

## Technical Data

## DOM Tapkey Pro BLE Padlock

### General:

- Padlock without forced closing

### Technology:

- 13,56 MHz (RFID / NFC)
- 2,4 GHz (BLE: Bluetooth Low Energy)

### Material:

- Housing: Solid brass, surface matt chrome plated
- Bottom plate: Polyamide (PA66)
- Shackle: Steel (10B21), surface brilliant chrome plated
- Knob of cylinder: Stainless steel 1.4305

### Durability:

- Padlock: at least 10,000 cycles (according to DIN EN 12320, grade 1)
- Cylinder: at least 100,000 cycles (according DIN EN 1303 and EN 15684 grade 6)

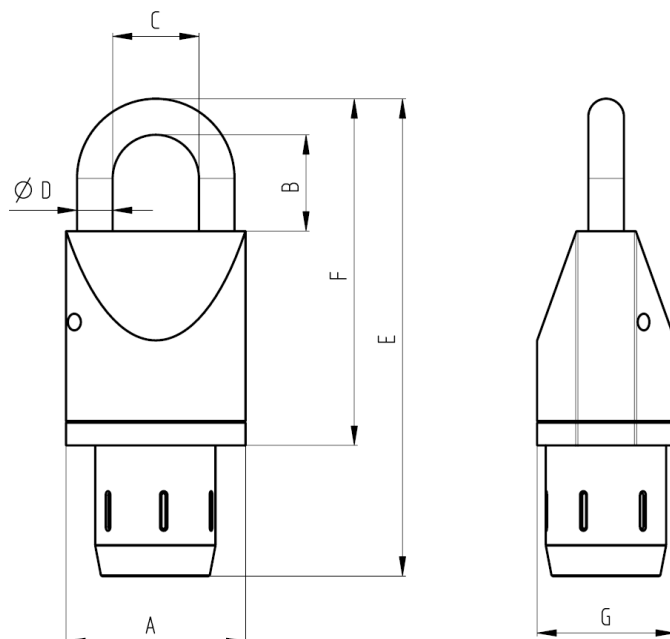
### Mechanical strength:

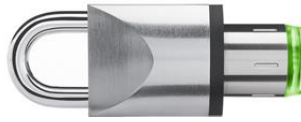
- Strength of shackle:
  - Tensile strength:  $\geq 15$  kN (Ch. 5.5.5, DIN EN 12320)
  - Torsional strength:  $\geq 200$  Nm (Ch. 5.5.6, DIN EN 12320)
  - Cutting strength:  $\geq 25$  kN (Ch. 5.5.7, DIN EN 12320)

- Impact resistance of padlock housing and shackle:
  - Tested with 5 shocks at  $-20^{\circ}\text{C}$  (falling mass of 1,250 g from a height of 800 mm)

### Dimensions:

- |                        |     |         |
|------------------------|-----|---------|
| • Width                | A = | 56 mm   |
| • Thickness            | G = | 43 mm   |
| • Length without knob  | F = | 109 mm  |
| • Length with knob     | E = | 150 mm  |
| • Shackle diameter     | D = | 11.1 mm |
| • Inner shackle height | B = | 30 mm   |
| • Inner shackle width  | C = | 27 mm   |





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### Power supply:

- Battery pack with 2 lithium cells 3.0 Volt
- Type CR2 (Li-MnO<sub>2</sub> system)

### Battery life time and data preservation:

At room temperature (+20°C):

- Up to 35.000 locking cycles or
- Up to 2 years in case of non-use or
- Up to 1,5 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:

- Buffering typically 1 minute (in case of battery change)
- Clock drift at room temperature: ±10 minutes/year  
at -25°C and +70°C: -50 minutes/year

### Clutch duration:

- 8 seconds

### Signalling:

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

### Certifications:

- Certification of the cylinder according to EN 15684 (PIV test reports 49-4/18)

Digit	1	2	3	4	5	6	7	8
Grade	1	6	B	4	A	F	3	2

- Certification of the padlock according to DIN EN 12320 (PIV test report 51-2/15):

Digit	1	2	3	4
Grade	1	1	3	3

### Environmental:

- Padlock in combination with Pro cylinder:
  - Temperature: -25°C to +65°C
  - Humidity: 20-96% no condensation
  - Anticorrosive according to grade 3 DIN EN 12320 (salt spray test 96 h)
- Locking cylinder:
  - Temperature: -25°C to +65°C (grade 4 EN 15684)
  - Humidity: 20-99% no condensation (grade 4 EN 15684)
  - Protection class: IP66 (knob), IP65 (complete cylinder)
  - Anticorrosive according to grade 3 DIN EN 1670 (salt spray test 96 h)

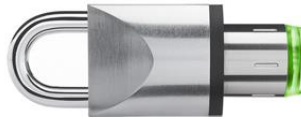
### Programming:

Programming via NFC/BLE-enabled smartphones with the following prerequisites:

- Android APP as of Android 5.0 (NFC/BLE)
- iOS APP iOS 9 or higher / iPhone 5 (BLE)
- Programming of transponders exclusively via Android APP with NFC
- Google ID or Tapkey ID required

### Events:

- Ring buffer for the latest 1,000 events



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### Inductive transponder interface:

- Reading range: up to 3 cm
- Frequency: 13.56 MHz
- Field strength in 10 m distance: < 42 dB  $\mu$ A/m
- In conformity with ETSI EN 300 330

- Supports passive transponders (ISO 14443 A) & NFC (ISO/IEC 18092)

- Encryption: Mifare DESFire EV1 / EV2: AES-128 Bit

### Bluetooth Low Energy (BLE):

- Communication range: typical 10 m
- Frequency: 2,4 GHz
- Transmission power: < 20 dBm
- Conformity to ETSI EN 300 328
- Bluetooth version: 4.1, 5.1 ( $\geq$  Firmwareversion 3.2)

### Encryption / security on the interfaces (NFC/BLE and backend):

- TLCP: Tapkey BLE Pro  $\leftrightarrow$  APP  $\leftrightarrow$  Tapkey Trust Service: AES-128, CMAC (NIST 800-38B), RNG (ANSI X9.31)
- Communication to backend: HTTPS, RSA with 4.096 bit, SHA 256, TLS 1.0 or higher

### Transponder types:

- DOM Tapkey Standard Tag

### Storage of access authorizations

- Access authorization on the transponder:
  - Up to 12 devices
- Access authorization on Android / iOS smartphone:
  - No limit of devices
  - No limit of users (Google or Tapkey IDs)
  - > 5 users fee-based (see license model)



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