Security

Intelligent security systems for your data centre

iQdata

www.iQdata.info

SCHÄFER IT-SYSTEMS

iQdata
The intelligent data centre

The specialist for IT infrastructure

iQdata

iQdata is the brand for complete system solutions for all your data centre needs. Thanks to iQdata, SCHÄFER IT-Systems, as an experienced specialist for IT infrastructure, can now offer you the entire product spectrum for the full-scale equipment of your data centre:

- **Rack**
- **Cooling**
- **Power**
- **Monitoring**
- **Security**
- **Service**

iQdata combines the renowned SCHÄFER product quality with innovative and intelligent IT solutions to make your enterprise fit for the future. With unprecedented manufacturing depth, SCHÄFER IT-Systems develops and produces its own data centre solutions and supplies you with the complete system from a single source.

Put your trust in iQdata!

iQdata Security

Intelligent access control

The iQdata e-lock door locking system increases the security of your entire system through access controls down to cabinet level, including logging and traceability. It consists of database-driven control software, powerful modules and electromechanical handles. The modular, configurable structure and standardized connection technology make installation easy.

Fire protection

The fire protection solutions used in IT centres enable reliable early fire detection, fire fighting, fire prevention and hazard management and offer a comprehensive fire protection concept from a single source: from project planning to installation and maintenance.

Security – how sensitive is your system?

Content

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The system as a whole

Rack

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- Colocation racks
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Security

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- Rack extinguishing systems
- Door locking systems

Service

- Planning support
- Energy efficiency analyses
- Maintenance/replacement parts
- Commissioning/acceptance
- Assembly/installation

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Rack

The extensive product portfolio of SCHÄFER IT-Systems' modular rack concept scarcely leaves anything to be desired. A broad base of different racks and an extremely wide-ranging spectrum of accessories will cover almost any requirements. The flexibility of the server cabinets' internal design combined with access from all sides (removable doors and side panels) and their use as stationary or mobile units are prime examples for the wealth of combination possibilities.

Standard or individual – what performance level does your server rack have to achieve?

Cooling

In data centres, cooling can take up more than a third of total energy consumption. Cooling solutions from SCHÄFER IT-Systems provide your data centre infrastructure with highly energy-efficient cooling, leading to a sustainable reduction in costs. Our diverse product range includes self-developed side, back or in-rack coolers, as well as enclosures for cold or warm aisles.

The modular architecture of our cooling solutions enables them to be adapted individually to your specific requirements.

Optimised cooling – how much do you want to save?

Power

An intelligent power supply is an absolute must for your data centre. High availability and the elimination of failure rates are becoming increasingly important features.

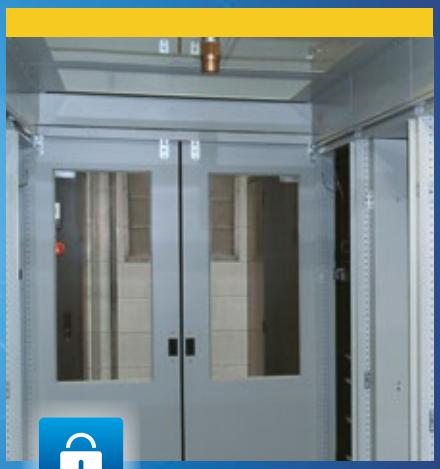
The Power Distribution Units from SCHÄFER IT-Systems are available as Basic PDUs, Smart PDUs or Customized PDUs and fulfil almost all requirements regarding socket form and numbers. The possibility for PDU cascading increases the flexibility and efficiency of your power supply even further. Thanks to permanent residual current monitoring, fewer manual inspections are needed and costs can be optimised sustainably, without compromising reliability.

Always available – how reliable do you want your power supply to be?

The system as a whole

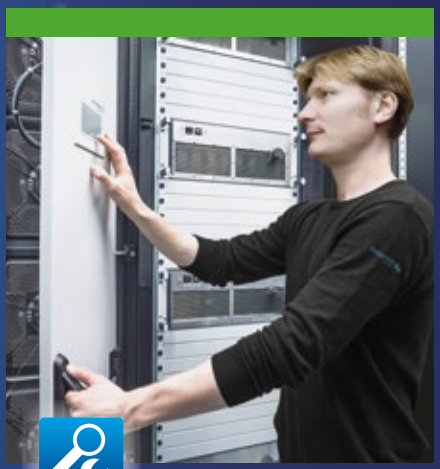
Monitoring

Permanent status control is the basis for the smooth operation of your data centre. The intelligent sensor concept from SCHÄFER IT-Systems will significantly simplify your data centre infrastructure management (DCIM).
Climate control, door management, temperature, humidity and power supply are all monitored in the racks or in the entire server room.
Always up to date – what do you need to know?



Security

For fire detection and suppression, SCHÄFER IT-Systems has developed a 3-step safety concept to protect your data.
1. Intelligent and highly sensitive early smoke detection system
2. Automatic system shutdown
3. Optimal gas suppression
Depending on your data centre structure, both an integrated rack and room suppression solution can be implemented. Intelligent mechanical or electronic door locking systems round off the overall concept.
Safety – how sensitive is your system?



Service

The analysis is always the first step.
In SCHÄFER IT-Systems' holistic service approach, competent on-site consulting and advice are the decisive components. An energy-efficiency analysis of your data centre determines the status quo and reveals optimization potential. Commissioning and acceptance tests are also included in the service portfolio, as is on-site assembly and installation by our own team. And after installation, we continue offering you our support.
If your requirements change and your company continues to grow, the modular SCHÄFER IT-Systems solutions will grow with it.
Requirements – what do you need?

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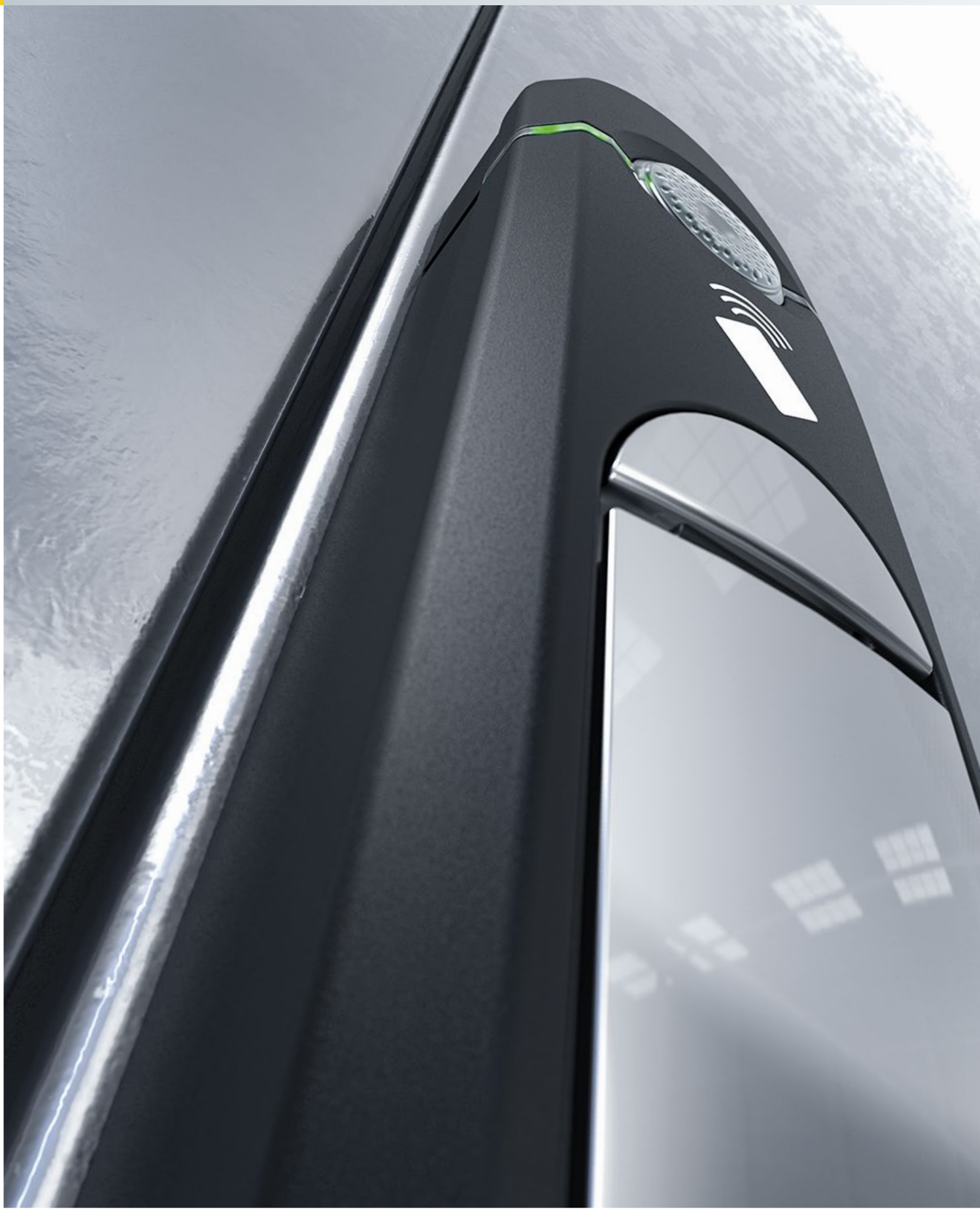

SCHÄFER IT security concept – Protecting your data centre

Systematic intelligent access control

The intelligent electronic door locking system iQdata e-lock from SCHÄFER IT-Systems guarantees unequivocal logging and traceability through personalised access control down to cabinet level. This increases the operational reliability of the entire system. It consists of database-driven control software, high-performance modules and electro-mechanical handles. The modular design and standardized connection technology enable simple installation and fast commissioning. Wireless radio handles reduce the installation work required. The functionality of the system can be extended and supplemented at any time by adding further modules.

Reliable access control

With the software from iQdata e-lock you have all handles in view. The displays for access control or operating status can be configured to operator requirements.
All cases of access to server cabinets are recorded and fully documented. All operating statuses are displayed and faults are reported directly to the operator. The open database structure with SNMP and SQL interface allows easy integration into higher-level systems.

Standards, regulations and laws

- **ANSI/TIA/EIA-942**
  The standard contains information on the protection of equipment in the data centre by means of physical security. It refers to the importance of access control to facilities in the data centre and to the person-related monitoring of access itself (WHO, WHEN, WHERE).
- **EN 50600-2-5**
  Specifies requirements and recommendations for data centre facilities and the security systems to be used there to counter unauthorized access by means of of constructive, organizational and technological solutions.
- **ISO/IEC 27002**
  - Only authorised persons have access
  - All visitors should be accompanied unless their visit has been authorised in advance.
  - Access should only be allowed for specific, authorized purposes.
  - Access controls, such as magnetic cards plus PIN code, are to be used.
  - Duration and date of access should be recorded
- **GDPR** (General Data Protection Regulation from May 2018)
  Denial of access for unauthorized persons to any installations where data processing is carried out.

The operator of a data centre must be able verify all procedures to customers and auditors in an understandable manner.

Your benefits

- **Optimum access protection for highly sensitive data**
- **Web-based system enables access authorisation and control from almost anywhere**
- **Highest possible energy efficiency due to deep sleep mode**
- **Increases operational reliability of the entire system**
- **Significant reduction in installation work due to wireless radio handles**
- **Modular design and standardised connection technology enables easy installation and fast commissioning**

Top Quality Made in Germany

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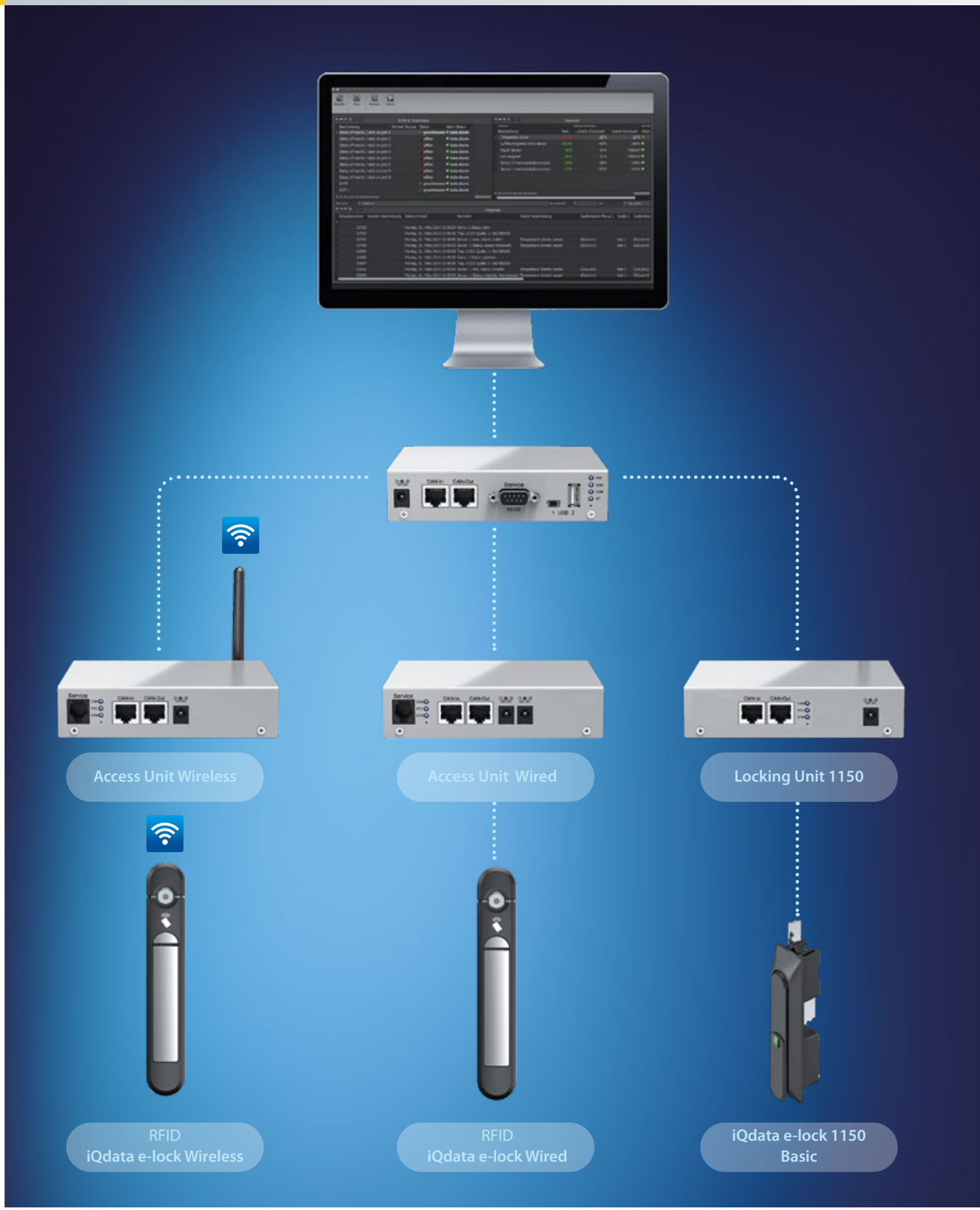


SCHÄFER IT security concept – Four intelligent door locking systems

1. iQdata e-lock Wireless

Wireless is so far the only electromechanical swing handle with radio network-based communication. Thanks to its wireless and thus cost-saving installation, it is ideally suited for retrofitting in data centres.
Highly efficient energy management guarantees a long battery life.

- Complete centralised event logging
- Remote opening
- Easy to install
- No wiring
- No disruption of ongoing operations
- Ideal for retrofitting

2. iQdata e-lock Wired

Wired is the cable-connected version of the electromechanical swing handle programme.

- Remote opening
- Complete centralised event logging
- Secure and convenient access via RFID cards

3. iQdata e-lock Stand-Alone

The stand-alone consists of a battery-operated, electromechanical swivel handle with integrated card reader for 125 kHz or 13.56 MHz transponder cards.

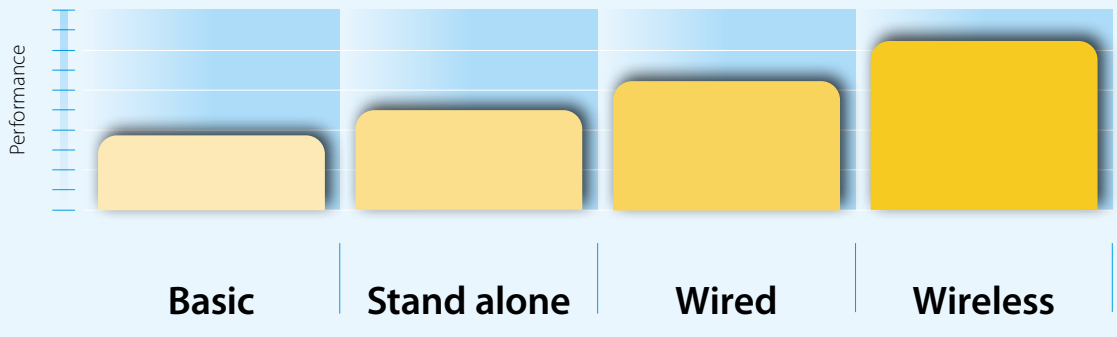
- Simple electromechanical locking of rack doors by key card
- Complete, unbroken monitoring of up to 500 events in individual cabinets
- Easy installation without cables
- Free software for download

4. iQdata e-lock 1150 Basic

The Basic is a simple handle for locking and electrically opening rack doors. It is enabled by applying a voltage signal.

- Integrated LED for signalising an enabled handle
- Potential free reed contact for remote monitoring of the handle status
- Emergency opening with key possible in the event of power failure

Performance matrix



iQdata e-lock Wireless 13,56 MHz

The iQdata e-lock is so far the only electromechanical swing handle with radio network-based communication. Its wireless and therefore cost-saving installation makes it ideally suited for retrofitting in data centres and also in mixing systems with e-lock wired handles. Authentication is carried out via RFID. A highly efficient energy management system guarantees a long battery life. Different frequencies and identification standards in acc. with ISO 7816 as well as adaptation to many cabinets from a range of different manufacturers are possible on request.

Performance features

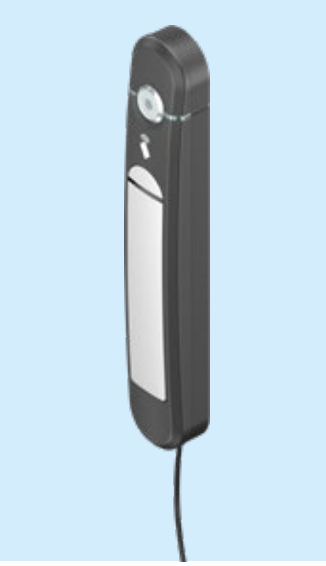
- Wireless communication for data exchange via radio network with access units Wireless (Industry standard depending on national regulations)
- A wireless control unit can control up to 1,200 iQdata e-lock Wireless handles in a radio network via wireless access units
- Extremely energy-efficient battery operation (Battery life min. 3 years)
- Authentication possible via 13.56 MHz RFID cards or via remote opening
- 4-eyes principle for authentication with 2 authorized cards
- The handle has a connection option for a door contact
- In conjunction with the Access Unit, the central LED in the sensor field can be enable, in order to signalise malfunctions in the cabinet, such as increased temperature
- 2 iQdata e-lock handles can be attached to one access unit
- A maximum of 32 Access Units can be wirelessly managed from one Control Unit
- In the event of a power failure, emergency opening is possible via the integrated USB port
- Due to its wireless installation, iQdata e-lock Wireless is ideally suited for retrofitting

Article name	Order no.
Swing handle iQdata e-lock Wireless 13.56 MHz	**7809010**
Transponder card iQdata RFID Karte 13.56 MHz	**7809300**
Connection options iQdata door contact e-lock	**7809320**

Dimensions: 240 x 40 x 26 mm (H x W x D)
Material: polyamide / zinc die casting
Colour: handle body: black
Swing handle: white aluminium
Delivery scope: 1 x swing handle, 1 x rod locking screw, 2 x fixing screws, 1 x fixing bridge

SCHÄFER IT security concept – Components

iQdata e-lock Wired 13,56 Mhz



The cable-connected version of the electromechanical swing handle system enables the complete and centralised logging of events - for optimal use with the SCHAFER IS-1 cabinet system. Personalised access is secure and convenient via RFID card readers. Different frequencies and identification standards adaptation to many cabinets from a range of different manufacturers are possible on request.

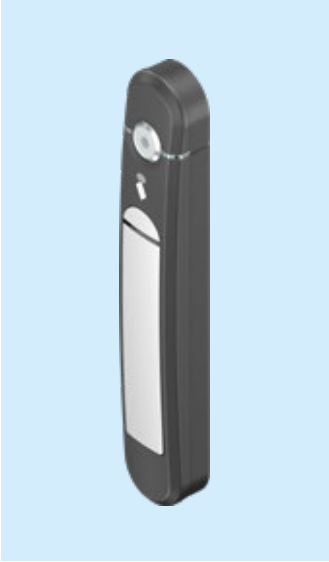
Article name	Order no.
Swing handle iQdata e-lock Wired 13.56 MHz	**7809000**
Transponder card iQdata RFID Karte 13.56 MHz	**7809300**
Connection options iQdata door contact e-lock	**7809320**

Performance features

- Authentication possible via 13.56 MHz RFID cards or via remote opening
- 4-eyes principle for authentication with 2 authorized cards
- The handle has a connection option for a door contact
- In conjunction with the Access Unit, the central LED in the sensor field can be enable, in order to signalise malfunctions in the cabinet, such as increased temperature
- 2 iQdata e-lock handles can be attached to one access unit
- A maximum of 32 Access Units can be wirelessly managed from one Control Unit
- In the event of a power failure, emergency opening is possible via the integrated USB port

Dimensions: 240 x 40 x 26 mm (H x W x D)
Material: polyamide / zinc die casting
Colour: handle body: black
Swing handle: white aluminium
Delivery scope: 1 x swing handle, 1 x rod locking screw, 2 x fixing screws, 1 x fixing bridge

iQdata e-lock Stand Alone 13,56 MHz



This versions consists of a battery-operated iQdata e-lock handle with an integrated card reader for 13.56 MHz transponder cards. Holding an authorised card up to the device opens the lock. Easy configuration using software. To function, this handle requires no external wiring. Different frequencies and identification standards in acc. with ISO 7816 are possible on request as well as adaptation to many cabinets from a range of different manufacturers.

Performance features

- Battery-operated handle with integrated RFID reader
- Configuration via USB port with e-lock configuration software (card management, time profiles, reading event logs)
- Extremely energy-efficient battery operation (Battery life min. 3 years)
- Authentication possible via 13.56 MHz RFID cards
- The handle has a connection option for a door contact
- Data memory for 2,000 events
- In the event of a power failure, emergency opening is possible via the integrated USB port
- Due to its wireless installation, iQdata e-lock Stand Alone is ideally suited for retrofitting

Article name	Order no.
Swing handle iQdata e-lock Stand Alone 13.56 MHz	**7809020**
Transponder card iQdata RFID Karte 13.56 MHz	**7809300**
Connection options iQdata door contact e-lock	**7809320**

Dimensions: 240 x 40 x 26 mm (H x W x D)
Material: polyamide / zinc die casting
Colour: handle body: black
Swing handle: white aluminium
Delivery scope: 1 x swing handle, 1 x rod locking screw, 2 x fixing screws, 1 x fixing bridge

iQdata e-lock 1150

This handle is suitable for locking cabinets in indoor areas. It is enabled by applying a voltage signal and after briefly pressing the handle into the recess, it can be opened.

Performance features

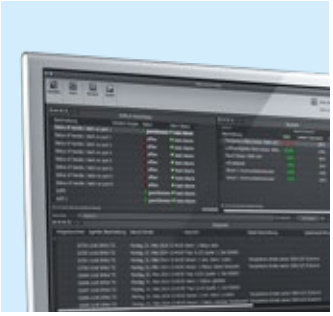
- Integrated LED for signalising an enabled handle
- Potential free reed contact for remote monitoring of the handle status
- Emergency opening with a key in the event of power failure
- Cylinder cover is destroyed in emergency opening and must be replaced
- Can be connected to Access Unit 7809100 or Locking Unit 1150 7809140

Article name	Order no.
Swing handle iQdata e-lock 1150	**7809040**
Connection options iQdata door contact e-lock	**507809330**

Dimensions: 170 x 36 x 18 mm (H x W x D)
Material: polyamide / zinc die casting
Colour: handle body: black
Delivery scope: 1 x swing handle, 1 x rod locking screw, 2 x fixing screws

SCHÄFER IT security concept – Components

iQdata e-lock Software



The database-supported iQdata e-lock software manages access authorisations. It logs and documents all cases of access to the server cabinet. Measured values from sensors are recorded completely and monitored for limit violations. Can be integrated into higher-level systems via an SQL interface. Larger IT systems are often controlled via several different rack management systems. This may be necessary due to the large number of racks or their distribution over several rooms or locations. Such systems are often connected to higher-level control or management systems. In such cases, central operation, control and configuration are of decisive importance.

Article name	Order no.
iQdata e-lock Software	**7809200**

Performance features

- User administration
  - Easily add users and assign user groups
  - Individual assignment of authorizations and personal pin codes
- System management
  - Management of up to 50 rack management systems with connected components such as handles, sensors or card readers
- Basic functions
  - Reading transponder cards
  - Allocation of rights for transponder cards with free choice of assignment
  - Allocation of access rights for locks
  - Assignment to cabinet groups
  - Setting limit values for sensors and activating alarms
- Real-time monitoring
  - Easy and convenient opening of the handles after entering a PIN code
  - Extensive control and monitoring functions
  - Indication of alarm status of handles or sensors by colour change
  - Extensive filter functions for displaying the most important information
- Configurable screen display
  - Individual design of the screen displays in different windows
- Measured value storage
  - Monitoring and recording of temperature values to determine the thermal load
  - Graphical diagram representation of the measured value curves of historical or current data in freely definable time windows
  - Simple saving or printing of diagrams via export function
- Logging and evaluation
  - Archiving the events of all connected systems in a common database
  - Creation of customer-specific reports with extensive filter and export functions
- Remote access
  - Installation of the software at any number of locations
  - Access to central database as a client
  - Encrypted data transmission within the network
- Integration in external systems
  - Open database structure allows easy integration into higher-level systems via SQL interface

iQdata Access Unit HID

Front view

Rear view

Performance features

- Direct connection of 2 iQdata e-lock swing handles
- Activation of central LED in the handle via terminal block on rear side
- Max. 32 Access Units per Control Unit
- Management of up to 64 handles under one IP address
- Power supply from plug-in mains adapter for up to 3 Access or Control Units via CAN bus

Energy supply: 12 to 24 VDC, 200 mA + outputs
Handle outputs: 2 (RJ45), max 12 V / 1 A, or max 24 V / 0.5 A per output
Relay outputs: 2 (max. 10 VDC, 1mA)
CAN bus ports: 2
Operating temperature: + 5 to + 45 °C
Dimensions: 33 x 135 x 107 mm (H x W x D)
Colour: light grey
Delivery scope: mounting brackets

Article name	Order no.
iQdata Access Unit HID	**7809100**
Power connector iQdata plug-in mains adapter, 12 V	**7809350**

iQdata Access Wireless EU

Front view

Rear view

Performance features

- In combination with a wireless Control Unit, up to 1,200 iQdata e-lock Wireless handles can be managed under one IP address with a wireless Access Unit
- To improve the range of the radio signal, a maximum of 15 additional wireless Access Units can be connected to the wireless Access Unit
- Radio frequency 868 MHz (Europe) or 922 MHz (USA, Singapore)
- Power supply with one plug-in mains adapter for up to 3 Access or Control Units via CAN bus

Power supply: 12 to 24 VDC, 200 mA
RS 485 ports: 2 for connecting additional wireless Access Units
CAN-Bus ports: 2
Operating temperature: + 5 to + 45 °C
Dimensions: 33 x 135 x 126 mm (H x W x D)
Colour: light grey
Delivery scope: mounting brackets

Article name	Order no.
iQdata Access Wireless EU	**7809120**
Power connector iQdata plug-in mains adapter, 12 V	**7809350**

SCHÄFER IT security concept – Components

iQdata Control Unit

Front view

Rear view

Performance features

- Central control unit for wired and wireless systems
- All connected units are configured and operated via the network interface with a standard web browser or via the iQdata e-lock software
- Fail-safe and tamper-proof logging of all events in the system with real-time clock and additional memory
- Time synchronization via the NTP server
- 2 connection sockets for different alarm conditions on the rear side of the housing
- Simple integration of the system into higher-level management systems using the SNMP transfer protocol
- Redundant power supply possible
- Power supply with one plug-in power supply unit for up to 3 Access or Control Units via CAN bus

Article name	Order no.
iQdata Control Unit	**7809130**
Power connector iQdata plug-in mains adapter, 12 V	**7809350**

Power supply: 12 to 24 VDC, 325 mA
Relay outputs: 2 (30 VDC / max. 1 A, or 48 VAC /max. 0.5 A)
Interfaces: serial RS 232C interface (front)
Network interfaces: Ethernet 100Mbit, RJ45 (rear)
Communication protocols: SNMP 1.0 and V2.0
CAN bus ports: 2
Operating temperature: + 5 to + 45 °C
Dimensions: 33 x 140 x 123 mm (H x W x D)
Colour: light grey
Delivery scope: mounting brackets, 2 external terminal resistors

iQdata Locking Unit 1150

Front view

Rear view

Performance features

- This unit can control up to 8 iQdata e-lock 1150 handles and read the 8 handle contacts for status information. An iQdata 1150 door contact can also be connected instead of a handle. The opening impulse for the corresponding handle is triggered by management software, keyboard or, on request, by card reader.
- The status (open/closed) of locking systems, doors and side panels can be evaluated via the existing inputs

Article name	Order no.
iQdata Locking Unit 1150	**7809140**
Power connector iQdata plug-in mains adapter, 12 V	**7809350**

Power supply: 12 VDC, 50 mA, short-term 300 mA after an opening process
Handle outputs: 8, min 2.8Ω. One impulse of 40 V, max. 15 A, for max. 30 ms duration opens the handle
CAN bus ports: 2
Operating temperature: + 5 to + 45 °C
Dimensions: 33 x 135 x 235 mm (H x W x D)
Colour: light grey
Delivery scope: mounting brackets

iQdata CAN keypad

Performance features

- In combination with a control or access Unit, the keypad is used for the local opening of selected locks by entering a PIN code
- In connection with the Access Unit, only the lock number is entered via the keypad, while the transponder card contains the authorisation
- Alternatively, 2-factor authentication is possible in this constellation to open a lock (personal PIN code + card).

Power supply: 12 VDC, 50 mA
CAN bus ports: 2
Operating temperature: + 5 to + 45 °C
Dimensions: 113 x 64 x 12 mm (H x W x D)
Colour: keypad body, black, keys white
Delivery scope: CAN keypad, 3 m RJ11 connector cable

Article name	Order no.
iQdata CAN keypad	**7809340**
iQdata keypad cable 3 m	**7809370**

SCHÄFER IT security concept – Components

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SCHÄFER IT fire protection concept – Early fire detection and rack distinguishing systems

In IT centres, there is an increased fire risk: power supply, switch cabinets and computer systems are concentrated in one place. Due to the high energy density, IT centres and network hubs always harbour a latent danger and, consequently, they are the focus of fire protection planning.

The following questions should therefore be at the forefront of IT managers' considerations when creating fire protection concepts:

- What is the primary protection objective?
- How can flameless smouldering fires be detected in time?
- Can the climate control be switched off for minutes at a time?

A risk analysis and the subsequent definition of the protection objectives make it possible for our engineers to develop and integrate the perfect fire protection solution for a wide variety of IT centres. Innovative climate control concepts, on the basis of Green IT, are also included in the planning. From our extensive product portfolio, we develop the right fire protection solution for almost every requirement. This helps you to effectively protect your IT data centre from fire!

3-stage safety concept combining early fire detection and fire fighting

With its 3-stage security concept consisting of early fire detection and fire fighting, SCHÄFER IT-Systems offers a comprehensive solution for protecting your data.

- **Earliest possible, highly sensitive smoke detection**
  Maximum time gain through fast alarms to minimise fire damage
- **Automatic system shutdown**
  Cuts off the necessary support energy to prevent the fire spreading, and secures data back up through soft shutdown or virtual server management (live migration)
- **Precisely targeted gas extinguishing**
  Targets areas where the fire started for precise extinguishing

We will provide you with a fire protection solution that is perfect for your IT centre and tailored precisely to your needs. The coherent overall concept combines the most up-to-date and necessary fire protection technologies and ensures maximum safety.

Contact us and we will provide you with the solution!

Your benefits

- **Maximum safety through an optimally coordinated fire protection concept**
- **Early fire detection and damage minimization through automatic system shutdown and targeted gas extinguishing**
- **Backup of your data via soft shutdown or virtual server management**

Top Quality Made in Germany

TITANUS RACK·SENS®

The air sampling smoke detector TITANUS RACK·SENS® from Wagner is used for monitoring 19" devices such as server and switch cabinets. The fire detector can optionally be extended to include a fire fighting function by either integrating extinguishing gas cylinders or attaching them externally. With 10 air intake openings, up to five server cabinets can be monitored cost-effectively and in a manner immune to false alarms. In addition to the overall height - one or two height unit(s) - this special fire detector offers the option of selecting the extinguishing gas (NovecTM or nitrogen).
TITANUS RACK·SENS® is currently the only system of its kind for the protection of 482.6 mm cabinets that is equipped with a VdS-approved fire detection unit and is certified in acc. with the requirements of EN 54-20, classes A, B and C. The TITANUS system is also certified to EN 54-20.

The system meets the very high IT sector safety requirements and, for the first time, also provides the benefits of the proven TITANUS® smoke aspiration systems for protecting 482.6 mm equipment.

TITANUS RACK·SENS® is optionally available as:

- A 482.6 mm insert (19") for early fire detection with an overall height of 44.45 mm (1 U)
- A 482.6 mm insert (19") for early fire detection with an integrated extinguishing function, 88.90 mm (2 U)

Surface-mounted versions are also available to protect fully equipped cabinets and equipment other than 482.6 mm. Extensions enable individual adaptation to the customer's requirements.

SCHÄFER IT fire protection concept – Early fire detection and rack distinguishing systems

TITANUS RACK·SENS® 44.45 mm (1 U)

The ultra-flat version of the TITANUS RACK·SENS® with an overall height of 44.45 mm enables early fire detection when space requirements are minimal. The fire detection system detects beginning fires at the earliest possible time. At the same time, the proven fire-type recognition system LOGIC·SENS, opens up a new dimension of sensitivity to false alarms in cabinet monitoring.
The TITANUS RACK·SENS® fire detection plug-in unit is suitable for securing open ventilated, open unventilated and closed air-conditioned 482.6 mm cabinets. The VdS approved fire detection unit of the system meets even the highest detection requirements according to EN 54-20 (classes A, B and C) and thus ensures the earliest possible fire detection. Due to its CPD approval according to the product standard EN 54-20 for aspirating smoke detectors, the 24V version meets all requirements for connection to fire alarm systems.

Performance Features

- Prepared for installation in 482.6 mm (19") cabinets
- LOGIC·SENS false alarm suppression
- PIPE·GUARD for detection of breakage and blockage of the connected pipe system
- 2 alarm levels for a phased alarm concept
- Fast commissioning thanks to plug-and-play and automatic initialization
- 6 optical status displays on the front of the housing for "Operation", "Service/blocked", "Released", "Pre-alarm", "Alarm" and "Fault"
- Potential-free alarm and fault contacts for connection to any central fire alarm system
- An interface for data transfer to a PC
- Prepared to accommodate an Ethernet network module for setting up a VisuLAN®
- Connection option for a response indicator
- Diagnostic tool can be connected for comprehensive service information
- Automatic shutdown of the 19" rack configurable via optional shutdown module
- Functionality can be extended in many ways (e.g. extinguishing control, door contacts). Preconfigured 482.6 mm (19") smoke aspiration system with 44.45 mm (1 U) height for early fire detection in open, closed and heavily air-conditioned electronic cabinets

Article name	Order no.
TITANUS RACK·SENS® 44.45 mm (1 U)	**7809400**

Technical data (excerpt)

Operating voltage	15 to 30 V DC
Nominal voltage	24 V DC
Power consumption at rest (24 V)	160 mA (24 V DC)
Power consumption on alarm (24 V)	205 mA (24 V DC)
Starting current limitation	190 mA (24 V DC)
Max. contact load	1 A / 30 VA / 30 V
Operating temperature range	0 °C to 40 °C
Storage temperature range	-5 °C to 45 °C
Max. rel. humidity, operation	not cond. (class F, DIN 40040)
Dimensions (W x H x D)	482.6 x 43.6 x 300 mm
Net weight	6.4 kg
Housing material	steel sheet, hot-dip galvanised
Housing colour	RAL 7021, black grey

SCHÄFER IT fire protection concept – Early fire detection and rack distinguishing systems

TITANUS RACK·SENS® 88.90 mm (2U)

The integrated fire detection and extinguishing system TITANUS RACK·SENS® with an overall height of 88.90 mm extinguishes fires directly at their source and thus considerably reduces extinguishing agent consumption.
The TITANUS RACK·SENS® Fire detection and extinguishing insert is therefore particularly suitable for protecting hermetically sealed 482.6 mm cabinets, which cannot be usefully protected with a room extinguishing system, due to the slow penetration of the extinguishing gases.
The VdS approved 24 V fire detection unit fulfils the very highest detection requirements according to EN 54-20 (classes A, B and C) and thus ensures the earliest possible fire detection.
The extinguishing agent NOVECTM 1230 from 3MTM is provided as this guarantees low-damage extinguishing while requiring a minimum of extinguishing agent in stock.
Due to its CPD approval in acc. with the product standard EN 54-20 for aspirating smoke detectors, the 24 V version fulfils all requirements for connection to fire alarm systems.

Performance features

- Prepared for installation in 482.6 mm (19") cabinets
- Integrated NOVEC gas extinguishing system for automatic extinguishing in case of fire
- Extinguishing agent tank type tested according to Directive 97/23/EC, ADR and TRG-Rw
- Automatic switch-off possible for affected cabinet
- LOGIC·SENS false alarm suppression
- PIPE·GUARD for detection of breakage and blockage of the connected pipe system
- Fast commissioning thanks to plug-and-play and automatic initialization
- Potential-free alarm and fault contacts for connection to any central fire alarm system
- An interface for data transfer to a PC
- Prepared to accommodate an Ethernet network module for setting up a VisuLAN®
- Connection option for a response indicator
- Automatic shutdown of the 19" rack configurable via optional shutdown module
- Integrated system in 482.6 mm (19") format, 88.90 mm height (2 U) for early fire detection and extinguishing in closed, air-conditioned and non air-conditioned electronic cabinets

Article name	Order no.
TITANUS RACK·SENS® 88.90 mm (2 U)	**7809410**

Technical data (excerpt)

Operating voltage	15 to 30 V DC
Nominal voltage	24 V DC
Power consumption at rest (24 V)	160 mA (24 V DC)
Power consumption on alarm (24 V)	270 mA (24 V DC)
Starting current limitation	300 mA (24 V DC)
Extinguishing media	NOVEC™ 1230 von 3M™
Max. contact load	1 A / 30 VA / 30 V
Operating temperature range	0 °C to 40 °C
Storage temperature range	-5 °C to 45 °C
Max. rel. humidity, operation	not cond. (class F, DIN 40040)
Dimensions (W x H x D)	482.6 x 88.1 x 670 mm
Net weight	6.4 kg
Housing material	steel sheet, hot-dip galvanised
Housing colour	RAL 7021, black grey

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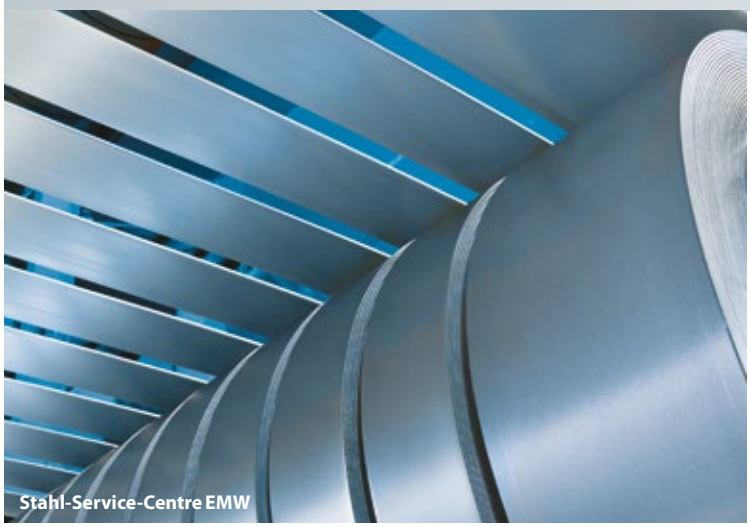
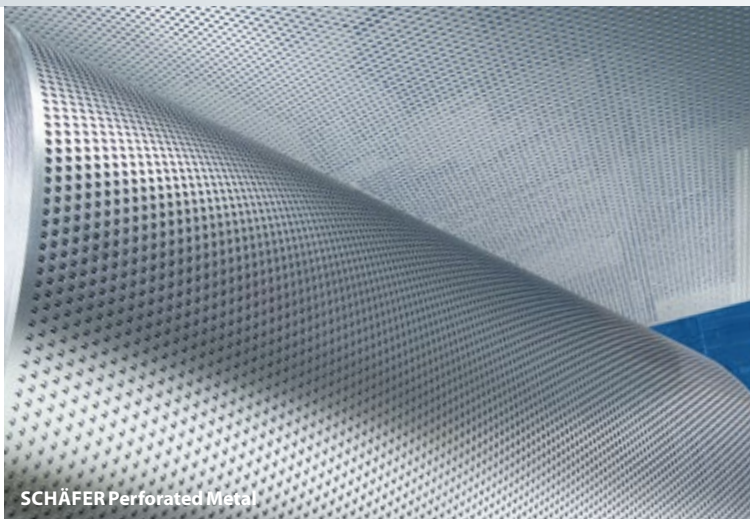
VI. The SCHÄFER WERKE Group of Companies


Stahl-Service-Centre EMW


SCHÄFER Perforated Metal

SCHÄFER Container Systems


SCHÄFER Container Systems


SCHÄFER IT-Systems


SCHÄFER Industrial Solutions

SCHÄFER WERKE –
Expertise in steel processing

Within the SCHÄFER Group, **SCHÄFER WERKE** are the specialists for the development, manufacture and sale of fine steel sheet and stainless steel products. Constant growth and the uncompromising extension of the product range underline the company's successful strategy. The outstanding success of the five individual business areas lies above all in the ability to put customer wishes into practice quickly, while keeping the products themselves highly individual.

The extraordinary speed at which new sheet steel products can be realised stems from the close co-operation of all business areas with our own **EMW Steel Service Centre**, which, with a storage capacity of 100,000 t of fine steel sheet, can provide the coils, slit strips, cut-to-size sheets and circular blanks required for further processing in very high quality and at very short notice.
SCHÄFER Perforated Metal supply a broad and rapidly available range of high-quality perforated plates and sheets for all sectors and application fields.
SCHÄFER Container Systems is one of the world's leading suppliers of reusable stainless steel beverage containers for beer, wine and soft drinks, as well as for IBCs and special containers for solid and liquid substances and granulates.

SCHÄFER IT-Systems supplies both standardised and customised network and server cabinets as well as data centre and water-cooled server cabinet solutions. Based on our own extensive and future-oriented expertise, these products and solutions are planned, designed and manufactured in the company's own production facilities.
SCHÄFER Industriegehäuse develops, designs and manufactures customised punched and bent parts, machine cladding, special and standard housing solutions in metal.

Our great manufacturing expertise, our extensive range of production equipment and our employees' outstanding level of qualification make SCHÄFER the ideal partner for contract manufacturing.
By working with SCHÄFER, our customers can profit from measurable time and cost-saving benefits.

SCHÄFER WERKE

Our locations

Head office and production site at Neunkirchen (D

Plant at Betzdorf (D)

Plant at Treuen (D)

Plant at Ledeč nad Sázavou (CZ)

SCHÄFER IT-Systems, innovative manufacturer of made-to-measure network and cabinet solutions for both conventional and complex applications, is part of the internationally successful company SCHÄFER WERKE. This owner-led group of companies has its headquarters in Neunkirchen in Germany's Siegerland region. The work of all the SCHÄFER WERKE divisions – SCHÄFER IT-Systems, SCHÄFER Container Systems, SCHÄFER Perforated Metal and EMW Steel Service Centre – is based on high-quality thin steel sheet. The processing of this material is one of the core competencies of this enterprise.

SCHÄFER IT-SYSTEMS

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