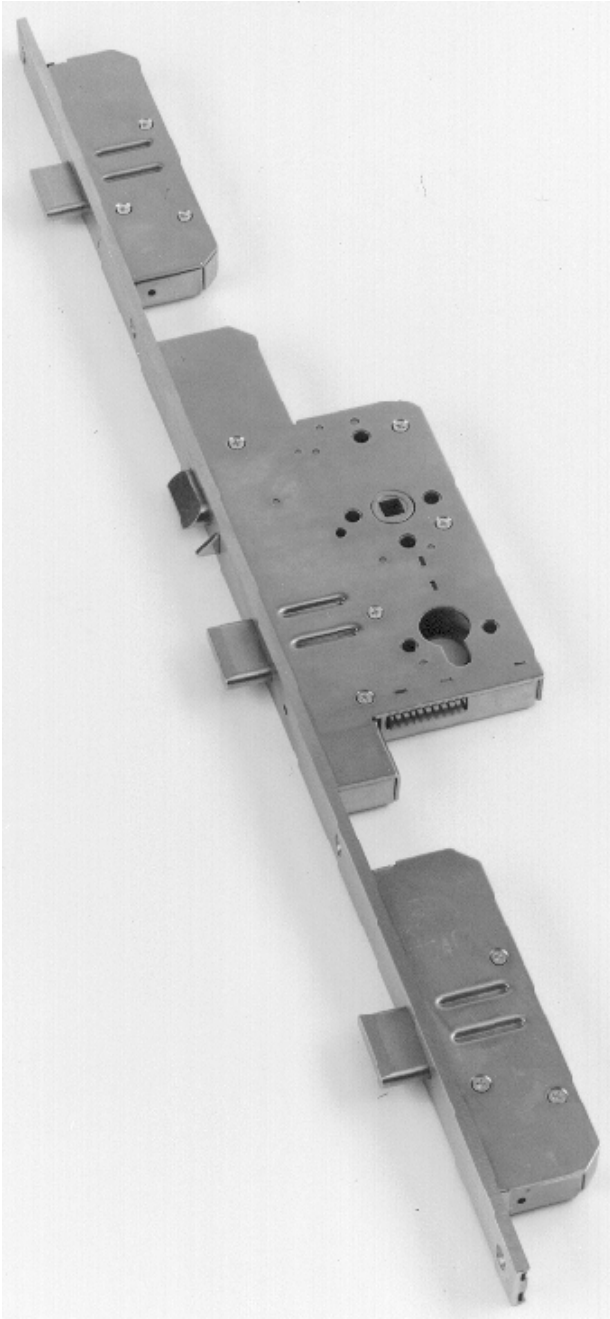


HZ-lock: the multifunctional lock for security doors



HZ-lock: the multifunctional lock for security doors

One door ...

- ... burglar resistant
- ... automatic self-locking
- ... with electronic access-control
- ... emergency exit
- ... fire resistant
- ... mechanical opening by key

The HZ-lock comprises a main lock, level with the door handle and additional upper and lower deadbolts. The main lock and additional bolts are connected by hardened bars that are integrated onto the front plate of the lock. Opening of the door occurs by the door handles on either side of the leaf. Normally, the outside door handle is uncoupled from the lock mechanism and can be actuated only in idle motion. The inner door handle is permanently connected with the lock mechanism.

Any electronic access control system can switch the outside handle from idling to engaged via the built-in magnetic coil. The three bolts and the latch are withdrawn by lowering either the inner door handle or the coupled outside door handle. The bolts function in a variable zoom sliding movement and remain in each withdrawn position, even if in case of a broad clearance, they need not be withdrawn completely for slewing the door leaf. In case of a power cut or for emergency opening, the outside door handle can be engaged by way of the cylinder and key.



Automatic locking

If the door fitted uses an automatic door closer to close, the latch of the main lock snaps into the striking plate first and positions the door leaf in the locking position. The three bolts are released briefly before the latch fully extends and are automatically thrust out by pre-loaded springs but only when they can extend into the appropriate openings unobstructed. The fully extended bolts are blocked. A magnet in the strike and a reed contact in the front plate of the lock, control the position of the door leaf. This reed contact is switched with a second contact that controls the position of the bolts. These two contacts monitor if the door is closed and locked.



Burglar resistance

The throw of each of the three deadbolts is 20 mm. In the extended position, the bolts are blocked against pressing back. The bolts, the casings and the connecting bars are hardened so to protect against drilling.



Emergency exit

The inner door handle or bar is permanently connected to the lock mechanism. With one single movement of the handle, the door can be opened from the inside at any time without use of a key or any other means. Every actuation of the door handle closes a contact, with that, an authorised opening can be signaled to a control system.



Access control

The external handle can be engaged by any electronic access control system. After recognition of an authorisation, the magnetic coil in the lock is put under current and the outside door handle is switched from idle motion to operation. As long as the current supply is on, the door can be opened.

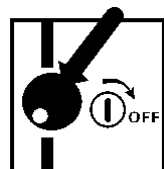
Exit control

If an exit control is provided on an emergency exit, the door is equipped with an additional fail safe magnetic lock. After recognition of an authorised access, the magnetic coil of the lock is supplied by an electric current and at the same time the power supply of the additional magnetic lock is interrupted. The inside terminal for the exit control only interrupts the power supply of the magnetic lock; the door may be opened by the anti-panic function of the inner door handle. In case of an emergency, the magnetic lock is released by breaking the emergency switch.



Emergency opening

In case of power cuts or for mechanical opening by rescue services, the coupling of the outside door handle is possible by turning the master key in the cylinder outside door handle at the same time. When turning the key in the cylinder a changeover switch is actuated. This contact interrupts the current supply to a optionally mounted additional magnetic lock for emergency exits or can be used for supervisory functions.



Total interlocking

When turning the key in the cylinder in a closing direction, two electric switches are actuated: one interrupts the power circuit to the electromagnetic coil and the other is free for control functions.



Fire resistance

HZ-lock is tested and approved for fire resistant doors.

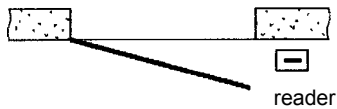
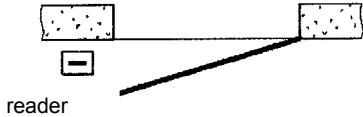
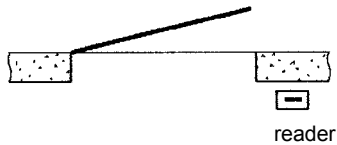
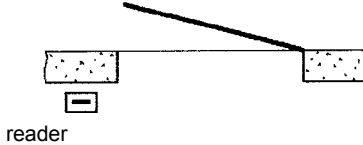
Technical data:

Front plate for door-height	Refined steel	24 x 6 mm 195 – 225 cm
Backset		80 mm
Follower		9 x 9 mm
Distance	Kaba / Keso EURO-Profil-cylinder	74 mm 72 mm
Lock case depth	Main lock Additional bolts	113 mm 52 mm
Bolts	Cross section Feed	oval 8 x 35 mm 20 mm
Door clearance lock side	Minimum Maximum	3 mm 6 mm
Magnetic coil	Voltage Power consumption Switch-on time	12 or 24 VDC 4 Watts 100 %
Test	DIN18251	cl. 4
Certificate	MPA Dortmund	P-12 0021 4 95

Name/Company
 Street
 Town
 Post Code
 Processed by Telephone
 Commission Fax

HZ-lock: The Multifunctional Security Lock

Order **Quote** Date

Definition	
Lock DIN left outward 	Lock DIN right outward 
Lock DIN left inward 	Lock DIN right inward 

Lock

Function	<input type="checkbox"/> electronic access with monitoring and control contacts	<input type="checkbox"/> mechanic only, without electric contacts
Cylinder bore	<input type="checkbox"/> Kaba/Keso 74mm	<input type="checkbox"/> profile cylinder 72mm

Definition	Door height		
	2050 mm	2150 mm	2250 mm
Front plate extensions without additional latch			
DIN left outward	pcs	pcs	pcs
DIN right outward	pcs	pcs	pcs
DIN right inward	pcs	pcs	pcs
DIN left inward	pcs	pcs	pcs
Front plate extensions with additional latch			
DIN left outward	pcs	pcs	pcs
DIN right outward	pcs	pcs	pcs
DIN right inward	pcs	pcs	pcs
DIN left inward	pcs	pcs	pcs
Blind front plate profile for use as extension			mm

Magnet	<input type="checkbox"/> 24 VDC	<input type="checkbox"/> 12 VDC	<input type="checkbox"/> VDC	<input type="checkbox"/> without magnet
Stranded wire with plug	<input type="checkbox"/> 5 mtr	<input type="checkbox"/> 10 mtr	<input type="checkbox"/>mtr	

Functions

<input type="checkbox"/> control outside only. Inside anti-panic function on latch and bolts
<input type="checkbox"/> control outside and inside (no anti-panic function!)
<input type="checkbox"/> magnet control can be switched off with key

Accessories

Striking plate CRNI including mounted door position magnet			2050 mm	Door height 2150 mm	2250 mm
U-striking plate			pcs	pcs	pcs
Blind profile to U-front plate for extension			rod	0.5m	1.0m
Flat striking plates	36x3 mm	2662.01/02	to Janisol Off-set		pcs
Flat striking plates	16x3 mm	2663	to Janisol mortised		pcs
Flat striking plates	50x3 mm	2664.01/02	to Forster Fuego		pcs
Flat striking plates	52x3 mm	2671./	to Schüco	Royal S 65	pcs
Flat striking plates	57x3 mm	2672./	to Schüco	Royal S 70	pcs
Flat striking plates	24x2 mm	2661	Standard		pcs

Emergency door opener	DIN left	DIN right	DIN left	DIN right
Without monitoring	pcs	pcs	pcs	pcs
With latch contact	pcs	pcs	pcs	pcs
With latch and anchor contact	pcs	pcs	pcs	pcs

Spindle			Amount
Special spindle for split follower		Door thickness	
	3943.2540	25 - 40 mm	pcs
	3943.4070	40 - 70 mm	pcs
	3943.7085	70 - 85 mm	pcs
	3943.85100	85 - 100 mm	pcs

Security fittings

Glutz safety plates	ES 2	Amount	ES 3	Amount
grade satin stainless steel	5465S/5467	pcs	5466S/5467	pcs
grade polished stainless steel	5465S/5467	pcs	5466S/5467	pcs
Lever handle fixed mobile on either side				
Cylinder projection		mm		mm
Stainless steel handles both sides	type			pairs

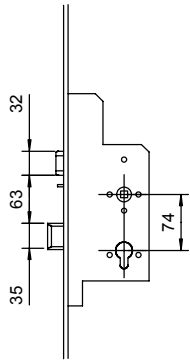
Screws for door thickness	mm
---------------------------	----

Cable track	deflection	
Covered	50 mm	pcs
Covered	100 mm	pcs
Mounted visibly	pcs	Cable thickness
		mm

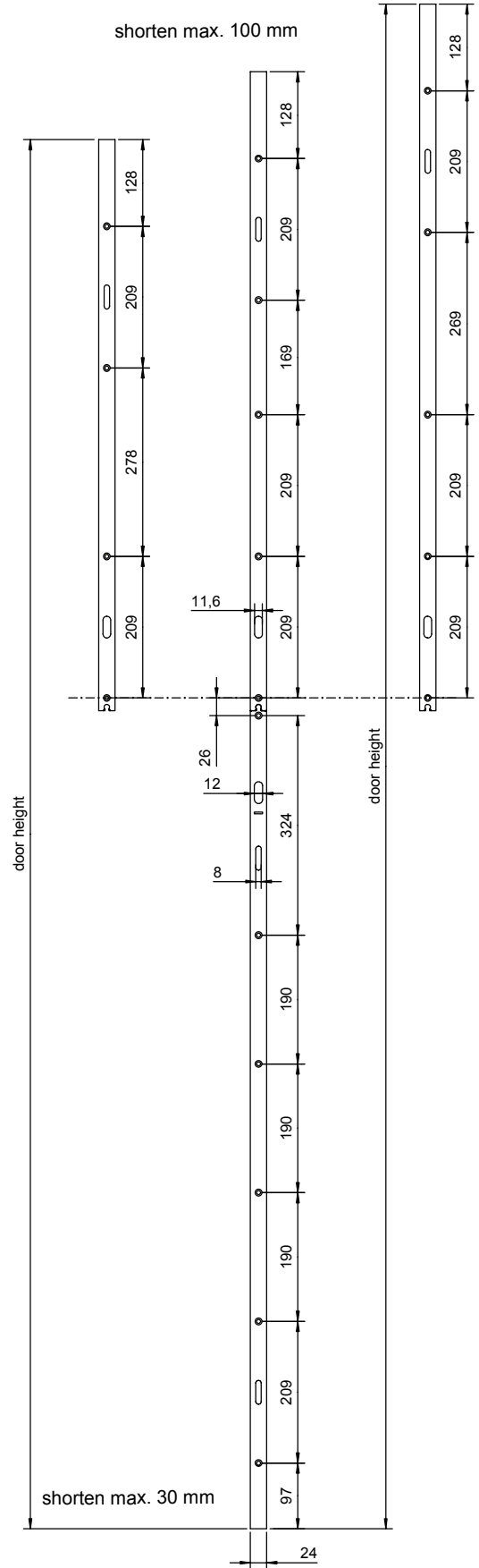
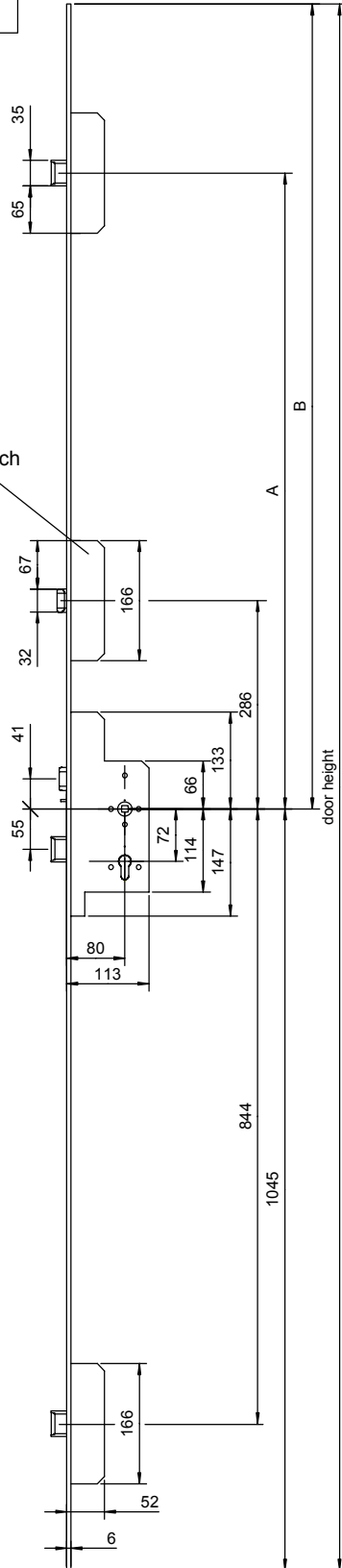
Emergency button green with glass pane		
Single pole		pcs
Two-pole		pcs
Emergency exit control with power supply		pcs
Emergency door control terminal with emergency switch opener and power supply		pcs
Door closer		
Standard fitting	pcs	Top mounting
		pcs

door height	dim. A	dim. B
2050	773	1005
2150	873	1105
2250	973	1205

Typ KABA



additional latch
(optional)



HZ-lock: The multifunctional Security Lock

Installation

To ensure a long-standing performance, it is essential to study and follow these instructions carefully.

Preliminary Note

HZ-lock with anti-panic function: Ensure that your burglar-proof door offers resistance against pounding and drilling during the time of attack so that no breach can be made and that the door has a threshold.

1. Preparing the Door

Cut out lock cavity according to the drawing. You may wish to consider side supports for the lock case. Mortise the front plate to a depth of 6mm. Clean all cavities and tubes properly. The gap between the front plate and striking plate must be 3 – 6 mm. Drill holes for the spindle and the security cylinder and *clean all cavities and holes.*

2. Preparing the Frame

The door is positioned by the latch only. The bolts must be able to project into the appropriate strike openings without obstruction (minimum 1mm on either side, bolt projection = 20mm). The control latch must be obstructed by the striking plate and must not slide into any opening.

3. Lock Installation

Reduce the front plate to the exact measurement, top and bottom if necessary.

Allow the bolts to extend by pushing in the latch and simultaneously holding back the control latch below. The bolts are thrown upon release of the latch.

In order to connect the lower part of the lock with the upper extensions of the front plate, carefully insert the two extension rods of the front plate extension into the guiding slots of the front plate on the main lock until they click into position. Then, align the Ω -sections of the front plate profiles. We recommend that you first fasten the upper front plate extension loosely to the door with the top screw and then align the main lock to the front plate extensions from below, allow the connecting rods to click into place. Insert the lock case into the prepared cavity. During assembly of the lower part of the lock and the upper extensions of the front plate, take great care not to bend the connecting rods in the front plate, as the lock cannot work with bent connecting rods. In such a case all guarantees are deemed invalid.

In the eventuality of loosening the upper extension of the front plate, push a pin (ca. 3mm diameter) into the hole in the front plate above the latch whilst separating the two parts.

4. Cylinder Installation

The hole for the security cylinder must be big enough and the cylinder must not contact the door. To fasten the cylinder, insert a 3mm allen key into the opening on the front plate below the centre bolt, approx. 60mm deep and tighten the screw. Take care that the lock is centred correctly and the follower can function properly. *Never work the door handle or let the bolts project while the allen key is inserted.*

5. Mounting the Guard-plates

Only use suitable guard-plates with fixed mobile mounted handles. The split spindle does not support the fitting and must not be over-strained. If you used roses, the strain on the follower will be excessive. In such a case, we cannot guarantee the lock.

We recommend the use of the manufacturer's template for drilling the holes. Prepare the correct lengths of the screws. When the screws are tightened it is important that neither spindle nor cylinder jar in the lock. The door must not be contracted, if necessary use husks.

6. User instructions

The property owner/manager must be instructed in the functions of the lock according to the enclosed instructions, or at least be given them in writing. Furthermore, the enclosed *reference sticker* for opening the door with a key must be attached to the outside of the door!

Problems – Causes – Remedies

1. Lock functions

Problem	Cause	Remedy
1.1 After closing the door, it isn't automatically bolted. The bolts are not or only partially ejected.	a) The latch cannot snap into the striking plate. b) At least one bolt is obstructed. c) The latch keep is too large; the control latch slips into it. d) The connecting rods in the front plate were bent during assembly of main lock and front plate extensions.	a) Enlarge the keep in the striking plate or frame. b) Enlarge the notches for the bolts in the striking plate or frame. c) Move the striking plate upwards or weld the keep. d) Remove the lock, carefully separate the front plate extensions (see installation instructions), adjust extension rods. Badly bent rods must be replaced.
1.2 When opening the door the bolts do not remain withdrawn but eject.	The control latch jams.	Lightly grease and work the control latch whilst slightly pressing the main latch.
1.3 Short circuit in the power supply to the lock magnet.	Connectors 11 and 12 poled incorrectly.	Correct connections: + to terminal 12, - to terminal 11. In case of defective diodes, send lock to be repaired
1.4 The outer door handle is not engaged.	a) Wrong or no voltage from the access control system b) Connectors 11 and 12 poled incorrectly c) The function "electric access switched off" is actuated and the cylinder is in locking position d) The spring fails to push the latch into the end position	a) Check the supply lead, measure the voltage of the terminals 11 (-) and 12 (+) and compare with label data, plug in correctly. b) Connect the stranded wire correctly: + to red/blue, - to grey/pink. In case of defective diodes, send lock to be repaired. c) One turn of the security key in the cylinder in opening direction. d) Check guard plates (handle movement obstructed in the guard)
1.5 The handle cannot be operated via the security cylinder	The security cylinder in the lock is positioned incorrectly	Loosen cylinder fastening with 3mm allen key, position cylinder in central position and re-tighten screw

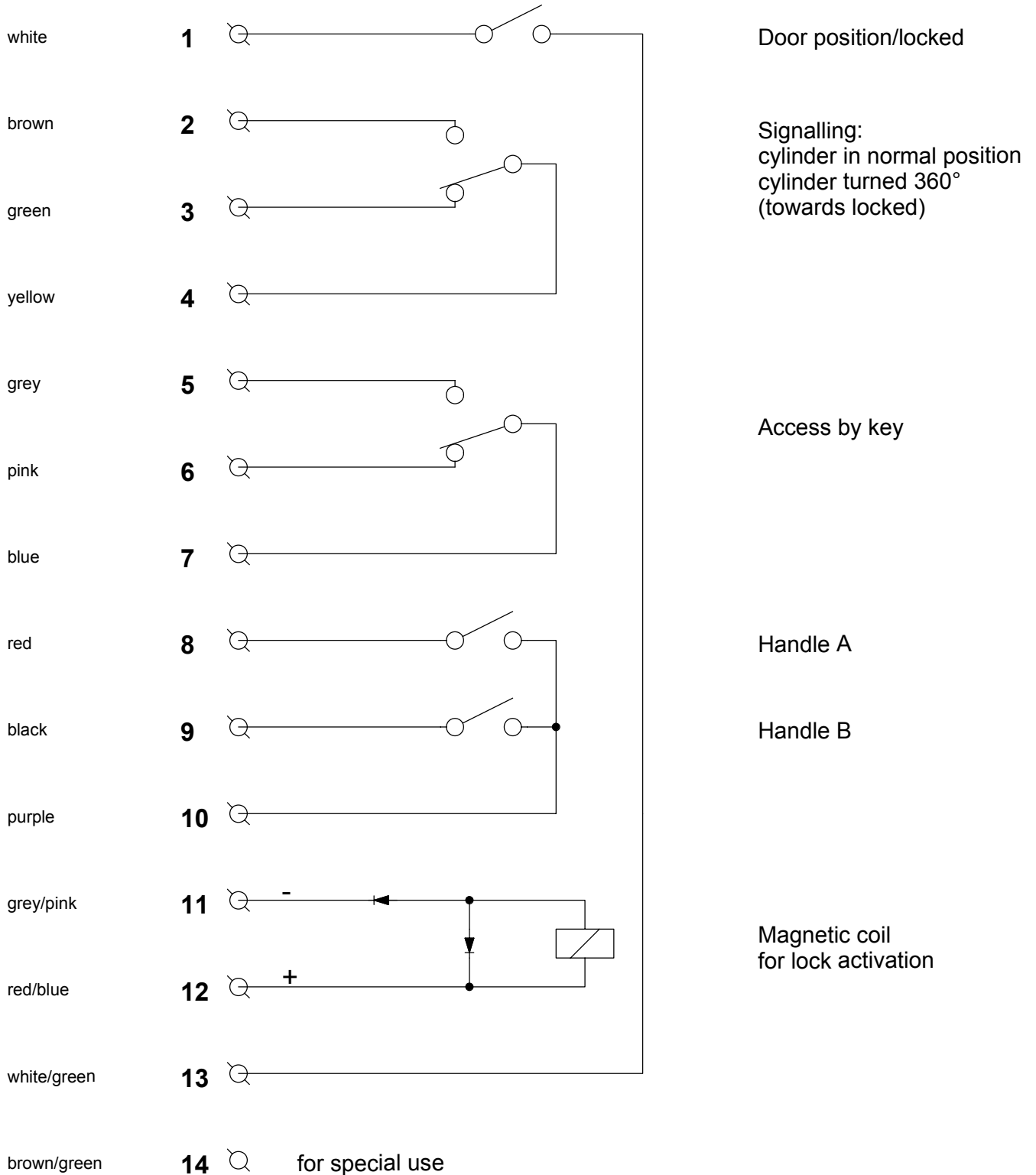
2. Control and surveillance functions

Problem	Cause	Remedy
2.1 Feedback "door position/locking" does not function	a) Magnet in striking plate not positioned correctly b) Bolts cannot eject fully c) Contacts are overcharged	a) Re-position magnet; ascertain correct position by trial b) See problem 1.1 c) Send main lock to be repaired
2.2 Commutation contact "electronic access switched off" does not function	a) Cylinder positioned incorrectly b) Contacts overcharged	a) See problem 1.5 b) Send main lock to be repaired
2.3 Commutation contact "access by key" does not function	c) Cylinder positioned incorrectly d) Contacts overcharged	c) See problem 1.5 d) Send main lock to be repaired

HZ-lock: the multifunctional security lock

Circuit diagram

Wire colour DIN



details: p.t.o.

HZ-lock: The Multifunctional Security Lock

Electric connections / Control and Surveillance function

Terminal	Contact	Max.Load VDC	Max.Load mA	Function	Comments
1	NO	30	300	Monitoring door position and locking	Circuit of two reed contacts activated by magnets in striking plate and projected bolts
2	NO	30	300	Electronic access magnet switch off	This switch is actuated and the power supply to the electro-magnets suspended by turning the key in the cylinder in locking direction. A further turn in the opposite direction recovers the starting position. Important! This function is not usually in action, it has to be ordered separately.
3	NC	30	300		
4	COM				
5	NO	30	300	Access with key	This switch is actuated and the handle switched from idle to coupling by turning the key in the cylinder in opening direction. When electric locking is used on emergency routes, this contact can be used to control the exit locking element.
6	NC	30	300		
7	COM				
8	NO	30	300	Handle contact (base of lock case)	This contact closes when the handle pointing left is moved (e.g. signalling an authorised exit to the control system)
9	NO	30	300	Handle contact (lid of lock case)	This contact closes when the handle pointing right is moved (e.g. signalling an authorised exit to the control system)
10	COM			handle contacts	COM for handle contacts 8, 9
11	-	12 24	340 170	Magnetic coil	Minus-terminal for actuation magnet (note voltage and poling!)
12	+	12 24	340 170		Plus-terminal for actuation magnet (note voltage and poling!)
13	COM			Monitoring door	COM for door position / bolt position contact 1
14				Reserve	For special versions

HZ-lock: the multifunctional lock for security doors

User-Instructions

1. Access

In the normal locked position the door handle on the outside of the door is disengaged from the lock mechanism and can be actuated only in idle-motion. As long as an access control system supplies the magnetic coil in the lock with electric power the outside handle is switched from idling to operation, lowering the handle withdraws the latch and the three bolts. As soon as the power supply is cut the outside door handle returns to idle-motion.

In case of a loss of power, or if the access control is faulty, the door may still be opened mechanically by rescue services by means of the matching key. The key is turned in the cylinder in an opening direction and held in this position. The door handle is now actuated.

2. Exit

Lowering the door handle on the inner side of the door clears the emergency exit at any time. With some installations, a green exit button could be mounted aside of the door. In this case you have to break the glass and lower the door handle to exit through the door.

3. Locking the door

HZ-lock is self-locking. After closing the door all three bolts are ejected automatically. Turning the key in the cylinder is not necessary. For perfect operation, the latch and the three bolts must be able to engage into the strikes without obstruction.

4. Maintenance

The latch, the control-latch and the three bolts must be slightly greased at least twice a year or more if necessary, without opening the lock casings. Never spray inside the lock. Take this opportunity to check the proper function of the lock, strikes, cylinder and door handles. Use only anti-corrosive detergents. If the sliding surface of the latch is always slightly greased the door should work perfectly and with less noise.