DOSA II

Power: 12-30A
Vin: 4,5-14V
Vout: 0,69-5V trim range

DCx series



DC/DC POL

Power: 3-60A
Vin: 3-13,8V, 10,2-13,8V
Vout: 0,59-5V trim range

NE series **NC** series



DC/DC POL

Power: 10-80A
Vin: 4,5-13,8V, 10,8-13,2V
Vout: 0,6-5V trim range
D12 series



DC/DC Power Block

Power: 30-140A
Vin: 7-13,2V
Vout: 0,6-3,3V trim range
D12S1R8 series



DC/DC 1/32 Brick

Power: 100W
Vin: 9-53V
Vout: 3,3-16,5V trim range 8A (6A)
Vout: 5-30V trim range 4,5A
T31S1N series



DC/DC POL (transformer coupled)

Power: 100W
Vin: 45-60V
Vout: 1,2V, 1,8V, 3,3V
TCP54 series

STANDARD ON-BOARD DC/DC EMI FILTER MODULES



EMI Filter 1"x1" Encapsulated THT

Current: 5A max

Vin: 75V max

FL75L5 A



EMI Filter 1"x1" Open Frame SMD / THT

Current: 7A max

Vin: 75V max

FL75L7 A / FL75L7 B



EMI Filter 2"x1" Encapsulated THT

Current: 10A max

Vin: 75V max

FL75L10 A



EMI Filter 2"x1,6" Encapsulated THT

Current: 20A max

Vin: 75V max

FL75L20 A / FL75L20 B



- ❑ Traffic, Telematics, Ticketing, POS
- ❑ Railway, Bus, Rolling Stock & Infrastructure
- ❑ Forklift trucks, Heavy Machine, Road Sweeper
- ❑ AGV, Transport E-vehicles, Caddies
- ❑ Defense COTS



- ❑ Base stations, Small Cells, Radio Communication
- ❑ Optical Networks, Switches, Routers, Gateways
- ❑ Broadband, Cable TV, Broadcast
- ❑ Satellite Communications, Radio Heads, Wireless
- ❑ PABX, Access, Ethernet, IP Phones, Modems, PoE
- ❑ Data Center, Computing, Cloud



- ❑ Building Automation, Security Systems, CATV
- ❑ Controls, Interfaces, Industrial Ethernet Switch
- ❑ Test & Measurement Systems, ATE, Balances
- ❑ Robotics, Manufacturing, Pumps, Drives
- ❑ Infotainment, Video Walls, LED Signage
- ❑ Laser Systems, Plasma, Welding, Machine Tools
- ❑ Gaming, Audio/Video, Printers



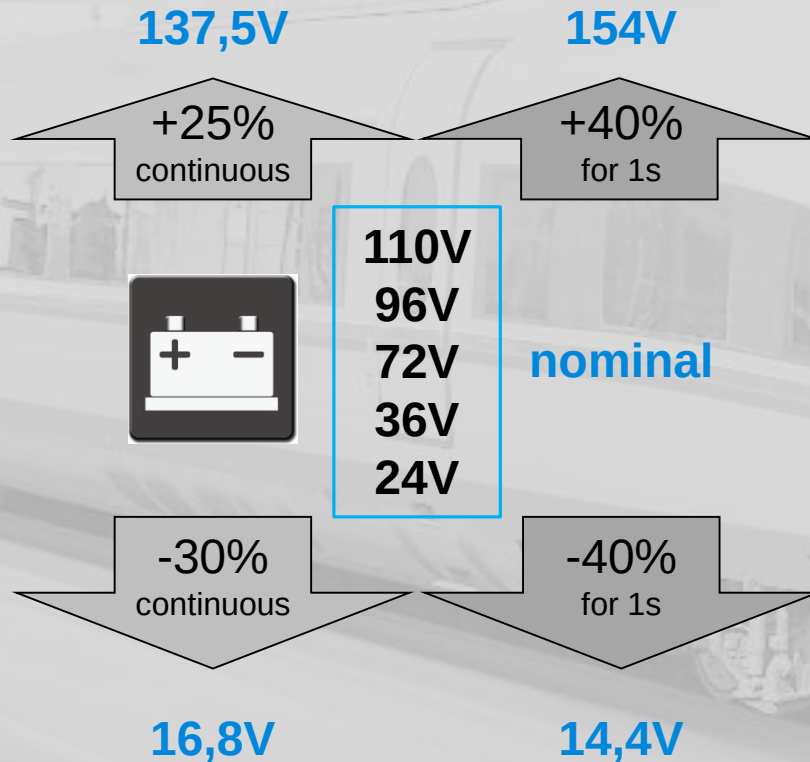
- ❑ Analysis, Diagnostics, Dialysis, Ventilation
- ❑ MRT, Scanners, X-ray, Ultrasound, Microscopy
- ❑ Patient Monitoring, Treatment, Dental
- ❑ Surgery, Laser, Trolleys, Pumps, Lighting





BATTERY VOLTAGES VARIATIONS IN TRAINS

Railway Standard EN50155



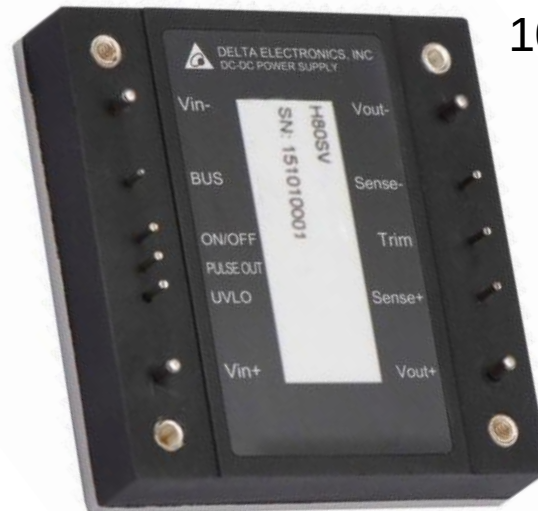


ULTRA-WIDE INPUT VOLTAGE 16,8-160V

+45%

110V
96V
72V
36V
24V

-40%
for 1s



200W
100W



54V



Video Surveillance
PoE, Wi-Fi

48V



Signaling
Communication
Event Recorder

24V



Cabin Equipment
Air Conditioning
Audio Amplifier

24V



Door Control
Board Computer

24V



Internal & External
Lighting

15V



Motor Drive &
Brake Controller

12V



Passenger
Information
Displays

DC/DC Half-Brick

Power: 100-200W

Vin: 16,8-160V (14,4V-200V 1s)

Vout: 12V, 15V, 24V, 48V, 54V

H80SV series

Efficiency: 85-90%

Isolation: 4242Vdc

Conducted Cooling: -40~100°C baseplate temp.

Features: Trim, Sense, OVP, OCP, OTP

Options: Remote ON/OFF, M3 Screw Threads

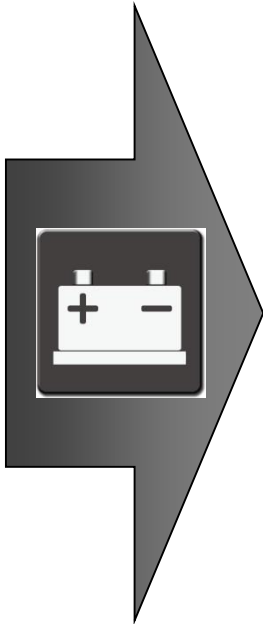


ULTRA-WIDE INPUT VOLTAGE 14,4-170V

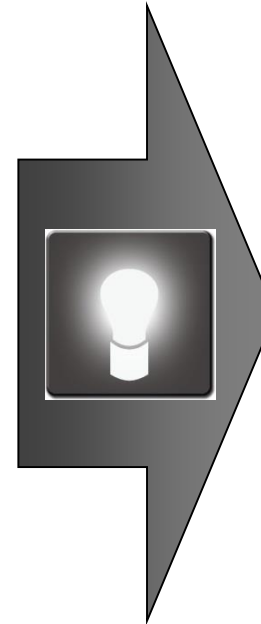
+50%

110V
96V
72V
36V
24V

-40%



80W
150W



(Trim Range)

54V
(48V)
24V
12V
5V

Video Surveillance
PoE, Wi-Fi
Power Distribution
Signaling
Communication
Event Recorder
Router
Amplifier
Cabin Equipment
Lights
Door Control
Board Computer
Fans
Server
Hard Drives
Displays
Electronics

DC/DC Quarter-Brick

Power: 80-150W

Vin: 14,4-170V (12-200V 1s)

Vout: 5V, 12V, 24V, 54V

Q80SV series

Efficiency: 89%

Isolation: 3000Vdc

Conducted Cooling: -40~100°C baseplate temp.

Features: Trim -20/+10%, Sense, OVP, OCP, OTP

Options: Remote ON/OFF, M3 Screw Threads

STANDARD OFF-BOARD DC/DC CONVERTERS

ELECTRICAL FEATURES

- Input 16,8-160V continuous (14,4-200V 1s)
- EN50155 approval
- EN55011 / 55022 Class A EMC Filter
- 10ms hold-up time (110Vin)
- Input Reverse Polarity Protection
- Optional Parallel function
- Remote ON/OFF
- -40°C to 100°C Baseplate Temperature
- Input UVLO, OVP, OCP, OTP
- UL 60950-1 (pending)

MECHANICAL FEATURES

- Metal Case
- Spring Cage Terminals
- Size: 226 x 100 x 45 mm
- Optional heatsink: 198,5 x 100 x 28 mm

Output
Voltages:

54V
48V
24V
15V
12V

Panel
Mount

200W



PM80S series

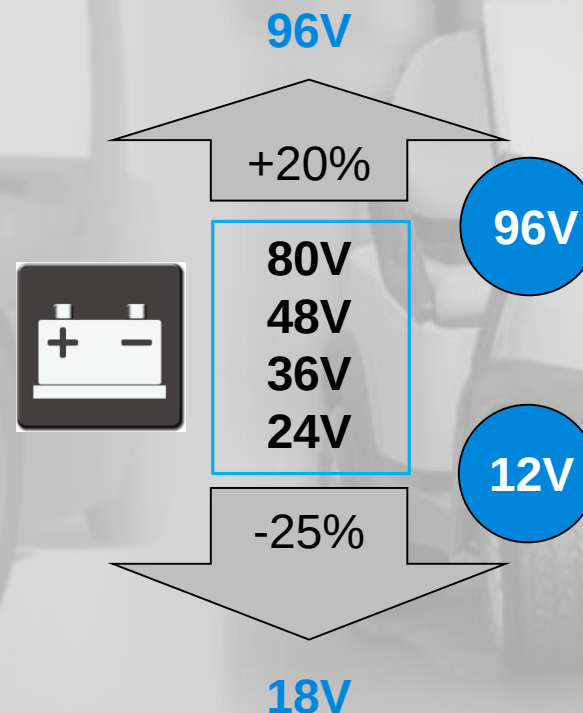


Product	Form Factor	Power	Input	Output	Series	Features
	1"x1"	10W	9-36V	3,3V, 5V, 12V, 15V, ±12V, ±15V	S24SE S24DE	
		15W				
		20W				
		30W				
	2"x1"	40W	9-36V	5V, 12V, 15V, 24V	S24SP	
		60W				
	Eighth-Brick	150W	9-36V	5V, 12V, 24V, 48V	E24SE	
		120W	9-60V		E35SE	
	Quarter-Brick	80W 150W	14,4-170V	5V, 12V, 24V, 54V	Q80SV	
	Half-Brick	50W	53-154V	12V, 15V, 24V	HA1SV	
		100W				
		100W	16,8-160V	12V, 15V, 24V, 48V, 54V	H80SV	
		200W				



BATTERY VOLTAGES VARIATIONS IN ELECTRIC VEHICLES

Industrial Trucks Standard
EN12895



BOX TYPE IP67

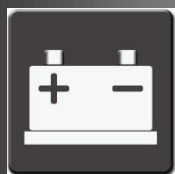
ULTRA-WIDE INPUT VOLTAGE 18-106V



+30%

80V
48V
36V
24V

-25%



24V
13,7V
12V

Lights
Wipers
Computer
Display
Scanner
Printer
Cameras
Heater
Radio

DC/DC Box Type IP67

Power: 300-360W

Vin: 18-60V, 18-106V, 36-106V

Vout: 12V, 13,7V, 24V

B40SR series **B62SR** series **B70SR** series

Efficiency: 88-92,5%

Isolation: 2250Vdc

Conducted Cooling: -40~75°C ambient temp.

Features: Parallel Connection, Input Reverse Polarity Protection, OVP, OCP, OTP

Options: External Fuse, Remote ON/OFF, Sealed Connector

BOX TYPE IP67



WIDE INPUT VOLTAGE
32-96V



500W

+20%

80V
48V

-30%



24V
13,7V
12V

Lights
Wipers
Computer
Display
Scanner
Printer
Cameras
Heater
Radio

DC/DC Box Type IP67

Power: 500W

Vin: 32-96V

Vout: 12,4V, 13,7V, 24,5V

B70SP series

Efficiency: 91,5%

Isolation: 2250Vdc

Conducted Cooling: -40~75°C ambient temp.

Features: Parallel Connection, Input Reverse Polarity Protection, OVP, OCP, OTP

Options: External Fuse, Remote ON/OFF, Sealed Connector

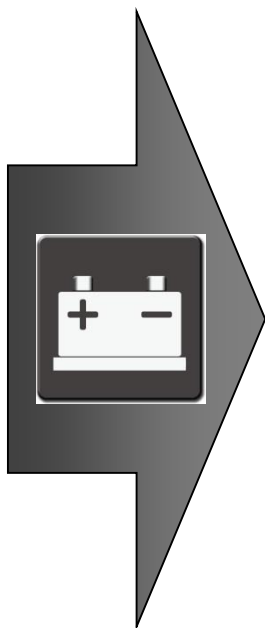
ON-BOARD BUCK/BOOST CONVERTER

WIDE INPUT VOLTAGE
9-60V

+25%

48V
36V
24V
12V

-25%

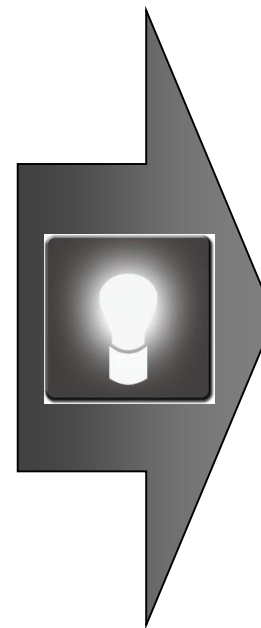


Half
Brick



3000W

WIDE OUTPUT VOLTAGE
0-60V trim



60V



0V

Motor
Pump
Valves
Heater
RF Amplifier
Audio Amplifier
Computer
Display
Lights
Scanner
Cameras
Printer
Radio
Battery Charge



DC/DC Half-Brick (non-isolated)

Power: 3000Wmax (50A)

Vin: 9-60V

Vout: 0-60V trim range

H60SB series

Efficiency: 98% peak

Conducted Cooling: -40~100°C baseplate temp.

Features: Parallel Connection (Active CS), OVP, OCP, OTP

Options: Remote ON/OFF, PMBus communication

NON-AUTOMOTIVE TRANSPORTATION

Mounting	Form Factor	Product	Power	Input	Output	Series	Features	
Panel Mount	Box Type		300W	18-60V	12V, 13,7V, 24V	B40SR		
				18-106V		B62SR		
				36-106V		B70SR		
		360W	18-106V	24V	B62SR			
			500W	32-96V	12V, 13,7V, 24V	B70SP		
On-Board	Half-Brick		3000W (50A)	9-60V	0-60V trim range	H60SB	non-isolated wide trim range	
	1"x1"		10W	9-36V	3,3V, 5V, 12V, 15V, ±12V, ±15V	S24SE S24DE		
			15W					
			20W					
			30W					
	2"x1"		40W		5V, 12V, 15V, 24V	S24SP		
			60W					

HIGH VOLTAGE DC/DC ON-BOARD CONVERTERS

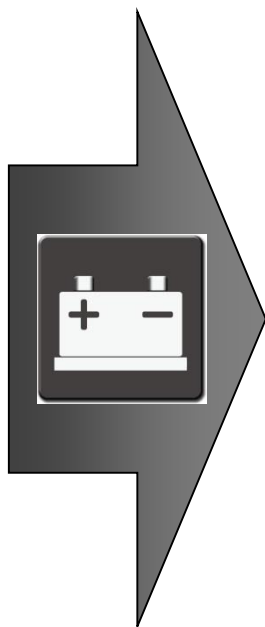
UP TO 12 UNITS IN
PARALLEL CONNECTION

FG5SR

800V
400V

FB7SR

400V
200V



Full
Brick



1200W



(Trim Range) Power Distribution

Router
Printer
RF Amplifier
Audio Amplifier
Motor
Pump
Valve
Relay
Lights
Fans
Heater
Server
Hard Drives

DC/DC High-Voltage Full-Brick

Power: 1200W

Vin: 200-400V, 400-800V

Vout: 14V, 28V, 54V

FB7SR series FG5SR series

Efficiency: 94-96,5%

Isolation: 4242Vdc

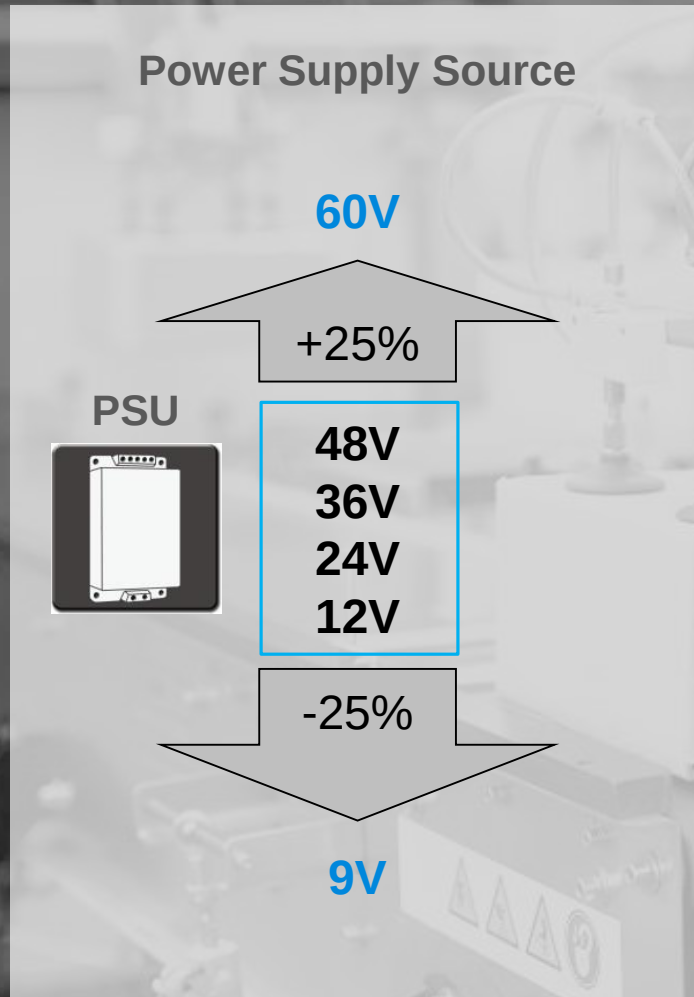
Conducted Cooling: -40~100°C baseplate temperature

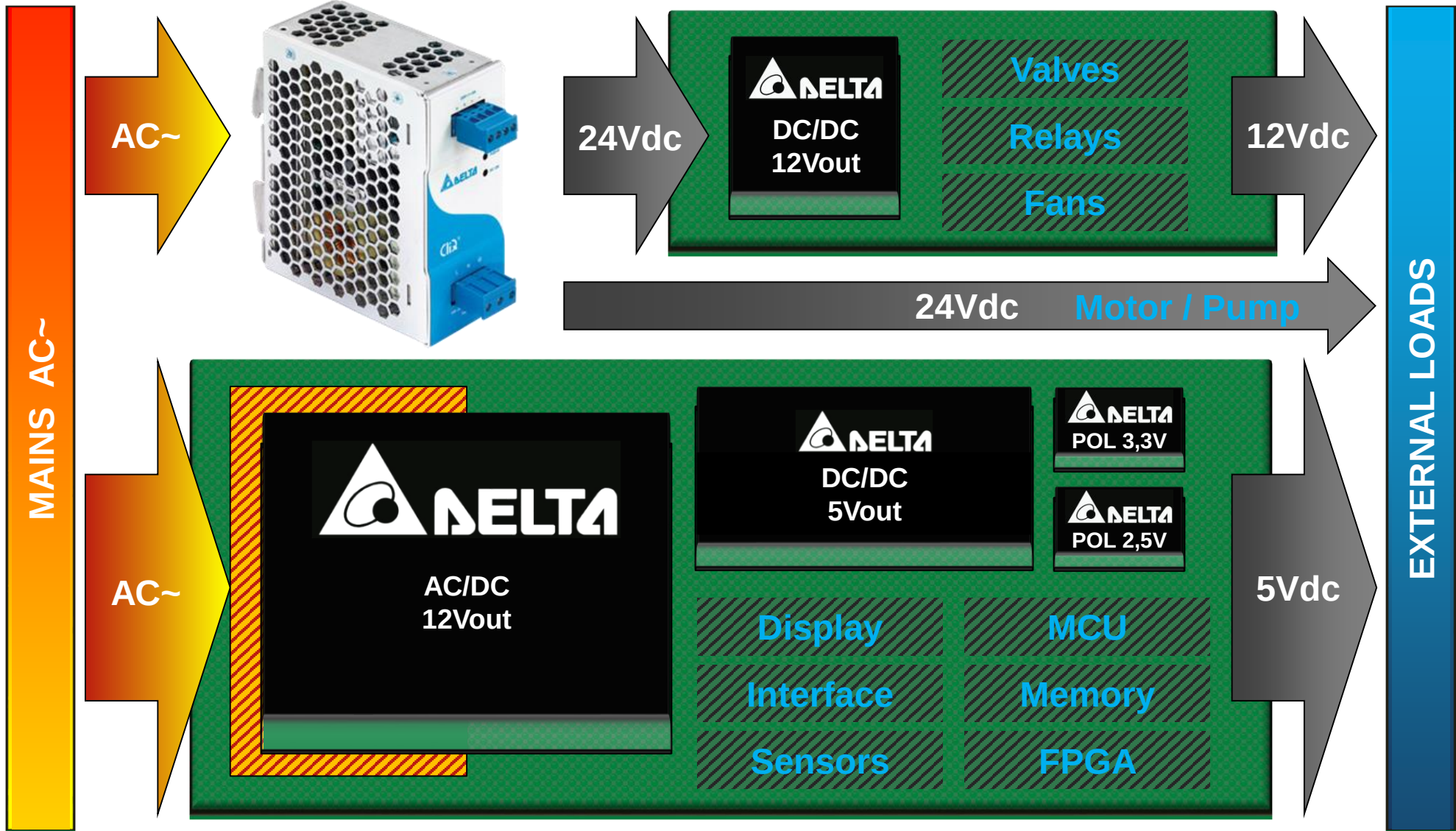
Features: Parallel Connection (Active CS), Trim, Sense, OVP, OCP, OTP

Options: Remote ON/OFF, PMBus communication



VOLTAGES VARIATIONS IN INDUSTRIAL DEVICES





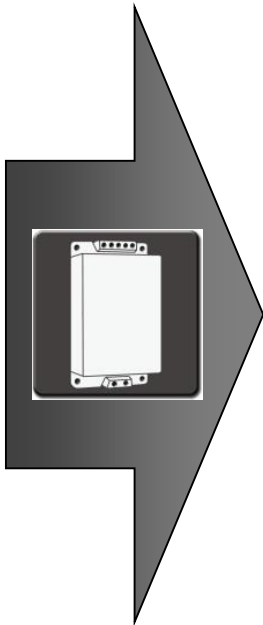
ENCAPSULATED ON-BOARD CONVERTERS



+50%

24V
12V

-25%



WIDE INPUT VOLTAGE 9-36V

1"x1"

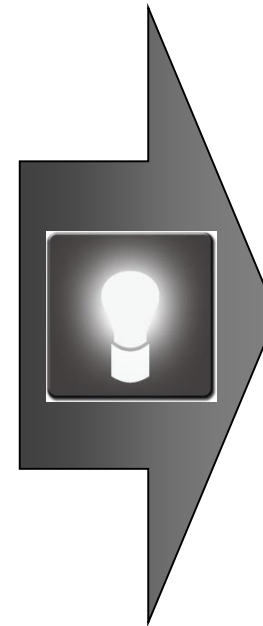


30W
20W
15W
10W

2"x1"



60W
40W



24V
15V
12V
5V
3,3V
±15V
±12V

Motor
Pump
Valve
Relay
Fans
Display
Lights
Cameras
Interface
Sensors
Modem
MCU
FPGA
Memory

DC/DC 1"x1"

Power: 10-30W

Vin: 9-36V

Vout: 3,3V, 5V, 12V, 15V, ±12V, ±15V

S24SE series **S24DE** series

DC/DC 2"x1"

Power: 40-60W

Vin: 9-36V

Vout: 5V, 12V, 15V, 24V

S24SP series

Efficiency: 87-93%

Isolation: 1600/1500Vdc

Natural Convection: -40~85°C ambient temp.

Features: Trim, OVP, OCP, OTP

Options: Remote ON/OFF, Heatsink

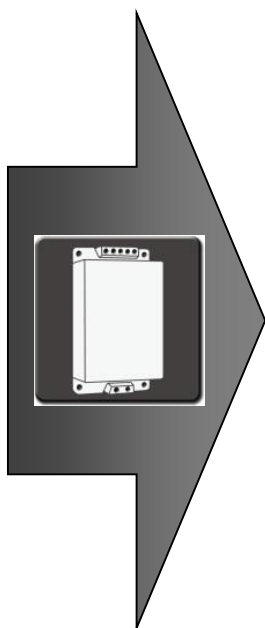
ENCAPSULATED ON-BOARD CONVERTERS



+25%

48V
36V
24V
12V

-25%

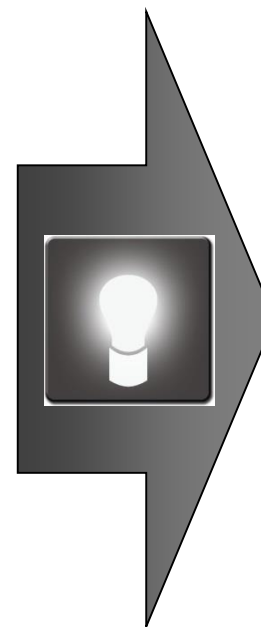


WIDE INPUT VOLTAGE
9-36V / 9-60V

1/8
Brick



150W



(Trim Range)

(54V)
48V
24V
12V
5V

Power
Distribution
Router
Printer
Amplifier
Motor
Pump
Valve
Relay
Fans
Display
Lights
Cameras
Interface
Sensors
Modem
MCU
Electronics

DC/DC 1/8 Brick

Power: 150W
Vin: 9-36V
Vout: 5V, 12V, 24V, 48V
E24SE series

DC/DC 1/8 Brick

Power: 120W
Vin: 9-60V
Vout: 5V, 12V, 24V, 48V
E35SE series

Efficiency: 93,5%
Isolation: 4000V
Natural Convection: -40~85°C ambient temp.
Features: Wide Trim Range +/-20%, OVP, OCP, OTP
Options: Remote ON/OFF, Heatsink

ENCAPSULATED ON-BOARD CONVERTERS

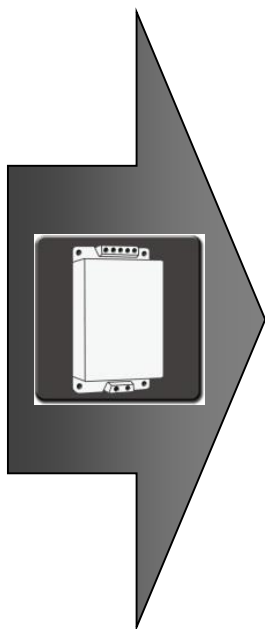
WIDE INPUT VOLTAGE
9-36V



+50%

24V
12V

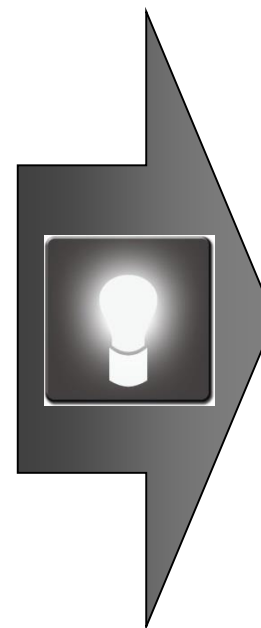
-25%



1/4
Brick



240W



(Trim Range)

(54V)

48V

(36V)

24V

(15V)

12V

5V

Power
Distribution
Router
Printer
Amplifier
Motor
Pump
Valve
Relay
Fans
Display
Lights
Cameras
Interface
Sensors
Modem
MCU
Electronics

DC/DC 1/4 Brick

Power: 240W

Vin: 9-36V

Vout: 5V, 12V, 24V, 48V

Q24SE series

Efficiency: 92,5%

Isolation: 2250V

Natural Convection: -40~85°C ambient temp.

Features: Wide Trim Range -50/+10%, OVP, OCP, OTP

Options: Remote ON/OFF, Heatsink, PMBus

DC/DC Modules for Industrial

ON-BOARD CONVERTERS

WIDE INPUT VOLTAGE
18-75V

1"x1"



Encapsulated

15W

Open-Frame

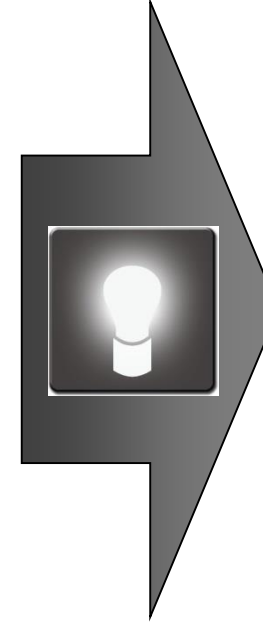
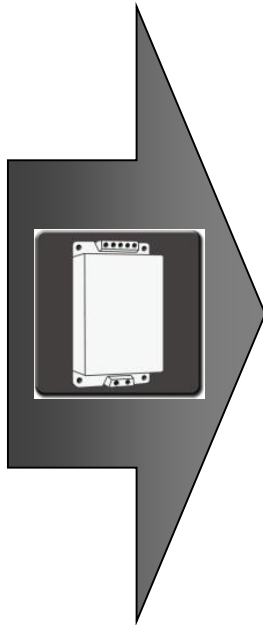


1"x1"

+50%

48V
24V

-25%



12V
7V
5V
3,3V

Relay
Fans
Display
Cameras
Interface
Sensors
Modem
MCU
Memory

DC/DC 1"x1"

Power: 15-17W

Vin: 18-75V

Vout: 3,3V, 5V, 7V, 12V

S36SE series

Efficiency: 83,5-87%

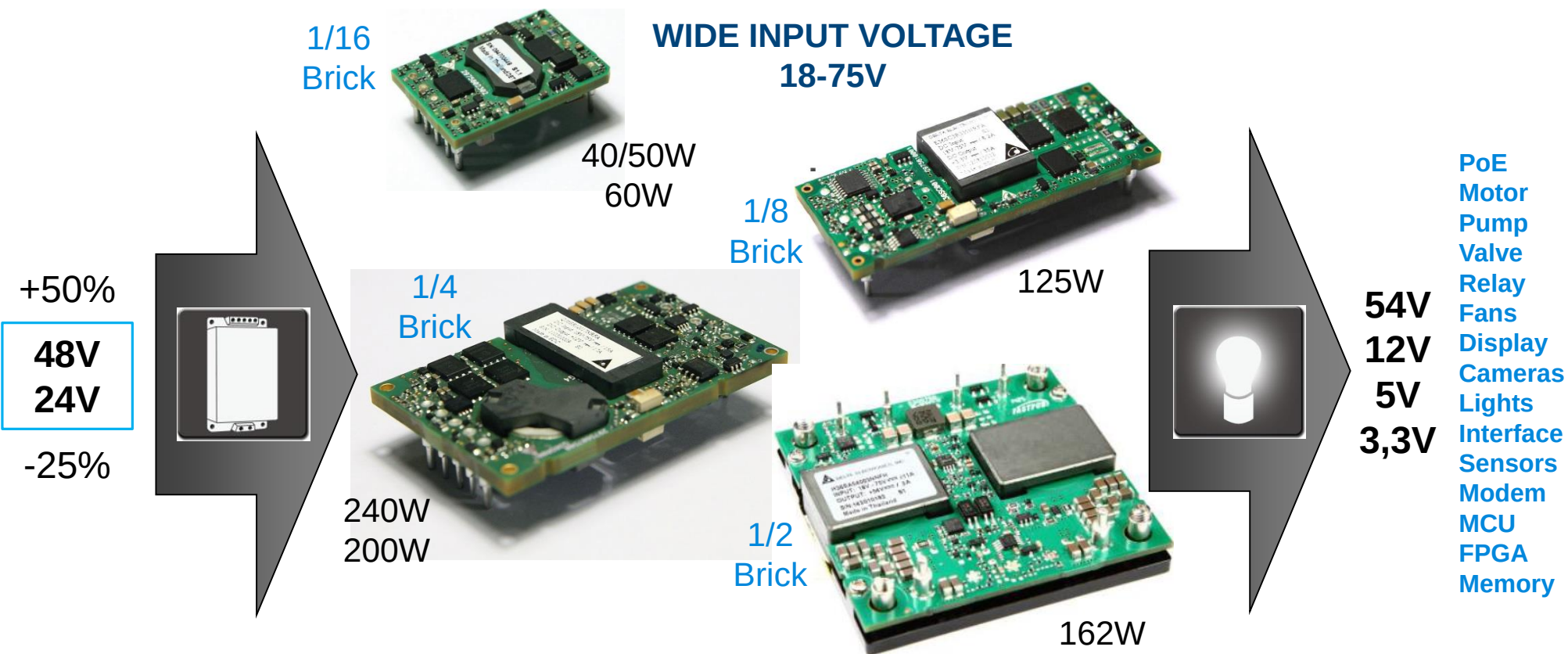
Isolation: 2250Vdc

Natural Convection: -40~85°C ambient temp.

Features: Trim, OVP, OCP, OTP

Options: THT/SMD, Remote ON/OFF

OPEN-FRAME ON-BOARD CONVERTERS



DC/DC 1/16 Brick

Power: 40-60W
Vin: 18-75V
Vout: 3,3V, 5V, 12V
V36SE series

DC/DC 1/8 Brick

Power: 108-125W
Vin: 18-75V
Vout: 3,3V, 5V, 12V
E36SC series

DC/DC 1/4 Brick

Power: 204-240W
Vin: 18-75V
Vout: 12V
Q36SR series

DC/DC 1/2 Brick

Power: 162W
Vin: 18-75V
Vout: 54V
H36SA series

Efficiency: 88-93%

Isolation: 2250/1500Vdc

Natural Convection: -40~85°C T_A

Features: Trim, Sense, OVP, OCP, OTP

Options: THT/SMD, Remote, Heatsink

STANDARD ON-BOARD DC/DC MODULES 1-6W

SIP



DIP



SMD



Power	Input	Output	Series
1W	3,3V	3,3V, 5V	PA01S
	5V	3,3V, 5V, 9V 12V, 15V ±5V, ±9V ±12V, ±15V	PA01S PB01S/D PD01S/D PE01S/D PF01S PI01S/D PL01S/D
2W	5V	3,3V, 5V, 12V, 15V ±5V, ±12V, ±15V	PC02S/D PG02S
3W	4,5-18V	3,3V, 5V, 12V, 15V ±5V, ±12V, ±15V	PJ03S/D
2W	9-36V	3,3V, 5V, 12V, 15V ±5V, ±12V, ±15V	PH02S/D
3W			PJ03S/D
2W	18-75V		PH02S/D
3W			PJ03S/D

Power	Input	Output	Series
1W	5V	5V, 9V, 12V, 15V	DA01S
2W		5V, 12V, 15V ±5V, ±12V, ±15V	DC02S/D DK02S/D
	4,5-9V	3,3V, 5V, 12V, 15V ±5V, ±12V, ±15V	DB02S/D
3W		3,3V, 5V 12V, 15V, 24V ±5V, ±12V, ±15V	DD03S/D DM03S/D DN03S/D
	9-36V	3,3V, 5V 12V, 15V, 24V ±5V, ±12V, ±15V	DL03S/D
DF04S/D			
DJ06S/D			
DL03S/D			
4W	18-75V		DF04S/D
6W		DJ06S/D	

Power	Input	Output	Series
1W	5V	3,3V, 5V, 9V 12V, 15V ±5V, ±9V ±12V, ±15V	SA01S/D SB01S/D SH01S/D SK01S/D
2W		5V, 12V, 15V ±5V, ±12V, ±15V	SC02S/D SG02S/D
	4,5-9V		SD02S/D
	9-18V		SE03S/D
5W			SF05S/D
2W			SD02S/D
3W	18-36V		±5V, ±12V, ±15V
5W		SF05S/D	
2W		SD02S/D	
3W	36-75V		SE03S/D
5W		SF05S/D	

STANDARD ON-BOARD DC/DC MODULES 10-240W

Case	Form Factor	Product	Power	Input	Output	Series	Features
Encapsulated	1"x1"		10W	9-36V	3,3V, 5V, 12V, 15V ±12V, ±15V	S24SE S24DE	optional Heatsink 
			15W				
			20W				
			30W				
	2"x1"		40W	9-36V	5V, 12V, 15V, 24V	S24SP	
			60W				
Open Frame	1"x1"		15W	18-75V	3,3V, 5V, 7V, 12V	S36SE	THT/SMD
	1/16 Brick		40W/50W 60W		3,3V, 5V, 12V	V36SE	THT/SMD optional Heatspreader
	1/8 Brick		108W 125W			E36SC	
	1/4 Brick		200W		12V	Q36SR	optional Heatspreader
			228W 240W				
	1/2 Brick		162W		54V	H36SA	

STANDARD OFF-BOARD DC/DC CONVERTERS

ELECTRICAL FEATURES

- Output LED Indicator
- EN55022 Class B EMC Filter built-in
- Internal Fuse
- Input Reverse Polarity Protection
- Minimized Inrush Current
- Remote ON/OFF
- Output Trim Potentiometer (for single output)
- -40°C to 85°C Ambient Operating Temperature
- Input UVLO, OVP, OCP, OTP
- No Min. Load Required
- UL 60950-1 & CSA C22.2 No.60950-1-07
- CE Mark

MECHANICAL FEATURES

- Metal Case
- Screw Terminals
- Size DIN-Rail: 100 x 23.5 x 56 mm
- Size Panel Mount: 86 x 56 x 20 mm

Case	Power	Input	Output	Series
DIN Rail	15W	9-36V	5V, 12V, 15V ±12V, ±15V	DR24S DR24D
	30W			
	40W			
	60W			
Panel Mount	15W			PM24S PM24D
	30W			
	40W			
	60W			



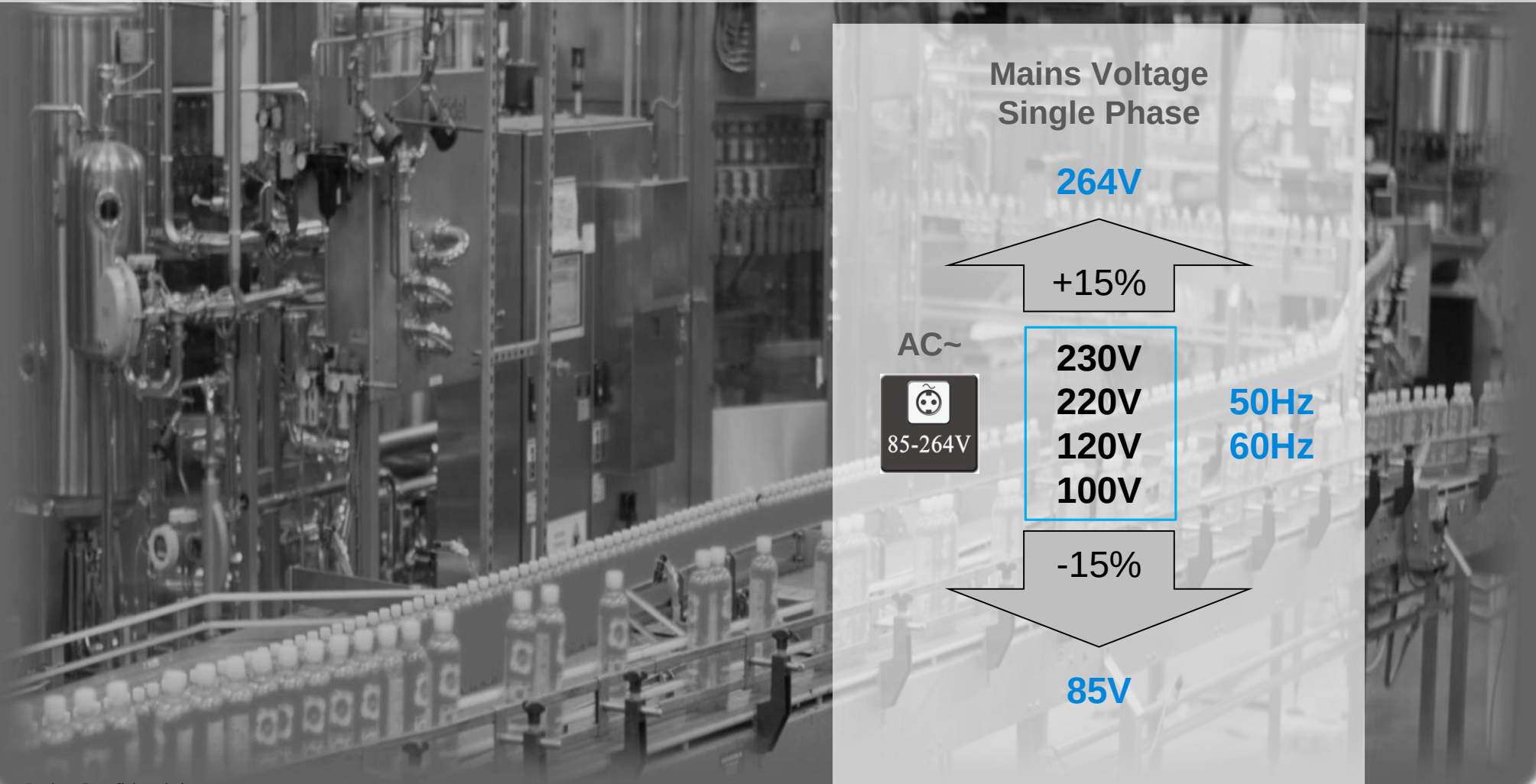
DIN-Rail

60W
40W
30W
15W

Panel Mount



VOLTAGES VARIATIONS IN INDUSTRIAL DEVICES



AC/DC ON-BOARD CONVERTERS

WIDE INPUT VOLTAGE 85-264Vac



AC/DC On-Board 3/4 Brick

Power: 300-500W
Vout: 12V, 24V, 28V, 48V
Features: Trim, Sense, Power Good
PACSR series

AC/DC On-Board Full-Brick

Power: 800W
Vout: 12V, 28V, 48V (Wide Trim Range)
Features: PG, AC OK, 12V stand-by, PMBus, Parallel Connection
FACSR series

Efficiency: 90-94%
Isolation: 3000Vac
Conducted Cooling: -40~90°C ambient temp.
Features: UVP; OVP, OCP, OTP



AC/DC Modules for Industrial



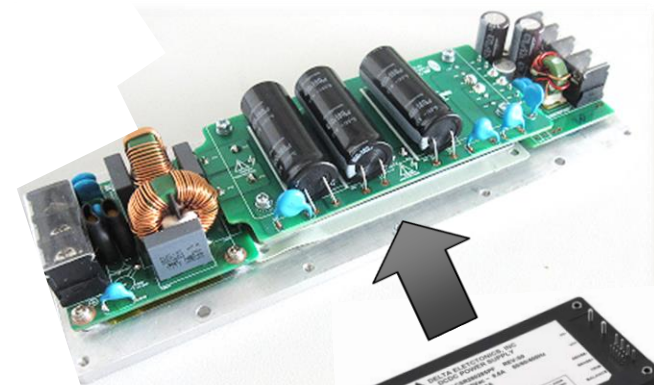
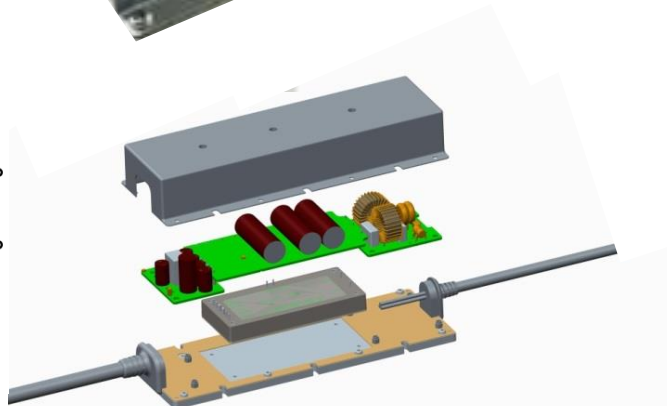
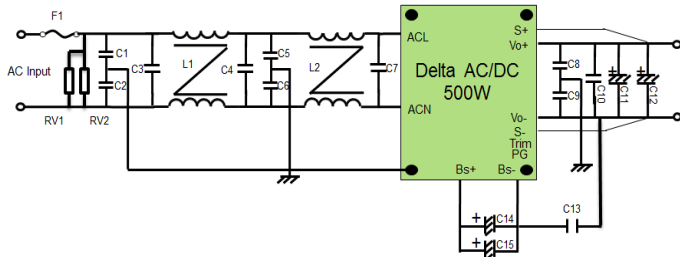
AC/DC BOX TYPE IP65

WIDE INPUT VOLTAGE
85-264V



800W
600W

**Integrated EMI Filter and
Hold-Up Capacitors**



FACS Module
inside



AC/DC Box Type IP65

Power: 600-800W

Vout: 12V, 28V, 48V

BACSF series

Efficiency: 92,5-94%

Isolation: 3000Vac

Conducted Cooling: -40~100°C baseplate temperature.

Features: UVP; OVP, OCP, OTP, PG, AC OK, 12V stand-by
PMBus, Parallel Connection

STANDARD POWER SUPPLIES ON-BOARD

Mounting	Case	Product	Power	Input	Output	Series	Features
On-Board	Encapsulated		4W	85-264Vac	3,3V, 5V, 9V, 12V, 15V, 24V 3,3V+5V, 5V+12V, $\pm 12V$, $\pm 15V$	AA04S/D	
			7W		3,3V, 5V, 12V, 15V, 24V	AA07S	
			10W			AA10S	
			15W		5V, 12V, 15V, 24V, 48V $\pm 12V$, $\pm 15V$, Triple	AA15S/D/T	
			24W		5V, 9V, 12V, 15V, 24V $\pm 12V$, $\pm 15V$	AB24S/D	EN60601
			30W		5V, 12V, 15V, 24V, 48V $\pm 12V$, $\pm 15V$, Triple	AA30S/D/T	
			40W		5V, 12V, 15V, 24V $\pm 12V$, $\pm 15V$	AB40S/D	EN60601
			60W		5V, 12V, 15V, 24V, 48V	AB60S	
					5V, 12V, 15V, 24V, 36V, 48V	AA60S	
			300W		12V, 24V, 28V, 48V	PACSR	
			500W				
			800W		12V, 28V, 48V	FACSR	Parallel PMBus 12V Stand-by

STANDARD POWER SUPPLIES OFF-BOARD

Mounting	Case	Product	Power	Input	Output	Series	Features
DIN-Rail	Boxed IP52		15W	85-264Vac	5V, 12V, 15V, 24V, 48V ±12V, ±15V, Triple	AA15S/D/T	
			24W		5V, 9V, 12V, 15V, 24V ±12V, ±15V	AB24S/D	EN60601
			30W		5V, 12V, 15V, 24V, 48V ±12V, ±15V, Triple	AA30S/D/T	
			40W		5V, 12V, 15V, 24V ±12V, ±15V	AB40S/D	EN60601
			60W		5V, 12V, 15V, 24V, 48V	AB60S	
					5V, 12V, 15V, 24V, 36V, 48V	AA60S	
Panel Mount	Boxed IP52		15W		5V, 12V, 15V, 24V, 48V ±12V, ±15V, Triple	AA15S/D/T	
			24W		5V, 9V, 12V, 15V, 24V ±12V, ±15V	AB24S/D	EN60601
			30W		5V, 12V, 15V, 24V, 48V ±12V, ±15V, Triple	AA30S/D/T	
			40W		5V, 12V, 15V, 24V ±12V, ±15V	AB40S/D	EN60601
			60W		5V, 12V, 15V, 24V, 48V	AB60S	
					5V, 12V, 15V, 24V, 36V, 48V	AA60S	
	Box Type IP65		600W		12V, 28V, 48V	BACSF	Parallel PMBus 12V Stand-by
			800W				

MODULAR POWER SUPPLY CONCEPT

3-Phase

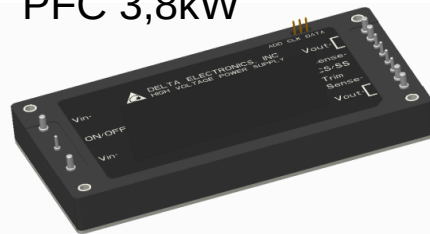
+10%

460V
380V

-10%



PFC 3,8kW



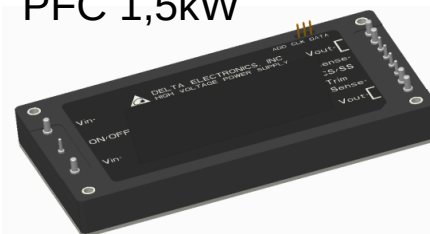
Parallel up to 12 units



STANDARD MODULES:

- PFC Modules: 1,5kW (plan), 3,8kW (UDV)
- HV DC/DC: 1,2kW (UDV)

PFC 1,5kW



Parallel up to 12 units



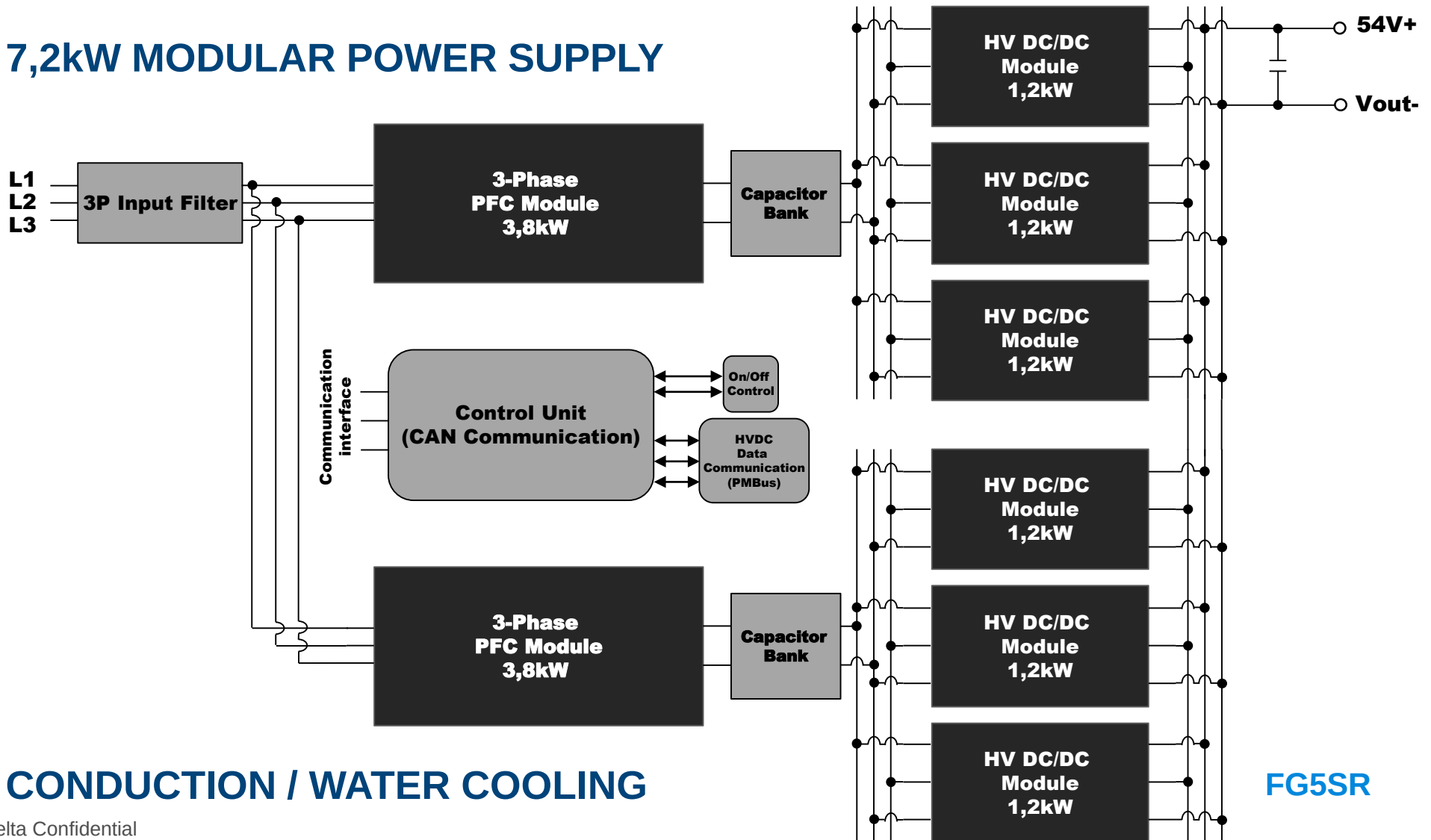
Power Distr.
Printer
Router
RF Amplifier
Motor
Pump
Valve
Relay
Fans
Heater
Server
Hard Drives

Full
Brick

HV DC/DC 1,2kW **FB7SR** series

VALUE ADDED POWER SUPPLY SOLUTION

7,2kW MODULAR POWER SUPPLY



CONDUCTION / WATER COOLING

FG5SR





MEANS OF PROTECTION

PSU



MOP



3rd Edition
Safety Medical
Electrical Equipment

MOOP = Means of Operator Protection
MOPP = Means of Patient Protection

	One MOOP	One MOPP	Two MOOP	Two MOPP
Insulation	Basic	Basic	Double or Reinforced	Double or Reinforced
Isolation Voltage	1500V	1500V	3000V	4000V
Clearance Distance	2mm	2,5mm	4mm	5mm
Creepage Distance	2,5mm	4mm	5mm	8mm

STANDARD MEDICAL AC/DC CONVERTERS

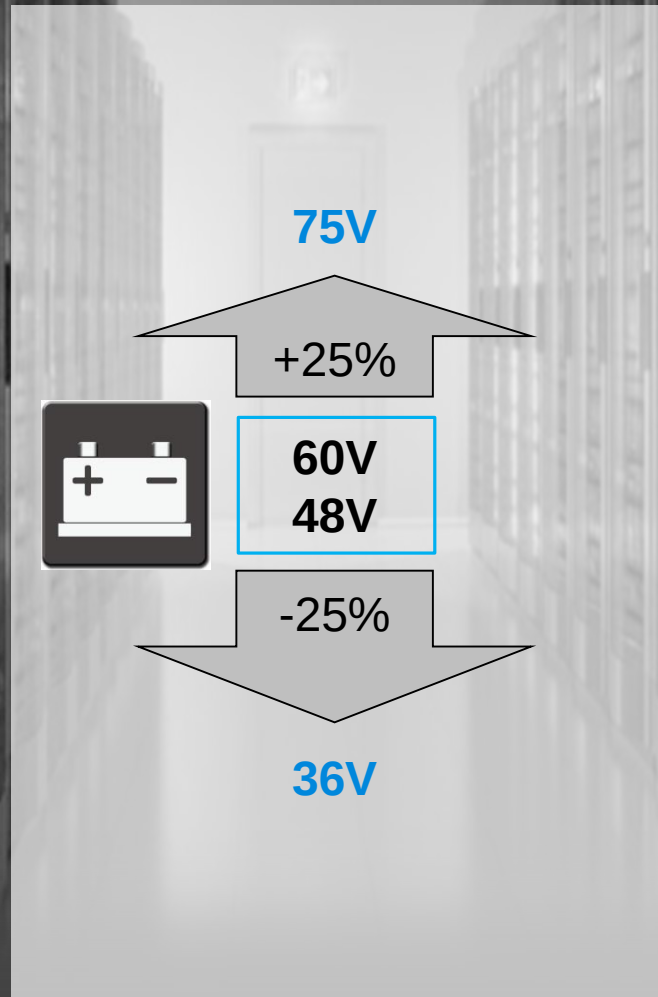
Mounting	Case	Product	Power	Input	Output	Series	Features
DIN-Rail	Boxed IP52		24W	85-264Vac	5V, 9V, 12V, 15V, 24V ±12V, ±15V	AB24S/D	
			40W		5V, 12V, 15V, 24V ±12V, ±15V	AB40S/D	
			60W		5V, 12V, 15V, 24V, 48V	AB60S	
Panel Mount			24W		5V, 9V, 12V, 15V, 24V ±12V, ±15V	AB24S/D	Two MOPP 4kVac Isolation Protection Class II
			40W		5V, 12V, 15V, 24V ±12V, ±15V	AB40S/D	
			60W		5V, 12V, 15V, 24V, 48V	AB60S	
On-Board	Encapsulated		24W		5V, 9V, 12V, 15V, 24V ±12V, ±15V	AB24S/D	
			40W		5V, 12V, 15V, 24V ±12V, ±15V	AB40S/D	
			60W		5V, 12V, 15V, 24V, 48V	AB60S	

STANDARD MEDICAL DC/DC CONVERTERS

Mounting	Case	Form Factor	Product	Power	Input	Output	Series	Features	
On-Board	Encapsulated	SIP		1W	5V	5V, 12V, 15V ±5V, ±12V, ±15V	PI01S/D	3kVac Isolation	
					12V				
		DIP		2W	5V	5V, 12V, 15V ±12V, ±15V	DK02S/D	 Reinforced Insulation 4kVac Isolation 	
					12V				
					24V				
				3W	4,5-9V	5V, 12V, 24V ±12V, ±15V	DM03S/D		
					9-18V				
					18-36V				
					36-75V				
				6W	9-18V	5V, 12V ±12V, ±15V	DU06S/D		
					18-36V				
					36-75V				
				10W	9-18V		DT10S/D		
					18-36V				
					36-75V				
		SMD		2W	5V	5V, 12V, 15V ±12V, ±15V	SG02S/D		
					12V				
					24V				

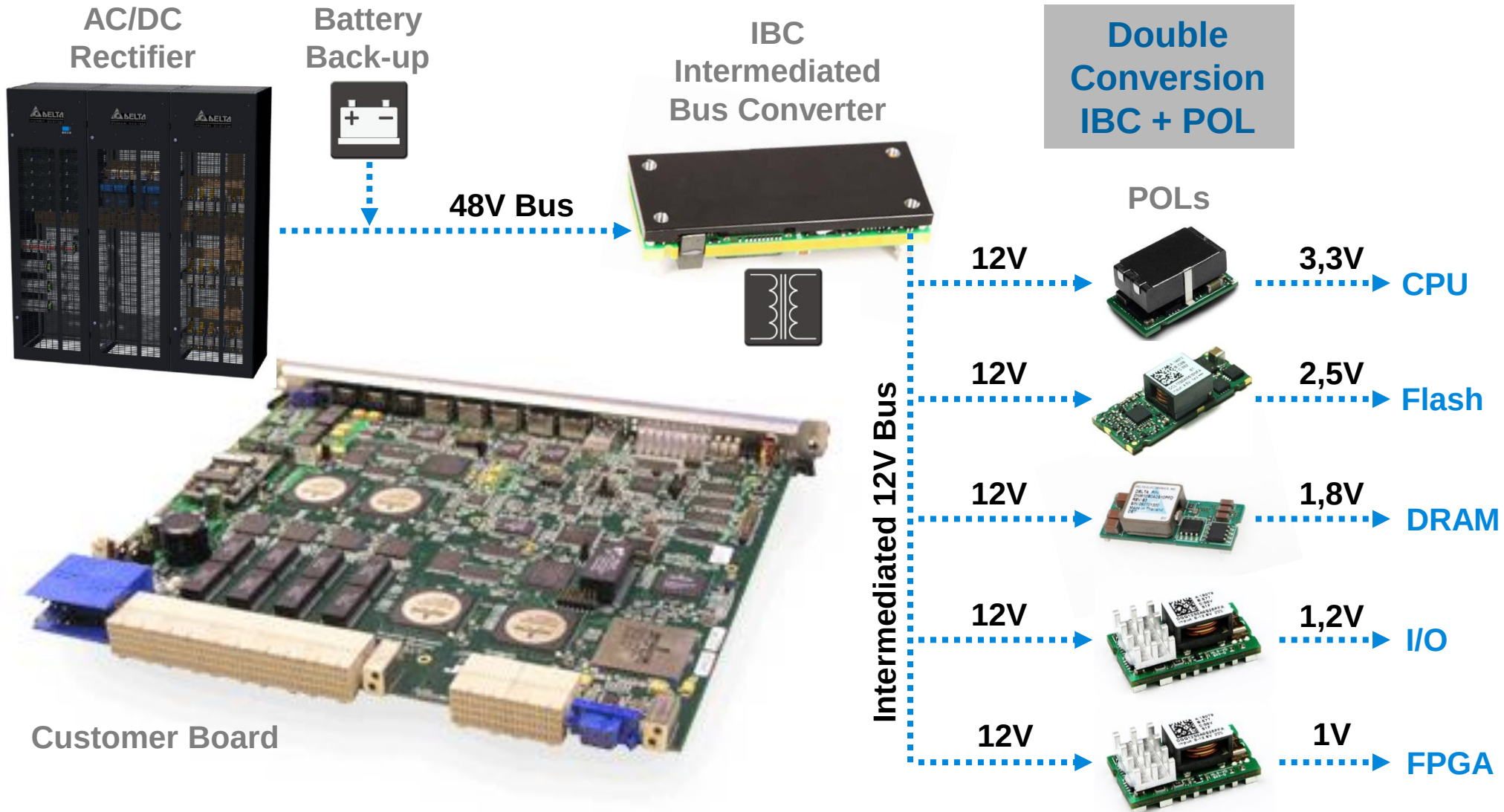


VOLTAGES VARIATIONS IN TELECOM EQUIPMENT

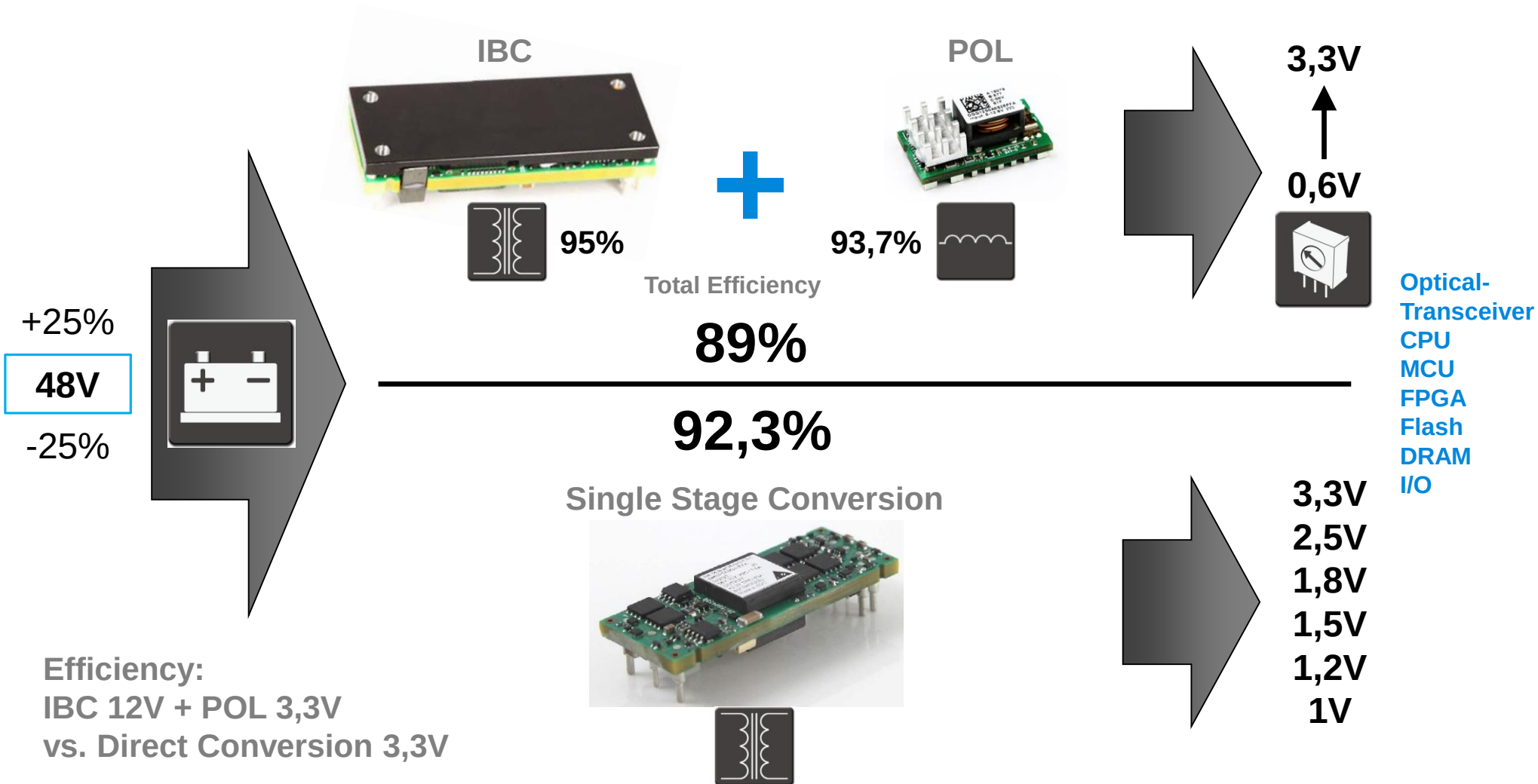




DISTRIBUTED POWER ARCHITECTURE



DIRECT CONVERSION vs. DOUBLE CONVERSION

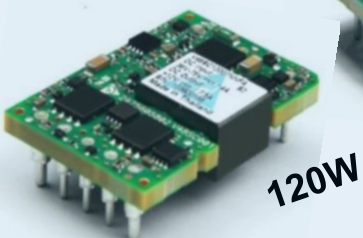




12V IBC INTERMEDIATED BUS CONVERTERS

- High Efficiency up to 96,8%
- Parallel Connection (Quarter Bricks)
- Digital IBCs with PMBus
- Output trim 8-13,2V (Digital E48SC and Q48SC)
- Optional Heat spreader
- Remote ON/OFF
- Protections UVP, OVP, OCP, OTP
- No minimum load required

V48SC



120W

E48SC



120W

E48SC
DIGITAL



240W, 300W, 360W

Q48SC
DIGITAL



300W, 400W
500W, 600W

Q54SJ
DIGITAL



600W, 700W
800W, 950W
1100W, 1300W

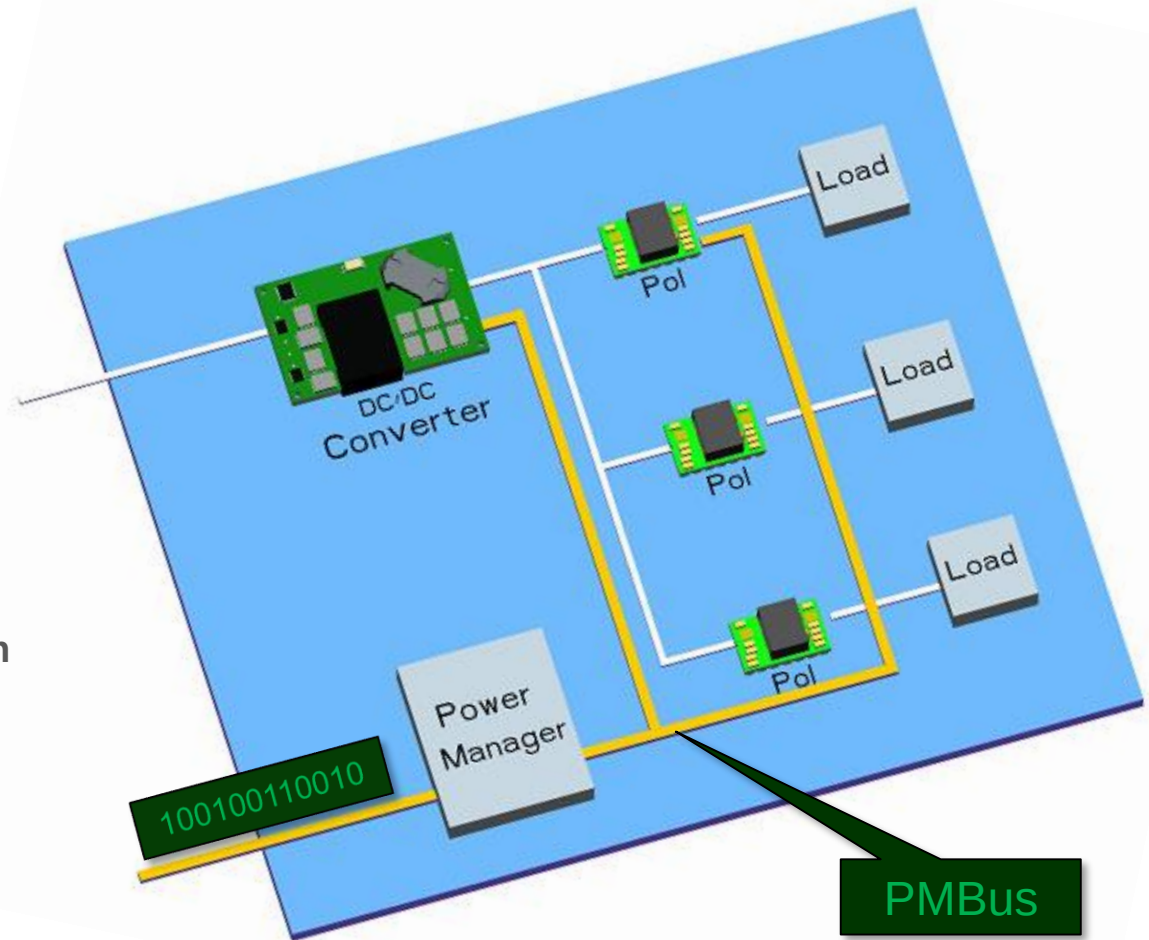
- Servers
- Data Storage
- Communications
- Optical Networks
- Wireless Networks
- Industrial Testing Systems

DIGITAL CONTROL PMBUS



PMBus

- Monitoring
- Optimizing System Power Consumption
- Simple Control Circuit
- Flexible Control
- Design standardization
- User friendly Communication
- Deep and accurate Control at duty level



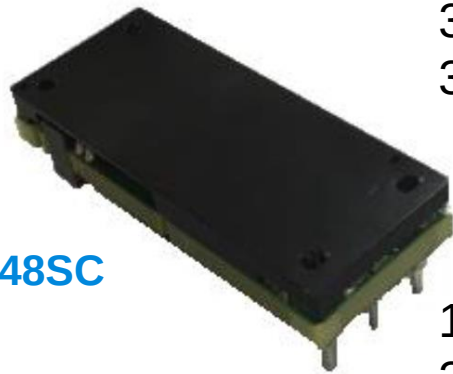
PMBus



DC/DC CONVERTERS FOR AMPLIFIERS

Eighth
Brick

E48SC



300W
32V 9,4A

35V



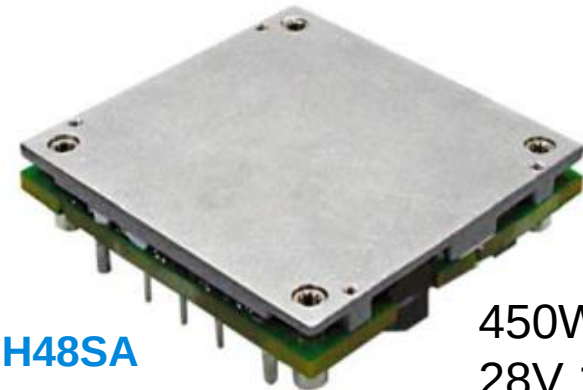
16V



160W
32V 5A

Half
Brick

H48SA



450W
28V 16A

33V



14V



Quarter
Brick

Q48SC



300W
32V 9,4A

32V



25,6V



H48SC



700W
28V 25A

450W
28V 16A

34V



23V





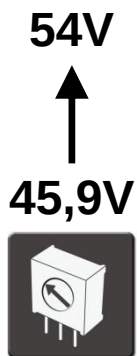
DC/DC CONVERTERS FOR PoE

Quarter
Brick



Q48SA

80W
54V 1,5A



Eighth
Brick

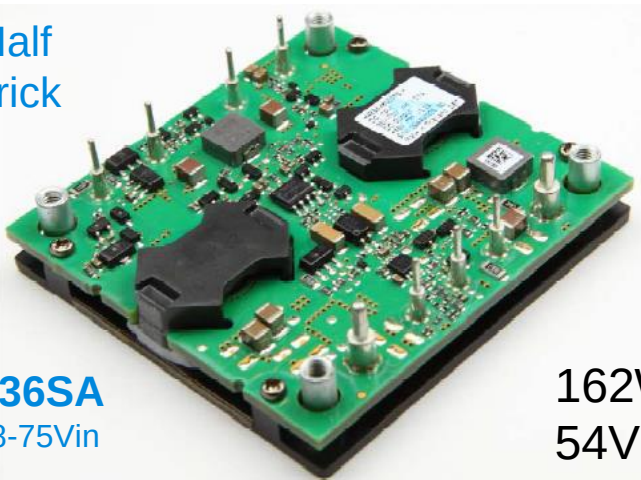


E48SC

300W
50V 6A



Half
Brick



H36SA
18-75Vin

162W
54V 3A



Half
Brick



H48SA

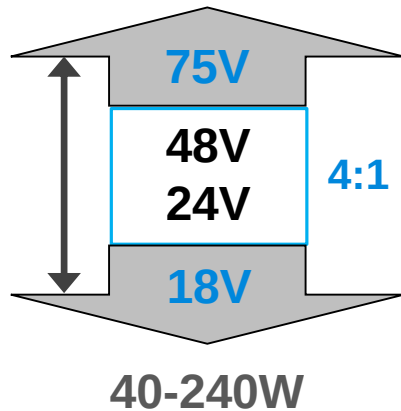
450W
54V 10,2A

1000W
50V 20A

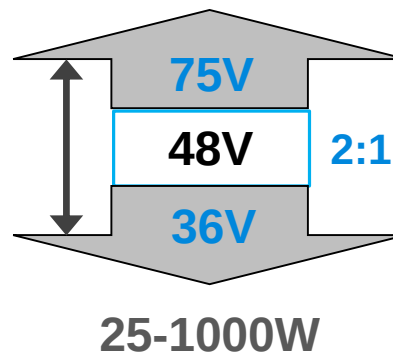


OPEN FRAME DC/DC BRICKS

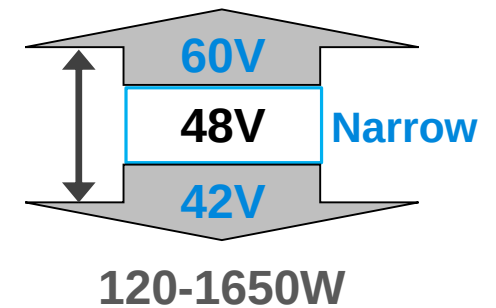
Telecom + Industrial



Telecom



Datacenter



Half Brick
85-1650W



Quarter Brick
60-1600W



Eighth Brick
50-480W



1/16 Brick
40-120W



1/32 Brick
25W





STANDARD OPEN FRAME DC/DC BRICKS I

Form Factor	Product	Power	Input	Output	Series	Features
1/16 Brick		40W/50W 60W	18-75V	3,3V, 5V, 12V	V36SE	THT/SMD Heatspreader
1/8 Brick		108W 125W			E36SC	THT/SMD Heatspreader
1/4 Brick		200W 240W		12V	Q36SR	optional Heatspreader
1/2 Brick		162W		54V	H36SA	
1/32 Brick		25W	36-75V	3,3V, 5V	T48SR	
1/16 Brick		50W 120W		3,3V, 5V, 6,5V, 12V	V48SC	THT/SMD Heatspreader
		50W 100W		1V, 1,2V, 1,8V, 3,3V, 5V, 6V	V48SH	
		65W		1,2V, 1,5V, 1,8V, 2,5V 3,3V, 5V, 12V, 15V	V48SR	THT/SMD

STANDARD OPEN FRAME DC/DC BRICKS II

Form Factor	Product	Power	Input	Output	Series	Features
1/8 Brick		50W 120W	36-75V	3,3V, 5V, 12V	E48SC	THT/SMD
		50W 120W		1V, 1,2V, 1,5V, 1,8V, 2,5V 3,3V, 5V, 6V, 12V	E48SH	THT/SMD Heatspreader
		65W 85W		1,2V, 1,5V, 1,8V, 2,5V 3,3V, 5V, 12V, 15V	E48SR	
		200W 240W		3,3V, 5V, 12V	E48SP	
		240W 360W	40-60V	12V, 32V, 50V	E48SC DIGITAL	PMBus Heatspreader
		165W 480W		3,3V, 12V	E54SJ	Parallel Heatspreader
		300W	42-60V	12V	E54SD DIGITAL	PMBus Heatspreader

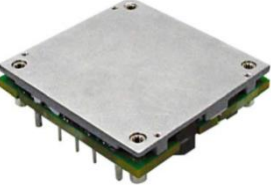


STANDARD OPEN FRAME DC/DC BRICKS III

Form Factor	Product	Power	Input	Output	Series	Features
1/4 Brick		80W	36-75V	54V	Q48SA	optional Heatspreader
		216W 400W		12V	Q48SQ	
		300W 600W		12V, 32V	Q48SC DIGITAL	PMBus Parallel Heatspreader
		390W 500W	38-75V	11,8V	Q48SG DIGITAL	
		600W	40-60V	12V	Q54SG DIGITAL	
		600W 1300W		12,2V	Q54SH DIGITAL	
		600W	46-60V	12,2V	Q48SK	optional Heatspreader
		750W 1600W		12V 10,8V	Q48SJ Q54SJ	



STANDARD OPEN FRAME DC/DC BRICKS IV

Form Factor	Product	Power	Input	Output	Series	Features
1/2 Brick		85W	36-75V	3,3V	H48SC	optional Heatspreader
		150W 450W		12V, 28V, 48V	H48SA	
		450W 700W		28V	H48SC DIGITAL	PMBus Parallel Heatspreader
		550W 1000W 1100W 1650W	40-60V 36-75V	50V, 54V	H48SA H51SA	optional Heatspreader



PROGRAMMABLE BRICKS WITH WIDE OUTPUT VOLTAGE RANGE

Form Factor	Power	Input	Output	PMBus	Parallel	Part Number
1/8 Brick	260W	36-60V	0,6-8V	X		E48SC08033
	240W	36-75V	 8-13,2V	X		E48SC12020
	300W			X		E48SC12025
	360W			X		E48SC12030
	160W		 16-35V	X		E48SC32005
	300W			X		E48SC32009
1/4 Brick	165W	36-75V	0,6-8V	X	X	Q48SC06625
	300W		 8-13,2V	X	X	Q48SC12025
	400W			X	X	Q48SC12033
	500W			X	X	Q48SC12042
	600W			X	X	Q48SC12050
	300W		25,6-32V	X		Q48SC32009
	230W	42-60V	0,6-7V	X	X	Q54SC07033
1/2 Brick	450W	36-75V	14-33V		X	H48SA28016
	450W		23-33V	X		H48SC28016
	700W		23-34V	X		H48SC28025



NON-ISOLATED DC/DC CONVERTERS

Standard POL



DOSA I: 3-30A
THT SMD



DOSA II: 12-30A
LGA SMD



Power Block



30A 89%
D12S1R830



40A 90%
D12S72A



45A 91%
D12S1R845



60A 91.5%
D12S1R860



80A 93%
D12S1R880



100A 94%
D12S1R8100



140A 96%
D12S1R8140

Switching Regulator



0.5A
PM05S series

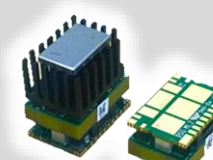
Fixed
Output
Voltages

Wide Input Range



100W 8A (6A), 4,5A
T31SN series

Vin 9-53V
Vo 3,3-16,5V
Vo 5-30V
1/32 Brick



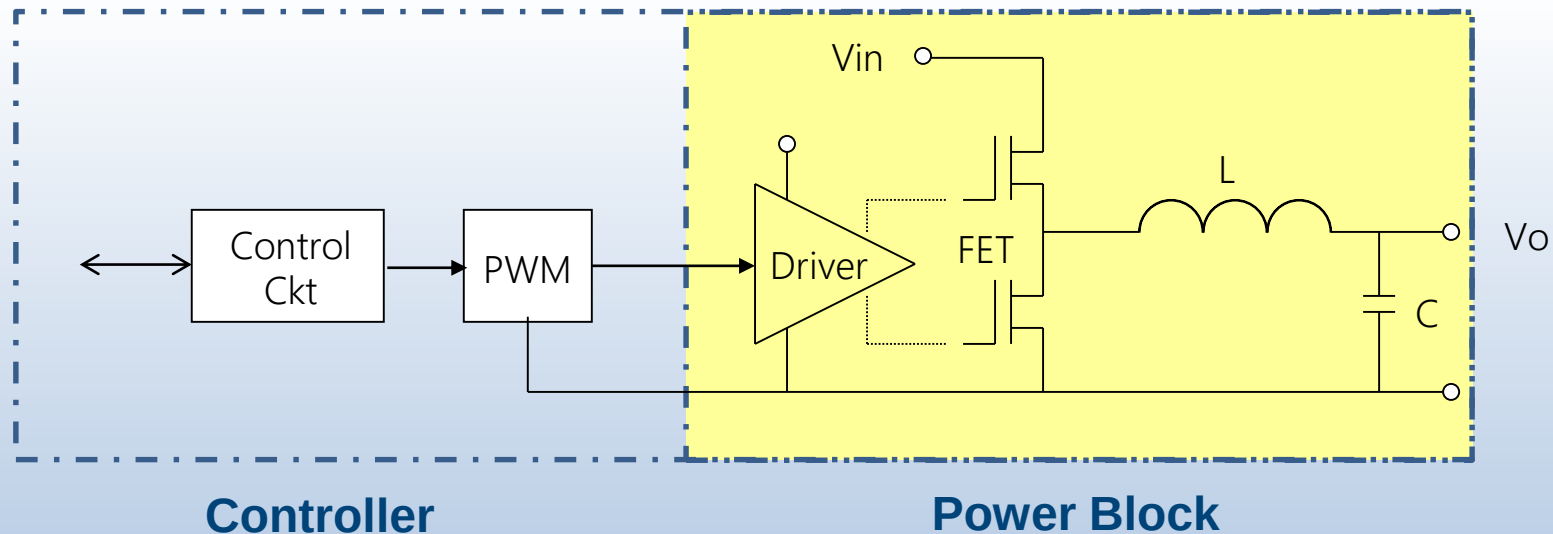
100W (up to 95A)
TCP54 series

Vin 45-60V
Vo 1,2V
Vo 1,8V
Vo 3,3V



NON-ISOLATED DC/DC POWER BLOCKS

	Technical features	Cost	Space	System design
Discrete Solution	IC + Power FET + Power L/C	Low	Large	Difficult
Modules solution	All-in-one power supply	High	Med	Easy
Power Block solution	Power Block + on board PWM	Med	Small	Medium



PRODUCT SELECTION GUIDE



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Search products by parameters

Type Select: ☒ DC/DC ☐ AC/DC

Input Voltage

☒ Nominal Voltage: V

☐ Min: V Max: V

Output Voltage

Output Number: ☒ 1 ☐ 2

Nominal Voltage: V

Output Power: W

Features: All

Reset Submit

Datasheet download by part number: Submit

Please key in first 5~10 characters of part number

Stock Checking

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Digi-Key Distrelec Arrow

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Selection Guide

Product Search



Search products by parameters .

Type Select : ☒ DC/DC ☐ AC/DC

Input Voltage

☒ Nominal Voltage : V

☐ Min: V Max: V

Output Voltage

Output Number : ☒ 1 ☐ 2

Nominal Voltage : V

Output Power : W

Features : All

Reset Submit

Datasheet download by part number :

Submit

Please key in first 5~10 characters of part number

Product Finder

Product Catalog



T48SR Series

FEATURES

- High efficiency
- Isolated Standard DC/DC converter topology and product
- 21 pin output
- Power Frequency operation
- Isolated Input/Output (DC/DC, DC/AC)
- Regulator and output protection
- Power factor correction
- No external load required
- Available in multiple versions (DC/DC)
- RoHS compliant

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Power	Efficiency	Isolation	Regulation	Load Regulation
T48SR01	24V	1.2V	1.2W	85%	1000V	±1%	±1%
T48SR02	24V	2.5V	2.5W	85%	1000V	±1%	±1%
T48SR03	24V	5.0V	5.0W	85%	1000V	±1%	±1%
T48SR04	24V	12.0V	12.0W	85%	1000V	±1%	±1%
T48SR05	24V	15.0V	15.0W	85%	1000V	±1%	±1%
T48SR06	24V	18.0V	18.0W	85%	1000V	±1%	±1%
T48SR07	24V	21.0V	21.0W	85%	1000V	±1%	±1%
T48SR08	24V	24.0V	24.0W	85%	1000V	±1%	±1%
T48SR09	24V	27.0V	27.0W	85%	1000V	±1%	±1%
T48SR10	24V	30.0V	30.0W	85%	1000V	±1%	±1%

ME DRAWING

ME DRAWING

V36SE Series

FEATURES

- High efficiency
- Isolated Standard DC/DC converter topology and product
- 41 pin output
- Power Frequency operation
- Isolated Input/Output (DC/DC, DC/AC)
- Regulator and output protection
- Power factor correction
- No external load required
- Available in multiple versions (DC/DC)
- RoHS compliant

SPECIFICATIONS

Part Number	Input Voltage	Output Voltage	Output Power	Efficiency	Isolation	Regulation	Load Regulation
V36SE01	24V	1.2V	1.2W	85%	1000V	±1%	±1%
V36SE02	24V	2.5V	2.5W	85%	1000V	±1%	±1%
V36SE03	24V	5.0V	5.0W	85%	1000V	±1%	±1%
V36SE04	24V	12.0V	12.0W	85%	1000V	±1%	±1%
V36SE05	24V	15.0V	15.0W	85%	1000V	±1%	±1%
V36SE06	24V	18.0V	18.0W	85%	1000V	±1%	±1%
V36SE07	24V	21.0V	21.0W	85%	1000V	±1%	±1%
V36SE08	24V	24.0V	24.0W	85%	1000V	±1%	±1%
V36SE09	24V	27.0V	27.0W	85%	1000V	±1%	±1%
V36SE10	24V	30.0V	30.0W	85%	1000V	±1%	±1%

ME DRAWING

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Delta Contact Window

for Standard Power Modules

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Thank You

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