ixalo®

DOOR TECHNOLOGY

BKS

ixalo® – the electronic locking system
SE technology

Securing technology for you

G·U **BKS** **FERCO**

Cutting-edge locking systems

The Gretsch-Unitas system worlds

BKS

Mechanical

Cylinder and key – the high-quality basis of mechanical locking systems

Mechatronic

Combination of tried-and-tested mechanics with convenient electronics

Electronic

Flexible electronic products with outstanding reliability for even more comfort and organisation

Locking systems from BKS offer a variety of solutions for securing individual doors and for planning modern master key systems. Individual designs can be created conveniently, reliably and cost-effectively by combining mechanical, mechatronic and electronic locking systems.

Be clever with your combinations!
ixalo® the electronic locking system
Access to greater flexibility

Locking

Identifying

Organising
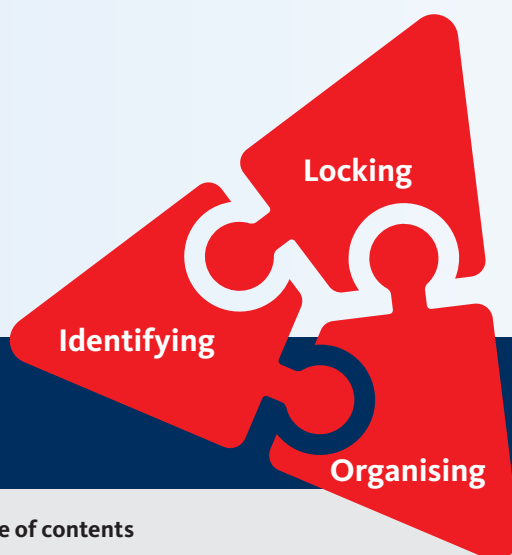
There is a growing tendency towards systems that combine mechanical locking cylinders with electronic solutions. This mixture ideally combines flexibility of usage and profitability.

ixalo – the electronic locking system of BKS combines a variety of electronic products and technologies into a state-of-the-art, sustainable overall system.

Optionally equipped with BKS SE technology or with RFID technology: MIFARE® (MIFARE Classic®, MIFARE® DESFire® EV1) – ixalo offers a multitude of applications for individual customer requirements.

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ixalo® the electronic locking system

Access to greater flexibility

BKS

Secure locking has been the core competency of BKS for more than 100 years and is also the main purpose of ixalo, the all-encompassing electronic locking system. With the modular security system, you can resolve any access problem in any project situation – also in combination with mechanical master key systems if required.

ixalo transponder | SE
Central access medium for the entire building. In addition to individual access rights, personal time frames can also be set.

The advantages

1. Energy efficient

Thanks to the SE technology by BKS, the products consume a particularly low amount of energy – one of the fundamental criteria to be met by battery-operated systems. This is the only way to ensure a large number of locking cycles (up to 600,000) and long standby times (up to 10 years).

2. Secure

Whoever opts for an electronic locking system can expect outstanding security in addition to a high degree of comfort. ixalo – the electronic locking system satisfies the highest security requirements lonts of the EN 15684 standard for mechatronic locking cylinders by using extremely reliable encoding and communication mechanisms. The security is certified by the VdS.

3. Cost-effective

Locking systems are particularly cost-effective when electronic and mechanical cylinders are combined into one system. The prerequisite for this is that all cylinders, keys and transponders are managed uniformly within one software.

4. Visually appealing

Convenient operation and individual door design does not necessarily have to be mutually exclusive. With the ixalo lock | SE, the emphasis is on compact, visually appealing security as the entire system technology is integrated into the lock. Any door hardware can be chosen.

ixalo knob cylinder | SE
Controls access to individual building complexes.

ixalo door hardware | SE
The access solution for every door with clear accent on design

G-U

janus cylinder | SE
Combines mechanical security with electronic comfort.

ixalo lock | SE
Ensures access to individual rooms.

Locking

Identifying

ixalo wall reader | SE
Opens gates, barriers or barrier-free access points.

Organising

ixalo software BKS KeyManager
Software for administration and programming of mechanical and electronic locking systems.

ixalo programming device | SE
For extremely straightforward programming of access points and transponders.

ixalo wall-mounted radio module
Networking of remotely installed access points via LAN and/or wirelessly.

ixalo release terminal | SE
Writes current access authorisations to all transponders at a central point in the building.

BKS

ixalo® the electronic locking system
Access to greater flexibility

"I am looking for a locking system that allows me to combine mechanical and electronic cylinders/access points flexibly with one another."

Jörg Schäfer, Facility Manager

Future-oriented locking – keys and cylinders constitute the high-quality basis for mechanical locking systems. Electronic locking systems offer comfortable solutions in terms of flexibility – modification of changed access rights – and security, e. g. due to secure encoding and straightforward disabling of lost keys. Particularly efficient and cost-effective solutions are characterised by a combination of both systems and their respective benefits.

ixalo® the electronic locking system

The areas of application

BKS

Electronic locking systems have become firmly established on the market. They are extremely economic to run when combined with mechanical and mechatronic master key systems. They offer the convenience and flexibility of a networked access control, with no wiring of doors required.

Escape door
ixalo knob cylinder | SE also retrofittable

Interior door
ixalo lock | SE lock as locking cylinder with any choice of door hardware

Terminal
BKS KeyManager software for administration and pro-gramming of mechanical and electronic locking systems

Barrier-free access
ixalo wall reader | SE as convenient access control

Security system

Mechanical master key system – problem-free extension into an electronic locking system

ixalo – the electronic locking system is a secure investment as the overall system can be extended as and when the need arises in order to meet growing demands. It can be combined with existing mechanical components at any time.

Access control

Growing demands for access rights and time frame management

Owing to the modular struc-ture of the system, it can be installed without difficulty in any project situation. As access rights can be assigned individ-ually and lost transponders or keys can be quickly replaced, this helps to save time and costs.

Project solutions

Manage locking rights centrally

All cylinders, with or without electronic components, can be managed consistently within one software programme using the BKS KeyManager. Modified access rights can be conveni-ently updated locally via the release terminals.
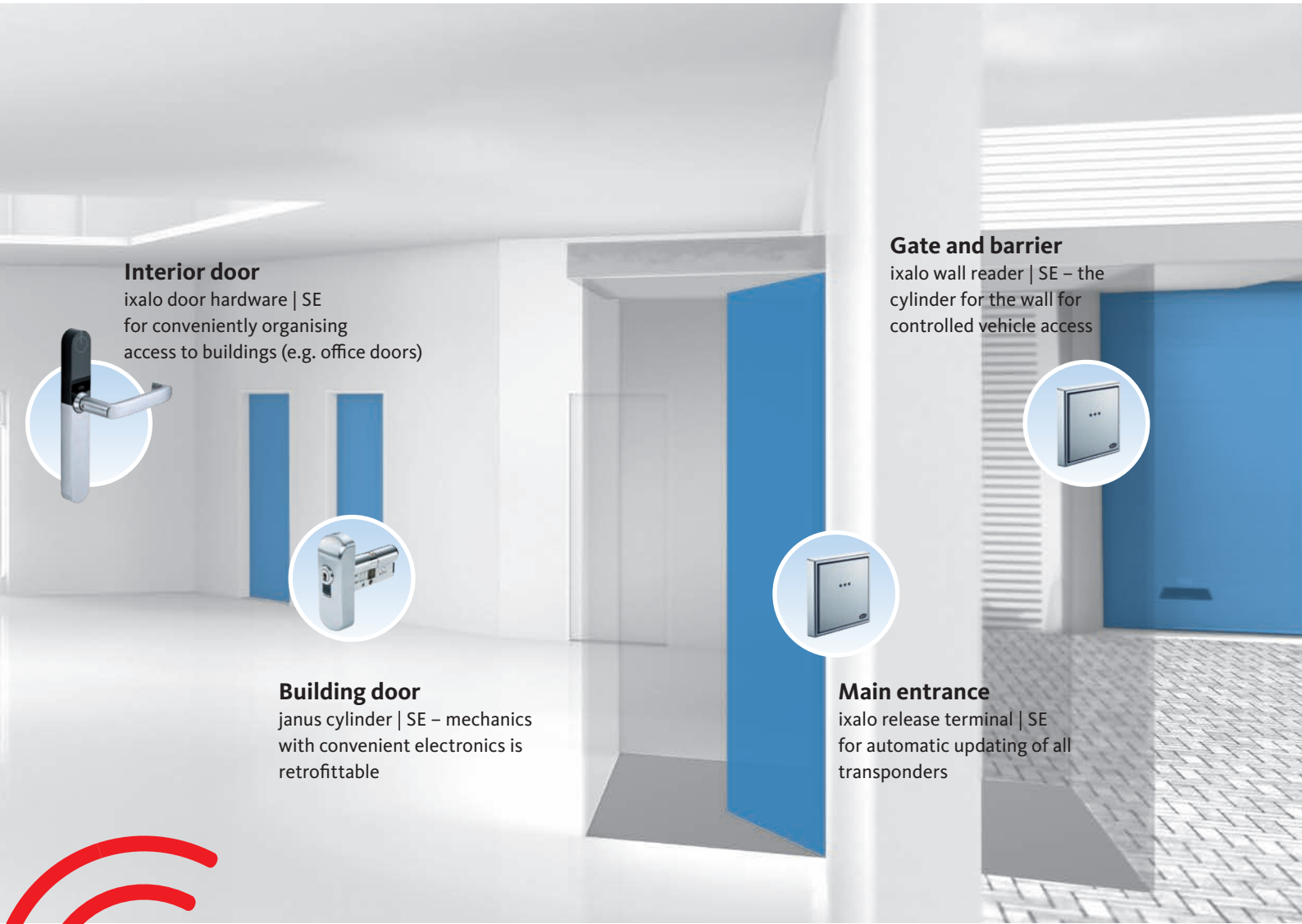
Interior door
ixalo door hardware | SE
for conveniently organising
access to buildings (e.g. office doors)

Gate and barrier
ixalo wall reader | SE – the
cylinder for the wall for
controlled vehicle access

Building door
janus cylinder | SE – mechanics
with convenient electronics is
retrofittable

Main entrance
ixalo release terminal | SE
for automatic updating of all
transponders

Access medium
ixalo transponder | SE – convenient
access which can be programmed and
enabled via the ixalo release terminal

ixalo® the electronic locking system
Access to greater flexibility

Photo: Getty Images

BKS

ixalo® the electronic locking system
Access to greater flexibility

Identifying

"I need a solution that gives our employees simple, uncomplicated and reliable access."

Karin Bezner, Project Manager

Future-oriented locking – humans should be in control of technology and not the other way round. The focus is on simplicity and clear operating logic with only one medium. New or modified access rights can be flexibly adapted at any time during operation.

ixalo® transponder

Universal access medium

BKS

Locking

Identifying

Organising

● High-quality design and pleasant haptics

● Can be combined with mechanical keys by BKS

● Maximum security due to strong encryption

ixalo transponder
Universal access medium

Regardless of whether you use mechanical, mechatronic or electronic locking cylinders – with an ixalo transponder from BKS you can lock every type of cylinder of any BKS master key system. Different cylinders can be combined in a cost-effective overall system. And without having to sacrifice comfort, as only one locking device is required for all cylinders.

In virtually networked "Data on Transponder" systems, the ixalo transponders are not just access media, they are also data transmitters. This means that individual access rights or different events can be securely transmitted between access points, release terminals and the BKS KeyManager without the need for a wired network.
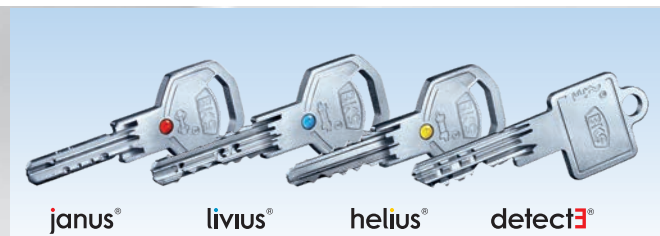
There is also a considerable cost advantage when retrofitting an existing mechanical BKS master key system with ixalo transponders as not all existing keys automatically need to be replaced.

OFF LINE | ON LINE | DATA ON TRANSPONDER | Ex | SE ⟩⟩⟩

ixalo transponder

ixalo transponder with key

janus®   livius®   helius®   detect3®

Combinable BKS keys
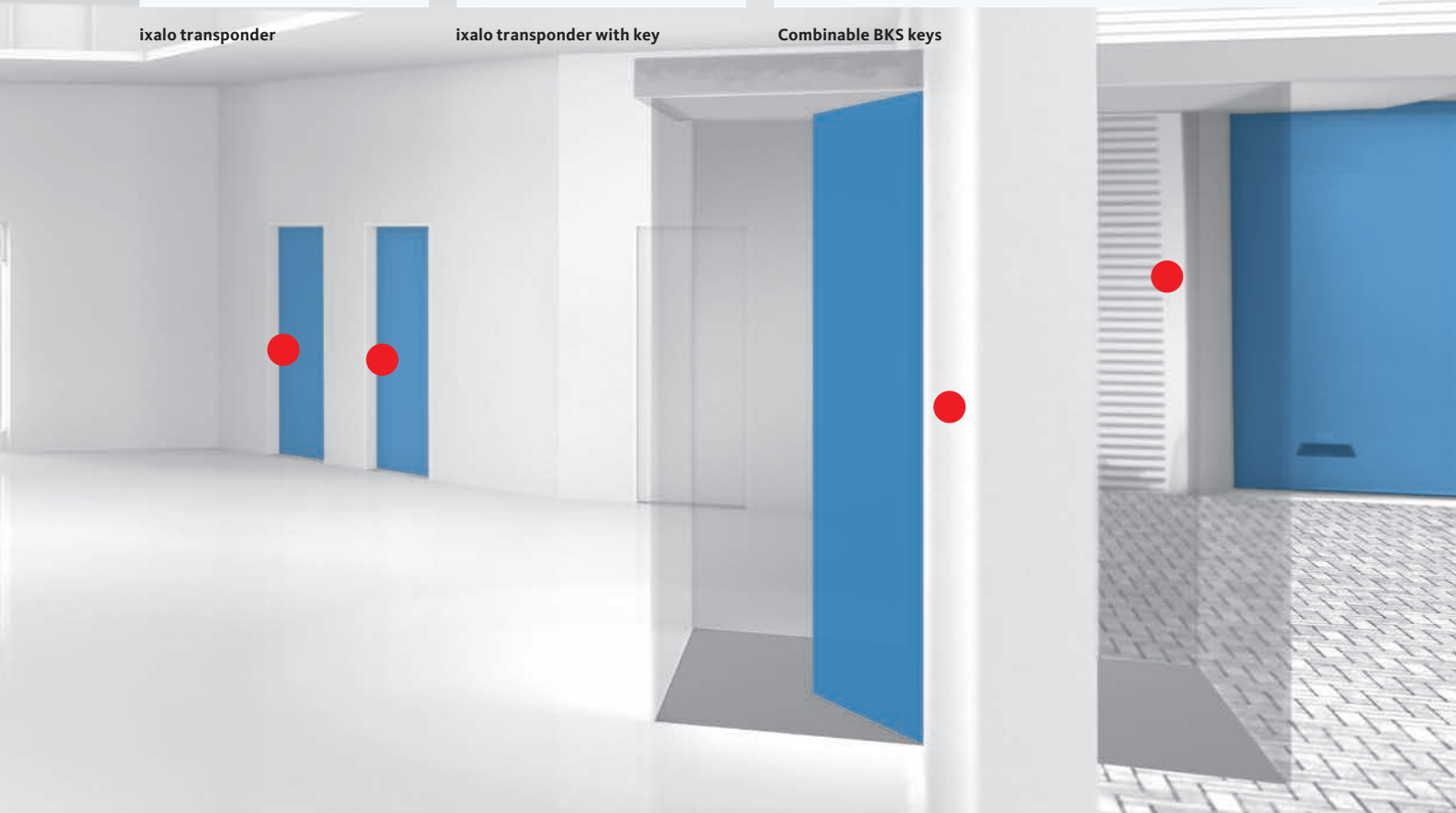
Features and benefits of ixalo transponders:

■ Retrofittable to existing BKS master key systems – without labour intensive key exchange

■ Multifunctional LED indicates active authorisations and battery level

■ Active transponder for minimal cylinder battery consumption

■ Long service life of battery: up to 200,000 locking cycles or 10 years standby per standard battery

■ Easy battery change

■ Consecutive numbering of IDs for simple and fast recording in the ixalo BKS KeyManager software

■ The following data can be written to transponders with the "Data on Transponder" version
  – authorisation data
  – periods of validity
  – events
  – programming jobs
  – service information

Optional versions:

■ Explosion-protected

BKS

ixalo® the electronic locking system
Access to greater flexibility

Locking

Identifying

Organising

Locking

"One step ahead in the market as design and function are no longer mutually exclusive."

Matthias Reimer, Architect

Future-oriented locking – unlike conventional electronic hardware solutions, a wide range of door hardware can be combined with the ixalo lock as the entire system technology is integrated into the lock. This gives designers the design and aesthetic freedom they require.

ixalo® knob cylinder

Electronic cylinders

BKS

Locking

Identifying

Organising

- Extremely long battery life – also in standby mode

- All electronics are located inside the secure interior area

- Full scope of functions in the standard version

Perfect and flexible combinations

ixalo knob cylinders can be combined with every mechanical master key system from BKS or other manufacturers. This is why they are eminently suitable for retrofitting.

ixalo panic double knob cylinder

Some panic locks place very high demands on knob cylinders. The ixalo panic double knob cylinder is designed precisely for such cases.

ixalo half knob cylinder

With the ixalo half knob cylinder you can electronically secure key switches, escape door terminals or elevators and organise access optimally. The knob can be detached for installation in different situations.

EN 1303	DIN 18252	EN 15684	CE	F

OFF LINE	ON LINE	DATA ON TRANSPONDER	SKG	VdS	SE)))

ixalo double knob cylinder

Installation situation

ixalo half knob cylinder

ixalo panic double knob cylinder

Features and benefits of ixalo knob cylinders:

- High energy efficiency: up to 350,000 locking cycles or 10 years standby per standard battery

- Electronic release on both sides (no unauthorised operation of the interior knob)

- Large event recorder (can be deactivated)

- Many special functions (daytime release, double-check principle, intruder detection system function, etc.)

- Contactless programming with programming device, transponder or via radio control

- Freely definable time frames, holidays and vacation durations

Optional versions:

- Special lengths > 80/80 mm

- Panic version (ixalo panic double knob cylinder)

- VdS BZ (highest level of security – certified by VdS)

- SKG*** (highest level of security – certified by SKG)

- Weather-protected version (IP65)

- Online version with integrated radio module

janus® cylinder | SE

Mechatronic cylinders

BKS

Locking

Identifying

Organising

- Outstanding battery life due to standard battery

- Double security due to combination of mechanical and electronic systems

- Protected against vandalism

Secure mechanics – flexible electronics

Provided with an additional electronic security feature, the proven janus mechanical cylinder system can be implemented especially flexibly. In terms of its outward appearance, the janus cylinder | SE is barely distinguishable from a purely mechanical cylinder. It is therefore suitable e.g. for areas where there is a risk of vandalism, in schools for instance. On the inside, the cylinder is protected by its robust rosette.

Highest level of energy efficiency

Its remarkably energy-efficient functioning principle allows for a very high number of locking cycles per inserted standard battery. This is a decisive criterion where battery-operated systems are concerned.

Outstanding security

Based on mechanical janus cylinder, the janus cylinder | SE combines the positive characteristics of a mechanical cylinder with the comfort of an electronic cylinder without this being outwardly identifiable as such.

| EN 1303 | DIN 18252 | EN 15684 | CE | F | SKG |
| OFF LINE | ON LINE | DATA ON TRANSPONDER | VdS | Ex | SE))) |

janus cylinder | SE

External view janus cylinder | SE

Installation of a janus cylinder | SE

Features and benefits of janus cylinders | SE:

■ The highest level of energy-efficiency: up to 600,000 locking cycles, or 10 years standby per standard battery

■ Double security with mechanical and electronic security

■ Large event recorder (can be deactivated)

■ Contactless programming with programming device, transponder or via radio control

■ Freely definable time frames, holidays and vacation durations

■ Ideally suited for vandalism risk areas

Optional versions:

■ Special lengths > 80/80 mm

■ Online version with integrated radio module

■ VdS BZ (highest level of security – certified by VdS)

■ SKG*** (highest level of security – certified by SKG)

■ Cylinder cover for BKS security hardware

■ Explosion-protected

ixalo® lock

The lock as locking cylinder

Locking

Identifying

Organising

● Convenient operation

● Ultimate design freedom due to unlimited choice of door hardware

● High degree of security – electronics protected in the door leaf

Design freedom at the door

In contrast with electronic hardware solutions, with the ixalo lock the choice of door hardware – e. g. tried-and-tested quality BKS hardware or other manufacturers – and therefore the door design is un-limited. Convenient operation and individual design of doors need not be mutually exclusive.

Compact visually appealing security

Electronics, reader and battery are securely integrated into the lock – instead of external hard-ware – thus protecting them from unauthorised access. The door is always locked thanks to the integrated automatic latchbolt (except when daytime release is desired). Easy use and high security have been efficiently combined.

Cost-efficient retrofitting of existing doors

The ixalo lock is sized to DIN lock case dimensions. This en-sures it is easy to retrofit into existing doors. The lock has been certified based on DIN 4102 and EN 1634 as acceptable for use in smoke and fire protection doors.

ixalo lock

ixalo lock with profile cylinder

ixalo lock without profile cylinder

Features and benefits of ixalo locks:

- The ixalo lock communicates directly with the transponder – without a detour via an externally wired reader

- Event recorder

- Extremely long battery life: 400,000 locking cycles or 10 years standby per standard battery

- Approved for use in fire protection doors and escape doors

- Outstanding security due to electronics and actuator being integrated into the lock instead of the external electronic door hardware

- Many special functions (daytime release, double-check principle, burglar alarm system function and others)

Optional versions:

- Online version with integrated radio module (868 MHz)

- Combination with the WDL door hardware range by BKS: for use in sheet-steel doors

ixalo® door hardware

Comfortable access-organisation solution

BKS

Locking

Identifying

Organising

● Very easy operation

● Design-oriented access control solution

● Also suitable for use on doors in escape and rescue routes (EN 179/EN 1125)

### Convenient to use – flexible installation options

The ixalo door hardware fits seamlessly into the modular overall system and provides a very convenient solution for access organisation. The orientation of the lever handle can be reversed at any time to DIN left or DIN right thus offering outstanding flexibility on-site during installation.

Fire protection doors, escape and rescue routes

Special doors also need to be considered when planning an access system. This is why ixalo door hardware has been designed from the very outset for the hardware to be used on fire protection doors and emergency and escape doors. ixalo door hardware is approved according to EN 1634 and EN 179/EN 1125.

Can be combined with BKS WDL hardware range

ixalo door hardware can be used in conjunction with different lever handle models of the mechanical WDL door hardware range. To meet individual requirements, many design-oriented door hardware variants can be obtained in combination with the relevant WDL lever handle series.
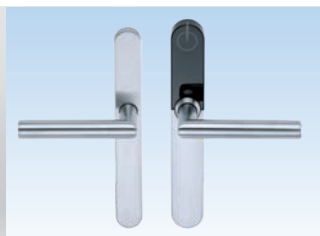
ixalo door hardware – lever set
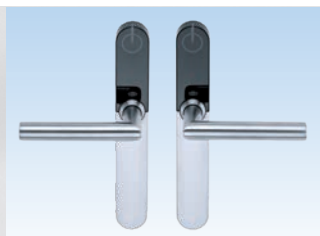
ixalo door hardware – reading from both sides

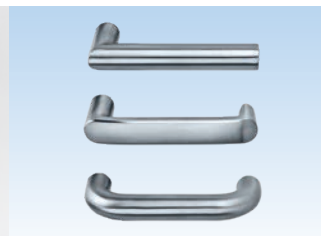**Range of lever handle designs: BELCANTO, DIRIGENT, RONDO**

Features and benefits of the ixalo door hardware:

- High level of energy efficiency: 120,000 locking cycles/ standard battery pair

- Suitable for fire protection doors

- Can be adjusted for RH/LH use – also retrospectively

- Visual and acoustic signalling of access authorisation

- Many special functions (daytime release, double-check principle, burglar alarm system function and others)

Optional versions:

- Online version
- Different hole configurations for the cover plate
  - no holes
  - PC72 or PC92 profile cylinder hole
  - CHRC74, CHRC78 or CHRC94 Swiss round cylinder hole

- Half set, ixalo door hardware with electronics on both sides

ixalo® wall reader

The cylinder for the wall

BKS

Locking

Identifying

Organising

Opens gates, barriers or barrier-free access points

Many buildings are not always accessed by traditional doors: there are roller shutters, car park barriers, elevators, or barrier-free entrances. With ixalo wall readers, you can operate these access points with the same access medium as the mechatronic or electronic cylinders used within the master key system.

The wall reader releases motor-driven locks, electric strikes, swing-door drives or sliding doors to authorised transponders; at predefined times, if desired.

OFF LINE ON LINE DATA ON TRANSPONDER CE SE ⟩⟩

ixalo wall reader small for outdoors and for installation in profile

● Contactless programming

● Can connect online to BKS KeyManager via bus

● Compact access control next to the door

Features and benefits of ixalo wall reader:

■ Controlled activation of BKS motor-driven locks and multi-point locks such as SECURY Automatic with A-opener, swing-door drives, car park barriers

■ Large event recorder (can be deactivated)

■ Contactless programming with programming device, transponder or online via bus

■ Electronics securely accommodated in the interior (in conjunction with an external reader)

BKS

ixalo® the electronic locking system
Access to greater flexibility

Locking

Identifying

Organising

Organising

"I require a software which enables me to flexibly control and manage my access organisation at all times – for both mechanical and electronic access points."

Peter Gerber, Facility Service

Flexible organisation – different access solutions are required for each project. Modular software, efficient system variants and different access products such as cylinders, locks, wall readers can be combined to produce solutions tailored to individual requirements. This guarantees convenient access organisation that can be easily adapted to new requirements at any time.

ixalo® software

BKS KeyManager for access administration

Locking

Identifying

Organising

● Intuitive and straightfor-ward operation
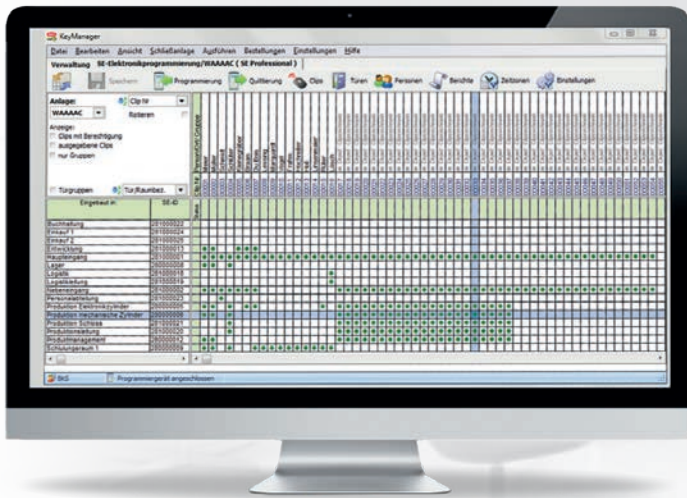
● Coherent management of mechanical and electronic cylinders

● Always up-to-date due to regular updates

Control and overview

Throughout the years, the BKS KeyManager, constantly refined in collaboration with our customers, has proven itself a competent administration software for master key systems. The BKS KeyManager does full justice to the trend of combining mechanical, mechatronic and electronic cylinders in one cost-effective overall system.

Programming and administration

All cylinders, with or without electronic components, can be managed consistently within one software programme using the BKS KeyManager. The intuitive user interface enables convenient programming of cylinders, from simple YES/NO programming through to time-controlled authorisations and special functions.

OFF LINE | ON LINE | DATA ON TRANSPONDER | SE)))

Features and benefits provided by the BKS KeyManager:

- Uniform administration and programming of mechanical, mechatronic and electronic cylinders and wall readers via one user interface.

- Administration of distributed keys and transponders

- Display and printing of mechanical and electronic access authorisations

- Networkable (client/server)

- Electronic acknowledgement of receipt by means of signature pad

- Scaleable range of functions via powerful software modules

ixalo® programming device

Contact-free access updating

Locking

Identifying

Organising

BKS

- Two devices rolled into one: service device and programming device
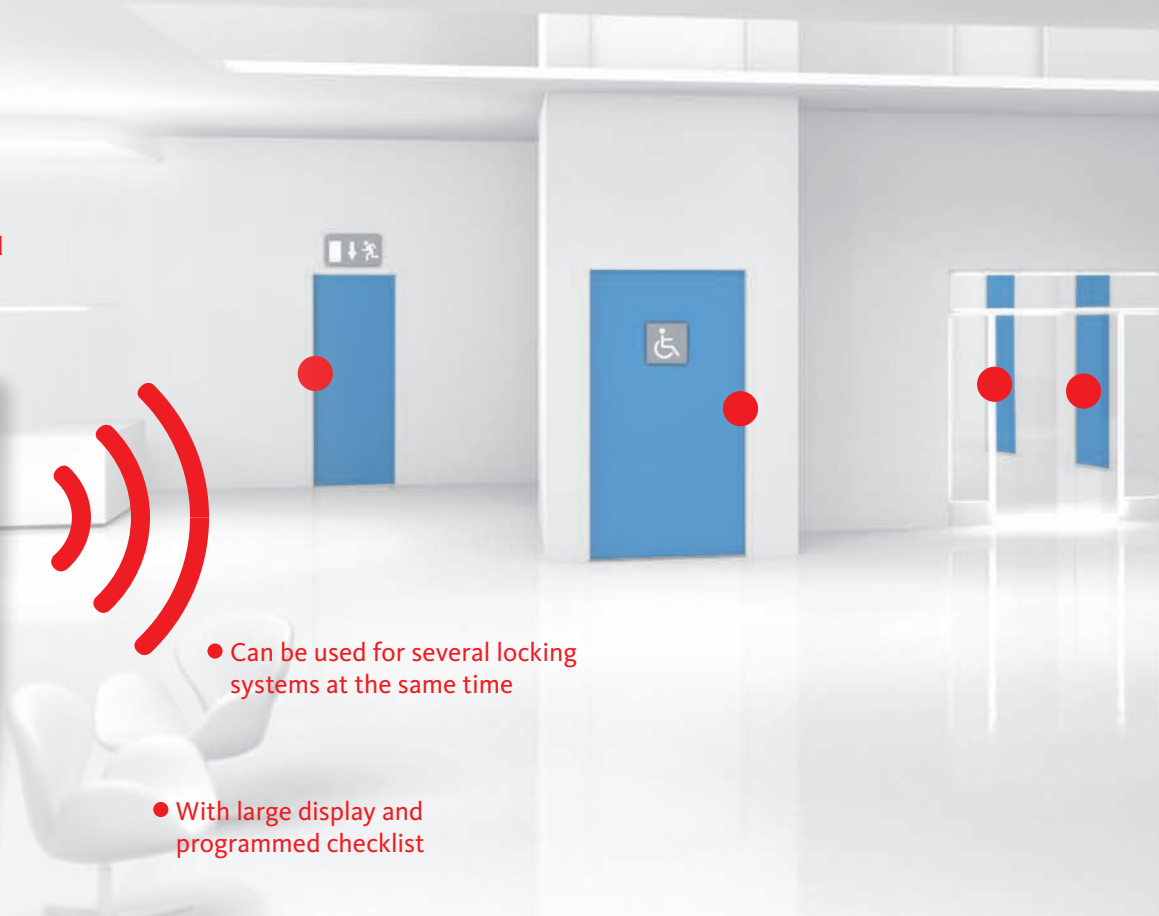
- Can be used for several locking systems at the same time

- With large display and programmed checklist

Convenient programming device instead of a heavy laptop

The ixalo programming device uses non-contact data transfer and can also be operated by persons who have no product or software training. This means that a security firm or caretaker can for example also update data for individual doors when on-site. When checking through the doors, a convenient checklist of the doors to be programmed is displayed.

Cost-effective maintenance

In addition to the programming function, the ixalo programming device can also be used as a servicing device and significantly simplify the maintenance of an electronic master key system. Battery charge level, firmware status and other service parameters are read out contact-free from built-in ixalo cylinders or locks.

OFF LINE | ON LINE | DATA ON TRANSPONDER | C€ | SE))

Features and benefits of ixalo programming devices:

- Programming of ixalo access points
  (ixalo cylinder, ixalo wall reader, ixalo lock)
  - Indication of programming progress
  - Acoustic signaling
    (e.g. when programming is complete)
  - Checklist display
    (designations of doors yet to be programmed)

- Can be used as a programming device for writing to ixalo transponders

- Reading of ixalo access point events

- Multi-function display operated by means of function keys

- Usable as a service device
  - Contactless querying of cylinder and lock battery levels
  - Resetting of the low-battery warning

- Functions can be extended by carrying out firmware updates via BKS KeyManager software

ixalo® release terminal

Updating access rights

BKS

Locking

Identifying

Organising

Access authorisations that are always up-to-date

With the "Data on Transponder" system version, continuous exchange of data between the software and the cylinders is always reliably guaranteed by the interaction between all transponders and the release terminal.

Changes in the access authorisation of the transponder can be updated conveniently in a decentralised way using the release terminal.

The validity of a transponder can be extended using a release terminal (e.g. for 24 hours). If a transponder is disabled in the BKS KeyManager, the validity can no longer be extended at the release terminal. This means that the transponder will automatically be disabled after this 24 hour time period has elapsed at the latest.

DATA ON TRANSPONDER   CE   SE))）

ixalo release terminal pro

● Conveniently update
  the access rights
  of transponders

● Extend the validity
  of transponders

● Read events from
  transponders

Features and benefits of ixalo release terminals:

■ Validity ("daytime rights") of transponders can be updated

■ Output relay can be used for release (e.g. turnstile)

■ Access authorisations of the transponder can be updated

■ Transponder events can be read out
  (e.g. battery charge level of cylinders)

■ Flexible connection via LAN and RS-485 bus

ixalo® wall-mounted radio module

Access networking via LAN or radio control

Locking

Identifying

Organising

● No wiring of doors required

● Use of existing LAN infrastructure possible

● Very easy operation

Convenient programming

If access rights are updated in the BKS KeyManager software, these changes must be transmitted to the ixalo access points (e. g. ixalo cylinder). The ixalo wall-mounted radio modules make this particularly convenient as it takes place automatically. The cylinders or locks are connected wirelessly to the ixalo wall-mounted radio modules that in turn guarantee secure exchange of data with the BKS KeyManager.

In contrast to conventional access control systems it is not necessary to wire the individual doors. Depending on the local circumstances, several doors can be connected to one wall-mounted radio module. The ixalo wall-mounted radio modules | SE are easy to integrate into an existing Ethernet network which means it is also possible to incorporate access points or doors that are far away.

ON LINE | DATA ON TRANSPONDER | C€ | SE))) | RFID)))

Features and benefits of ixalo wall-mounted radio modules:

- Once entered in the BKS KeyManager, authorisation changes are directly updated wirelessly in the cylinders and locks

- Special functions such as the connection of intruder detection systems can be implemented

- Up to 64 ixalo knob cylinders/locks can be connected per wall module in the online version.

- Use of existing LAN infrastructure possible

- Battery statuses of ixalo knob cylinders/locks (online version) are monitored automatically

The system variants for programming access authorisations

Efficient solutions for every requirement

BKS

Because the size and organisation of every project is different, customised solutions can only be implemented with varied, intelligent system concepts and versatile product variants. Three efficient systems can be selected with the ixalo electronic locking system in SE technology:

OFF LINE

An ideal entry-level system

An offline system can be installed and brought into operation very quickly.

ON LINE

Convenience in programming

The focus of the online system is on programming convenience. Once entered in the KeyManager, changes to access rights are updated automatically in the cylinders and locks via the network or radio control – also over long distances.

Organising

or

or

Installation:

- Straightforward installation
- No wiring required

Convenience:

- Doors are programmed on-site using a programming device

Master key system size:

- For small and medium-scale master key systems

Advantages:

- An ideal entry-level system
- Easy to install

At least the following are required:
ixalo transponder
ixalo cylinder
ixalo programming device
BKS KeyManager
ixalo software licence

Installation:

- Wiring of wall-mounted radio modules is required

Convenience:

- Central authorisation allocation via KeyManager software
- Networking possible via various, also existing, transmission paths (LAN, bus, radio control)

Master key system size:

- For medium-scale and large master key systems

Advantages:

- Very easy operation

At least the following are required:
ixalo transponder
ixalo cylinder online
ixalo programming device
BKS KeyManager
ixalo software licence, ixalo software licence: online, ixalo wall-mounted radio module (e. g. EBKFM Ethernet bus coupler with radio module)

G-U

Locking

Identifying

Organising

DATA ON TRANSPONDER

For every master key system size

Combines the advantages of offline and online master key systems within one system.

Locking

Identifying

Installation:

- Straightforward installation
- Only release terminals are wired

Convenience:

- Changes to authorisations are transmitted automatically via the release terminal
- Networked solution without having to wire every door
- Lost transponders are automatically deactivated

Master key system size:

- For small and medium-scale master key systems

Advantages:

- Easy to install
- Very easy operation

At least the following are required:
ixalo transponder
ixalo cylinder
ixalo programming device
BKS KeyManager
ixalo software licence, ixalo software licence: Data on Transponder, also recommended: ixalo release terminal with EBK Ethernet bus coupler

Cutting-edge locking systems

More than just products

BKS

Our products are protected by patents and have to meet high quality standards. This enables us to guarantee their safety and reliability the world over.

Online processing ensures error-free data transmission, reduced material planning expense, shortened procurement times in addition to continuous updating of the entire system around the clock.

MKS MasterKeySystem

MKS is the internet-based planning and ordering platform for master key systems. A number of useful functionalities make it easier to work out the entire master key system and then ensure trouble-free processing of your order.

Together with the mobile security card reader, MKS offers unique advantages in extending existing master key systems and reordering keys and cylinders.

Service email: mks@bks.de

Features and benefits provided by MKS:

- Planning and ordering of master key systems with mechanical, mechatronic and electronic locking cylinders
- Extensions of existing master key systems
- Ordering of registered key bittings
- Reordering of keys and cylinders
- Key combination records for download
- Master key system data for use in the BKS KeyManager
- Key identifications
- Plausibility check

Along with the outstanding quality of their mechanical, mechatronic and electronic cylinders, BKS offers a comprehensive range of services in the field of planning, administration and reordering of individual keys, cylinders and master key systems.

Peace of mind with high-quality production

Future-proof with patent protection

Regional dealer network

We are everywhere you need us! Our comprehensive network of BKS specialist dealers guarantees competent advice and reliable service on all aspects of your master key system.

BKS retailer search in the Internet

For a list of BKS specialist dealers in your region, visit: **www.g-u.com**

Securing technology for you

G·U | BKS | FERCO

Cutting-edge locking systems

Service and building project consulting

BKS

Our building project consulting services for architects, planners, builders and general contractors

Competent advice at the project planning stage guarantees you will receive a solution tailored to your project. Short distances and fast, reliable service make technical and cost-optimised solutions possible, perfectly in tune with your application.

Photo: Getty Images

Advice right from the planning stage

The advantages for you and your clients

Together with you, we will work out the necessary requirements in relation to the desired functionality, if required, and create an individual overall concept. Convenience and security are given the highest priority when it comes to opening and locking doors.

In this case we not only concentrate on the individual product, but design a complete solution, taking into account multiple equipment interfaces.

Building security, protection of life and valuables, barrier freedom and ease of use are often at opposites in terms of individual requirements. We will find the optimal solution for you.

Photo: Getty Images

TUER-ENGINEERING

Photo: Getty Images

**Tailor-made solutions
for any project**

DOOR ENGINEERING – the cross-trade planning service for planners and architects

The importance of door engineering is often underestimated during overall planning. Architectural, design and organisational guidelines as well as fire protection, security, barrier freedom and appropriate escape route requirements make doors a cross-trade, complex construction element. The "craft of the door" becomes a highly intricate planning task.

The GU project team provides advisory services based on functional models and derives solutions to problems. The solutions take the necessary standards and the conceptions and requirements of the planners into consideration and are documented using clear door configuration lists.

**The Tender-Text-Manager
– software for architects and planners**

With the Tender-Text-Manager, we offer an online tool enabling you to easily create complete BOQs and to dynamically compile complete tenders, and communicate these in digital form.

Service email: objektberatung@g-u.de

Service email: ausschreibungstexte@g-u.de

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The most important criteria when deciding on the right electronic locking system are obvious. On battery-powered systems, aspects such as the service life of the cylinder battery play a crucial role in minimising the costs incurred for changing batteries. This applies in particular to medium-sized and large master key systems.

Economically, it is always sensible to supplement the locking system with mechanical cylinders and be able to administer it using one item of software. The most important aspects are summarised in the following table to help you make an informed decision:

Comprehensive system

An economical solution
☐ An electronic locking system can be ordered in combination with mechanical cylinders in a master key system

Operating comfort, reliability and security
☐ Transponders and cylinders/wall readers use contactless communication

Different cylinder types
☐ In addition to standard double knob cylinders, mechatronic cylinders are available that can be operated like mechanical cylinders and can be used e.g. in areas at risk of vandalism

Combination of transponder with mechanical keys
☐ The transponder can be clipped onto mechanical keys.
☐ For mechanical and electronic cylinders, only one locking device is carried on the bunch of keys.
☐ Existing keys for a mechanical master key system do not have to be changed, saving time and effort.

Availability of different system versions for different applications
☐ Offline version as affordable entry-level system
☐ Online version via radio control for convenient assignment of authorisation
☐ It must be possible to combine offline and online products within one master key system
☐ Virtual networking via writable transponders

Economic online solution
☐ With wall-mounted radio modules, several cylinders with integrated radio module can be connected

Easy, fast commissioning of networked systems
☐ Automatic configuration of wireless components

High level of security
☐ Master key system identifier assigned ex works in combination with a master key system password that can be freely defined by the end client

Fast commissioning
☐ Transponders are consecutively numbered so that they do not have to be programmed individually

Special versions with Ex-protection
☐ Ex-protected versions of cylinders and transponders are also available

Reduced network costs with the online system
☐ Wall-mounted radio modules can be networked via LAN or alternatively via RS-485 bus

Software

Electronics and mechanics managed within one software
☐ In addition to programming and managing electronic cylinders, the software can also manage mechanical master key systems

Fast commissioning
☐ When a master key system is delivered, it comes with a master key system file detailing all cylinder/door data, such as the door designation and technical features – this allows the system to be commissioned quickly

Convenient acknowledgement/confirmation of receipt
☐ The distribution of transponders/keys can be signed via the signature pad and archived electronically

Password-protected event query
☐ The "double-check principle" control function is available

Straightforward programming of cylinders/transponders
☐ Performed via the intuitively operated locking scheme matrix or list view

Straightforward installation with internal database
☐ Stand-alone installations can be performed without external SQL data bases

Networkable
☐ Client/Server operation is possible

Scope of functions can be extended in a modular fashion
☐ Online module for integration of cylinders that are suitable for radio transmission, bus interfaces and radio modules
☐ Client module for administration of several clients within a master key system
☐ "Data on Transponder" module for virtual networking of cylinders via the transponder

Cylinders

Low operating/maintenance costs as battery rarely needs to be replaced
- ☐ Very long service life of cylinder batteries (up to 350,000 locking cycles or more per battery)

Operating reliability also with infrequent use
- ☐ Long standby times (up to 10 years) for remote or rarely used doors

Simple maintenance
- ☐ Use of customary batteries instead of special batteries for cylinders/transponders

Electronics on the secure interior side
- ☐ The evaluating electronics are integrated into the knob on the inside and are therefore protected

Convenient battery change
- ☐ Cylinder does not have to be removed

Battery in the cylinder
- ☐ An external energy supply via cable or in a separate milling in the door is not required for a high number of locking cycles

Complete products
- ☐ No limitation of cylinder functions (event storage and time frames are included in the basic equipment)

Location-independent function
- ☐ No restrictions in relation to the installation location of the cylinder (e.g. turned through 180°)

Effective prevention of door misuse
- ☐ The double knob cylinder generally scans electronically on both sides
- ☐ Unauthorised operation from the inside is not possible

Cylinders for panic locks
- ☐ Approved variants for panic locks, which require defined cam positions

Easy-to-mount half knob cylinders
- ☐ Knob can be removed for installation

Certified security
- ☐ VdS BZ, SKG***, Ex-protection certifications exist

Backup power supply for a double knob cylinder
- ☐ External power supply is available via an external backup power supply module

Lock

No design restrictions
- ☐ Unrestricted selection of door hardware design

Electronics in the secure inside area
- ☐ The evaluating electronics is in the lock in the door and not in the outside door hardware

Straightforward battery replacement
- ☐ The battery can be replaced without removing the lock or door hardware

Locking cylinder
- ☐ A locking cylinder can also be used.
  Its use is monitored and logged.

Electronic door hardware

Fire protection doors
- ☐ The door hardware is approved for use on fire protection doors

Panic doors
- ☐ The door hardware can be used on emergency and escape doors (EN 179/EN 1125)
- ☐ The hardware can be used with push bars or touch bars

Lever handle direction
- ☐ The lever handle direction can subsequently be changed over at any time on-site with no need for special tools

Energy management
- ☐ Thanks to the energy-efficient control method used for the door hardware 2 standard batteries (CR2) are sufficient for up to 120,000 locking operations

Programming device

Programming of cylinder
- ☐ Programming and event querying is contactless

Service and maintenance
- ☐ Programming device with service functions for maintenance work (e.g. contactless cylinder battery level querying)

Verification of time and date
- ☐ Time and date of the programming device can be checked using the integrated display

Versatile use
- ☐ Programming device can be implemented as a desktop device for programming/reading the transponders

Transponders

Display of access authorisation
- ☐ Multifunction LED in the transponder signals authorisation rights on a cylinder/wall reader

Battery level check
- ☐ It is possible to check the battery level using integrated visual signaling

Extremely low battery consumption
- ☐ Up to 200,000 locking cycles per standard battery

Long battery life with infrequent use
- ☐ Standby time is up to 10 years

Integrated event recorder (with Data on Transponder)
- ☐ Up to 500 events can be saved
- ☐ Transmission of battery charge levels of cylinders or locks

**Large data storage for access authorisations
(with Data on Transponder)**
- ☐ Transponder group and/or up to 64,000 individual doors can be saved

Combinations
Functions and product variants

ixalo knob cylinder | SE

	SL	VK	VdS	SKG	O	DoT	Ti	WS	HZ	F	ES	ZZ
Special lengths › 80/80 mm (SL)	–	●	●	●	●	●	●	●	–	●	●	●
Extended external plug (VK)	●	–	●	●	●	●	●	–	–	●	●	●
VdS BZ approval (VdS)	●	●	–	–	●	●	–	●	–	●	●	●
SKG*** approval (SKG)	●	●	–	–	●	●	–	●	–	●	●	●
Online (O)	●	●	●	●	–	●	●	●	●	●	●	●
Data on Transponder (DoT)	●	●	●	●	●	–	●	●	●	●	●	●
Internal push-button (Ti)	●	●	–	–	●	●	–	–	–	●	●	●
Weather-proof version (WS)	●	–	●	●	●	●	–	–	●	●	●	●
Half cylinder version (HZ)	–	–	–	–	●	●	–	●	–	–	●	●
Approved for fire protection doors (F)	●	●	●	●	●	●	●	●	–	–	●	●
Event recorder (ES)	●	●	●	●	●	●	●	●	●	●	–	●
Time frame management (ZZ)	●	●	●	●	●	●	●	●	●	●	●	–

Combination possible ●　　Combination not possible –

ixalo panic double knob cylinder | SE

	VK	O	DoT	Ti	WS	F	ES	ZZ
Extended external plug (VK)	–	●	●	–	–	●	●	●
Online (O)	●	–	●	–	●	●	●	●
Data on Transponder (DoT)	●	●	–	–	●	●	●	●
Internal push-button (Ti)	–	–	–	–	–	–	–	–
Weather-proof version (WS)	–	●	●	–	–	●	●	●
Approved for fire protection doors (F)	●	●	●	–	●	–	●	●
Event recorder (ES)	●	●	●	–	●	●	–	●
Time frame management (ZZ)	●	●	●	–	●	●	●	–

Combination possible ●　　Combination not possible –

janus cylinder | SE

	SL	VdS	SKG	O	DoT	WS	F	ES	EX	ZZ
Special lengths › 80/80 mm (SL)	–	●	●	●	●	–	●	●	●	●
VdS BZ approval (VdS)	●	–	–	●	●	–	●	●	–	●
SKG*** approval (SKG)	●	–	–	●	●	–	●	●	–	●
Online (O)	●	●	●	–	●	–	●	●	–	●
Data on Transponder (DoT)	●	●	●	●	–	–	●	●	●	●
Weather-proof version (WS)	–	–	–	–	–	–	–	–	–	–
Approved for fire protection doors (F)	●	●	●	●	●	–	–	●	●	●
Event recorder (ES)	●	●	●	●	●	–	●	–	●	●
Explosion protected version (EX)	●	–	–	–	–	–	●	●	–	●
Time frame management (ZZ)	●	●	●	●	●	–	●	●	●	–

Combination possible ●　　Combination not possible –

ixalo software licences	SE			
Master key system management			
Management module	With this module you can manage mechanical, mechatronic and electronic master key systems. Distributed keys and transponders as well as installed cylinders are appropriately recorded e.g., to give evidence to insurance companies in the event that keys are lost.		
Client module	This module allows splitting of master key systems into different clients. Each client (e.g., tenant of an office building) can only manage the keys/cylinders and programme the ixalo transponders/access points allocated to him/her.		
Programming of the electronic locking system			
	Max. number of transponders	Max. number of access points (cylinders or wall readers)	Management module included (mechanics)
Software licence	SE free	25	5	No
Software licence	SE standard	1000	100	No
Software licence	SE professional	Unlimited	Unlimited	No
Software licence	SE standard plus	1000	100	Yes
Software licence	SE professional plus	Unlimited	Unlimited	Yes
Extra licences			
Software licence	SE online	This licence permits the connection of online products, e.g. ixalo cylinders	SE with integrated radio module.		
Software licence	SE Data on Transponder	This licence enables the programming of products via virtual networks.		

EN 1303	Certified in accordance with EN 1303 – Building hardware – Locking cylinders for locks – Requirements and test methods	**SKG**	In SKG version, testing underway	EN 179	Emergency exit devices in accordance with EN 179
DIN 18252	Certified in accordance with DIN 18252 – Profile cylinders for door locks – Terminology, dimensions, requirements and marking	**VdS**	In VdS version, testing underway	EN 1125	Panic exit devices in accordance with EN 1125
EN 15684	Certified in accordance with EN 15684 –Building hardware, mechatronic locking cylinders, requirements, test methods	**OFF LINE**	Offline system variant	**Ex**	Explosion-protected
CE	CE marking	**ON LINE**	Online system variant	**RFID))**	Available in RFID technology
F	Suitable for use on fire protection doors	**DATA ON TRANSPONDER**	System variant Data on Transponder	**SE))**	Available in SE technology

Exclusion of liability/Copyright notice

BKS

Exclusion of liability

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