



MODAN[®]



SafeMCC for processing industry

Intelligent, safe energy distribution!

MODAN®

Why MODAN® meets even the most extreme



MODAN®- switchgear: for safe and reliable use in the processing industry and in building management

MODAN®- switchgear not only offers safe and reliable energy distribution but also processor-orientated control and automation functions up to 6300A. With MODAN® KÖHL produces type-tested switchgear assemblies to IEC DIN/EN 61439-2/60439-1, which are in demand in the processing industry and in building management. Due to the modular and space-saving design individually tailored solutions can be achieved far above the standard offering.



demands in the processing industry.

The unique modular concept!

MODAN® P (POWER)

- ▶ Supply, outgoers or couplings with power switches NZM4, IZM X16 or IZM X40
- ▶ Fixed compartments/withdrawable units
- ▶ 3- and 4-pole circuit breakers
- ▶ Cables and bus bar trunking systems from above or below



MODAN® W (WITHDRAWABLE)

- ▶ Withdrawable units for motor starter up to 200 kW
- ▶ Energy outgoers with power switches PKE, NZM up to 630A
- ▶ Up to 30 withdrawable units per field installable
- ▶ Main current inlet and auxiliary current completely plugged in
- ▶ Withdrawable units may be exchanged under live conditions
- ▶ Cable connection from above or below



MODAN® R (REMOVABLE)

- ▶ Energy outgoers with switch safety units up to 630A
- ▶ Up to 27 switch safety units per field installable
- ▶ Removable compartments for motor starter up to 90 kW
- ▶ Energy outgoers with power switches PKE, NZM up to 630A
- ▶ Up to 15 removable compartments installable
- ▶ Main current inlet and auxiliary current plugged in
- ▶ Cable connection from above or below



MODAN® G (UNIVERSAL)

- ▶ Assembly systems, serial assembly units
- ▶ Individual fixed compartments on assembly plates up to 630A, e.g. soft starter, frequency rectifier, idle power compensation
- ▶ Automation engineering
- ▶ Control engineering, adapter systems, xstart
- ▶ Cable connection from above or below



Why MODAN® systems are so stable

SAFE.

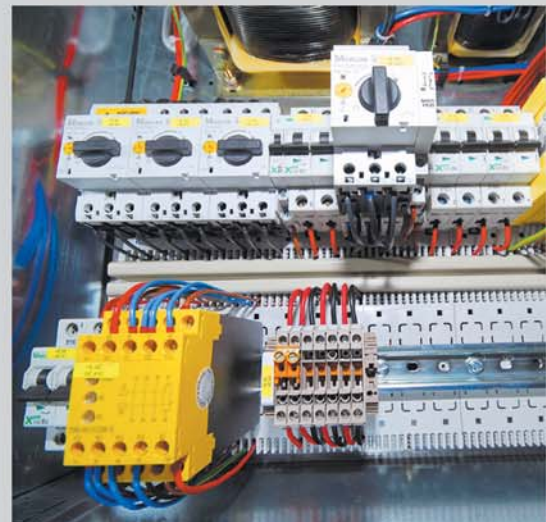
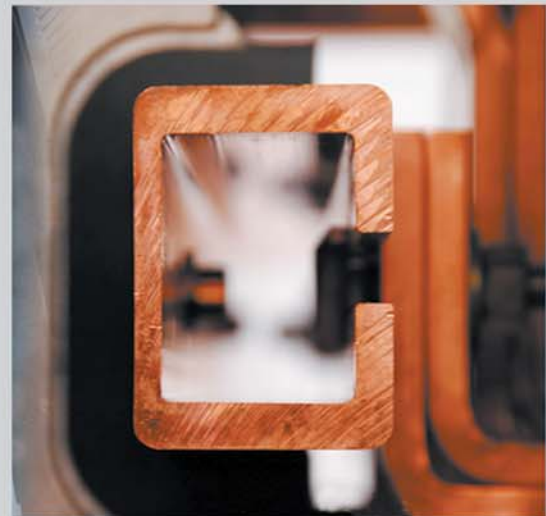
- ▶ **MODAN®** has exceeded the highest test requirements IEC/DIN EN 61439-2 and IEC/DIN EN 60439-1.
- ▶ **MODAN®** limits the effects of an accidental arc with the ARCON® - arc fault protection system. This ensures maximum personal and plant protection.
- ▶ The modern insert and plug-in technology guarantees maximum flexibility and availability. The bus bar, equipment/function and connection zones are isolated from one another in Form 4b. Up to 630 A the function units can be exchanged and added to without danger while the system is live.
- ▶ **MODAN®** slide-in modules are equipped with an operating, test and disconnected position. The degree of protection is retained in the test position.

FLEXIBEL.

- ▶ **MODAN®** allows users to fit the function units they need and is designed for internal distribution up to Form 4b.
- ▶ **MODAN®** allows thanks modular design highly versatile in terms of installation and connection. Choose from individual panels with protection classes IP30/31 and IP54 for use in any combination.
- ▶ **MODAN®** can be extended to the right or left whenever required. It is also quick and inexpensive to replace individual panels within the system.

USER-FRIENDLY.

- ▶ **MODAN®** convinces through its operator and operating safety. Inspection work and cleaning can be easily carried out.
- ▶ **MODAN®** has been designed to be low-maintenance and the bus bars are maintenance-free.



and efficient.

Inner values, in detail.

Switch Safety Unit

- ▶ Switch safety units applicable in sizes NH00 up to NH3
- ▶ Double break, i.e. safe switching
- ▶ Comfortable switching by means of a lockable rotary handle
- ▶ Simple identification of the switched state by the position of the handle



Removable compartment modules

- ▶ Energy outgoers up to 630A
- ▶ Motor starter up to 90 kW
- ▶ Primary current connected on the access side, Primary current on the outgoing side, as direct connection
- ▶ Control current, connected



MODAN® withdrawable units

- ▶ Energy outgoers up to 630A
- ▶ Motor starter up to 200 kW
- ▶ Withdrawable unit is retractable, i.e. all electric connections are plug-in connections
- ▶ Exchangeable under live conditions
- ▶ All switch settings lockable
- ▶ Clear and well visible display for all possible switch settings (operation, test, free of voltage)
- ▶ Degree of protection retention is ensured in the unique test latching position.



MODAN®

Why everything is back under control in
The ARCON®



2 milliseconds.

safety installation for staff and systems.

ARCON®- arc fault protection system

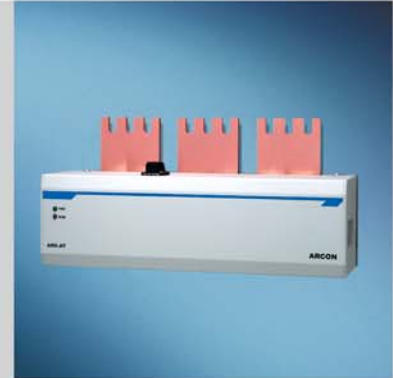
ARCON® is based on the principle of prevention, rather than limitation. The proven effectiveness of ARCON® has ensured it has passed all of the relevant tests defined by the GDV German Insurance Association and VdS Loss Prevention, who have certified the system as meeting the VdS 2349 fine insurance guidelines for “Low-trouble electrical installation”. This confirms that ARCON® meets their definition of a systems in which no destructive energy can arise in the event of an arc fault. ARCON® provides the highest level of staff and system safety available today.

The system effectively limits the arc energy and discharges accidental arcing in no time. After remedying errors and replacing the discharge device, the system is ready to run again. There is no need to replace equipment, components or consumables in the output range of the switchgear after an accidental arcing incident.

ARCON®- Features

- ▶ **Detection of the arc fault:**
 Looking for over currents and intense light emissions
- ▶ **Quenching the arc:**
 By producing a three phase short circuit within 2ms
- ▶ **Evaluating the location of the arc:**
 By monitoring the busbar sections
- ▶ **Isolating the affected area:**
 By disconnecting the incoming circuit breaker feeding the busbar

The effects of an arc fault are very similar to those of an explosion. This ranges from the risk of death and injury to personnel, extensive damage to the switchboard system, to several weeks of downtime. Join them and start in the future with the ARCON®- arc fault protection system!



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Additional information