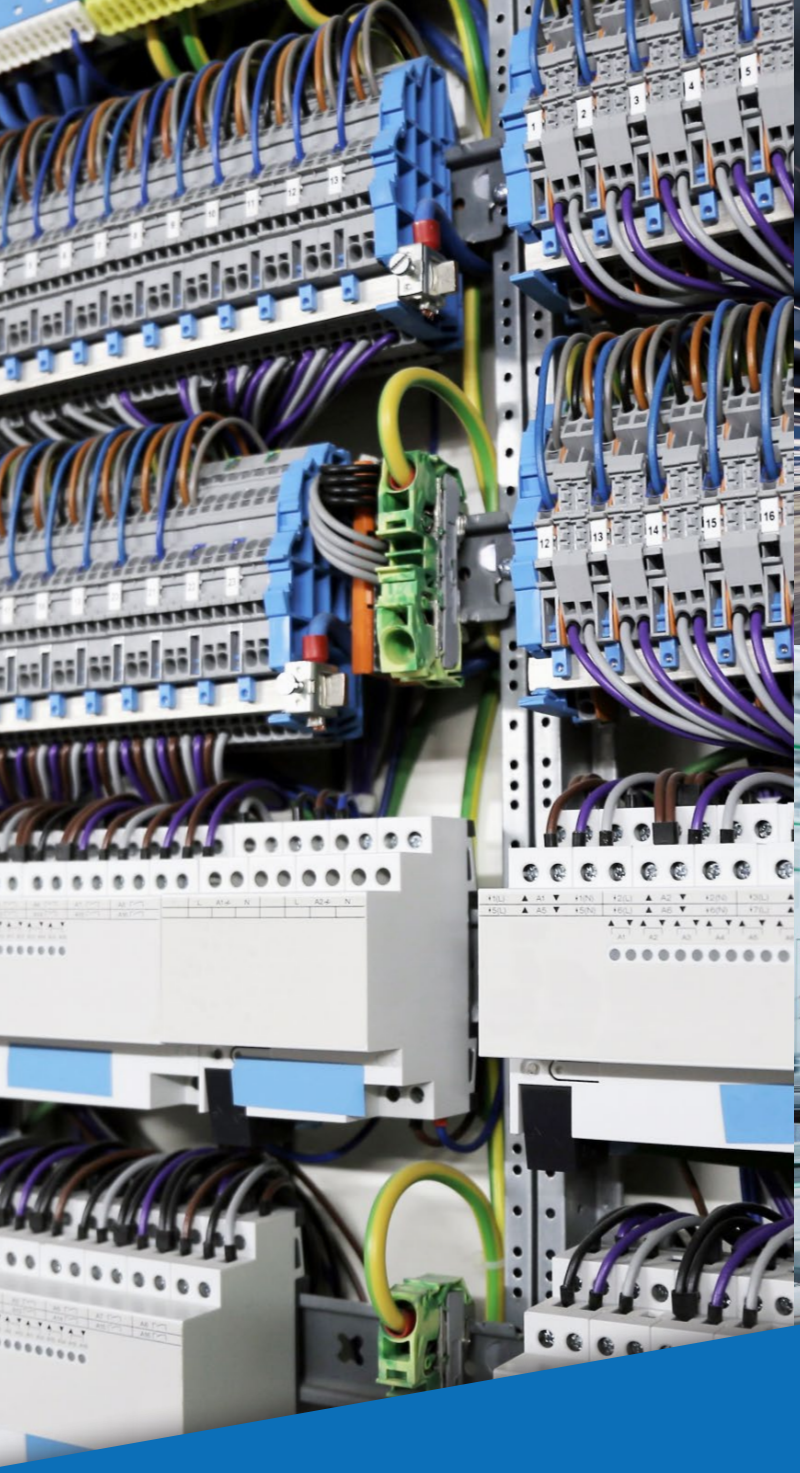


TDK

DIN-Rail Power Solutions

TDK·Lambda

Our solutions are yours

TDK-Lambda, a TDK Corporation company, is one of the world's leading providers of power supplies. With development, manufacturing and logistics centres in the EMEA region, Asia and the Americas, TDK-Lambda is a strong partner and a market leader in industrial applications.

Added value at the highest level

TDK-Lambda offers its customers a unique range of power supplies for DIN-Rails. We give you innovative, reliable solutions combined with design-in support, global logistics expertise and total lifecycle support. Our customers appreciate our experience, our know-how and our commitment to providing them with the best-possible solution at all times.

Maximum system availability thanks to the most stringent quality standards

TDK-Lambda power supplies are synonymous with the highest quality, reliability and sophisticated design. Integrating virtually the entire value chain – from components, production and logistics right through to sales and technical support – enables TDK-Lambda to guarantee high quality standards.

There when you need us

Our global sales teams mean that our customers have their own dedicated contacts who can provide rapid, flexible support in their local language. In addition, our network of technical experts boasts a comprehensive knowledge of applications and standards. We can advise which DIN-Rail power supply solution is best suited for your project.

Ready for the future – thanks to research and development

As one of the world's leading providers of industrial power supplies, we invest continuously in researching new technologies and developing new generations of our products. This ensures that future solutions will generate new added value for our customers and, in the process, will become more powerful, more efficient and more digital. TDK-Lambda already holds over 700 patents.

Available everywhere at any time

Having warehouses in strategic locations and stocked with a reliable supply of DIN-Rail power supplies allows us to meet the demand from our customers quickly, flexibly and effectively.

Our entire product range is franchised with all the main distribution partners across the world, enabling our customers to buy their components through their preferred channel. Needless to say, our products can also be purchased directly via the relevant regional TDK-Lambda sales office.

Our product range

Single-phase power supplies

DRB

15 to 100W

Low-power devices in a polycarbonate housing for stringent safety requirements

PAGE 10

DRB

120 to 480W

Compact power supplies for efficient plant control systems

PAGE 11

D1SE

120 to 480W

Essential power supplies without compromises

Coming soon

PAGE 12

DRF

120 to 960W

Well equipped and designed for harsh environments

PAGE 13

Single-phase power supplies

DRL

10 to 100W

Designed for building automation systems with Class II reinforced insulation

PAGE 14

Three-phase power supplies

DRB

120 to 960W

Efficient design for conventional mechanical and plant engineering

PAGE 15

DC-DC power supplies

DDA

250 to 500W

Highly efficient converters with a broad input and output voltage range for universal use

PAGE 16

Our product range

Uninterruptible power supplies

DUSH

First-class reliability for mission-critical applications

PAGE 17

Add-ons and accessories

DRM
DBM

Buffer and redundancy modules further increase plant up-time

PAGE 18 ONWARDS

Applications

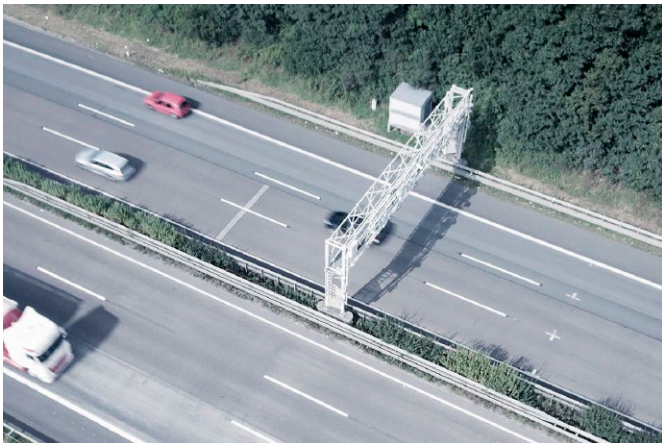
Machinery
Factory automation, production & processing, testing & inspection, robot controllers, printing & marking, etc.

Infrastructures
Power generation & transmission, Grid monitoring, traffic control, ICT systems, Security systems, Public transport, Parking systems, etc.

Intralogistics
Conveyors, scanning systems, storage & packing systems, transportation systems, etc.

Processes
Oil&Gas, Food&Beverage, Wastewater treatment, Pharmacy, etc.

Building automation
Elevators, Escalators, HVAC systems, Emergency systems, Entrance control, Window drives, etc.



Quickfinder

Safety standards

	1 phase up to 100W		1 phase above 100W			3 phase	DC-DC	DC-UPS	Buffering	Redundancy
	DRB	DRL	DRB	DRF	D1SE	DRB	DDA	DUSH	DBM	DRM
IEC/EN 61010-1	–	–	–	■ 1)	■	■	–	■	–	–
IEC/EN 61010-2-201	–	–	–	■ 1)	■	■	–	■	–	–
UL/CSA 61010-1	–	–	–	■ 1)	■	■	–	■	–	–
UL/CSA 61010-2-201	–	–	–	■ 1)	■	■	–	■	–	–
IEC/EN 62368-1 Ed. 2	■	■	■	■ 2)	□	■	■	□	■	■
IEC/EN 62368-1 Ed. 3	–	–	■ 3)	–	■	–	–	■	–	–
UL/CSA 62368-1 Ed. 2	■	■	■	■ 2)	□	■	■	□	■	■
UL/CSA 62368-1 Ed. 3	–	–	–	–	■	–	–	■	–	–
IEC/EN 60950-1	■	■	■	■	□	□	–	□	■	■
UL/CSA 60950-1	■	■	■	■	□	□	–	□	■	■
IEC/EN 62477-1	–	–	□	–	□	□	–	□	–	–
IEC/EN 61204-7	–	–	–	–	□	□	–	□	–	–
IEC/EN 61558-2-16	–	–	–	–	□	□	–	–	–	–
EN 60204-1	–	–	–	–	□	□	–	□	–	–
IS 13252-1	■	–	■ 3)	–	■	–	–	–	–	–
UL 508	■	■	■	■	–	–	–	□	■	■
UL 1310 (NEC Klasse 2)	■ 4)	■	–	–	–	–	–	–	–	–
IEC/EN 60079 (IECEx, ATEX)	–	–	–	■	–	–	–	–	–	–
ANSI/ISA-12.12.01 (Class I Div 2)	■	–	–	■	–	–	–	–	–	–

■ Available □ Designed to meet – Not available 1)DRF960 2)DRF120/240/480 3)DRB120/240 4)DRB15/30/50

Features and functions

	1 phase up to 100W		1 phase above 100W			3 phase
	DRB	DRL	DRB	DRF	D1SE	DRB
Electrical output						
Power boost	–	–	●●○○○	●●●●○	●●●○○	●●●●○
Hold–up time	●●●○○	●●○○○	●●●○○	●●○○○	●●○○○	●●●○○
Electrical input						
AC wide range input	■	■	■	■	■	■
DC input	■	■	–	–	■	■
Inrush energy	●●●○○	●●●○○	●●●○○	●●○○○	●○○○○	●○○○○
Input fuse	■	■	■	■	■	■
Ambient conditions						
Start–up temperature	–	–	-40°C	-40°C	-40°C	-40°C
Min. operating temperature	-20°C	-20°C	-25°C	-25°C	-25°C	-25°C
Max. operating temperature	+70°C	+70°C	+70°C	+70°C	+70°C	+70°C
Power derating temperature	-10°C/+55°C	+50°C/+55°C	+55°C	+50°C/+60°C	+55°C	+55°C
Max. operating altitude[1]	3000m	3000m	3000m	5000m	6000m	6000m
Connection						
Screw terminals	■	■	■	■	–	■
Spring clamp terminals	–	–	–	–	–	–
Push–in terminals	–	–	–	–	■	■
Signaling & Control						
DC OK indicator (LED)	■	■	■	■	■	■
DC OK contact	–	–	■	■[2]	■	■
Remote ON/OFF	–	–	–	■	–	■
Overload indicator (LED)	–	–	–	■	–	■
Remote voltage programming	–	–	–	■	–	–
General						
Conversion efficiency	●●○○○	●●●○○	●●●●○	●●●●●	●●●●●	●●●●○
Service lifetime	●●○○○	●●●○○	●●●●○	●●●○○	●●●●●	●●●●○
Radiated emission	Class B	Class A	Class B	Class B	Class B	Class B
Surge immunity[3]	4kV	2kV	4kV	4kV	4kV	4kV
Protection class	I	II	I	I	I	I
Over-voltage category[4]	II	II	II	II[5]	II	II
Conformal coating	–	–	–	■[6]	■	–
Manufacturer warranty	3 years	3 years	3 years	5 years	3 years	3 years
Use-cases						
Series operation	■	■	■	■	■	■
Parallel operation	–	–	–	■	■	■
S/P mode configurator[7]	–	–	–	–	–	■

■ Available – Not available

1) With power derating and reduced over-voltage category 2) A4 models only 3) Asymmetrical (common mode) 4) Under IEC 62368-1 5) DRF960 OVC III 6) A5 models only 7) S/P - Single/Parallel

Single-phase power supplies

DRB – Series

Low-power devices in a polycarbonate housing for stringent safety requirements

TECHNICAL SPECIFICATIONS

Power classes	**15 | 30 | 50 | 100W**
Output voltages	5 | 12 | 15 | 24VDC
Input voltages	85..264VAC or 120..373VDC
Warranty	3 years

SPACE-SAVING DESIGN

With widths between 18 and 45mm, the smallest power supplies in the DRB series will save valuable space in the system.

HIGH DEGREE OF PLANT AVAILABILITY

Ample buffer energy and an enhanced insulation concept mean that the devices cannot only bridge power failures of at least 20ms but can also withstand a transient overvoltage of up to 4kV.

ENHANCED SAFETY APPROVALS

An additional integrated safety circuit allows the devices to be used in sub-100W applications in accordance with UL 1310 (NEC Class 2). They hold Class I Div 2 safety approval for operation in process environments.

Product website | Datasheet

Single-phase power supplies

DRB – Series

Compact power supplies for efficient plant control systems

TECHNICAL SPECIFICATIONS

Power classes	**120 | 240 | 480W**
Output voltages	12 | 24 | 48VDC
Input voltages	85 .. 264VAC
Warranty	3 years

LONGER LIFECYCLES

Very high levels of efficiency – up to 93% – mean that these devices reduce thermal stress in the system as a whole, thus helping overall to extend the system's useful life.

HIGH DEGREE OF PLANT AVAILABILITY

Ample buffer energy and an enhanced insulation concept not only enable temporary power failures to be bridged but also ensure robustness in the face of transient overvoltages of up to 4kV.

VARIED RANGE OF POSSIBLE USES

A broad temperature range – from -40°C (start-up) to +70°C – allows the devices to be used for a wide variety of applications.

Product website | Datasheet

Single-phase power supplies

D1SE – Series

Essential power supplies without compromises

Coming soon

TECHNICAL SPECIFICATIONS

Power classes	**120 | 240 | 480W**
Output voltages	24VDC
Input voltages	100..240VAC or 110..250VDC
Warranty	3 years

SUSTAINABLE SOLUTION

With up to 95% of efficiency, this series minimizes energy consumption and heat generation, enhancing both economic efficiency and longevity.

ECONOMIC DESIGN

Developed with a focus on essential functions, ensuring a perfect balance of cost-effectiveness and performance without any compromises on quality.

BUILT FOR TOUGH CONDITIONS

Dedicated models with coated circuit boards are designed to endure harsh environments, making them a long-lasting power source.

Single-phase power supplies

DRF – Series

Well equipped and designed for harsh environments

TECHNICAL SPECIFICATIONS

Power classes	**120 | 240 | 480 | 960W**
Output voltages	24VDC
Input voltages	85 .. 264VAC
Warranty	5 years

IECEx

LARGE POWER RESERVE

A peak power output of 150% for 4s guarantees starting up into capacitive and inductive loads.

GUARANTEED RATED OUTPUT

The high levels of efficiency overall – between 91% and 95% – and the conservative cooling concept mean that the devices can still deliver their rated output even at an ambient operating temperature of +60°C.

RELIABLE CIRCUIT BREAKER

An additional bypass circuit at the input limits the input inrush current to 20A, thus preventing the circuit breaker from tripping incorrectly as far as possible.

COMMUNICATIVE

Equipped with numerous signal inputs and outputs, the devices offer various options for being integrated into plant control systems.

ENHANCED SAFETY APPROVAL

Specific versions of the devices are available for explosive atmospheres. These come with a protective coating on their electronics and are IECEx/ATEX-certified.

Product website | Datasheet

Single-phase power supplies

DRL – Series

Designed for building automation systems with Class II reinforced insulation

TECHNICAL SPECIFICATIONS

Power classes	**10 | 30 | 60 | 100W**
Output voltages	12 | 15 | 24VDC
Input voltages	85..264VAC or 120..373VDC
Warranty	3 years

LOW DEPTH DESIGN

The housing geometry of the DRL – Series was specifically designed for use in building automation.

NO GROUND CONNECTION REQUIRED

Due to their reinforced insulation, these power supplies meet the requirements of protection class 2, obviating the need for an earth ground connection.

A VARIED RANGE OF APPLICATIONS

A wide operating temperature range – from -20°C to +70°C – allows the devices to be used in industrial applications.

ENHANCED SAFETY APPROVAL

The devices are certified in accordance with UL 1310 (NEC Class 2) for sub-100W applications with more stringent safety requirements.

Product website | Datasheet

Three-phase power supplies

DRB – Series

Efficient design for conventional mechanical and plant engineering

TECHNICAL SPECIFICATIONS

Power classes	**120 | 240 | 480 | 960W**
Output voltages	12 | 24 | 48 | 72VDC
Input voltages	350 .. 575VAC
Warranty	3 years

GLOBAL USE

The safety concept for the devices integrates the seven most important electrical safety standards in accordance with IEC, EN and UL.

PEAK POWER CAPABILITY

A peak power output of up to 150% supports start-up into capacitive loads.

RELIABLE CIRCUIT BREAKER

The very low energy content of the initial inrush current prevents nuisance tripping of circuit breakers.

COMMUNICATIVE

Equipped with a DC OK and an INHIBIT signal contact, the devices offer a convenient range of options for being integrated into plant control systems.

TIME-SAVING CONNECTIONS

Every model is available with push-in wiring terminations, without the need for tools, providing a secure vibration-resistant connection.

Product website | Datasheet

DC-DC power supplies

DDA – Series

Highly efficient converters with a broad input and output voltage range for universal use

TECHNICAL SPECIFICATIONS

Power classes	**250 | 325 | 500W**
Output voltages	3.3–15VDC | 3.3–24VDC
Input voltages	9..40VDC | 9..53VDC
Warranty	3 years

LONGER LIFECYCLES

The highly efficient devices achieve degrees of efficiency of up to 95%, thus reducing thermal stress in the system as a whole. As a result, they help overall to extend the system's useful life.

HIGH TEMPERATURES

Ambient operating temperatures of up to +95°C is not an issue with the appropriate derating.

COMMUNICATIVE

Equipped with multiple signal inputs and outputs, the devices are easy to integrate into plant control systems.

ADVANCED VOLTAGE CONTROL

Voltage drops of up to 5% on the load side can be offset via remote sensing.

Product website | Datasheet

Uninterruptible power supplies

DUSH – Series

First-class reliability for mission-critical applications

TECHNICAL SPECIFICATIONS

Topology	Buck/Boost converter
Input voltage	12 .. 48VDC
Output voltage	12 .. 48VDC
Output current	20A
Warranty	3 years

MAXIMUM FLEXIBILITY

Thanks to the integrated DC/DC converter, the load and battery voltages are decoupled.

INFORMATIVE AND USER FRIENDLY

Thanks to its 1.5” colour display, the DUSH can be easily configured and maintained.

AVAILABILITY IS KEY

Continuous monitoring of important battery parameters increases system availability. An optional temperature sensor enables temperature-compensated charging of the battery.

UNIVERSAL CONNECTIVITY

A Modbus/RTU interface allows the DUSH to be integrated into intelligent industrial environments. Numerous configuration parameters are available for this purpose. The DUSH provides over 50 real-time status values for monitoring the system. This information can be conveniently displayed and managed using the PowerCMC user interface.

COST-OPTIMISED

A cost-optimised version without LCD and AUX output is available for systems that are difficult to access or smaller in size.

Product website

Add-ons and accessories

DBM – Series

Buffer module to increase hold-up time or provide a reserve for peak loads

TECHNICAL SPECIFICATIONS

Storage method	**Electrolytic capacitors**
Buffer current	20A
Buffer voltage	23..30VDC
Warranty	5 years

SCALABLE

In order to meet different requirements, several buffer modules can be paralleled to increase buffer time or buffer power.

CONTROLLABLE

The plant's control system gets information about its current operating status from multiple signal contacts and can disconnect the module safely from the load circuit if required.

DURABLE

The modules can be expected to last up to 15 years in normal mode and at a typical operating temperature of +40°C.

Product website | Datasheet

Add-ons and accessories

DRM – Series

Redundancy modules for building fault tolerant power supply systems

TECHNICAL SPECIFICATIONS

Decoupling element	MOSFET
Input voltage	10..30VDC
Input current	2×20A
Output current	40A
Warranty	5 years

STATE-OF-THE-ART COMPONENT TECHNOLOGY

Uses MOSFETs for decoupling minimizes voltage drops.

PEAK POWER OUTPUTS SUPPORTED

The module supports temporary peak power outputs of up to 150% to make sure that capacitive and inductive loads will be started up safely.

USER-FRIENDLY

To ensure an even load distribution during normal operation, a separate LED helps to adjust input voltages as precisely as possible. Two separate DC OK relay contacts enable the devices to be integrated into the higher-level plant control system.

Product website | Datasheet

Our team of experts will be happy to help you find the best power supply for your application.

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Local Distribution

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