

**Power and More**



About Deutronic	4
EDWANZ group	5
Expertise	8
Service+Support worldwide	10
Applications	11
Automotive Charging Technology	12
Battery chargers for the vehicle production and car workshop	14
Battery charger for 48V electrical systems	15
Battery chargers for the use in showrooms and car workshops	16
Diagnostic and conditioning system for Electric Mobility applications	17
Trickle charger / Battery guard	18
Solar module / Extract from the accessories program	19
DC-Connect	20
Electric Mobility	22
Converter for vehicles	23
Motor controller	30
Charging Technology / Test Systems for Electric Mobility	32
Automation Technology	34
Fully encapsulated power supplies	35
Controllable power supplies TS-35 (D-IPS) / DXC6000v2/3 / DSSE6000v2	36
Flush mounted	37
Print mounting / Plug in and desk-top power supplies	38
DC/DC converter for DIN rail-mounting	39
Test Systems	40
References	48
Info / Contact / Imprint	50

# About Deutronic / EDWANZ group



**As an international established partner of the industry, Deutronic develops and manufactures intelligent power electronics and test systems in the highest possible quality.**

The strength of the family owned and managed company lies in the realisation of application specific devices and customized solutions also for a smaller number of devices.

Deutronic was founded in 1983 in Adlkofen and is located near Landshut in Lower Bavaria. The owner-managed family company is still 100% family owned. Loyal to the company's motto "Power and More", Deutronic provides its customers with innovative all-in-one solutions with added value.

An **international network of qualified service partners** takes care of maintenance, repair and the exchange of devices upon delivery of spare parts as well as during the commissioning of our systems.

**ISO 9001**  
**BUREAU VERITAS**  
**Certification**



We successfully meet the challenge to a controlled quality management system and are certified according to DIN EN ISO 9001 since January 25th, 1993. Being certified ensures that we have implemented the principles of a quality system and have full control of our high quality standards.



Being part of the EDWANZ group, Deutronic is able to offer its customers a broad range of services as well as flexible development and manufacturing capacities.



Strategic management • Administration • Finance



Battery Charging Systems  
Power Supplies  
DC/DC Converter  
Test and Measurement  
Systems  
Motor Controller

Specialised in smart Power  
Electronic Systems



Vending machines &  
terminals  
Metal housing & assemblies  
Components for medical  
engineering & tele-  
communication  
Inductive components

Specialised in Electro-  
mechanical Systems



ECU Software  
Development tools  
for automotive  
Measurement for ADAS  
Mobile automation  
Embedded Systems

Specialised in development  
and integration of Electronic  
Systems

# About Deutronic

## Individual power electronics

As a specialist for intelligent power-electronics systems, we plan and realise individual solutions to meet your requirements. The EDWANZ company group offers you a broad service portfolio and flexible development and production capacities.

## Power and More

### ☑ Customized special devices

We advise you all-embracing and develop together a technical high-quality and 100 % accurately fitting solution for your requirements.

### ☑ Custom-made special devices

We adapt our standard products individually to your requirements and so we offer you an economical and technical attractive solution.

### ☑ Customer-specific, programmable software

### ☑ Customizable descriptions = high customer security

### ☑ Shortened development time through a high level of system integration

### ☑ Reduced project duration through a very high own value added

### ☑ Individual, customized production of special devices in the company group of the EDWANZ group

## Power under Control

### ☑ Modern communication interfaces

### ☑ Full controllability and connectivity

### ☑ 100 % security for man and machine

### ☑ State-of-the-art hardware layouts

### ☑ Long living and robust for the harsh use in the industry

## Customized developed solutions (examples)



✓ DXC3000/6000

### Controllable Built-In Power Supply

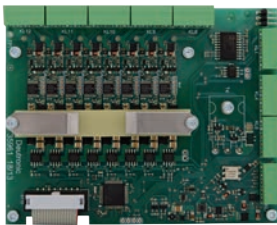
- ✓ High voltage system
- ✓ For process engineering equipment
- ✓ Cost efficient technology
- ✓ Special versions for pulsed loads and alternative output voltages on request!



✓ DVCH250-1100-27,5

### DC/DC Converter

- ✓ 250W DC/DC converter for very high input voltages (300–2000 VDC)
- ✓ Input voltage range is further scalable
- ✓ Very high isolation protection – 16 kV (reinforced isolation)
- ✓ Also available as 12, 24 and 48V systems

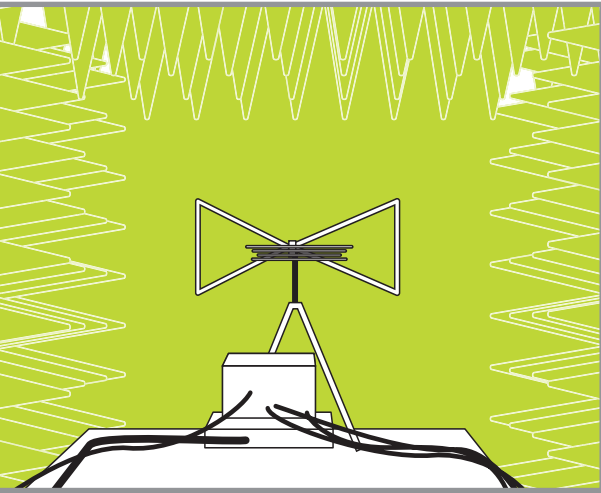


✓ Batterymanagement-system

### Battery Management System for 1...n cells

- ✓ Battery management system for 1 ... n cells / all Li-xx types
- ✓ Active energy management (without energy dissipation)
- ✓ Free parametrisation of the battery respectively user parameters via the software tool
- ✓ Various interfaces possible (e.g. USB, CAN, Serial etc.)

# Expertise

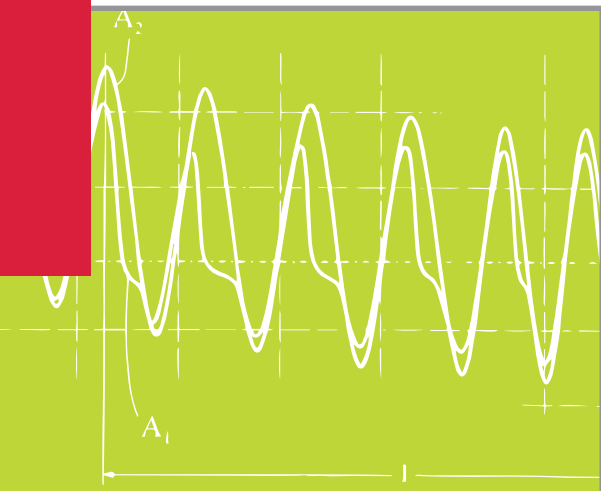


## EMC Engineering

Electronic devices have to run properly, be secure and safe from interferences. They should neither influence other devices during the operation nor cause inadmissible circuit feedback. To be able to ensure this in the research and development processes, Deutronic has an in-house EMC test laboratory (electromagnetic compatibility). The laboratory with its consulting and proposed solutions is used together with local partners.

Proposed solutions for interference suppressions with its know-how from our development of power electronics.

- ✓ EMC tests
- ✓ CE – conformity tests
- ✓ EMC testing during development
- ✓ EMC advisory service
- ✓ Proposed solutions for interference suppression



## Research Centre Energy Storage Technology

Prof. Dr. rer. nat. Jonny Dambrowski, director of the RCE

The in-house research centre for energy storage technology systematically researches the behaviour of energy storage systems. The research results form the basis for an optimal operation. The focus lies on the optimisation of battery-saving charging strategies in the application. This leads to an extensive know-how in the field of battery charging technology.

The Research Centre for Energy Storage Technology (RCE), founded at the end of 2012, continues the for 20 years successfully established department for battery charging technology of Deutronic.

In response to the growing importance of energy storage, Deutronic has already started in 2007 with investing in device development as well as in setting up a battery laboratory in order to be able to systematically research battery behaviour. However, optimised operation requires appropriate condition diagnostics. A more intensive scientific discussion on the subject of energy storage began.

The results of research form the basis for an optimised operation. The focus is on the primary optimisation of battery-saving charging processes in operation. This leads to an extensive know-how in the battery charging technology.

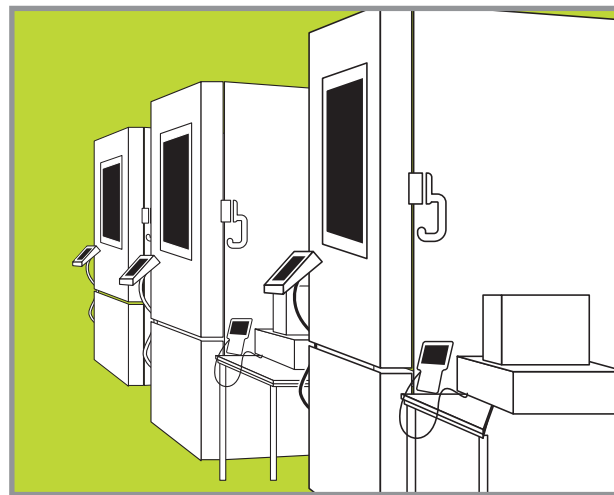
## Environmental laboratory

Equipment and technical possibilities of our environmental laboratory

Hightech electronic products need to function even under adverse environmental conditions. In order to meet these requirements, Deutronic has a modern and well-appointed environmental laboratory. We can test products under adverse environmental conditions from the product development to the validation.

The following equipment is available:

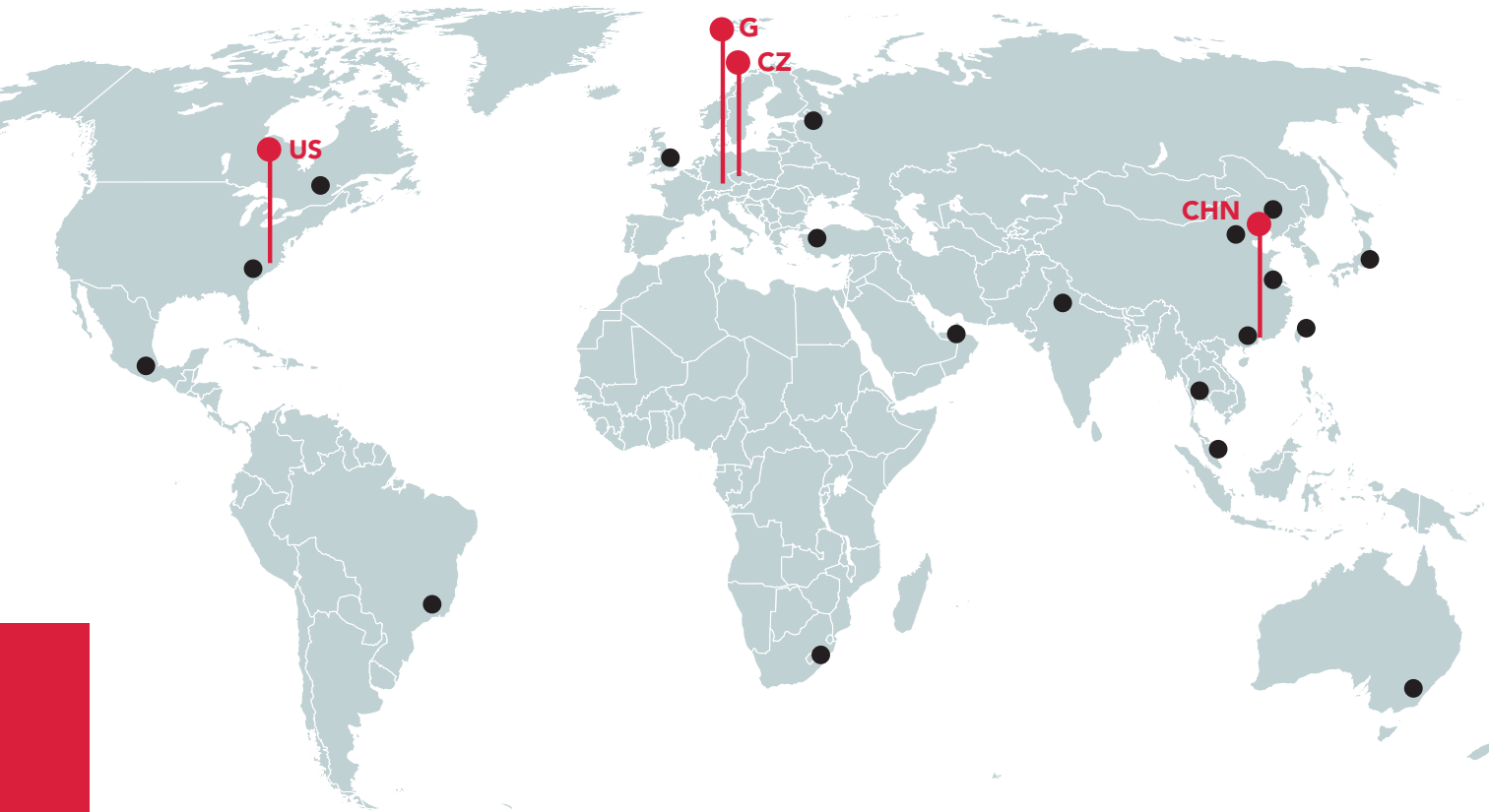
- ☑ Climatic chamber
- ☑ 3-phase power system simulation
- ☑ Current sink Deutronic DEL-Series



Further information can be found on the internet:

**[www.deutronic.com/know-how/](http://www.deutronic.com/know-how/)**

# Service+Support worldwide / Applications

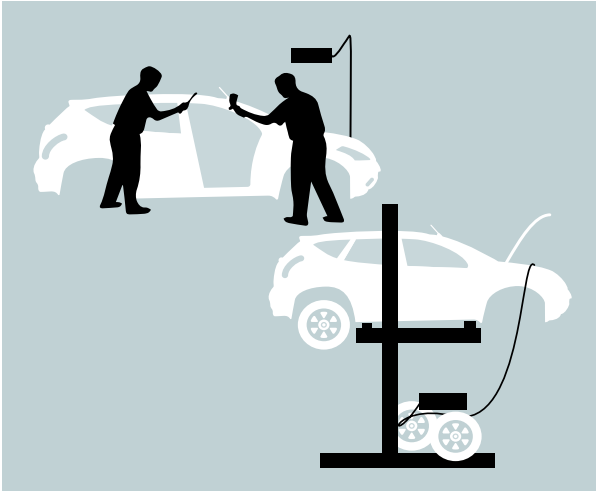


● Service-Center

● Deutronic locations

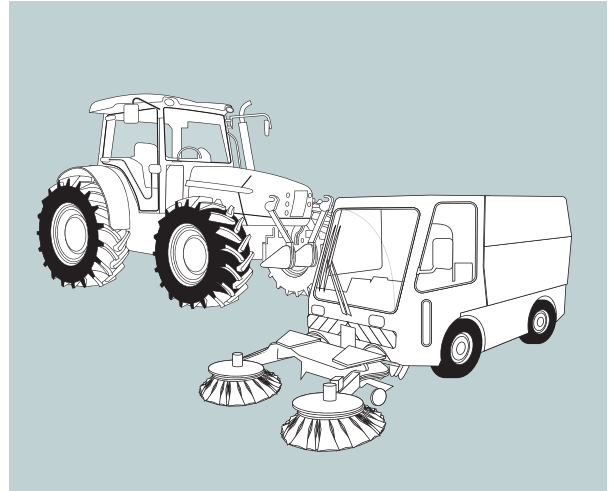
## Service+Support partners in the following countries

- |                  |                |                        |
|------------------|----------------|------------------------|
| ✓ Australia      | ✓ Canada       | ✓ Czech Republic       |
| ✓ Brazil         | ✓ Malaysia     | ✓ Turkey               |
| ✓ China          | ✓ Mexico       | ✓ USA                  |
| ✓ Germany        | ✓ Russia       | ✓ United Arab Emirates |
| ✓ United Kingdom | ✓ South Africa |                        |
| ✓ India          | ✓ Taiwan       |                        |
| ✓ Japan          | ✓ Thailand     |                        |



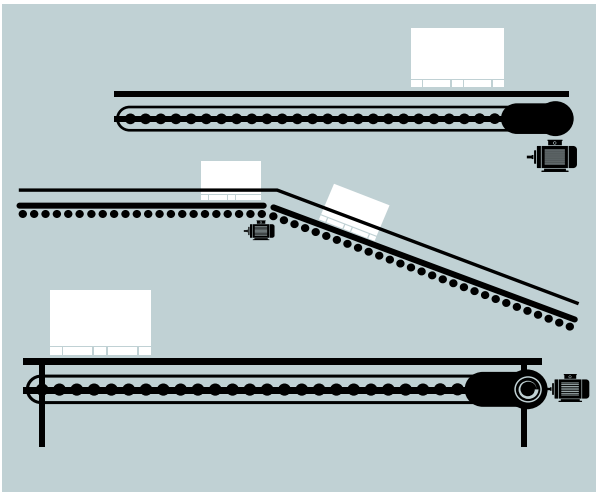
## Automotive Charging Technology

Starting at page 12



## Electric Mobility

Starting at page 22



## Automation Technology

Starting at page 34

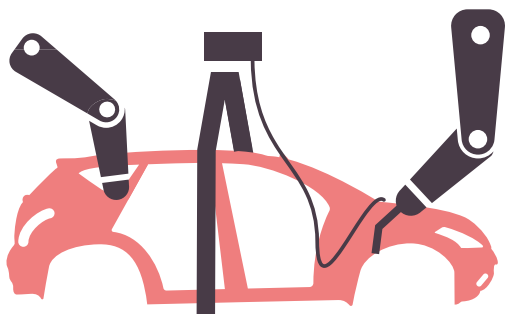


## Test Systems

Starting at page 40

# Automotive Charging Technology

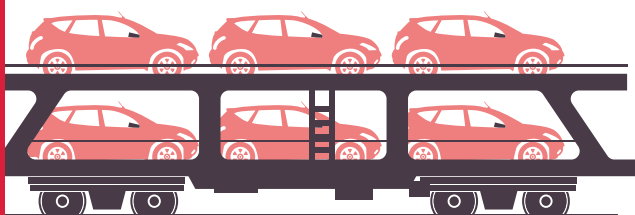
Vehicle production



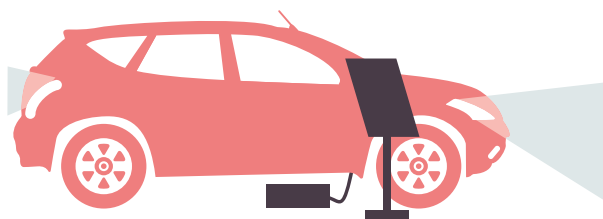
Final vehicle assembly



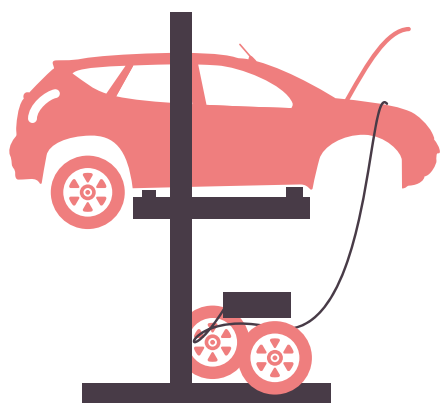
Transportation and storage



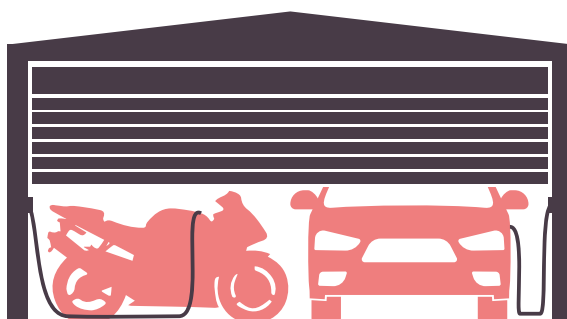
Vehicle showroom



Car workshop



Trickle charging







✓ Vehicle production



✓ Final vehicle assembly



✓ Transportation and storage



✓ Vehicle showroom



✓ Car workshop



✓ Trickle charging

# Automotive Charging Technology

## Battery chargers for the vehicle production and car workshop

As a market and technology leader for automotive battery chargers, our products are used in manufacturing lines, car workshops and showrooms worldwide.

Modern vehicles have a large number of electronic components. The resulting energy requirement places the highest demands on batteries and charging technology. In order to ensure that vehicle batteries can be handed with perfect conditions to the customer, Deutronic offers solutions for the protection of the vehicle battery from the first step of the vehicle production via the showroom to the workshop.

Type	Input	Output V	Output	Art. No.
DBL800-14	100-240VAC	14,4/13,2VDC	45A/54A Boost	107056/0/000
DBL800-14-B	100-240VAC	14,4/13,2VDC	45A/54A Boost	107061/0/000
DBL1050-14	100-240VAC	14,4/13,2VDC	70A/74A Boost	107501/0/000
DBL1050-14-B	100-240VAC	14,4/13,2VDC	70A/74A Boost	107502/0/000
DBL1200-14	100-240VAC	14,4/13,2VDC	80A/90A Boost	107073/0/000
DBL1200-14-B	100-240VAC	14,4/13,2VDC	80A/90A Boost	107075/0/000
DBL1200-28	100-240VAC	28,8/26,4VDC	40A/45A Boost	107074/0/000
DBL1200-28-B	100-240VAC	28,8/26,4VDC	40A/45A Boost	107098/0/000
DBL1600-14	100-240VAC	14,4/13,2VDC	90A/105A Boost	107063/0/000
DBL1600-14-B	100-240VAC	14,4/13,2VDC	90A/105A Boost	107068/0/000
DBL1050/3W-14-B-HAN	3AC 380-500VAC	14,4/13,2VDC	70A/74A Boost	107203/0/000
DBL1200/3W-14-B-HAN	3AC 380-500VAC	14,4/13,2VDC	80A/90A Boost	107200/0/000
DBL1600/3W-14-B-HAN	3AC 380-500VAC	14,4/13,2VDC	90A/105A Boost	107201/0/000
DBL1800/3W-14-B-HAN	3AC 380-500VAC	14,4/13,2VDC	100A/120A Boost	107077/0/000



✓ Standard design



✓ B-Version



✓ B-HAN-Version

- ✓ Use as battery charger, power supply and motor vehicles energy supply in buffer mode
- ✓ Electrical safety – certifications: EN60335, EN61010, UL1236, CSA22.2 107.1
- ✓ Utilized and approved by well known automotive manufacturers

Type	Input	Output V	Output	Art. No.
DBL2250/3W-14-HAN	3AC 400VAC	14,4/13,8VDC	100A/150A Boost	107229/0/000
DBL3000/3W-14-HAN	3AC 400VAC	14,4/13,8VDC	150A/200A Boost	107212/0/000
DBL3750/3W-14-HAN	3AC 400VAC	14,4/13,8VDC	200A/250A Boost	107226/0/000
DBL4500/3W-14-HAN	3AC 400VAC	14,4/13,8VDC	250A/300A Boost	107227/0/000
DBL5250/3W-14-HAN	3AC 400VAC	14,4/13,8VDC	300A/350A Boost	107209/0/000



- ✓ Use as battery charger, power supply and motor vehicles energy supply in buffer mode (support during diagnosis / flash programming) as well as for the initial start-up of a combustion engine (first start of the engine)

## Battery charger for 48V electrical systems

Type	Input	Output V	Output	Art. No.
DBL 800-58	100-240VAC	5-58VDC	11A/14A Boost	107057/0/000



- ✓ Suitable for 48V electrical systems

# Automotive Charging Technology

## Battery chargers for the use in showrooms and car workshops

The Deutronic DBLW Series is designed for charging and maintenance of lead-acid based and LiFePO<sub>4</sub> batteries. With its adaptive charging and maintenance algorithm the charger is perfect for the use in automotive showrooms and workshops. The robust and closed housing withstands even the hardest use in automotive workshops.

Type	Input	Output V	Output	Art. No.
DBLW301-14	100-240VAC	nom. 14,4/adaptive	20A	107123/20/000
DBLW501-14	100-240VAC	nom. 14,4/adaptive	35A	107116/20/000
DBLW751-14	100-240VAC	nom. 14,4/adaptive	50A	107124/2/000
DBLW975-14	100-240VAC	nom. 14,4/adaptive	65A	107125/2/000
DBLW1201-14	100-240VAC	nom. 14,4/adaptive	80A	107207/2/000

### Designed for Pb and LiFePO<sub>4</sub> batteries

- ✓ High-precision cable compensation
- ✓ Power Up Mode: To be able to connect deeply discharged LiFePO<sub>4</sub> batteries again (provided that the integrated electronics in the batteries give permission)

### Adaptive and dynamic charge algorithm and monitoring algorithm:

- ✓ LTC charging modes are optimised for the requirements in showrooms
- ✓ Intelligent and dynamic adjustment according to battery and load situation

### Optimised usability:

- ✓ After connection the battery will be charged immediately [Mains on/off, start/stop (valid interval for connection)]
- ✓ Battery state of charge and process (e.g. supply mode) will be displayed via RGB LEDs
- ✓ The last active mode will be rebuilt after mains on

### Extensive diagnosis and service activities possible:

- ✓ Connectivity to computers with Windows operating system via USB HID
- ✓ High-performance microcontroller



✓ DBLW Series



## Diagnostic and conditioning system for Electric Mobility applications

As a result of various innovations in the battery technology, new requirements for the charging technology occur. Newly developed lithium ion high-voltage batteries for electric and hybrid vehicles have entirely new charging characteristics and bring much higher demands on monitoring and safety. To meet these requirements, Deutronic has developed the Battery Conditioning and Diagnostic System for high voltage battery modules DBL1200HV-60. This allows the user the conditioning of a single battery module to a desired charging height. To ensure the safety of the module during the conditioning process, relevant parameters such as temperatures and cell voltages are permanently monitored and displayed in case of error.

The module conditioning is recommended in repository to extend the lifetime of an unused battery module. Furthermore, the exchange of individual battery modules of an entire high-voltage battery system is made possible by the module-related treatment.

Type	Input	Output V	Output	Art. No.
DBL1200HV-60	100-240VAC	25-67,2VDC	20A	107085/0/000

- ✓ Battery diagnostic system
- ✓ Extensive protection functions and self-protection functions
- ✓ Short circuit and reverse polarity protection
- ✓ Protection against defective batteries
- ✓ Reliable sparking suppression
- ✓ Comfortable menu navigation / charging parameter configurable
- ✓ Built-in communication interface
- ✓ Mini-USB port for firmware update
- ✓ 37-pin signal interface for cell contact plug
- ✓ Sealed housing, protected against internal pollution
- ✓ Cell voltage monitoring



# Automotive Charging Technology

## Trickle charger

The DBL 75-14 is a microprocessor controlled trickle charger for battery care of automotive batteries. Equipped with an intelligent, adaptive charging- and regeneration process and automatic battery chemistry detection. It is suitable for all types of 12V lead-acid batteries including GEL and AGM, also for 12V LiFePO<sub>4</sub> batteries. It is able to recognize lightly sulphated lead-acid batteries. The battery charger automatically detects the type of battery and selects an ideal charging process consequently.

Type	Input	Output V	Output	Art. No.
DBL75-14 [UL]	100-240VAC	14,4VDC	5A	116220
DBL75-14 [CE]	100-240VAC	14,4VDC	5A	116221



- ✓ AC wide range input
- ✓ Safety acc. to EN60335-1(CE-LVD); EN60335-2-29 [CE version]
- ✓ UL1310; CSA CS22.2 No. 223-15 [UL version]
- ✓ Class II, no protective earth
- ✓ Overload-/Over temperature protection
- ✓ Optional: Output cable with MagCode PowerClip

## Battery guard

The E-BVI indicates the state of charge of 12 Volt lead starter batteries. Long standstill times after production and transportation as well as the ever increasing current consumption of new vehicles often lead to a massive discharge of the battery. The E-BVI signals clearly and reliably the current charging state via a 3-color LED with high luminance with a net power consumption, which is less than the self-discharge current of automotive batteries.

Type	Input	Output V	Output	Art. No.
E-BVI				116197



- ✓ Battery voltage indicator for 12VDC lead acid vehicle batteries
- ✓ Robust construction, compact housing
- ✓ Easy mounting on the windshield of the vehicle using suction cup
- ✓ Extremely low power consumption
- ✓ Connection via OBD interface

## Solar module

The ESM5 is a solar module with an integrated charge controller for maintaining 12VDC lead-based, rechargeable batteries.

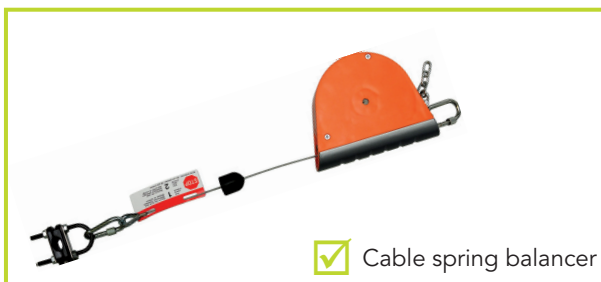
Long standstill times after production and transport as well as increasing standby-power consumption of new cars often lead to a discharge of the vehicle battery. The ESM5 Solar-Battery-Maintainer-System prevents a deep discharge of the battery causing a massive increase of the battery lifetime. The current state of charge of the battery is indicated on the front side of the ESM5 at any time via LEDs.

Type	Input	Output V	Output	Art. No.
ESM5		14,2VDC	max. 600mA	116198



- ✓ Solar module with integrated charge controller for 12VDC lead-based rechargeable batteries
- ✓ Processor controlled charging
- ✓ Robust solar module
- ✓ Aluminium / plastic sandwich carrier plate
- ✓ Only 5 mm thick (without charge controller)

## Extract from the accessories program



Further information can be found on the internet:  
[www.deutronic.com/publications/downloads](http://www.deutronic.com/publications/downloads)

# Automotive Charging Technology

## DC-Connect

Networking of smart Deutronic products

Modular design, simple and clear user interface, individually adaptable



- ✓ Explorer structures with Microsoft Windows® user interface in the device management which allows the division of a plant into different areas, e.g. Halls and zones
- ✓ Customized signalling of different equipment status reports
- ✓ Definable tabs for the presentation of relevant parameters in the device listing
- ✓ Graphical representation of the measured values over a time-limited period



- ✓ Read and store the current device configuration: e.g. firmware-version, parameter set-number, serial number, set parameter values
- ✓ Parameterising of single or multiple devices: e.g. safety timer, setting the desired mode, voltage, current
- ✓ Controlling of single or multiple devices: e.g. start or stop an operation, change of the configuration during the operation



- ✓ Allows a downstream analysis of the measured values
- ✓ Graphically appealing preparation
- ✓ Extensive zoom and configuration-functions
- ✓ Export to other data processing programs





- ✓ Maintenance information stored in the device can be read out:  
e.g. interval of a device match, interval of a device calibration,  
interval of a check of the device perimeter
- ✓ Update-possibilities of single or multiple devices:  
e.g. bootloader, firmware, parameter set



- ✓ Enables integration into e.g. a SIMATIC WinCC® system  
via OPC interface

# Electric Mobility



Converter for vehicles



We offer a wide range of DC/DC converters for operation in harsh environments, electric and hybrid vehicles.



Motor controller



The motor controllers are state-of-the-art sinusoidal commuted speed controllers. The engine current is regulated to a sine wave to guarantee an optimal and highly efficient activation of the engine with this commutation principle.



Charging Technology for Electric Mobility



Our product range includes diagnosis and conditioning systems for high-voltage batteries and charging poles as well as wallboxes for electric mobility charging.

## ✓ Converter for vehicles

Deutronic offers robust, electrically isolated DC/DC converters for various fields of application for the power range from 75 to 3,000 watt:

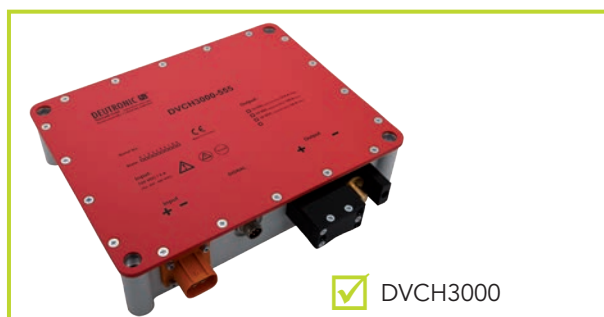
- ✓ For applications with high requirements of the environment
- ✓ Protection against unfavourable environment impacts (vibrations, shock, stress through temperature changes, humidity and aggressive atmosphere, etc.)
- ✓ In use in the industrial trucks sector (lift trucks, driverless transportation systems, etc.)
- ✓ Supply of working lights, scanner, data terminal, etc.
- ✓ For special variants to bypass the voltage drops of the electrical system when the engine starts

Deutronic offers, apart from the standard delivery program (viz. on request), also individual DC/DC converters.

## DC/DC converter for hybrid and electric vehicles

For hybrid and electric vehicles, electronic components such as high-voltage energy storage, electric motors etc. have an important role. Depending on the degree of electrification of the vehicle, components of conventional drive concepts are replaced by more efficient ones. Thus, the generator of hybrid or electric vehicles, which supplies the 12V/24V/48V electrical on-board system, can be saved. Instead of this, a DC/DC converter is required, which changes the voltage of the high-voltage energy storage device to the voltage of the electrical system. The HV-DC/DC converter DVCH3000 meets the requirements occurring in a vehicle and also impresses with an extremely low construction volume and very high efficiency.

Type	Input	Output V	Output	Art. No.
DVCH3000-555-12	555VDC (400-800VDC)	9-14VDC	216A	101319
DVCH3000-555-13.8	555VDC (400-800VDC)	13,8VDC	216A	101344
DVCH3000-555-24	555VDC (400-800VDC)	18-28VDC	108A	101326
DVCH3000-555-28	555VDC (400-800VDC)	28VDC	108A	101345
DVCH3000-555-48	555VDC (400-800VDC)	36-56VDC	54A	101327
DVCH3000-555-55.2	555VDC (400-800VDC)	55,2VDC	54A	101349

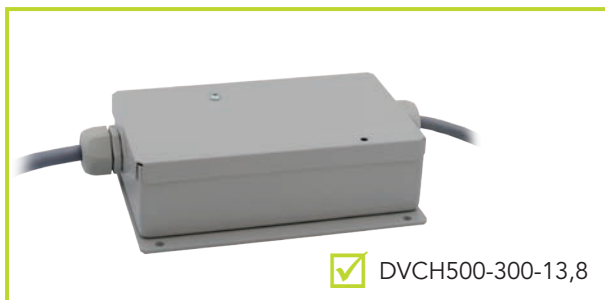


✓ DVCH3000

- ✓ 400VDC–800VDC wide range input
- ✓ **Power range up to 3kW**
- ✓ Adjustable output voltage
- ✓ High efficiency – typ. 95%
- ✓ Short-circuit / no load protection, over temperature protection
- ✓ IP-Protection Class IP65, IP67 & IP6K9K
- ✓ Optional controllable via CAN Bus

# Electric Mobility

Type	Input	Output V	Output	Art. No.
DVCH500-300-13,8	300VDC (90-350VDC)	13,8VDC	35A (Boost 42A)	101369



- ✓ Input 90–350VDC (wide range)
- ✓ Electrical safety: EN60950, EN50178
- ✓ EMC: EN55011 Class B, EN61000-6-2
- ✓ Extensive protection for power output:  
Short circuit, no-load, overvoltage,  
high temperature
- ✓ Very low stand-by-power

## Converter for vehicles with planar technology

Due to the fact that planar devices are used, it is possible to achieve a high power density combined with a very flat design. The different types of the classes 450W and 1900W are optional controllable via CAN or RS-232. The DVC1903 provides a maximum output power of 3.840W. Other input voltage ranges are available on request.

Type	Input	Output V	Output	Art. No.
DVC1903-48/80-24	34-104VDC	24V (0-25V)	80A (160A Boost $t \leq 4s$ )	105178



- ✓ **1920W (3840W Boost  $t \leq 4s$ )**
- ✓ Extremely compact design
- ✓ Very powerful
- ✓ Option: CAN / RS232
- ✓ Option: Other input/output voltage ranges
- ✓ **160A Boost ( $t \leq 4s$ )**

Type	Input	Output V	Output	Art. No.
DVC453-24/36-24	18-54V	24,3V (0-25V)	12A (Boost 20A)	105176
DVC453-48/80-24	34-104V	24,3V (0-25V)	12A (Boost 20A)	105177



- ✓ Extremely compact design
- ✓ Very powerful
- ✓ Option: Can / RS232
- ✓ Option: Other input/output voltage ranges

Type	Input	Output V	Output	Art. No.
DVC153-24/36-12	24/36V (+/- 30% $U_{nom.}$ )	12,5V (+/- 1% initial setting)	12A	105173
DVC153-48-12	48V (+/- 30% $U_{nom.}$ )	12,5V (+/- 1% initial setting)	12A	105174
DVC153-80-12	80V (+/- 30% $U_{nom.}$ )	12,5V (+/- 1% initial setting)	12A	105175



- ✓ Extremely compact design
- ✓ Very powerful
- ✓ Option: Other input/output voltage ranges

# Electric Mobility

## Standard converter for vehicles

Type	Input	Output V	Output	Art. No.
DVC500-36-24	36VDC (25-70VDC)	24VDC	21A	105119
DVC500-48-12	48VDC (33-90VDC)	12,5VDC	40A	105114
DVC500-48-13,8	48VDC (35-90VDC)	13,8VDC	36A	105112
DVC500-48-13,8/ITO12	48VDC (35-90VDC)	13,8VDC	36A	105112/1
DVC500-48-24	48VDC (33-90VDC)	24VDC	21A	105115
DVC500-80-12	72/80/96/110VDC (56-154VDC)	12,5VDC	40A	105116
DVC500-80-13,8	72/80/96/110VDC (56-154VDC)	13,8VDC	36A	105109
DVC500-80-24	72/80/96/110VDC (56-154VDC)	24VDC	21A	105117



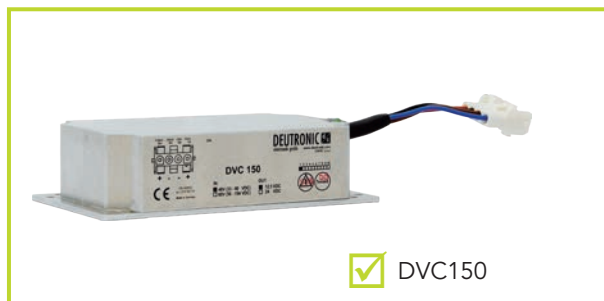
- ✓ Protection against unfavourable environmental conditions
- ✓ DC/DC wide range input
- ✓ Regulated output, very high efficiency
- ✓ Short-circuit / No-load protection
- ✓ Parallel connectable (Option: Smart output characteristic)
- ✓ Designed for the use in rough environment

Type	Input	Output V	Output	Art. No.
DVC251-12-12	12VDC	12,5VDC	11A	105120
DVC251-12-24	12VDC	24VDC	7A	105121
DVC251-24-12	24VDC	12,5VDC	18A	105122
DVC251-24-24	24VDC	24VDC	9,5A	105123
DVC251-24-27,6	24VDC	27,6VDC	8,2A	105141
DVC251-48-12	48VDC	12,5VDC	20A	105124
DVC251-48-24	48VDC	24VDC	10,5A	105125
DVC251-80-12	72/80/96/110VDC	12,5VDC	20A	105126
DVC251-80-13,8	72/80/96/110VDC	13,8VDC	18A	105130
DVC251-80-24	72/80/96/110VDC	24VDC	10,5A	105127
DVC251-EUT-12-24	12VDC	24VDC	6A	105131
DVC251-EUT-12-24	24VDC	24VDC	8A	105133



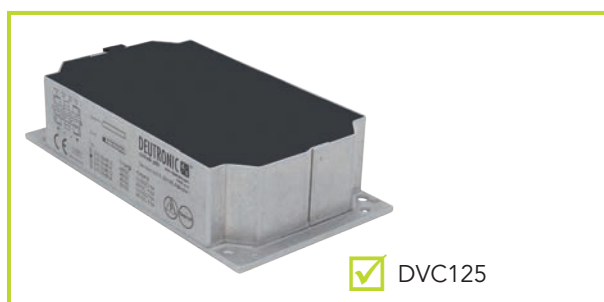
- ✓ Protection against unfavourable environmental conditions
- ✓ DC/DC wide range input
- ✓ Filtered against vehicle on-board disturbances
- ✓ Galvanic separation 1,5kV (500V at 12/24VDC input voltage)
- ✓ Regulated output, high efficiency
- ✓ Short-circuit / No-load protection

Type	Input	Output V	Output	Art. No.
DVC150-48-12	48VDC	12,5VDC	12A	105088
DVC150-48-24	48VDC	24VDC	6,5A	105089
DVC150-80-12	72/80/96/110VDC	12,5VDC	12A	105090
DVC150-80-24	72/80/96/110VDC	24VDC	6,5A	105091



- ✓ Protection against unfavourable environmental conditions
- ✓ DC/DC wide range input
- ✓ Filtered against vehicle on-board disturbances
- ✓ Galvanic separation 1,5kV
- ✓ Regulated output, high efficiency
- ✓ Short-circuit / No-load protection
- ✓ Over temperature protection

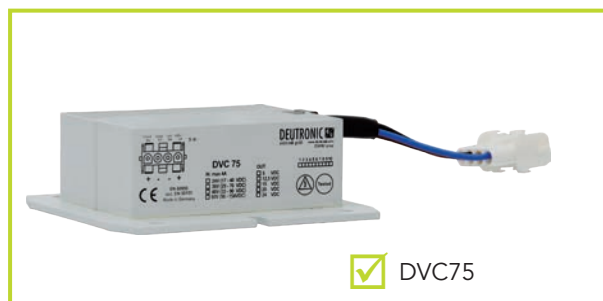
Type	Input	Output V	Output	Art. No.
DVC125-24-12	24VDC	12,5VDC	8A	105078
DVC125-24-15	24VDC	15VDC	6,5A	105071
DVC125-24-24	24VDC	24VDC	5A	105079
DVC125-36-24	36VDC	24VDC	5,5A	105107
DVC125-48-12	48VDC	12,5VDC	10A	105086
DVC125-48-20	48VDC	20VDC	5,5A	105104
DVC125-48-24	48VDC	24VDC	5,5A	105080
DVC125-80-12	72/80/96/110VDC	12,5VDC	10A	105087
DVC125-80-24	72/80/96/110VDC	24VDC	5,5A	105082



- ✓ Protection against unfavourable environmental conditions
- ✓ DC/DC wide range input
- ✓ Filtered against vehicle on-board disturbances
- ✓ Galvanic separation 1,5kV
- ✓ Regulated output, high efficiency
- ✓ Short-circuit / No-load protection
- ✓ Over temperature protection

# Electric Mobility

Type	Input	Output V	Output	Art. No.
DVC75-24-5	24VDC	5VDC	8A	105100
DVC75-24-12	24VDC	12,5VDC	4A	105101
DVC75-24-20	24VDC	20VDC	2,5A	105103
DVC75-24-24	24VDC	24,5VDC	2A	105102
DVC75-36-12	36VDC	12,5VDC	5A	105051
DVC75-36-24	36VDC	24,5VDC	2,8A	105053
DVC75-48-12	48VDC	12,5VDC	6A	105083
DVC75-48-15	48VDC	15VDC	5A	105049
DVC75-48-24	48VDC	24,5VDC	3,2A	105092
DVC75-80-12	80VDC	12,5VDC	6A	105085
DVC75-80-24	80VDC	24,5VDC	3,2A	105093
DVC75-80-24/RA	80VDC	24,5VDC	3,2A	105048
DVC75-80-24/RA	80VDC	24,5VDC	3,2A	105048/2



- ✓ Protection against unfavourable environmental conditions
- ✓ DC/DC wide range input
- ✓ Filtered against vehicle on-board disturbances
- ✓ Galvanic separation 1,5kV
- ✓ Design acc. to EN60950, EN1175, ISO20898
- ✓ Regulated output, high efficiency
- ✓ Short-circuit / No-load protection

## Standard converter for vehicles – galvanically non-separated

Type	Input	Output V	Output	Art. No.
DR350-12	24-48VDC	12VDC	25A	106066
DR350-24/48-13,5	24-48VDC	13,5VDC	23A	106070
DR350-24	48-80VDC	24VDC	15A	106067



- ✓ Regulated output
- ✓ Input filter versus disturbances of thyristors drives
- ✓ Rugged construction
- ✓ DC/DC wide range input
- ✓ Galvanically non-separated
- ✓ Efficiency up to 96 %

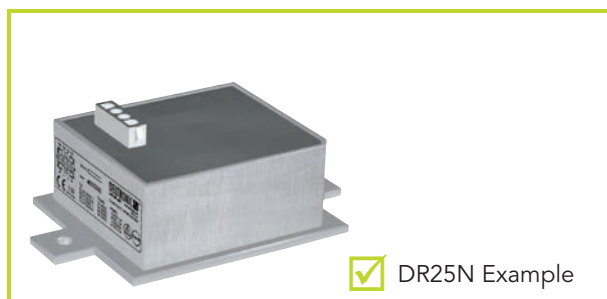


Type	Input	Output V	Output	Art. No.
DR160-24-12	80VDC	12 / 24VDC	3A / 5,2A	104970



- ✓ Rugged construction
- ✓ Over temperature protection
- ✓ Input filter versus disturbances of thyristors drives up to 400V
- ✓ Regulated output
- ✓ MOS-FET technology
- ✓ LED Display

Type	Input	Output V	Output	Art. No.
DR25N-12	24-96VDC	12VDC	2A	106062
DR25N-12/FE	24-96VDC	12VDC	2A	106073
DR100N-12	24-48VDC	12VDC	8A	106065
DR100N-12/FE	24-48VDC	12VDC	8A	106071
DR125N-12	48-80VDC	12VDC	5A	106059
DR125N-24	48-80VDC	24VDC	5A	106060
DR150N-24	48-80VDC	24VDC	6,5A	106063



- ✓ Regulated output
- ✓ Input filter versus disturbances of thyristors drives
- ✓ Rugged construction
- ✓ Efficiency up to 95 %
- ✓ Parallel connectable without control lead
- ✓ DC/DC wide range input
- ✓ Galvanically non-separated

# Electric Mobility

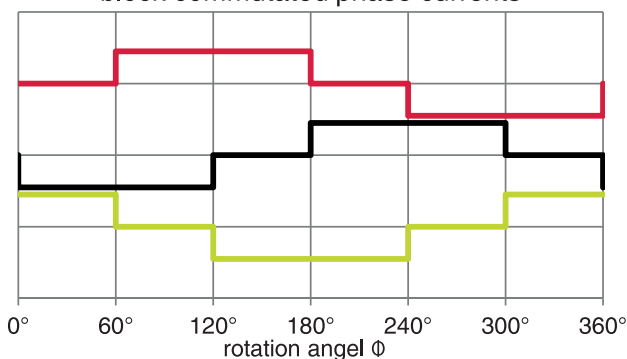
## ✓ Motor controller

The Motor controllers are state-of-the-art **sinusoidal commuted speed controllers**. The engine current is regulated to a sine wave to guarantee an optimal and **highly efficient activation** of the engine with this commutation principle.

Due to the **integrated current monitoring**, the motor is prevented from "overrunning". The main benefits of sinusoidal commutated speed controllers compared to block commutation are significantly smoother motor running and less motor warming.

**For an overview, extracts to block and sinusoidal commutation are described below:**

block commutated phase currents



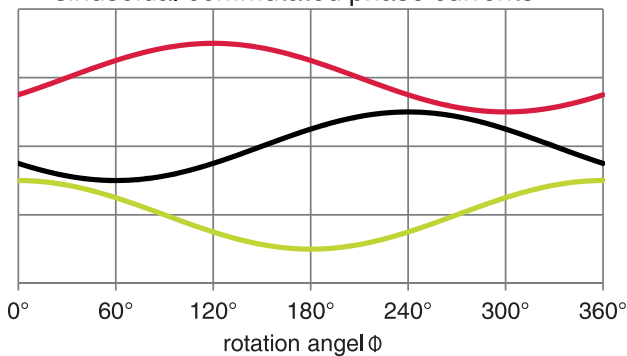
### ✓ Block commutation:

Motor with  $n$  pole pairs (positioned at  $60^\circ/n$  exactly known; commutation every  $60^\circ/n$ ).

Block-shaped phase current (torque ripple, vibrations and hums).

Block commutation with or without Hall sensors is characterized by an abrupt switching of the motor current every  $60^\circ$  (or after every  $60^\circ/n$ ).

sinusoidal commutated phase currents



### ✓ Sinusoidal commutation:

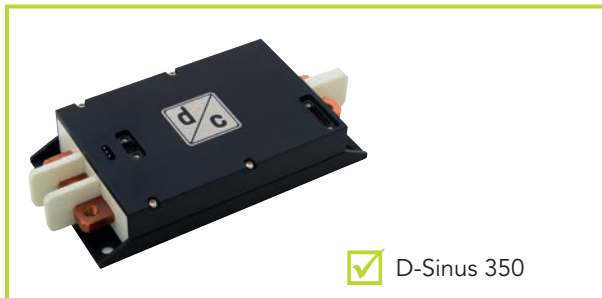
Sinusoidal phase currents ( $120^\circ$  phase displacement, similar to synchronous motors with variable frequency, no torque ripple, high synchronism, high starting torque).

High synchronism is achieved by gradually aligning the phase currents. Increased efficiency due to sinusoidal current waveform and created torque is constant in contrast to block commutation.

**Sinusoidal commutation is appropriate for higher synchronisation even at lower rotational speed**

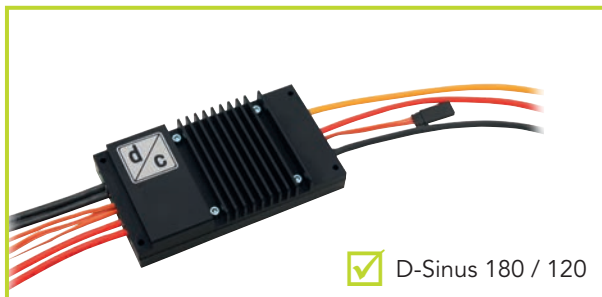
## Motor controller

Type	Input	Output V	Output	Art. No.
D-Sinus 350	22-58VDC		350A	101340



- ✓ Sensorless, sinusoidal commutated motor controller for a soft, steady and quiet running motor
- ✓ No torque ripple, high level synchronisation and high starting torque
- ✓ Up to 95 % Efficiency (Controller + Motor)
- ✓ Deutronic motor controller have to be adapted to the engine in a project-specific way

Type	Input	Output V	Output	Art. No.
D-Sinus 120	16-52VDC		120A	101317
D-Sinus 180	16-52VDC		180A	101328



- ✓ Sensorless, sinusoidal commutated motor controller for a soft, steady and quiet running motor
- ✓ No torque ripple, high level synchronisation and high starting torque
- ✓ Up to 95 % Efficiency (Controller + Motor)
- ✓ Deutronic motor controller have to be adapted to the engine in a project-specific way

## Motorchip

Type	Input	Output V	Output	Art. No.
D-MIC	3,3-8,0VDC			101329

The D-MIC is a  $\mu$ Controller that is fitted in the motor. It supplies the Deutronic D-Sinus Motor Controller with motor specific data and measures motor temperature. All values can be read out via Serial Single Wire Communication.

# Electric Mobility

## ✓ Charging Technology for Electric Mobility

### Diagnostic and conditioning system for E-mobility applications

As a result of various innovations in the battery technology, new requirements for the charging technology occur. Newly developed lithium ion high-voltage batteries for electric and hybrid vehicles have entirely new charging characteristics and bring much higher demands on monitoring and safety. To meet these requirements, Deutronic has developed the Battery Conditioning and Diagnostic System for high voltage battery modules DBL1200HV-60. This allows the user the conditioning of a single battery module to a desired charging height. To ensure the safety of the module during the conditioning process, relevant parameters such as temperatures and cell voltages are permanently monitored and displayed in case of error.

The module conditioning is recommended in repository to extend the lifetime of an unused battery module. Furthermore, the exchange of individual battery modules of an entire high-voltage battery system is made possible by the module-related treatment.

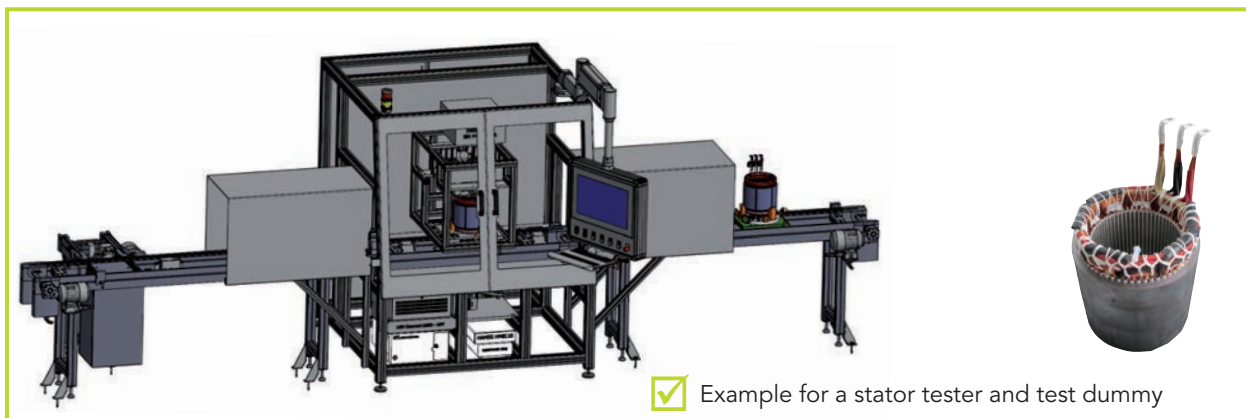
Type	Input	Output V	Output	Art. No.
DBL1200HV-60	100-240VAC	25-67,2VDC	20A	107085/0/000

- ✓ Battery diagnostic system
- ✓ Extensive protection functions and self-protection functions
- ✓ Short circuit and reverse polarity protection
- ✓ Protection against defective batteries
- ✓ Reliable sparking suppression
- ✓ Comfortable menu navigation / charging parameter configurable
- ✓ Built-in communication interface
- ✓ Mini-USB port for firmware update
- ✓ 37-pin signal interface for cell contact plug
- ✓ Sealed housing, protected against internal pollution
- ✓ Cell voltage monitoring



## ✓ Test Systems for Electric Mobility

- ✓ 100 % customizable
- ✓ Individual, modular component placement
- ✓ Extremely flexible Test software DTS-PS
- ✓ The test quality fulfils laboratory standards



- ✓ Patented, fully automated contacting
- ✓ High-precision partial discharge test in an appropriate frequency band
- ✓ Connectivity to the customer system

## Test Systems

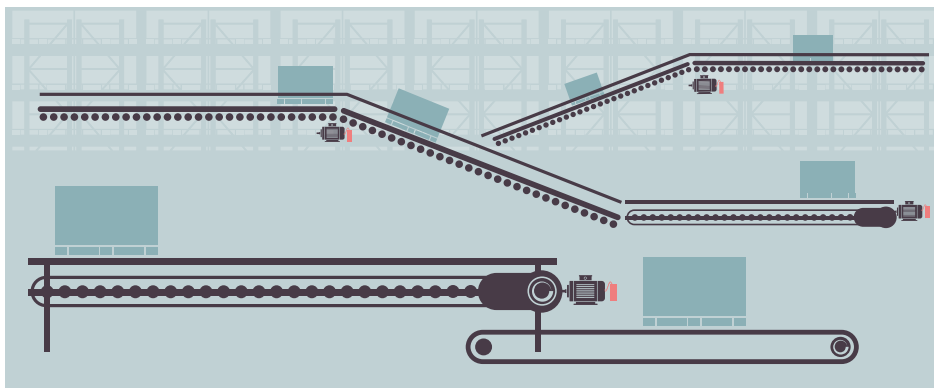
Starting at page 40

Further information can be found on the internet:

[www.deutronic.com/deutronic-testsysteme](http://www.deutronic.com/deutronic-testsysteme)

[www.deutronic.com/publications/downloads](http://www.deutronic.com/publications/downloads)

# Automation Technology



## Intra Logistics



24/7 – Automated intralogistics systems cannot stand still. Our robust Power Supplies for industrial usage provide 100 % reliability even under adverse conditions.



## Building Automation



In the field of building automation we offer compact and high-performance power supplies with extremely low standby current consumption. Moreover, we offer innovative solutions for energy storage technology.

## Intra Logistics

### Fully encapsulated power supplies

IP67:

Resistive encapsulation, mechanical loading/robust

Potted construction:

Compressed packing density, easy installation, no technical staff for installation required (UL508 listed, enclosed type (E204957) by DP500IP/3-24), no additional housing and/or control cabinet required, Plug&Play, no external cooling (contact cooling over the base plate), little effort and cost saving

No inrush current:

Less safety measures are needed, no load of the switch and safety installations thanks to an active limitation of the inrush current





Compact design:

It can be directly installed at home; no long supply lines, therefore no drop

Type	Input	Output V	Output	Art. No.
DP500IP-12	100-240VAC	12VDC	40A	109518
DP500IP-13,8	100-240VAC	13,8VDC	35A	109517
DP500IP-24	100-240VAC	24VDC	20A	109515
DP500IP-27,7	100-240VAC	27,7VDC	20A	109521
DP500IP/3-24	3AC 380-500VAC	24VDC	20A	109514



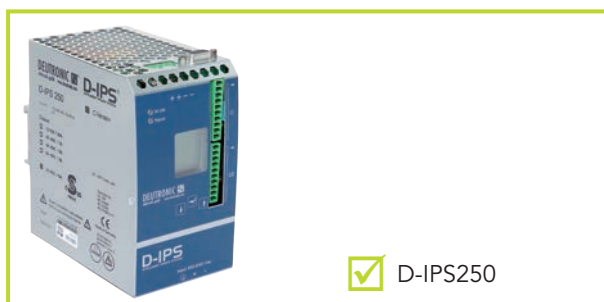
 DP500IP

-  Input 100–240VAC (wide range), Active-PFC
-  Electrical safety: EN60950, EN50178
-  Extensive protection for power output:  
Short circuit, no-load, overvoltage,  
high temperature
-  Very low stand-by-power, high efficiency

# Automation Technology

## Controllable power supplies TS-35 (D-IPS)

Type	Input	Output V	Output	Art. No.
D-IPS250C-24	100-240VAC	0-30VDC / 5VDC	0-10A / 0,1A	101130
D-IPS250C-60	100-240VAC	0-65VDC / 5VDC	0-5A / 0,1A	101133
D-IPS500C-24	100-240VAC	0-30VDC / 5VDC	0-20A / 0,1A	101140
D-IPS1000C-24	100-240VAC	0-30VDC / 24VDC	0-40A / 0,1A	101150
D-IPS1000/3-C-24	3AC 380-500VAC	0-30VDC / 24VDC	0-40A / 0,1A	101180



- ✓ For the use in switch cabinets (TS35-rail acc. to EN60715)
- ✓ Extensive protection for power output: Short circuit, no-load, overvoltage, overtemperature
- ✓ No inrush current
- ✓ Very low stand-by-power, high efficiency (smooth behaviour across total input voltage range)

## DXC6000v2/3 / DSSE6000v2

Type	Input	Output V	Output	Art. No.
DXC6000v2/3-60	3AC 400-500V	0-60VDC	0-100A	101923
DXC6000v2/3-120	3AC 400-500V	0-120VDC	0-50A	101949
DSSE6000v2-60-ETH/S	3AC 400-500V	0-60VDC	120A	101952
DSSE6000v2-120-ETH/S	3AC 400-500V	0-120VDC	60A	101953



- ✓ For the use in switch cabinets, screw mount
- ✓ Input: 400–500VAC, 3AC
- ✓ Assembly acc. to EN60950, EN61010, EN50178, UL508 EN55011-B, EN61000-6-2, EN61204-3
- ✓ Short circuit- / No-load protected
- ✓ Over voltage protection / Over temperature protection



- ✓ Static excitation for three-phase synchronous generators in small power stations
- ✓ Input: 400–500VAC, 3AC
- ✓ For use in switch cabinets, screw mount
- ✓ Short circuit- / No-load protected
- ✓ Over voltage protection / Over temperature protection



## ✓ Building automation

### Flush mounted

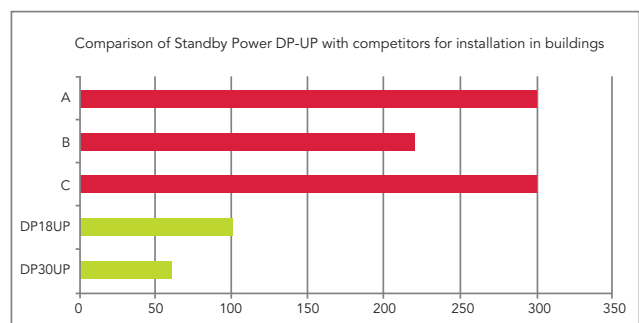
With the **DP30UP series** Deutronic sets new standards in the area of flush-mount power supplies for building automation applications. In contrast to the competitors, the Deutronic DP30UP power supplies, which are available with output voltages of 12VDC and 24VDC, sets itself apart due to its power density (30W continuous rating in a Ø 60 mm flush-mounted box), stand-by power consumption (<60mW) as well as the permissible ambient temperature (-25°C .. +85°C). Due to its 100 .. 240VAC wide-range input, the units can be used worldwide. The device series is supplemented by DP12UP and DP18UP.

Type	Input	Output V	Output	Art. No.
DP12UP-5	100-240VAC	5VDC	2A	101335
DP12UP-5-C	100-240VAC	5VDC	2A	101335/1
DP12UP-12	100-240VAC	12VDC	1A	101336
DP12UP-12-C	100-240VAC	12VDC	1A	101336/1
DP12UP-24	100-240VAC	24VDC	0,5A	101337
DP12UP-24-C	100-240VAC	24VDC	0,5A	101337/1
DP18UP-12	100-240VAC	12VDC	1,5A	101333
DP18UP-12-C	100-240VAC	12VDC	1,5A	101333/1
DP18UP-24	100-240VAC	24VDC	0,75A	101334
DP18UP-24-C	100-240VAC	24VDC	0,75A	101334/1
DP30UP-12	100-240VAC	12VDC	2,5A	101480
DP30UP-12-C	100-240VAC	12VDC	2,5A	101480/1
DP30UP-24	100-240VAC	24VDC	1,25A	101481
DP30UP-24-C	100-240VAC	24VDC	1,25A	101481/1



- ✓ High efficiency
- ✓ Worldwide applicable, AC/DC wide range input 100–240V
- ✓ Mounting in flush device box Ø 60 mm, depth 45 mm, at 12/18UP depth 42 mm
- ✓ Protection class 2 (no protective earth)

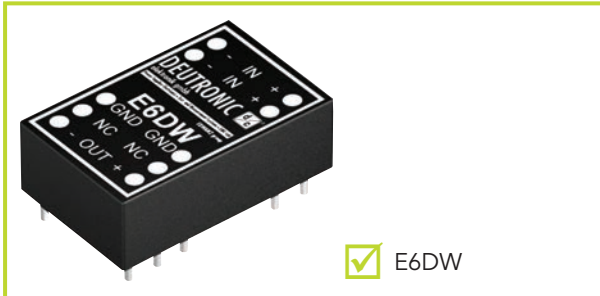
- ✓ Comparison of Standby Power DP-UP with competitors for installation in buildings



# Automation Technology

## Print mounting

DC converter from 0,25 Watt to 200 Watt, regulated and unregulated for the SMD mounting, print mounting and in the housing.



To the product overview:

[www.deutronic.com/produktkategorien/dc-dc-converter/print-mounting/](http://www.deutronic.com/produktkategorien/dc-dc-converter/print-mounting/)

## Plug in and desk-top power supplies



To the product overview:

[www.deutronic.com/produktkategorien/power-supplies/plug-in/](http://www.deutronic.com/produktkategorien/power-supplies/plug-in/)

## DC/DC converter for DIN rail-mounting

Type	Input	Output V	Output	Art. No.
E-TOP15DC12R12	9-18VDC	12VDC	1,25A	120212
E-TOP15DC12R24	9-18VDC	24VDC	0,625A	120214
E-TOP15DC12R12-12	9-18VDC	12VDC / -12VDC	0,625A / -0,625A	120214
E-TOP15DC12R30	9-18VDC	30VDC	0,5A	120215
E-TOP15DC12R15-15	9-18VDC	15VDC / -15VDC	0,5A / -0,5A	120215
E-TOP15DC24R5	18-36VDC	5VDC	23A	120217
E-TOP15DC24R12	18-36VDC	12VDC	1,25A	120218
E-TOP15DC24R24	18-36VDC	24VDC	0,625A	120220
E-TOP15DC24R12-12	18-36VDC	12VDC / -12VDC	0,625A / -0,625A	120220
E-TOP15DC48R12	36-72VDC	12VDC	1,25A	120224
E-TOP15DC48R24	36-72VDC	24VDC	0,625A	120226
E-TOP15DC48R12-12	36-72VDC	12VDC / -12VDC	0,625A / -0,625A	120226
E-TOP30DC12R12	9-18VDC	12VDC	2,5A	120232
E-TOP30DC12R24	9-18VDC	24VDC	1,25A	120234
E-TOP30DC12R12-12	9-18VDC	12VDC / -12VDC	1,25A / -1,25A	120234
E-TOP30DC24R3,3	18-36VDC	3,3VDC	5A	120236
E-TOP30DC24R5	18-36VDC	5VDC	5A	120237
E-TOP30DC24R12	18-36VDC	12VDC	2,5A	120238
E-TOP30DC24R15	18-36VDC	15VDC	2A	120239
E-TOP30DC24R24	18-36VDC	24VDC	1,25A	120240
E-TOP30DC24R12-12	18-36VDC	12VDC / -12VDC	1,25A / -1,25A	120240
E-TOP30DC24R30	18-36VDC	30VDC	1A	120241
E-TOP30DC24R15-15	18-36VDC	15VDC / -15VDC	1A / -1A	120241
E-TOP30DC48R12	36-72VDC	12VDC	2,5A	120244
E-TOP30DC48R24	36-72VDC	24VDC	1,25A	120246
E-TOP30DC48R12-12	36-72VDC	12VDC / -12VDC	1,25A / -1,25A	120246
E-TOP50DC24R5	18-36VDC	5VDC	10A	120258
E-TOP50DC24R12	18-36VDC	12VDC	4,16A	120259
E-TOP50DC24R24	18-36VDC	24VDC	2,08A	120261
E-TOP50DC48R12	36-75VDC	12VDC	4,16A	120265
E-TOP50DC48R24	36-75VDC	24VDC	2,08A	120267



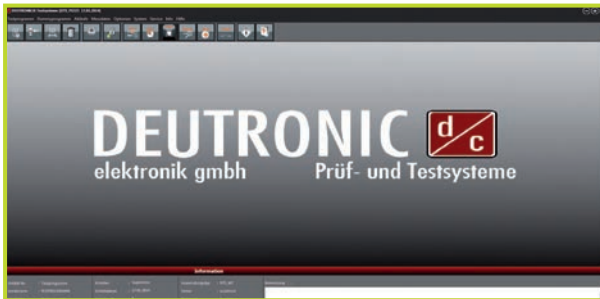
\* Image similar

- ✓ For the use in switch cabinets, clip fastening for DIN rail-mounting
- ✓ EN60950, CE
- ✓ Continuous short circuit protected
- ✓ Versions with single / dual output voltage
- ✓ Customized version on request

# Test Systems

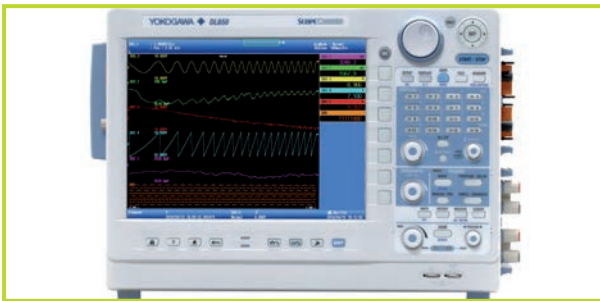
Deutronic test systems combine an individual, modular component configuration with the flexibility of the DTS-PS software solution suitable for all applications. The result of this symbiosis is application-specifically designed test systems. Possible applications know no boundaries.

In this context, the type of the product to be tested and the degree of automation specify the boundary conditions for the overall concept. This approach ensures electrical and physical safety and function of the products in line with standards and regulations applicable worldwide.



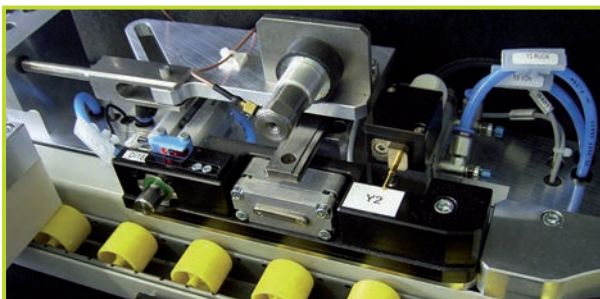
The Deutronic DTS-PS test software is designed for a maximum range of applications as Windows® desktop application. Operation is easy and programming can be learned easily and quickly without prior knowledge. Test sequence, parameters, limit values, durations, handling and other properties of the individual test steps can be freely programmed. Relevant measured data is documented and archived in a modern SQL database.

## ✓ Software



The hardware of all Deutronic test systems is designed fully modularly. Components of leading manufacturers are used. This allows an application-specific, high-quality component configuration, retrofitting and modernisation.

## ✓ Hardware



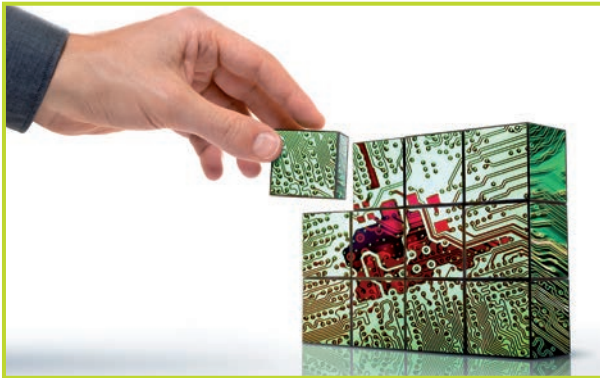
The motion sequences meet highest requirements regarding versatility, precision and speed. Handling can be freely programmed using the DTS-PS application software.

## ✓ Handling



Depending on the requirements, the housing design consists of a prefabricated cabinet and aluminium profile systems. This enables an application-specific system design. This way, a connection to all common transport systems (chain conveyors, work piece carrier transfer conveyors, etc.) with a horizontal or vertical specimen becomes possible.

## ✓ Housing



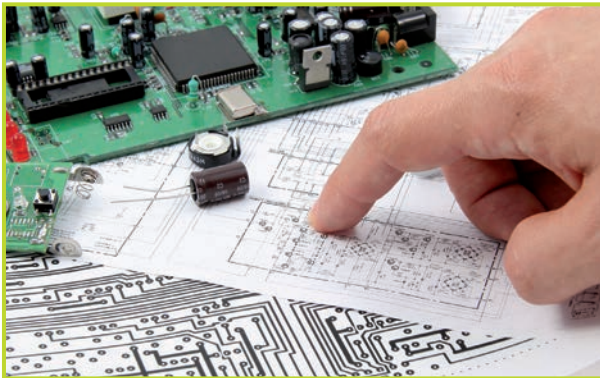
Individual configuration with test equipment from leading suppliers. Retrofits and modernisation are possible.

- ✓ Maximum flexibility
- ✓ Reliable components
- ✓ Tested quality
- ✓ Highest reliability and accuracy



Highly flexible and easy to use Deutronic DTS-PS test software. All imaginable areas of application covered by one software solution.

- ✓ Can be used without programming skills
- ✓ High system stability
- ✓ Windows® interface
- ✓ Freely programmable
- ✓ Comprehensive test spectrum

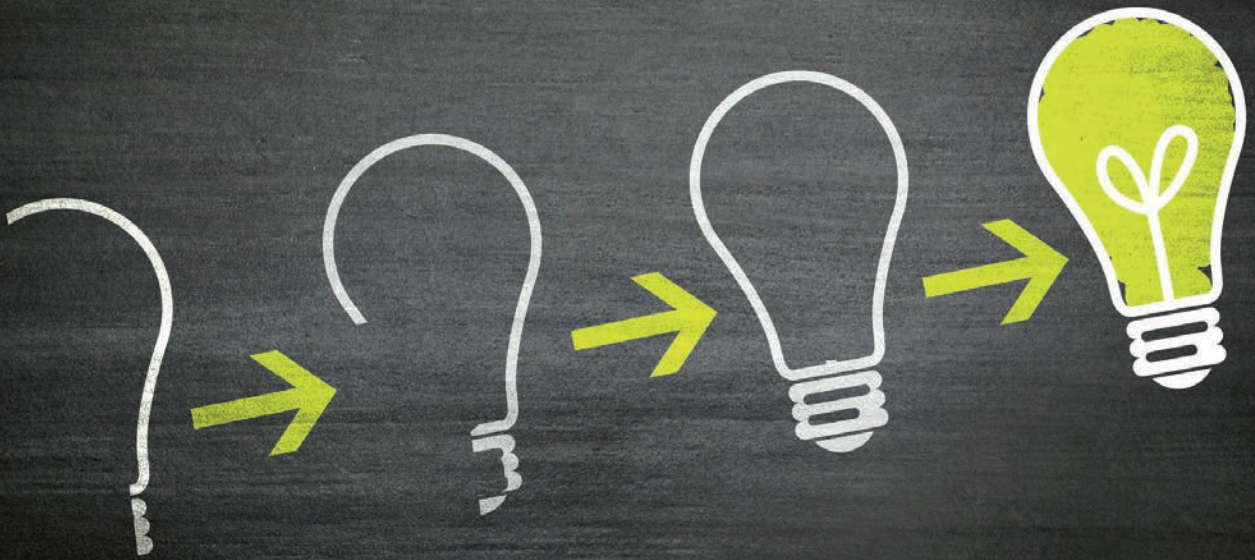


Customized test and measurement systems

- ✓ Maximum flexibility and variability
- ✓ Fully network-capable
- ✓ Safe, fast and reliable
- ✓ Covers all applications
- ✓ Cost-efficient retrofitting possible



# Test Systems



## Advantages

Deutronic meets all requirements on a test and measurement system:

- ✓ Simple and fast program generation
- ✓ Short setup and test times
- ✓ Minor adoption effort
- ✓ Simple operation
- ✓ Constant quality due to high testing depth
- ✓ Short cycle times
- ✓ High reliability

Deutronic test and measurement systems can be configured for any imaginable application thanks to their individual, modular design:

Power supplies, transformers, electric motors, semiconductor relays, mechanical relays, batteries, lights and lamps, fuses, lines and cables, solenoid valves, fans, switches, sensors, household appliances, medical devices, entertainment electronics, rail couplers, automotive industry and many more.

## Test methods

Deutronic test and measurement systems can be configured for any test scenario thanks to their tailored, modular design:

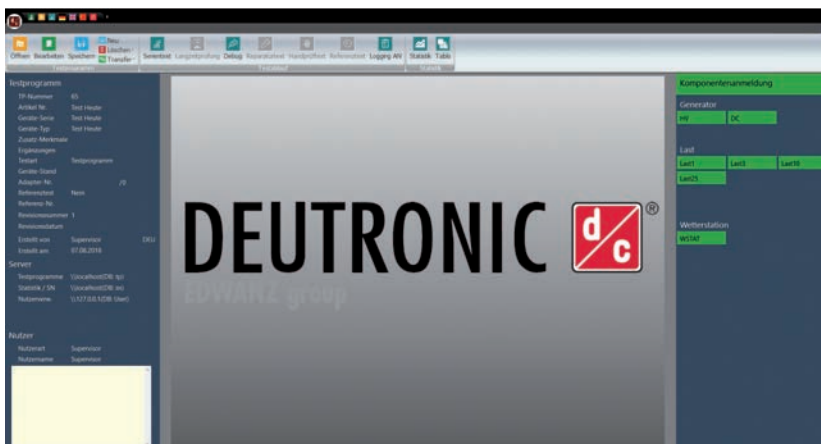
- ✓ **Safety tests**
  - HV test AC / DC
  - Productive conductor test
  - Insulation test
  - Leakage current test
  - Continuity test
- ✓ **Function tests**
  - Idle test
  - Digital/analogue inputs and outputs
  - Harmonics / ripple / spikes / noise
  - Communication tests (CAN, RS232, IEEE, Ethernet, etc.)
  - Shorted coil
  - Inductances
  - Capacitances
  - Brake test
  - Pulse counter
  - Hysteresis
  - Temperature compensation
  - Test currents up to 10,000 A
  - etc.
- ✓ **Power tests**
  - Current / voltage under load
  - Apparent / active / reactive power
  - Power factor / phase angle
  - etc.
- ✓ **Physical tests**
  - EMF / KE test
  - Torque / speed test
  - Structure-borne noise test
  - Axial eccentricity, pin eccentricity
  - Spectrum analysis
  - Mass flow
- ✓ **Contacting**
  - Pneumatic, manual and fully automated contacting
- ✓ **Other tests**
  - Partial discharge tests
  - Surge voltage tests, leakage test
  - etc.

# Test Systems

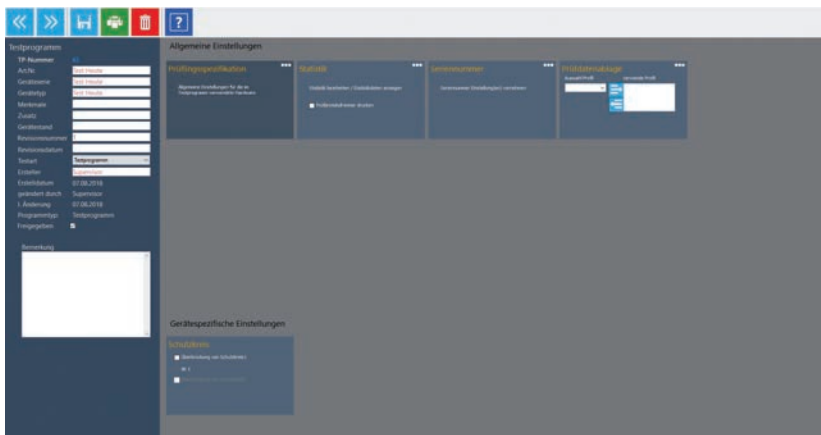
## Test software DTS-PS

The Deutronic DTS-PS test software is designed for a maximum range of applications with a Windows® user interface. Operation is easy. The user can learn programming easily and quickly without programming skills. Test sequences, parameters, limit values, durations, handling and other properties of the individual test steps can be programmed freely. Relevant measured data is documented and archived in a modern SQL database.

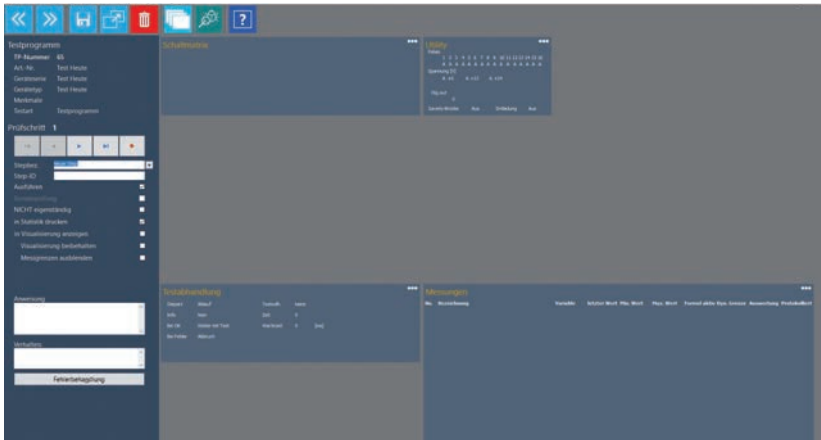
Test schedules can be created with any number of test steps. The test sequence can be programmed freely as well as parameters, limit values, durations and other properties of the individual test steps. The presentation of images, graphics, instructions, technical documents etc. on the monitor can be integrated into the test sequence, e.g. to guide and support testing personnel in their work.



- ✓ Freely programmable, screen-oriented settings of test programmes and test sequences (e.g., creation of test programmes, parameter settings) without programming skills
- ✓ Data output in PDF possible
- ✓ Connection to ERP systems possible
- ✓ Test schedules and measurement results are stored in a modern SQL database
- ✓ Update-capable, modularly extendible, compatible with third-party equipment and thirdparty software
- ✓ Remote diagnostics and maintenance

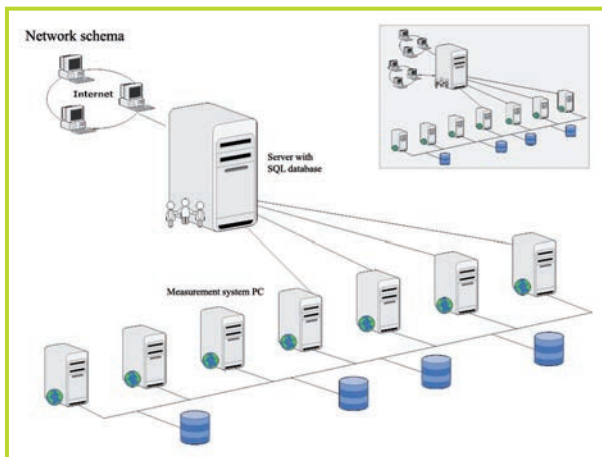






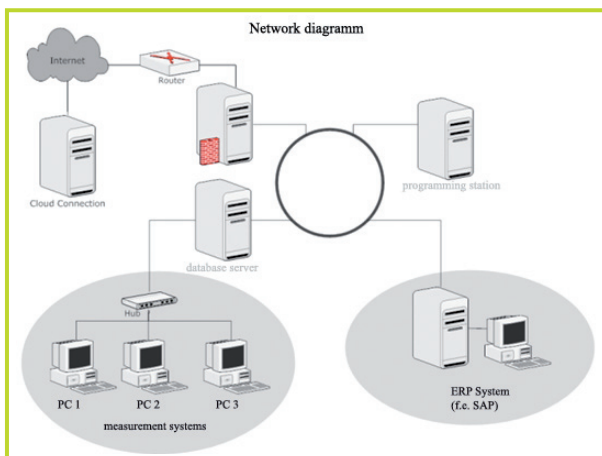
Flexible test programme creation

- ✓ Freely configurable test sequence, parameters, limit values, durations and other properties of the individual test steps
- ✓ Presentation and management of images, graphics, instructions and other technical documents
- ✓ Nearly unlimited number of test programmes and test steps
- ✓ All measured values can be stored in variables for further processing (calculation and handover)
- ✓ Complex calculations possible via MATLAB®



## Networking

- ✓ The test system database can be integrated into the company-internal network
- ✓ If several test systems are networked, the computer of one test system can manage and provide test programmes as well as technical documentation centrally as server
- ✓ Further PCs can be integrated as programming stations



## Modern SQL database

- ✓ Test results, test programmes, users, etc. are stored in a modern SQL database
- ✓ Completely rational database
- ✓ High reliability and scalability
- ✓ Use of inquiry scripts for test data analysis

# Test Systems

## Statistics software DTS-Tablo

The Deutronic DTS-Tablo statistics software is designed for statistical test and measurement analysis and evaluation. The functions include analysis, evaluation, visualisation and reporting. This enables a survey of the production quality and uncovers improvement potentials.



- ✓ Test and measurement analysis and visualisation
- ✓ Comprehensive selection possibilities by time frames, order and article numbers, up to three filter levels
- ✓ Integrated Cpk analysis
- ✓ Flexible detail filters via SQL wizard
- ✓ Adjustable 2D or 3D presentation as bar, line or scatter chart
- ✓ Reports for screen and print output
- ✓ Clear graphical user interface
- ✓ Versatile setting possibilities regarding data acquisition and analysis
- ✓ Graphical and logged measured data analysis (e.g., PASS / FAIL)
- ✓ Visual presentation of the characteristic values of a process possible without statistical assessment

## Statistics

The relevant measured data is archived in a SQL database. Determined and archived measured data can be analysed using statistical methods in real time or in retrospect. The current process capability index as well as the process potential are determined during the ongoing test. This allows an immediate reaction to process changes.

## Statistical data

The data of all networked test systems is stored in a data pool and is available at any time, e.g., to test field management, production management or quality control (office license required).

## Lifecycle service

With respect to service, Deutronic test systems also convince with an outstanding value proposition. Deutronic offers their customer comprehensive and competent service for all steps, starting from the first conceptual design to the test system modernisation.



As a solution provider, our experts develop a concept based on the technical specification of the test object and the overall requirements.



Within the scope of the realisation phase, modular design and test software are combined into a tailored test system solution. The focus here is particularly on on-time realisation.



To meet highest quality demands, user training as well as sound support are provided in addition to several acceptances.



Within the scope of a maintenance agreement, Deutronic assumes the entire test system maintenance. Calibrations can also be performed upon request.



A new product generation often also includes changed test sequence requirements. Together with the flexible test software, the modular design allows a cost-efficient test system adjustment to changed requirements.

Further information can be found on the internet:

[www.deutronic.com/deutronic-testsysteme](http://www.deutronic.com/deutronic-testsysteme)

[www.deutronic.com/publications/downloads](http://www.deutronic.com/publications/downloads)

# References Automotive Charging Technology / Electric Mobility



## ✓ References Automotive Charging Technology

- |                 |                 |                    |
|-----------------|-----------------|--------------------|
| ✓ Altmann       | ✓ Ferrari       | ✓ Mini             |
| ✓ Aston Martin  | ✓ Fiat          | ✓ Mosolf           |
| ✓ Audi          | ✓ Ford          | ✓ Opel             |
| ✓ Bentley       | ✓ German E-Cars | ✓ Porsche          |
| ✓ BLG Logistics | ✓ Hyundai       | ✓ Renault          |
| ✓ BMW Group     | ✓ Jaguar        | ✓ Rolls Royce      |
| ✓ BMW           | ✓ JLR           | ✓ S.A.S            |
| ✓ BMW Motorrad  | ✓ Karmann       | ✓ Seat             |
| ✓ Bugatti       | ✓ KIA           | ✓ Škoda            |
| ✓ Daimler       | ✓ Lamborghini   | ✓ Volkswagen Group |
| ✓ Daimler LKW   | ✓ Land Rover    | ✓ Volkswagen       |
| ✓ Egerland      | ✓ Magna Steyr   | ✓ Volvo            |
| ✓ e-Wolf        | ✓ MAN           |                    |
| ✓ Fendt         | ✓ Maybach       |                    |



## ✓ References Electric Mobility

- |                 |                   |               |
|-----------------|-------------------|---------------|
| ✓ ABB           | ✓ Jungheinrich    | ✓ Stadler     |
| ✓ Deutsche Bahn | ✓ KION Group      | ✓ Still       |
| ✓ EFA-S         | ✓ LAWO            | ✓ Tadano Faun |
| ✓ Fendt         | ✓ Liebherr        | ✓ Toyota      |
| ✓ Framo         | ✓ Linde           | ✓ Wölfle      |
| ✓ German E-Cars | ✓ mobile easykey® |               |

# Info / Contact / Imprint



## Info

Deutronic supplies the industry with innovative and technologically leading solutions worldwide.

As an expert for power electronics, Deutronic develops innovative solutions, systems and services with high added value in the following fields:

Battery Charging Systems, Test Systems, Power Supplies and DC/DC Converter.



## Contact

### **Deutronic Elektronik GmbH**

Deutronicstraße 5

D-84166 Adlkofen/Germany

Tel.: +49 (0)8707 920-0

Fax: +49 (0)8707 1004

E-Mail: [sales@deutronic.com](mailto:sales@deutronic.com)

[www.deutronic.com](http://www.deutronic.com)



## Imprint

### **Deutronic Elektronik GmbH**

Represented by: Dipl.-Ing. Eduard Wanzke,  
Christian Wanzke, Thomas Wanzke

USt-IdNo.: DE 128 947 951

WEEE-Reg.-Nr. DE 13739201

Commercial Register: HRB Nr. 18 37

Court of jurisdiction: Landshut/Germany

All technical data measured with nominal input voltage, full load and 25°C ambient temperature, when not otherwise stated.

Technical changes and errors excepted. The details in the catalogue and in the data sheets describe products, their characteristics are not guaranteed. Loading with "threshold" values (simple combinations) are permissible without permanent damage to the equipment. Operation of the equipment with threshold values for long periods of time can impair the reliability. The threshold value tolerances are subject to usual fluctuations.





[www.deutronic.com](http://www.deutronic.com)