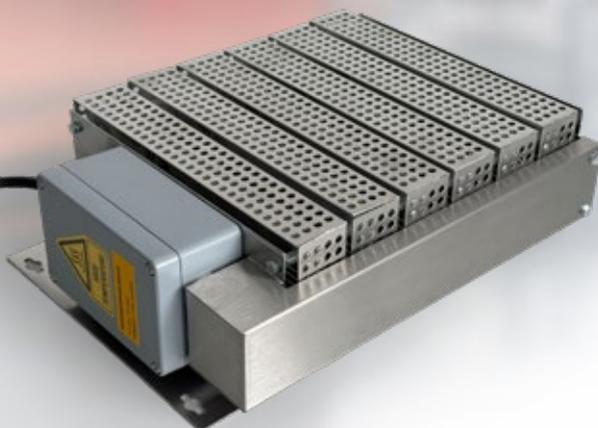


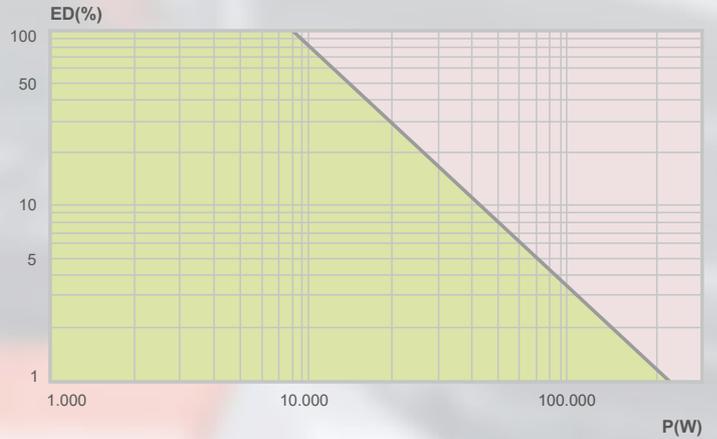
# Safe Dynamic Braking Resistors and Active Energy Management Devices for Electric Drives



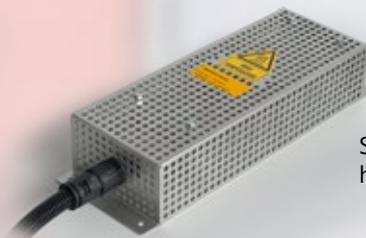
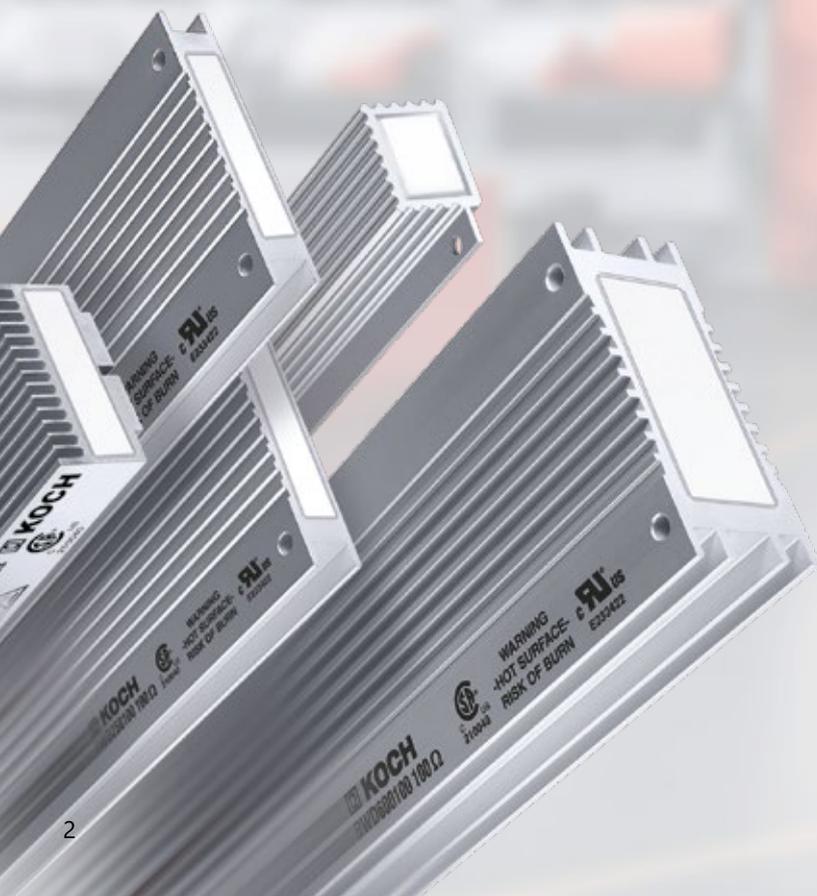
New  
Products

# Safe Dynamic Braking Resistors

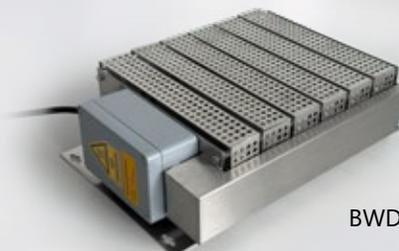
A wide range that offers a solution for every individual case. From 10 watts to 8 kilowatts rated power, braking power of several hundred kilowatts. Most products available with a high protection class. Compact and, above all, safe!



- > PTC braking resistor up to 140 watts rated power on heat sinks, 8 sizes.
- > Wire based braking resistors up to 400 watts rated power, 35 times the braking power, 11 sizes.
- > Combinations up to 8 kW rated power, 35 times the braking power, >10 designs, design according to requirements.
- > Subframe up to 800 watts rated power, 35 times braking power, design according to requirements.



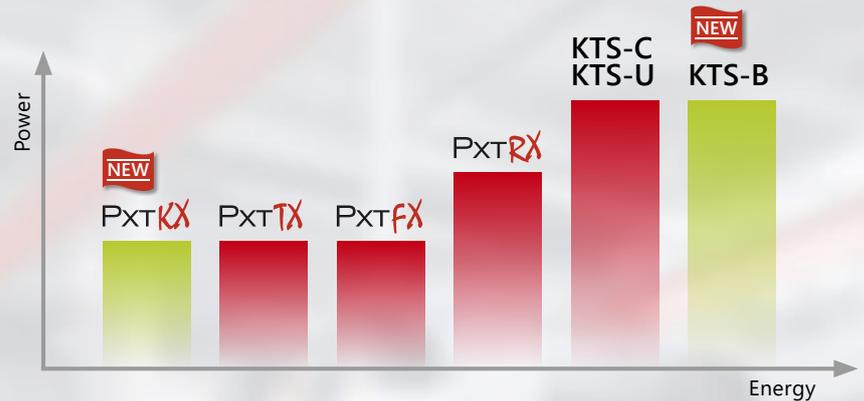
Safe dynamic braking resistor mounted on control cabinets



# Active Energy Management Devices and Systems

Optimal energy management for electric drives and DC grids. That is the central task of devices and systems ranging in size from shoe box to control cabinets. Always precisely dimensioned to the requirements of the specific application. The productivity of the machine or plant is the top priority.

## More power & energy for drives



- > **NEW PxtKX** Short-term UPS with 2 or 4 kJ energy, max. number of uses per hour: 40 or 20 times. In addition:
- > **NEW PxtCX** Additional energy for PxtKX with 2, 4, or 6 kJ energy, max. number of uses per hour is 13.5, 10, or 8 times.
- > **NEW PxtKX** In a terminal box, protection class IP66, with 2 or 4 kJ energy, max. number of uses per hour: 40 or 20 times.
- > **NEW PxtTX** for harsh environmental conditions, special protection against airborne particles, 18 kW for 3 s.
- > **PxtFX** Universal device for all applications with 2 or 4 kJ energy, UL. In addition:
- > **PxtEX** Additional energy for PxtFX with 2, 4, or 6 kJ energy, UL
- > **PxtMX** Plug-in module for communication, fieldbus connection and/or mains power limitation, UL
- > **KTS-C** Ready-to-connect control cabinet system solution for cyclic operation and/or combination with UPS function.
- > **KTS-U** Ready-to-connect control cabinet system solution for operation as an UPS.
- > **NEW KTS-B** Ready-to-connect control cabinet system solution for operation as an UPS with batteries.



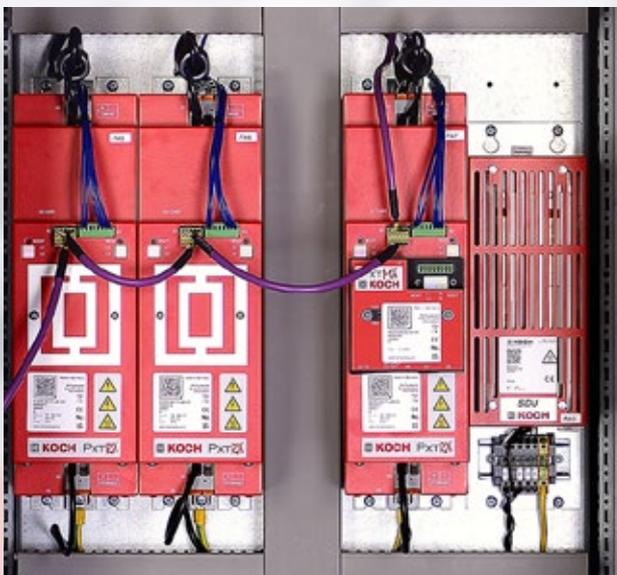
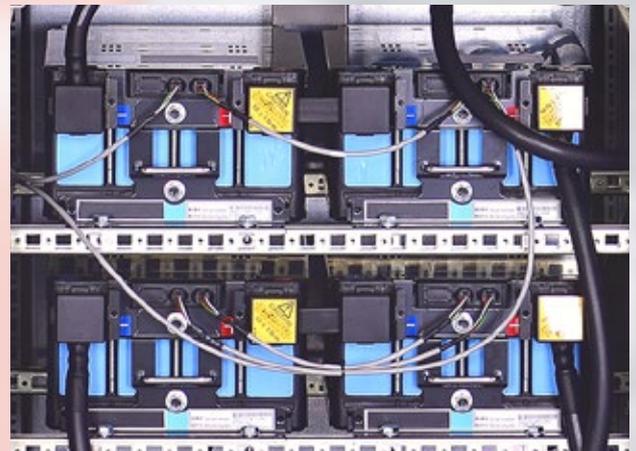
# Active Energy Management System KTS-B

Seven active PxrRX energy management devices ensure a peak current of 300 and a continuous current of 200 amps.

Each battery module provides approx. 5 MJ of energy. Continuous power outputs of up to 75 kW over a period of more than 15 minutes are possible with a control cabinet solution measuring 2,000 x 1,200 x 600 mm (H x W x D). Cycle-proof, dimensioned according to customer requirements, and confirmed by simulation. Standard-compliant protection with discharge option for the DC link.

Application engineering tailored to requirements, right through to a ready-to-connect system with warranty:

Everything from a single source.



## Your advantages

- > scalable system
- > ready-to-connect
- > wide range of applications
- > uninterrupted operation

### Technical data KTS-B

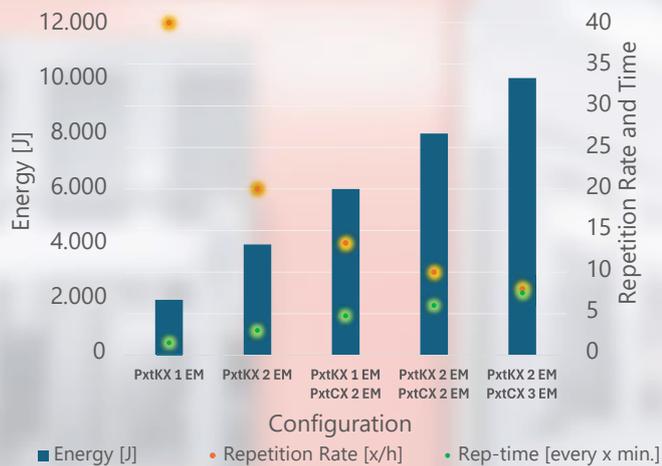
Parameters	KTS-B2000	2x KTS-B2000
Dimensions mm (H x W x D)	2000 x 600 x 600	2000 x 1200 x 600
Capacity up to approx.	5.9 kWh or 21.2 MJ energy	21.2 kWh or 76.6 MJ energy
Peak power up to approx.	36.5 kW	135 kW
Continuous power > 15 min. approx.	21 kW	75 kW



# Active Energy Management Device PxtKX

Specially designed for use as short-term UPS for electric drives, the PxtKX provides 2 or 4 kJ of energy. After connecting the PxtCX expansion unit, an additional 2, 4, or even 6 kJ of energy is available. The PxtKX is capable of delivering 40 amps of current for 1.25 seconds at a peak power of 18 kW. It comes standard with two digital inputs and two digital outputs. A small LED always indicates the operating status. Operating data can be output via optional communication card.

**PxtKX:**  
Energy quantity,  
repetition rate, and time





# Active Energy Management Device PxTtX

The PxTtX device acts as a short-term, uninterruptible power supply for electric drives and DC circuits. It is specially protected against airborne particles. The enclosed housing and heat dissipation via convection ensure this special protection. The PxTtX's primary application is the compensation of brownouts, i.e., bridging short voltage dips, as well as the safe and defined shutdown of the electric drive system during blackouts.



## Your advantages

- > UPS functionality
- > Protection against airborne particles
- > Powerful
- > Strong communication capabilities

## PxTtX

Rated power [W]	18,000 for 3 s
Energy volume [J]	2,000 per energy module
Dimensions H x W x D [mm] with one energy module	297 x 100 x 276

## Customization

There are many examples of customizing active energy management devices and systems. Some customers want the housings in their corporate colors, others even under their own logo. The documentation and labeling in general can also be customized. The possibilities are extensive; just contact us.

A recently implemented example: The connection between the PxTtFX active energy management device and the PxTtEX energy module with lockable and screwable connectors, thus providing a permanently secure connection to additional external energy capacity.



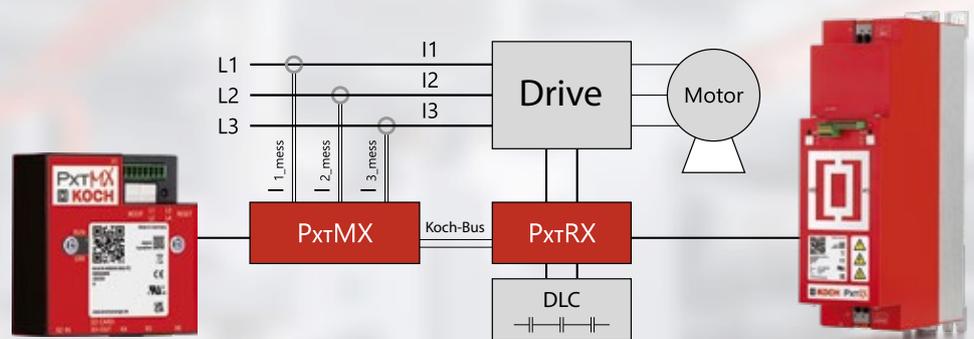
## Your advantages

- > Individual additional benefits
- > Integration into corporate design
- > Identification with the solution

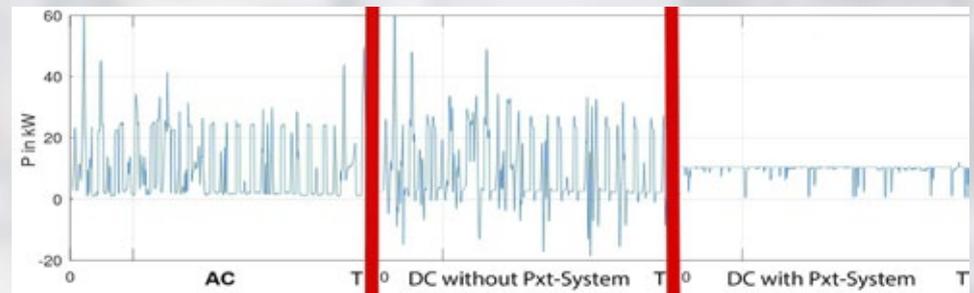
# Plug & Play Peak Power Reduction

The PxtMX plug-in module transforms the PxtFX and PxtRX active energy management devices, or their associated systems, into powerful peak power reducers! The module is simply plugged in and recognized by the active energy management device. Snap-on rings for measuring the currents of the three input phases (AC) of the drive are connected via a plug. Using the PxtTerminal visualization tool, the input current limit can be set to the exact ampere, regardless of the initial value, over a range of 100 amperes. Any additional power requirements are met by the active energy management device or system, which has been previously designed to meet the application-specific requirements.

Example setup of a drive system with peak power reduction using PxtMX and input current measurement in conjunction with PxtRX and double-layer capacitor modules.



The effect of peak power reduction can be very positive, as illustrated here using the example of a robot cell whose power load was reduced from around 60 to 10 kW through the use of an active energy management system with PxtMX.



Simply plugged in and connected to the snap-on current measuring rings via the gray cable, the active energy management system operates via plug & play after prior application engineering.

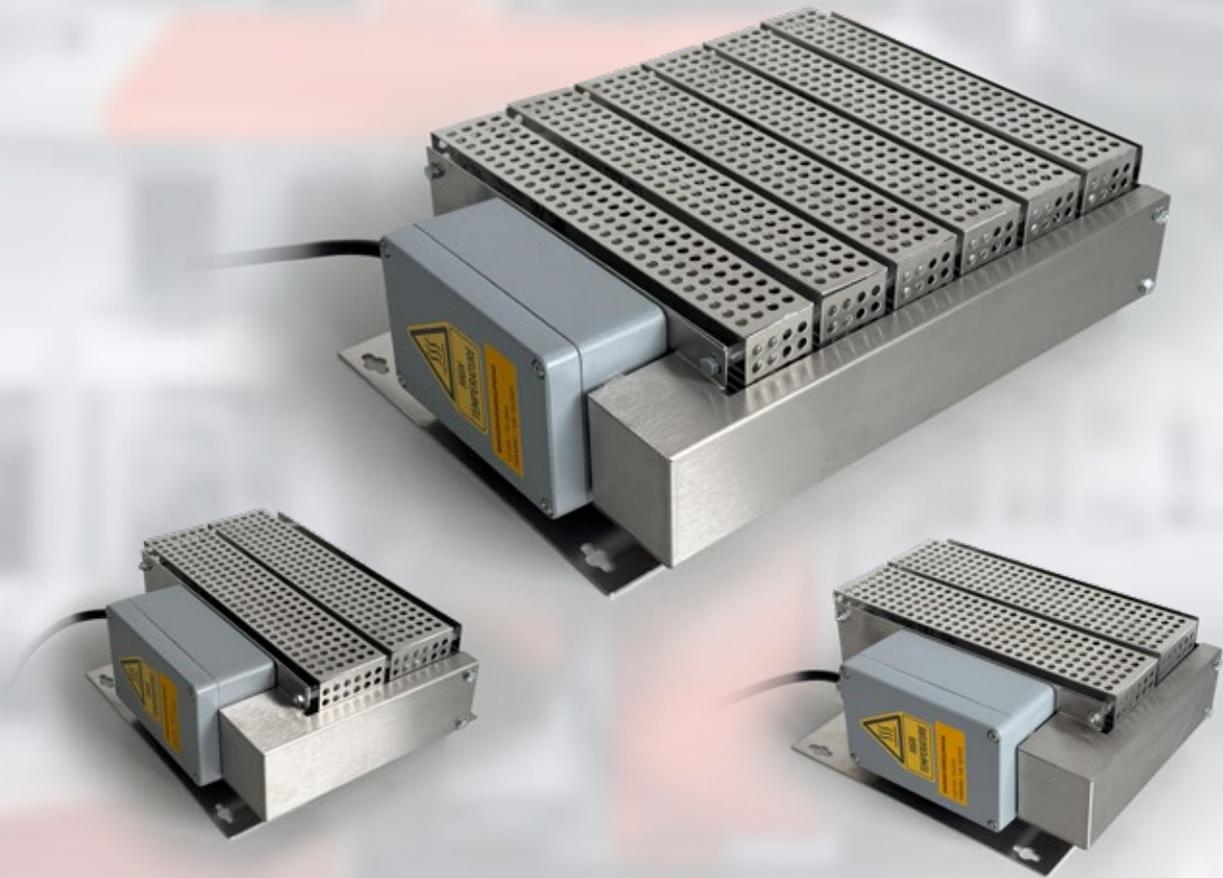


## Your advantages

- > Maintain a defined maximum mains input current
- > Easy operation
- > Ampere-accurate adjustment
- > Plug & Play activation

# Safe Dynamic Braking Resistor Unit with a High Protection Class

Compact design with touch protection for each dynamic braking resistor module, a stylish cover, and connection via an easily accessible terminal box: a powerful unit that meets the individual requirements of even decentralized drive technology. Several sizes and a very wide range of resistance values, as well as high flexibility with regard to the connecting cable, make the safe braking resistor unit with protection class IP65 the preferred product.



## BWD-K0xLIP65SG

3 sizes, 4 power variants

Rated power [W]

Resistance values [R]

Dimensions H x W x D [mm]

Cable length from terminal box [mm]

Cable end configured as required

480 – 1,200

4.5 – 3,720

96.5 x 216 x 245

96.5 x 227 x 245

96.5 x 349 x 245

max. 2,000



## Your advantages

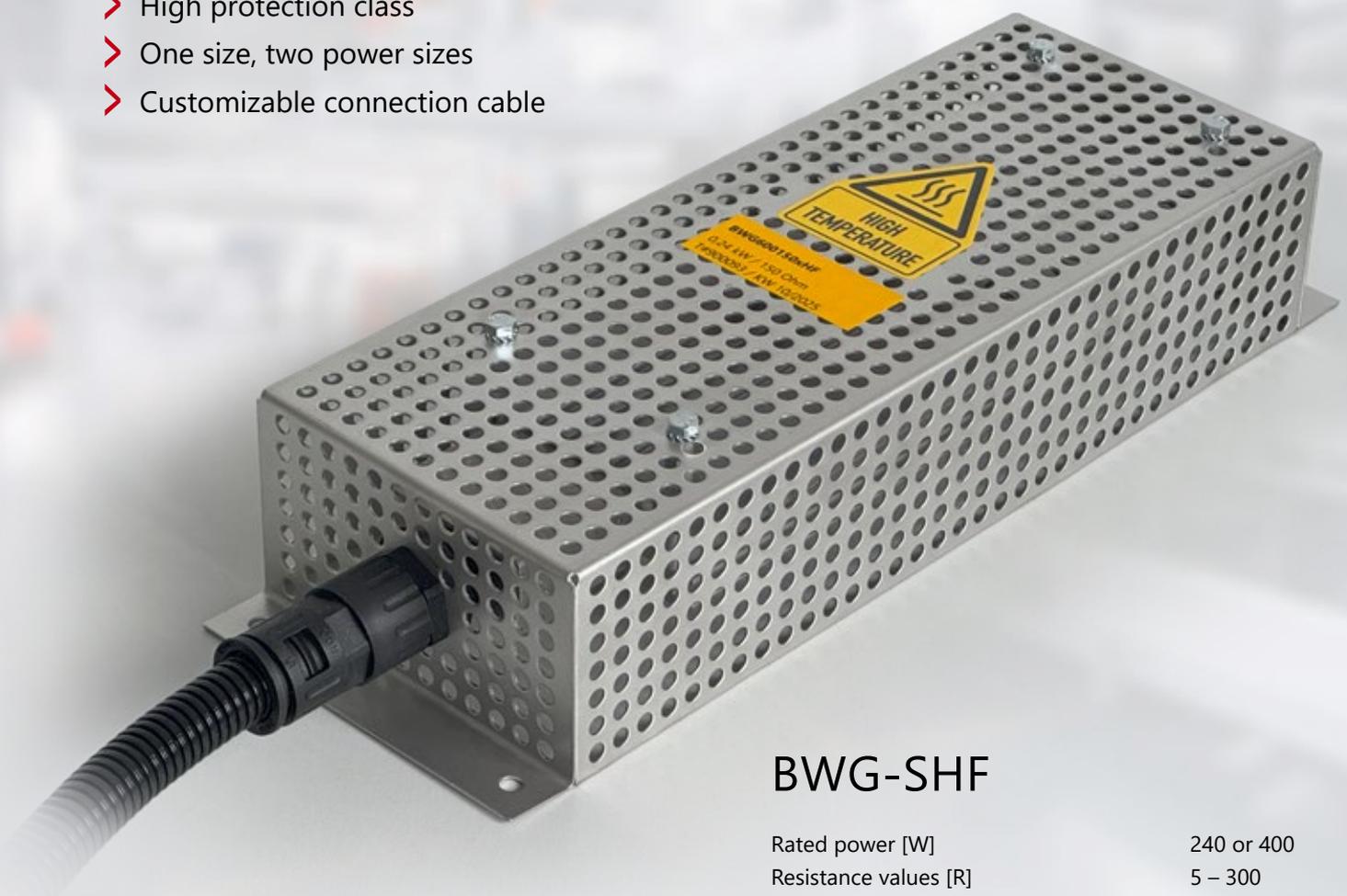
- > Compact solution
- > High protection class
- > Three sizes, four power sizes
- > Wide range of resistance values

# Safe Dynamic Braking Resistor Halogen-Free

A halogen-free connection cable with a protective sheath and touch protection above the safe dynamic braking resistor module: two crucial components of this safe dynamic braking resistor, which, with its high protection class IP65, meets the requirements of decentralized drive technology. The length of the connection cable can be adjusted to the exact centimeter, and the connection cable end can be individually configured to meet application-specific requirements for stranded wires or connectors.

## Your advantages

- > Halogen-free
- > High protection class
- > One size, two power sizes
- > Customizable connection cable



## BWG-SHF

Rated power [W]	240 or 400
Resistance values [R]	5 – 300
Dimensions H x W x D [mm]	64 x 106 x 320
Halogen-free connection cable	✓
Cable length from terminal box [mm]	max. 2,000
Cable end configured as desired	✓

# Safe Dynamic Braking Resistor Mounted on Control Cabinets

Specially designed for mounting on control cabinets: The base of the safe dynamic braking resistor fits directly onto the roof of standard control cabinets, and an optional cover provides touch protection. Continuous power can be adjusted in 400-watt increments up to 8 kilowatts, corresponding to a peak power of 280 kilowatts at a 1% duty cycle (1.2 seconds). High flexibility is ensured by the wide range of resistance values. The connection cable is designed according to customer requirements; its thickness and length are determined according to the application and can be provided with a sheath upon request. The spacious terminal box achieves protection class IP65. Additional optional mechanical components enable individual adaptation to the ambient conditions.

## Your advantages

- > Powerful
- > High protection class
- > One size, many power sizes
- > Customizable



## BWD-KzzDIP65S

1 size	
Rated power [W]	up to 8,000
Resistance values [R]	0.5 – 3,000
Dimensions H x W x D [mm]	252.5 x 440 x 550
Dimensions with cover H x W x D [mm]	275 x 440 x 550
Cable length from terminal box [mm]	max. 2,000



# Digital Nameplate: PxtTypeplate

The completely redesigned version of the digital nameplate is now structured according to the requirements of the digital product pass. In addition to the technical data printed on the product itself, extensive detailed product information is available by scanning a QR code and having a connection to the internet.

## Your advantages

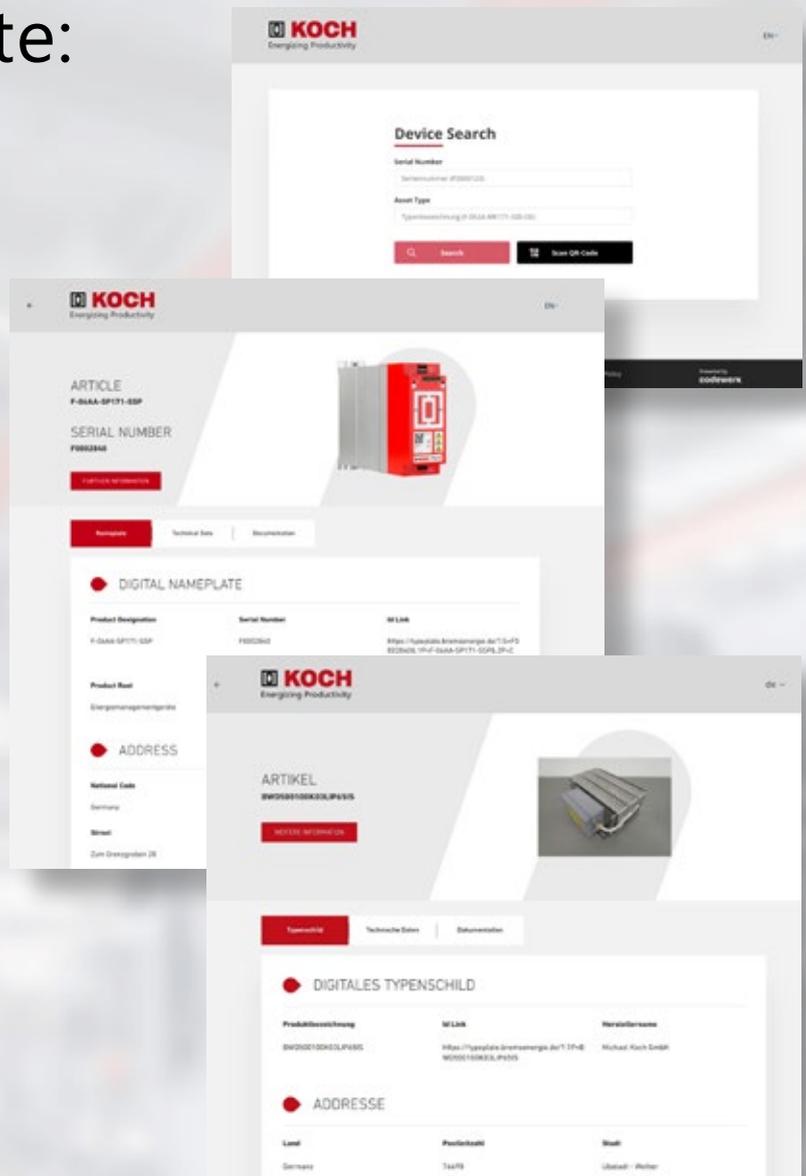
- > additional information on site
- > digital nameplate
- > customizable
- > DPP (digital product pass) requirements met

### New Extras:

In addition, there is now the option of assigning a unique serial number to the safe dynamic braking resistors. By scanning the QR code, users can access further product-specific data via PxtTypeplate.

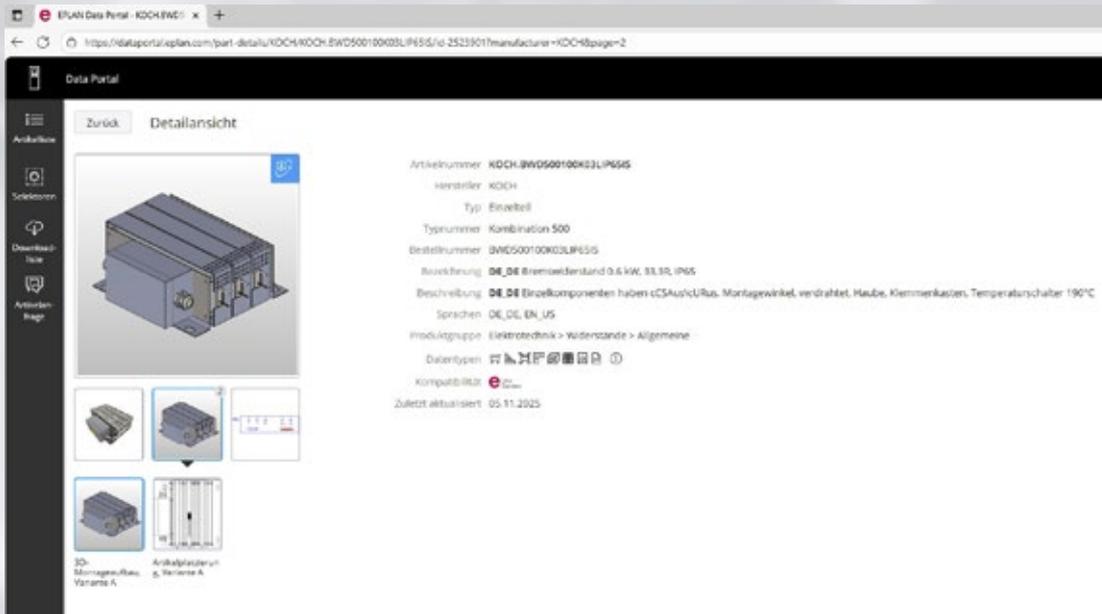
### Example PxtKX:

If you have an internet connection, simply scan the QR code to access extensive and helpful information about the product.



# Our products are available in Eplan

Higher productivity in design work! All data for our products is now gradually being added to Eplan. Eplan users know immediately how to take advantage of this benefit.



## Simulation with SERVOsoft

The PRO version of the SERVOsoft software package from ControlEng, starting with the current version V4.6.1, offers the option of combining drive systems with an active energy management system. SERVOsoft's "EasySize Wizard" complements the precise design with a comprehensive simulation that includes the entire drive system, from the power connection to the output shaft. Optimizing grid power peaks thus becomes a simple task.



### Your advantages

- > Highly accurate system definition
- > Simulation of the entire drive system
- > Precise component design

# Who we are – What we do

## Local roots

Our “little factory” with Technikum is located in the Baden town of Ubstadt-Weiher, between the Rhine valley and Kraichgau, where we currently employ over 55 people, seven of whom are still completing their training. We are conveniently located with good transport links and deliver to our customers world-wide from this location.



## Taking responsibility - pointing the way

We have certification for our environmental management in accordance with EMAS III and our quality management in accordance with DIN EN ISO 9001:2015 and take pride in having a sustainable business culture. We are a corporate member of the registered association Transparency International Deutschland e.V., which means we advocate cooperation without corruption.



UMWELTPREIS  
FÜR UNTERNEHMEN  
BADEN-WÜRTTEMBERG  
2022

Preisträger

## Quality through education

Every year we offer at least one apprenticeship for an industrial clerk and a warehouse logistics expert. In cooperation with the Cooperative State University Baden-Württemberg we also offer one place on a dual bachelor degree for business administration and electrical engineering. We place great importance on the career development of our employees: for this reason we work closely together with the local Chamber of Industry and Commerce and other training institutes.

## Multi-faceted communication

Not only through the classical channels do we keep you up to date, but also through our social media channels and our Newsletter.



Newsletter  
registration

## Commitment to the community

We take our social responsibility as a company seriously and are committed in many different ways: donations, sponsorships, cooperation with local schools, associations, local political institutions, the Chamber of Industry and Commerce and the regional economic promotion Bruchsal.



## What we offer:

- Tested product quality
- Certified processes
- Individual application support
- Machine specific design and sizing
- Rapid reaction
- Quick delivery times
- On-time delivery
- Reliable partner
- Long-term business relationship
- Direct customer relations

Use our communication channels:



## Your specialist for:

- Active energy management devices and systems
- Safe brake resistors

for electric drive technology

We look forward to hearing from you!



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