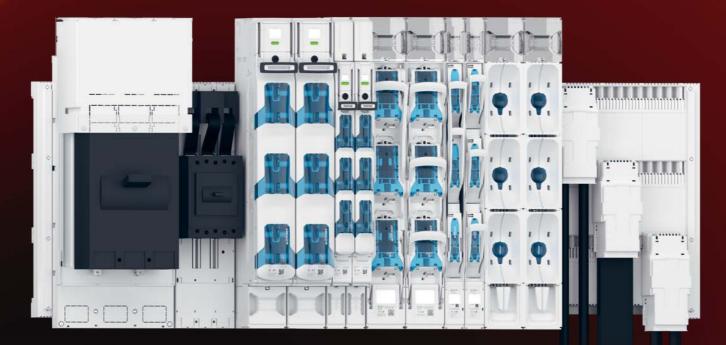
wöhner

185 POWER

WELCOME TO THE ULTIMATE SYSTEM WORLD

POWER FLEXIBLE SWITCHING WITHIN ONE SYSTEM



The 185 mm system solution continues to grow. QUADRON®185Power Speed, the NH in-line switch-disconnector-fuse

Discover a perfectly matched system with powerful components and maximum ease of mounting thanks to CrossLink®Technology. 185Power from Wöhner offers you a QUADRON® product family highlight in the QUADRON®185Power Speed, the NH in-line switch-disconnector-fuse that can be mounted vertically to a 185 mm busbar system. This is the first time a combination of fast switching NH in-line switch-disconnector-fuse can be included in a mixed installation with other components within a 185 mm system. The system also includes the CRITO®185Power connection strips and connection modules, guaranteeing a compact and flexible connection.

The 185Power system offers you, in addition to a comprehensive NH in-line product family, all the elements required for a sustainable system: from busbar supports, infeed components, and system covers for optimal touch-safe protection, right through to adapters for all standard circuit breakers.

BUSBAR SUPPORT AND CrossLink® COVERING SYSTEM

- → Drill-free mounting of all components through the touch-safe CrossLink® covering system
- + CrossLink® covering system ensures phase segregation
- Mounting and removal possible on live busbar system

CONNECTION COMPONENTS AND CIRCUIT BREAKER ADAPTER

- + Adapter to fit all standard circuit breakers
- + Adapter for direct connection to the busbar
- + Connection rail for round conductor, flat conductor and cable lugs
- + Connection module for round conductor, flat conductor and cable lugs

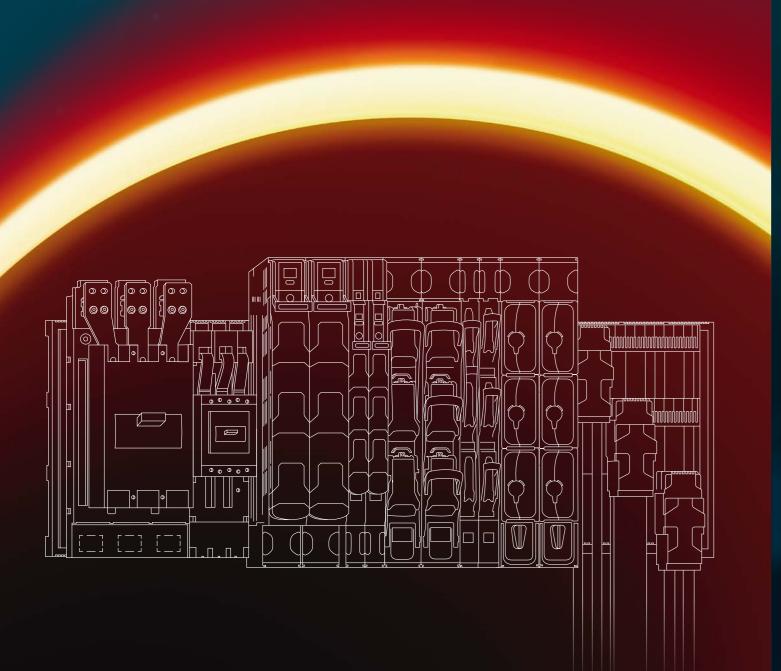
QUADRON[®] 185Power Speed, NH IN-LINE SWITCH-DISCONNECTOR-FUSE

- → NH in-line switch-disconnector-fuse
- Operator-independent switching with snap-action switch mechanism
- + Mixed possibilities multiple possibilities in one system

QUADRON®185Power NH IN-LINE FUSE-SWITCH-DISCONNECTOR

- + NH in-line fuse-switch-disconnectors size 00 to 3, for 160 A to 630 A, 910 A, 1250 A
- Rapid, safe mounting of the components to the busbar system
- ➡ Innovative heat dissipation and optimised venting of switching gases

M PAGE 20



Just a revolutionary idea at the start — Developing the first 185 mm system solution.

ONE SYSTEM ALL THE BENEFITS

MODULARITY (#

All components and products are modular and perfectly matched. For the first time you can combine NH in-line switch-disconnector-fuse vertically in a mixed installation with other components within a 185 mm system.

SIMPLICITY

Innovative CrossLink® connection makes for easy, no-drill mounting. Clamp connection permits all system components to be mounted and contacted effortlessly.

COMPATIBILITY

Thanks to the EQUES®185Power adapters all standard circuit breaker types can be quickly and easily mounted.

POWER



SAFETY

With the 185Power system, safety is paramount. The comprehensive touch-safe protection for the busbar system and all components guarantees this. In addition the QUADRON® 185Power Speed, the NH in-line switch-disconnector-fuse, whose snap-action switch mechanism is operator-independent and switches securely, represent a new safety dimension in the 185Power system

EFFICIENCY

Perfectly matched components from a single source enable a substantial increase in efficiency. The result is a considerable saving of time in engineering, planning, purchasing and system assembly.

MEASURING

In the 185Power system there are a number of possibilities to quickly and easily integrate current transformers. Retrofitting is possible without requiring additional space.



STRUCTURE

Standardized system components ensure order and a clean presentation of everything in the control cabinet.

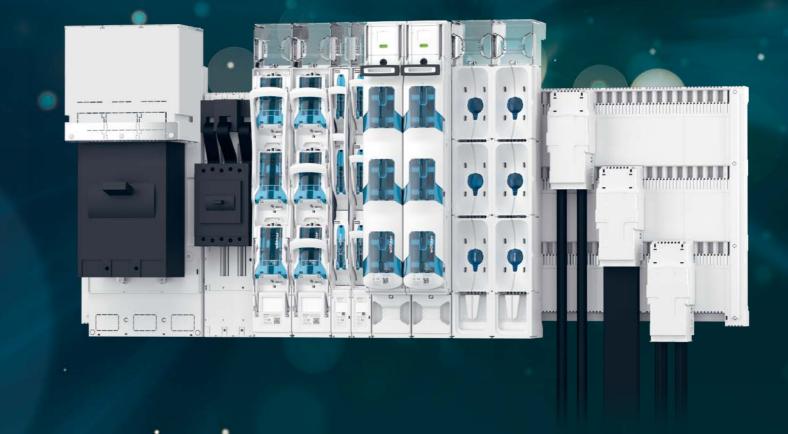
FURTHER SYSTEM DEVELOPMENT

Innovation has been at the heart of Wöhner's history.

In the early 1980s Wöhner presented its innovative 60 mm busbar system technology. The technology became the industry standard in Europe and is gaining broad acceptance in diverse markets around the globe. Innovation and improved design in pursuit of electrical safety and efficiency have been the hallmark of the Wöhner 60 mm busbar system. The introduction of the 185Power system in 2014 will continue the success in a new dimension. Our horizon has been dramatically broadened.

With the introduction of the QUADRON®185Power Speed, the NH in-line switch-disconnector-fuses, development goes even further.





Double-T profiles extend the 60 mm system to 1600 A

SECUR® in-line fuse-switchdisconnector series

EQUES®

adapter series

AMBUS® fuse-holders

30Compact busbar system

2013 **SECUR®**

D0 switch-disconnector with SnapLock wire connection technology

CrossBoard® basic system QUADRON®185Power Speed, NH in-line switchdisconnector-fuse

CRITO®CrossBoard QUADRON®

1980 60Classic

busbar system

1998 QUADRON® NH fuse-switchdisconnector series

2001 SECUR®

D0 switch-disconnector

2008

CrossLink® Technology

2012 MOTUS® hybrid motor starter

2014 185Power busbar system

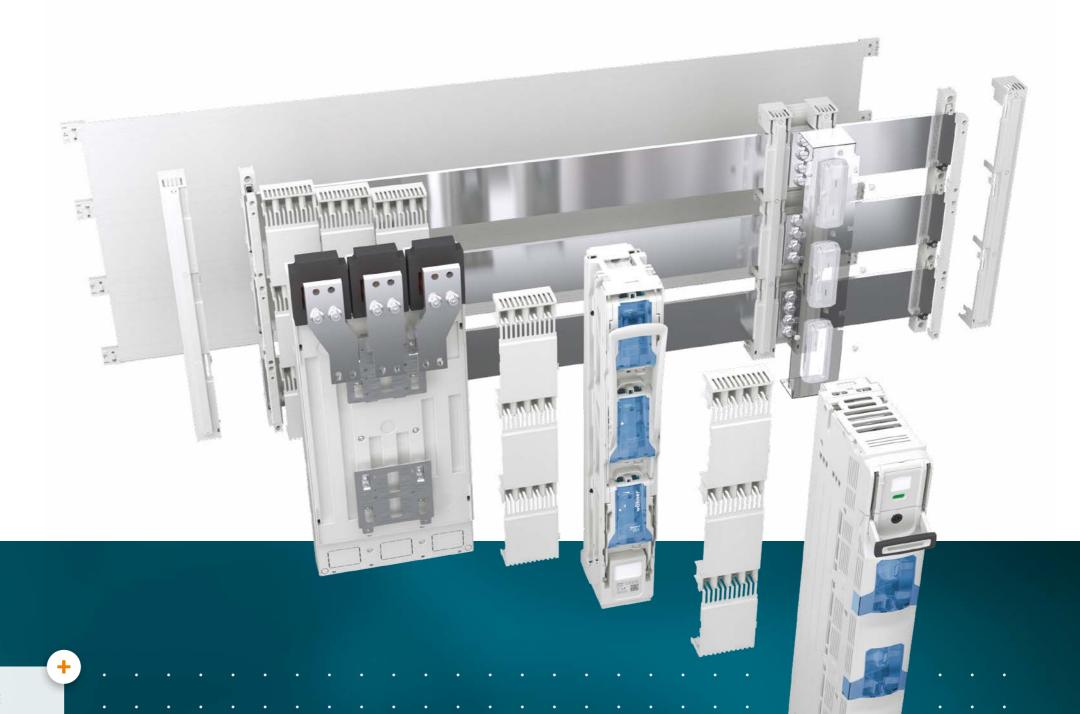
BROOME10®CrossBoard EQUES®CrossBoard



THIS SYSTEM IS ABOUT ELECTRICAL SAFETY

An all-round care-free package

The innovative CrossLink®Technology from Wöhner meets the requirements placed on power distribution equipment with readily available modular components delivering high levels of system dependability and personal safety. Systems can be engineered in the most straight forward way and modified to evolving application requirements. In the 185Power system the CrossLink®185Power covering modules, base plate profile, and the busbar support covers ensure comprehensive touchsafe busbar system protection. Integral system partitioning saves time when mounting and provides optimum safety thanks to the matched components. CrossLink®Technology advantages continue in the touch protection of longitudinal busbar connectors.





OPTIMUM TOUCH-SAFE PROTECTION

The base plate profile for covering the back of the busbar system provides all-round protection. When accessing the electrical system from the rear during maintenance or extension work, the electrician is optimally protected from touching current-carrying busbar system components.





TOUCH-SAFE PROTECTION RIGHT FROM THE START

Busbar support and CrossLink®185Power covering system

The base of 185Power are the busbar supports which can be adjusted to various busbar widths. These allow the possibility for a drill-free mounting of flat bars. Thanks to the industrial production of 50 mm and 100 mm CrossLink® touch-safe protection covers, custom fabricated solutions are a thing of the past. The guidance of the CrossLink® busbar covers allows for an easy, safe positioning and contacting of components at any time. The risk of an externally initiated short circuit is minimised.

FULLY TOUCH-SAFE PROTECTED BUSBAR SYSTEM

- Components can be mounted and removed from energized systems
- Base plate profiles make it possible for the busbar system to be covered from the back; Base plate fasteners are eliminated as a path for short circuits to develop
- Cover openings serve as a positioning aid for connection clamps, making it easy to position components such as NH in-line fuse-switchdisconnectors or circuit breaker adapters

Partition plates

between the phases

ensure high safety

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Manufacture de la constitución d

SLOT COVERS

- For covering the slots in the CrossLink®185Power touch-safe protection cover modules
- Protection class IP4x is achieved



100 mm wide 50 mm wide



ALL-PURPOSE BUSBAR SUPPORTS

for busbar supports

- Mounting non-drilled flat busbars Accessories: Touch-safe protection cover
- Superstructuring possible with NH in-line fuse-switch-disconnectors – even with touch-safe protected busbar supports

CrossLink®185Power **TOUCH-SAFE PROTECTION COVER MODULE**

- CrossLink®Technology provides optimum touch-safe protection and also dimensional scope for direct and secure connecting of components to the busbar system
- Modules in 50 mm and 100 mm widths are available
- Easy, tool-free mounting; However for safety reasons, tool-only disassembly
- For rear partitioning, base plate profiles can be snapped from the back onto the CrossLink®185Power touch-safe protection cover modules.

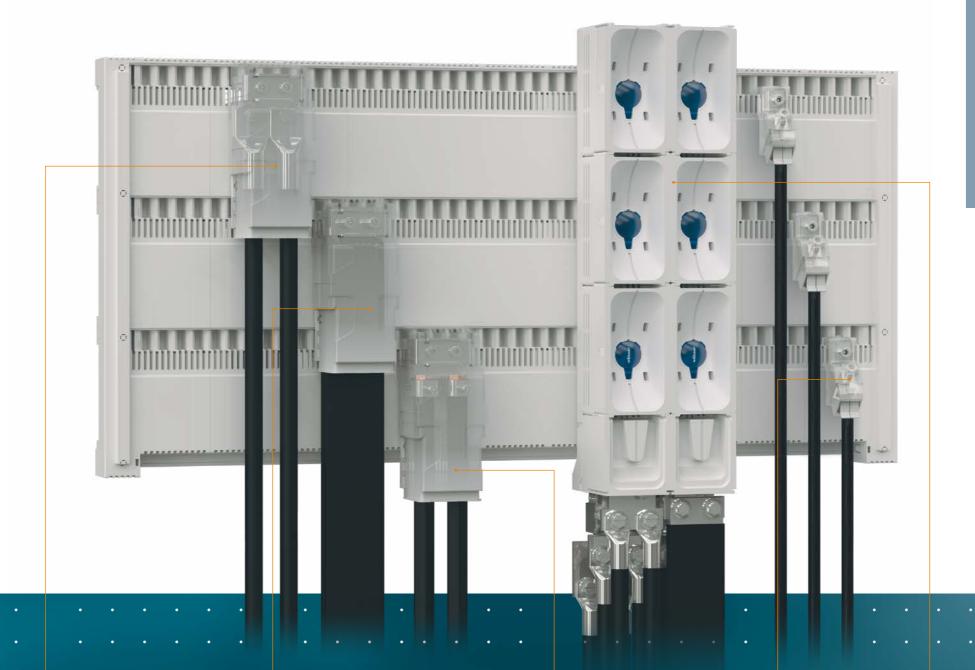




THE EASIEST WAY OF CONNECTING

CRITO®185Power connection components

Wöhner is breaking new ground in the area of connection technology. Both feeder and tap-off options are available with the CRITO®185Power connection rails or the CRITO®185Power connection modules. These solutions allow you to conveniently connect round conductors, flat conductors and cable lugs. With the individual components, you can apply currents of up to 1600 A directly to the busbar. Both connection options are fully compatible with the CrossLink® covering system.



CRITO®185Power CONNECTION RAILS

t only 100 mm wide, conductors, able lugs and a laminated copper bar an be connected. Due to the standard upporting edge, the CRITO® connection ills can be easily combined with all UADRON®185Power product family omponents. Just like other components are connection rail can be mounted pove the busbar support. The front access "service" covers allow convenient assembly and ease of maintenance.

CRITO®185Power CONNECTION MODULES

Four touch-safe protected clamping methods are available for variable connections and connection of bushar systems:



Conductor connection terminal for copper and aluminium. It is suitable for 2 round conductors up to 300 mm²



Flat conductor connection for 1 or 2 laminated coppe



M12 screw type terminal.
This can be used for up to



Conductor connection terminal with integrated cover for copper an aluminium conductors. It is suitable for 1 round or 1 sectored conductors up to 240 mm²

CRITO®185Power CONNECTION RAIL

Connection options:

- Laminated copper bar up to
- 80 mm wide

 Conductor connection terminal for copper and aluminium conductors up to 300 mm²
- Cable lugs:

4 x 240 mm² or 3 x 300 mm²

12



THE FASTEST LINK BETWEEN EVERYTHING

EQUES®185Power adapter for circuit breakers

Our adapters enable circuit breakers to be quickly and easily mounted on the 185Power system. They can be used for both feed- and tap-mounting of circuit breakers to the busbar system – something, of course, which applies to all customary circuit breakers up to 1600 A. With the EQUES®185Power adapter series, 185 mm busbar systems can be built without fuses.

Touch-safe protection shrouds for the connecting set between circuit breaker and adapter meets protection class IP2x. Retaining plate with various drilling templates for various brands of circuit breakers and construction sizes.

EQUES®185

EQUES®185Power ADAPTER FOR CIRCUIT BREAKERS

- possible at the top or bottom of the circuit breaker adapter

 The all-purpose retaining plates allo
- The all-purpose retaining plates allow all standard circuit breakers to be mounted on the adapter
 Rated currents: 400 A, 630 A, 800 A, 1000 A, 1250 A, 1600 A
 Terminal shrouds are available for
- Terminal shrouds are available for touch-safe protection of the connectin set as accessories. This provides IP2x protection from above.

ENERGY MANAGEMENT AT ITS BEST

Transformer measurement

To save space, three current transformers (CTs) can be directly integrated on the EQUES®185Power adapter. Transducers are easy to connect, and for efficient energy management purposes, provide data on power and consumption.





An additional cross-beam

can support the weight

of the circuit breaker and

adapter. Threaded holes

on the top of the adapter,

to the right and left, are

for mechanical fastening

to this beam.

Nounting aid for easier nounting of the cicuit reakers on the retaining late of the adapter.



file rails with cage nuts. merous circuit-breakers up

nerous circuit-breakers up 30 A can be easily mounted he EQUES*185Power oter due to C-profile rails n cage nuts that can be ably adjusted.



grated current surement current transformers

ADAPTER MOUNTING

There are two possibilities for mounting the adapter onto the busbars: One of them is direct connection conventionally undertaken with screw clamp connection onto the drilled busbars. The other is the extremely convenient and time-saving variant with terminal clamp as a no-drill mounting on a touch-safe protected system. The EQUES®185Power adapter for circuit breakers up to 630 A also comes in a variant with a terminal clamp for mounting without CrossLink® touch-safe protection.

CIRCUIT BREAKER MOUNTING

By using the mounting aids, all applicable circuit breakers can be easily and rapidly mounted onto the EQUES®185Power adapters and securely connected.











vith two C-profile rails with variably

One adapter – many applications.
The adapter is fully compatible with the CrossLink® covering system and



When the circuit breaker is attached to the EQUES®185Power adapter this results in the same level of 150 mm for the door cut-out as for the supporting edges of the QUADRON®185Power NH in-line fuse-switch-





SWITCHING **OR DISCONNECTING**

QUADRON®185Power Speed, the NH in-line switch-disconnector-fuse

QUADRON®185Power Speed, the in-line switch-disconnector-fuses, in sizes 00 to 3 with an operator-independent snap-action switch mechanism, now complement the 185Power system. With the NH in-line switch-disconnector-fuse, the user also benefits from the numerous advantages, with which he is already familiar from the NH in-line switchdisconnector-fuse: Quick and easy mounting, convenient line terminal, and integrated transformer.



OPERATOR-INDEPENDENT SWITCHING

Regardless of who is moving the lever – the automatic snap-action switch mechanism of the QUADRON®185Power Speed, NH in-line switch-disconnector-fuse switches with a defined speed. Danger from arcing is therefore effectively excluded. The snapaction switch mechanism always disconnects both NH fuse-link contacts from the voltage-carrying components. This double break ensures even more safety.

MIXED POSSIBILITIES

Multiple possibilities in one system

Mixed installation of switch-disconnector-fuses, in-line switch-disconnectors and circuit breakers, with other components in the same control panel is now possible. With the modular 185Power system, the various components can be combined on a single 185 mm busbar system, everything fits perfectly together. You also save space thanks to the narrow width and the gap free mounting of the strips. Even retrofits or extensions to the system are problem-free and possible at any time, thanks to the modular system.

YOUR ADVANTAGES AT A GLANCE

- Operator-independent snap switching mechanism with double disconnection
- Mounting under voltage possible
- Safety through full touch-safe protection thanks to CrossLink®Technology
- QUADRON®185Power Speed, NH in-line switch-disconnector-fuse installed vertically
- Top and bottom connection possible
- Mixed installation on a single busbar system
- Space-saving thanks to compact, seamless construction
- Time-saving due to simple mounting and connection
- Highly flexible subsequent changes and extensions easily possible

QUADRON®185Power Speed NH IN-LINE SWITCHDISCONNECTOR-FUSE

Size 1 - 3

Flag indicator shows

the switching state

via a red-green field

 NH in-line switch-disconnectorfuse project through the control panel door; this means that operation without opening the control panel door is possible

QUADRON®185Power Speed NH IN-LINE SWITCH-DISCONNECTOR-FUSE Size 00

- Available in two depths
- NH in-line switch-disconnectorfuse Speed project through the control panel door; this means that operation without opening the control panel door is possible

SAVE SPACE – REDUCE COSTS

Low voltage distribution with the 185Power system

The 185Power system lets you implement cost-efficient low voltage distribution systems. The mixed tap-off installation with varying protection on one busbar system in a standard control panel saves space, reducing your overall system costs. The modular design enables order and overview. Even if yet more changes are required to the system at a later date, you are on the safe side with this system 185Power. This lets the user remain flexible, even for future requirements.

SAFETY F

SAFETY PLUS: LOCKING AND SEALING

QUADRON®185Power Speed, the NH in-line switchdisconnector-fuses Speed, can be secured in a numbe of ways. All strips can be locked with padlocks of up to a maximum of 7 mm (NH00) or 8 mm (NH 1 - 3) shackle diameter. Unauthorized activation of a strip can effectively be prevented. Seal application provide additional security against manipulation.



COVER LOCKING

The lock integrated within the switch-disconnector fuse cover can easily be locked with a control panel key. Thanks to the possibility of access through the closed control panel door, this function secures the QUADRON®185Power Speed against unauthorized opening of the fuse space!

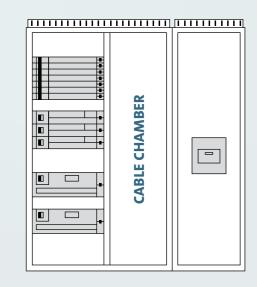


SEPARATE CABLE CHAMBER NOT REQUIRED WITH 185Power Speed

When you want to use conventional NH switch-disconnectorfuses as tap-offs but do not have enough space for the additional cable chamber (picture right).

With the horizontal busbar system 185Power and the NH in-line switch-disconnector-fuses Speed mounted vertical on it, you can get a more compact panel (Fig. page 19).

Another advantage: The vertical structure of the NH in-line switch-disconnector-fuses Speed ensures that any heat transfer between units is significantly reduced.





or bottom connection.

ith all QUADRON®185Power eed you can have the cable

STANDARD-COMPLIANT SYSTEMS

As the snap-action switch mechanism in combination with the specially designed switching contacts meets the AC 23B utilisation category under the IEC / EN 60947-3 device standard, the QUADRON®185Power Speed, the NH in-line switch-disconnector-fuses are suitable as Supply Circuit Disconnecting Means in accordance with standard IEC / EN 60204-1.

Thanks to the AC 23B utilization category, the QUADRON®185Power Speed, the NH in-line switch-disconnector-fuses can also be used for switching of motor and other inductive loads.



QUADRON®185Power, the NH in-line fuseswitch-disconnectors

Easily fits any combination of the QUADRON®185Power NH in-line fuse-switch-disconnectors of sizes 00 to 3 to the 185Power system. Based on application specific requirements, the NH in-line fuse-switch-disconnectors can be conveniently, quickly and securely mounted with mechanical clamps without drilling or bolted directly to a drilled busbar.

YOUR BENEFITS

SWITCHING EVEN

THROUGH THE CONTROL

Thanks to the greater depths,

the QUADRON®185Power Speed,

NH in-line switch-disconnector-

fuses can also be operated when

the control panel door is closed.

- Hinged windows for time-saving mounting and no need to dismantle the NH in-line fuse-switch-disconnectors
- Easily accessible cable terminal compartment
- Lid can be locked in the open and closed positions
- Lid position monitoring with two signaling switches per lid
- Easy switching thanks to ergonomic operating handle
- Considerable scope for cable connecting
- Top and bottom connection possible

1 Lid can be lead-sealed

QUADRON® 185 Power NH IN-LINE FUSE-SWITCH-DISCONNECTOR

Size 00 flat version

- 1- and 3-pole switchable
- Shallow depth allows for a space saving design
- Adapter available for mounting two QUADRON®185Power NH in-line fuse-switch-disconnectors size 00

high version

- 1- and 3-pole switchable
- In the overall height compatible with size 1 - 3 NH in-line fuse-switch-disconnectors
- Optimized fulcrum position for easy fuse removal

QUADRON® 185Power NH IN-LINE FUSESWITCH-DISCONNECTOR Size 1 - 3

- 1- and 3-pole switchable
- 2 x NH Size 3

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1250 A
 Sufficiently large terminal compartment cover

QUADRON®185Power

DOUBLE NH IN-LINE

FUSE-DISCONNECTOR

 4 cable lugs per phase can be connected

QUADRON®185Power NH IN-LINE FUSE-BASE OPEN VERSION

Size 00 - 3

- Mounting possible in a
- touch-safe protected condition

 Optional labelling on phase
- separating bar

padlock per lid NH in-line fuse-switch-disconnector

 1- and 3-pole switchable, closed with 3 x 2 padlocks, 5 mm shackle diameted
 3-pole switchable, open with 3 x 2



PARKING POSITION

The lids of the 1-pole switching NH n-line fuse-switch-disconnectors can be unhinged. A safe parking position is assured from them being turned over and re-mounted. The lid can no longer landvertently closed.





Simple fuse withdrawal and insertion from optimally positioned fulcrum point of the fuse carrier of the size NH 00, high version, NH in-line fuse-switch-disconnector.







- Size 00 to 3 available with electronic fuse monitoring
- Available with LED fuse indicator for indicating the fuse condition



COMPLETE FLEXIBILITY IN MOUNTING

One busbar – three connection possibilities

The innovative Wöhner 185Power system opens up a whole new dimension in terms of ease of mounting for NH in-line switch-disconnector-fuses and NH in-line fuse-switch-disconnectors. All sizes 00 - 3 models can be mounted in various ways to the busbar:

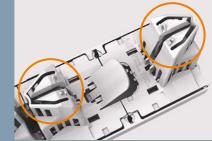
- No-drill mounting on the CrossLink®-protected busbar system using a terminal clamp
- No-drill mounting with a terminal clamp directly to a busbar structure without CrossLink® covers
- Mounting with a screw type terminal (M8 / M12) to drilled busbar

All NH in-line switch-disconnectors can be used with the outgoing terminals at the top or bottom. In the NH in-line fuse-switch-disconnectors, just the base needs to be rotated. The strip housing can be re-fitted in the same position and no change is required to the covering system. In the NH in-line switch-disconnector-fuses there are two different versions available for top or bottom outgoing terminals.

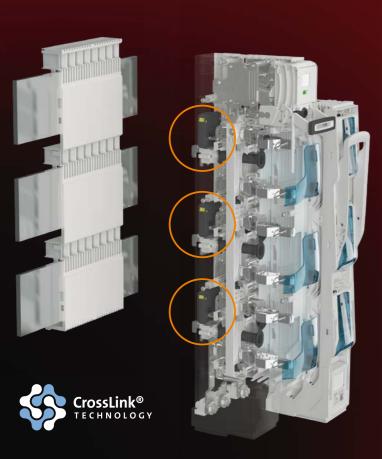
NO DISMANTLING – MOUNTING CONVENIENCE



 The NH in-line fuse-switch-disconnectors can be directly mounted on the busbar through a hinged window – without them having to be dismantled beforehand



- NH-contacts are IP10 protected with the lid dismantled
- IP20 touch-safe when complete assembled



Integrable current measurement

- For QUADRON®185Power and QUADRON®185Power Speed
- Easy mounting of the current transformers in the back of the housing
- No change in the installation depth of the switching devices



Mounting with terminal clamp on the CrossLink® touch-safe protection cover

In order to not unnecessarily interrupt the operation of equipment, terminal clamp-deployed mounting can also be done in an energized state. This ensures maximum safety for a qualified electrician.



Mounting with terminal clamps to a system without CrossLink® touch-safe protection is also possible. In so doing, the device can be easily attached onto the busbar without this added level of protection.



Mounting with M8 / M12 . screw type terminal

Three M8 / M12 screws can be used to fix the NH in-line switch-disconnectors onto either drilled or punched busbars in the traditional method after the added labour of drilling holes in the busbars.







VARIABILITY IN THE CONNECTION METHOD

Easily accessible terminal compartment

Simple connection increases efficiency. For all NH in-line switch-disconnector-fuses and NH in-line fuse-switch-disconnectors, vast importance was placed on an easily accessible terminal compartment. Depending on the type, the cover can be either opened or pushed out and removed – for all connection types.

INNOVATIVE COOLING AND VENTILATION

Effective discharge of switching gases

The full-length lateral ducts of the QUADRON®185Power NH in-line fuse-switchdisconnectors produce a kind of draw-off chimney which acts as a cooling and ventilation system for the pinpoint discharging of switching gases and heat. The need for arcing chambers is no longer necessary thanks to this simplified and effective discharge opening method.

CONNECTION ARRANGEMENT 1Box terminal

No additional terminal compartment cover is needed when using a box terminal for the connection.



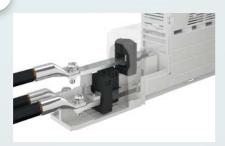
CONNECTION ARRANGEMENT 2

The drawer-type method allows for a considerable variation in connections. Connection can be flexibly made with either nut or stud bolt – depending on installation requirements. An additional terminal housing cover is needed when using a cable lug for the connection. These covers can be linked in series to form longer covers.



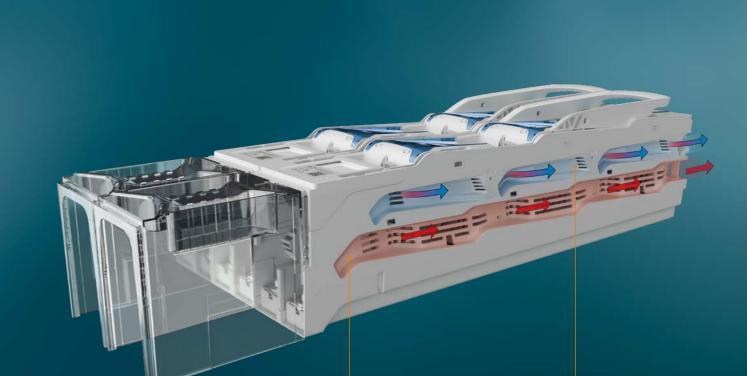






CURRENT TRANSFORMER MODULE FOR MOUNTING IN THE CONNECTION AREA

- For QUADRON®185Power sizes 1 to 3, QUADRON®185Power Speed sizes 1 to 3 and CRITO®185Power connection rail 800 A
- Easy installation in the connection area Perfect for retrofitting, installed current
- transformers still accessible Various current transformer versions, also for utility billing purposes
- Touch-safe protection, with optional terminal cover cap





LEAVE BEHIND A GOOD IMPRESSION

The attractive appearance of your switchgear assembly is what ultimately leaves a lasting impression of you on your customer.

The 50 mm and 100 mm grid units of the CrossLink® touch-safe protection covers make planning easier and provide you with a maximum degree of safety. For their part, the matched components raise safety levels and simplify installing, maintaining, servicing and extending the system. Deployment of the 185Power system is synonymous with both skill and a sense for operating efficiency.

Measuring current transformers — the basis for energy efficiency

Energy management is becoming increasingly important in order to be able to operate buildings and plants economically. For this purpose, many measuring points within the energy distribution systems must be available in modern switchgear assemblies. The measurement is carried out with current transformers. The values can be displayed directly in the energy distribution systems or further processed in an energy management system via measuring transformers. In the 185Power system there are a number of possibilities to integrate current transformers easily and quickly. Retrofitting is possible without requiring additional space. Depending on the application, current transformers are available in all common measuring ranges and accuracy classes, also for utility billing purposes.

PRETTY SMART! OUR CONFIGURATOR.

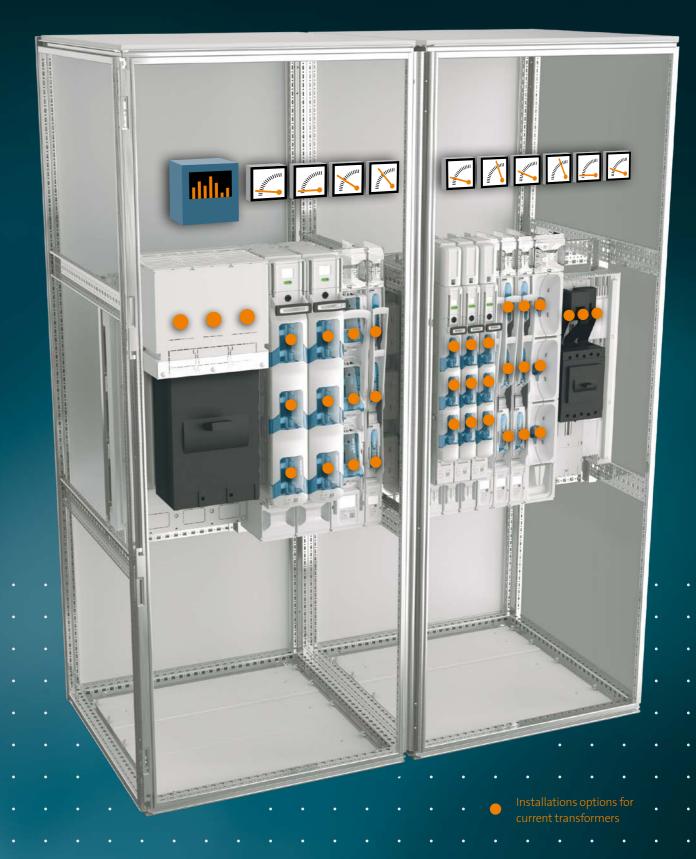


Configurator

- 3D planning tool with realistic appearance
- Guidance by technical parameters
- Technical documentation

Augmented Reality

- Presentation of a virtual control cabinet in a real
- Import of projects planned by yourself in the configurator is possible



An overview of the articles is available on the Wöhner website in Media/Downloads/

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