



Technical Data

ELS Pro

Variants:

- ELS Pro double cylinder (DC)
 - Even the standard version includes all mechanic and electronic security features:
 - Body and core drilling protection
 - Separate control electronic for actor in the core
- ELS Pro half cylinder (HC)
 - Outside basic length 30 mm, inside length 10 mm
 - Version "MIWE":
 - 90° cam range (adjustable)
 - Spring return mechanism for the cam
 - Cam position adjustable in 45° steps
 - Version "Haushahn" with two rear sided M4 threads
- ELS Pro EE double cylinder (emergency exit)
 - Application in escape and emergency routes (EN 179, EN 1125)
 - Return mechanism for the cam according to class R1 of DIN 18252:2018-05:
 - Cam position 6 o'clock ± 30°, dead range 12 o'clock ± 15°
 - Basic length 30/30 mm
 - Version EE-IM: Inside operation by a special mechanical key
 - Version EE-OI: Without inside knob
- ELS Pro KL (German: „Kurz-Lang“ cylinder)
 - Inside basic length 30 mm
 - Reduced outside length of 27,5 mm (see cylinder lengths)
- ELS Pro GL (cylinder für glass doors)
 - Outside basic length 30 mm
 - Reduced inside length of 10-27,5 mm (see cylinder lengths)
- ELS Pro OI (without inside knob)
 - Blind cylinder on the inside
- ELS Pro BS (reader on both sides)
 - Basic length 30/30 mm
 - Reading of transponders also on the inside
- ELS Pro KZSV (German: Kernziehschutzverlängerung)
 - For assembly in fittings with core pulling protection
 - Protruding outer shaft by 8,5m
 - Shaft diameter 15 mm
- ELS Pro CH (22 mm Swiss round profile)
- ELS Pro 382 lever cylinder (e.g. for letter boxes)
 - Housing length 36,6 mm, for mounting holes Ø 26 × 22 mm
 - 90° turning movement, lever is blocked in end positions
 - Adjustable lever position: 4×90°
- ELS Pro 1328 half cylinder for swivelling lever handles
 - Chamfered locking cam with 45° turning movement
 - Automatic locking by return mechanism for the flattened cam
- ELS Pro 777 padlock
 - See separate data sheet
- ELS Pro PP (privacy protection)
 - Available for all cylinder versions
 - Grade 1: Anonymised storage of all access control events
 - Grade 2: No storage of any access control events



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Technology:

- 125 kHz (RFID)
- 868 MHz (G4 / G1 band)

Power supply:

- Battery pack with 2 lithium cells 3,0 Volt
- Type CR2 (Li-MnO₂ system)

Battery life time and data preservation:

At room temperature (+20°C):

- Up to 50.000 locking cycles (40.000 for online system) or
- Up to 3 years in case of non-use (2 years for online system) or
- Up to 2,5 years for typical 10 locking cycles per day

Intelligent battery management:

- Multilevel temperature-compensated alarm system in case of voltage drop
- 10 years data preservation without battery

Time / Date:

- Clock buffering typically 1 minute (during battery change)
- Clock drift at room temperature: ±10 minutes/year
at -25°C and +65°C: -50 minutes/year

Durability:

- At least 100.000 cycles (according to EN 15684 grade 6)

Clutch duration:

- Adjustable ranging from 1 to 30 seconds
- Permanent open/close mode

Signalling:

- Optical signalling by 4 multicolour LEDs
- Circular lighting segments in knob cover

Cylinder length / dimensions:

- Maximum standard length 90/90 mm, higher lengths on request
- Version KL with outer length of 27,5 mm
- Version GL (glass door cylinder) with inner length from 10 to 27,5 mm
- Extendable in 5 mm steps
(Glass door cylinder: inner side in 2,5 mm steps)
- For backset < 30 mm the application is to be checked

Knobs:

- Outside knob: stainless steel: Ø 37,5 mm, length 44,8 mm
- Inside knob: pot metal: Ø 32,0 mm, length 30,0 mm
- For double cylinder with two-side readability
both knobs: stainless steel Ø 37,5 mm, length 44,8 mm
- Optional available in: black glossy powder-coated RAL9005
white glossy powder-coated RAL 9003
brass (PVD coated)

Environmental:

- Temperature: -25°C to +65°C (grade 4 of EN 15684)
- Humidity: 20-99%, no condensation (grade 4 of EN 15684)
- Protection class: IP66 (outside knob) for all variants
IP 65 (complete Europrofile cylinder, all variants)
PIV test report 44-3/15
(no IP classification for versions 1328, 382 and HC "MIWE")
- Anticorrosive according to DIN EN 1670 grade 3 and grade 4 of EN 15684
- SO₂ corrosion test: VdS 2156-2 / DIN EN ISO 6988 (15 cycles with 0,2 l SO₂)



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Approvals and certifications:

- Approved by German VdS: grade BZ+, certificate M116308
- SKG*** approval
- Not for the variants: Swiss round cylinder
Half cylinder type "MIWE"
382 lever cylinder
1328 half cylinder for swivelling lever handles
777 padlock
- Fire resistance test T90 (ift test reports 15-003428-PR01 and 18-002163-PR01)
Tested with two-wing steel door, refer to HPS 18-001080-PR02)
- Tested as free-wheeling cylinder according to test directive FZG, version 2010_01 of German PIV, test report 20-8/15 (not for EE version)
- Certification according to EN 15684 (PIV test reports 49-2/15 und 49-6/15)

Digit	1	2	3	4	5	6	7	8
Grade	1	6	B	4	A	F	3	2
- The two grades „F“ for the credential related security (6th digit) and „2“ for the attack resistance (8th digit) allow according to EN 1627 the installation in burglary-resistant doors up to resistance class RC4 without separate test

Programming:

- Programming by software via USB- RF-Stick (868 MHz):
- See separate data sheets of ELS and ELS mobile Software
 - Storage of max. 5 programming cards

Events:

- Ring buffer for the latest 2.000 events

Inductive transponder interface:

- Reading range: up to 5 cm
- Frequency: 125 kHz
- Field strength in 10 m distance: < -6 dB µA/m
- In conformity with ETSI EN 300 330
- Encrypted data transfer of 32 bit UID according to manufacturer standard
- Mutual authentication with 2 x 32 bit key length (Hitag 1) or with 48 bit key length (Hitag 2 and Hitag S)
- For Hitag S additional AES encryption (128 Bit) of the transponder data inclosing the transponder UID (copy protection)

Radio interface:

- For offline programming by a DOM USB-RF-stick or for the online connection to an ELS RF-NetManager:
- Communication range: typical 3m (offline) / 10m (online)
 - Frequency: 868 MHz (G4 / G1 band)
 - Effective radiated power: ≤ 5 mW / ≤ 25 mW
 - Conformity to ETSI EN 300 220
 - Key exchange: Curve25519–256 Bit (elliptical curve)
 - Encryption: XSALSA20–256 Bit
 - Signature / Authentication: Poly1305-128 Bit

Transponder types:

- All actual DOM transponder types
- Other types or transponder from other suppliers have to be checked





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Storage of access authorisations in the device:

- Supported transponders:
 - Hitag 1, Hitag 2, Hitag S
 - EM4100, EM4102, EM4150, EM4450

- Storage of maximal 3.000 authorisations in the device
- Identification of the transponders by their UID

Storage of access authorisations on the transponders:

- Supported transponder types:
 - Solely available for Hitag S transponders
 - AES 128 Bit data encryption

resp. virtual network

- Storage of max. 260 areal or 65 single authorisations

Temporal definition of authorisations:

- 31 freely definable time zones with three arbitrary time intervals per day
- Free door time zones
- Definition of holidays

Special functions:

- Four-eyes principle
- Office function



All data correspond to the actual development status and are subject to change at any time without notice.