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Opendor

IF-281 Cylinder

OF-281-0xxxx

A BRAND OF
ALLEGION

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1 General information

1.1 Short description

IF-281 Cylinder is the ideal solution for cost-effective, uncomplicated and wireless compliance with current security standards for a wide range of applications. The electronic lock cylinder offers stability through precisely manufactured mechanics and electronics as well as highest data security through the integrated Secure Element.

The key feature of the electronic cylinder from Interflex is that it can be easily integrated into the IF-6040 access control system. A variety of versions including standard, anti-panic, half cylinders or self-locking half-cylinders provide a solution for almost any application. Two technology variants are available:

- IF-281 Cylinder ^{card} reads the access permissions stored on RFID credentials via proven NetworkOnCard technology.
- IF-281 Cylinder^{air} reads the digital key on credentials or smartphones via RFID/NFC or Bluetooth® Low Energy technology and evaluates the stored access permissions from the IF-6040 access control system online in real time, or offline in IF-281 Cylinder.

Together with the IF-4041 Gateway from Interflex and the latest Bluetooth® 5 technology,IF-281 Cylinder offers all the benefits of a state-of-the-art wireless online system.

Models

Interflex provides three product variants that are all prepared for Euro profile cylinders:

- Comfort cylinder
- Half cylinder
- Anti-panic cylinder

All variants are available in outdoor version with completely sealed cylinder (protection category IP66).

Comfort cylinder	▪ Reader on one side, reader electronics in outer knob ▪ Inside mechanism permanently engaged Doors can be opened from the inside without a credential.
Half cylinder	▪ Reader on one side, reader electronics in outer knob ▪ Multi-point: Same as standard version, but the cam has dedicated points where it positions itself when disengaged. Thus, it is particularly suitable for very smooth-running multi-point locks.

	▪ Self-locking: Same as standard version, but the cam is brought back into the basic position by a return spring so that the lock can be pressed shut without identification medium. A version for installation in lever handles is available.

The following aspects should be taken into consideration for doors along rescue routes which have been installed after April 1, 2003 (locks as per DIN EN 179 or DIN EN 1125):

- *All* cylinders of the IF-281 Cylinder series may be used for all locks that have an approval that states that the cam position of the component *has no impact* on the function of the lock.
- Anti-panic cylinders of the series IF-281 Cylinder *must* be used for all locks where the cam position of the component *affects* the function of the lock. This must be stated in the lock manufacturer's declaration of conformity.

Anti-panic cylinders contain an integrated spring mechanism, which places the locking cam in a non-critical position. A panic lock's panic function cannot be blocked.

Anti-panic cylinder	▪ Reader on one side, reader electronics in outer knob ▪ Inner side freely rotating ▪ Multi-point: Same as standard version, but the cam has dedicated points where it positions itself when disengaged. Thus, it is particularly suitable for very smooth-running multi-point locks. Please refer to the lock supplier's declaration of conformity.

Due to the structural design of panic locks, it is not permitted to turn the knob of the component to the stop position when the door is locked since this may affect the panic function of the lock.

European standard EN 179, Appendix C, stipulates that, as part of the maintenance of emergency exit locking devices, all components in a locking device must be checked at intervals no greater than one month, to ensure that they are in satisfactory working order.

1.2 Scope of delivery

- Electronic Locking Cylinders
- Installation instructions
- Product depending on the ordered variant:
  95-10463 or 95-10465 (HZ)

Check the completeness and condition of the goods upon receipt and report any damage caused during transport immediately.

Prerequisites

✓ Access control system
✓ Opendor card: Software *DoorManager and* NFC USB adapter
✓ Opendor air IF-4041 Gateway

1.3 Intended use

The devices of the series IF-281 Cylinder are installed into door locks to integrate them into an access control system.

IF-281 Cylinder is available in different lengths. The dimensions are printed on the packaging. The dimensions for the outer or electronic side and the inner or mechanical side have to be measured separately. If the cylinder is too short, the knobs cannot be installed.

IF-281 Cylinder is designed for use in dry rooms. The Outdoor version .WP can be used if the electronic side may come into contact with moisture.

Any other use is not in accordance with the intended purpose and therefore not permitted. Modifications to the device are not permitted.

1.4 Target group

This document is solely intended for *experts* and *people trained in electrical engineering*.

Only perform the actions described in this document if you belong to this target group. Interflex Datensysteme GmbH is not liable for any damages caused by improper installation or initial operation.

1.5 Safety

General

NOTICE

Malfunction due to radio interference

This product may be affected by electromagnetic or magnetic interference.

- Do not place the product directly next to devices that can cause electromagnetic or magnetic interference, especially not near switching power supplies.

NOTICE

Blocked access due to improper mounting or faulty programming

If you modify the product without authorization, malfunctions may occur and access through a door may be blocked.

- Use the product only as specified in the documentation.

NOTICE

Damage due to electrostatic discharge (ESD)

Electrical components and modules can be damaged by only slight, hardly noticeable electrostatic discharge (ESD) without this becoming immediately obvious. ESD damages result in malfunctions and even failure of the device.

- Make sure that effective protective measures against electrostatic discharge are in place when working on the open device.

Batteries

⚠ DANGER

Risk of poisoning from swallowing button cells

This product contains lithium button cells. If button cells are swallowed, they can cause severe internal burns within a few hours and can lead to death.

- Keep new and used batteries away from children.
- If the battery case does not close securely, do not use the product anymore and keep it away from children.
- If you think that batteries have been swallowed or are lodged in any part of the body, get medical help immediately.

⚠ CAUTION

Risk of explosion due to incorrect battery type

Inserting the wrong type of battery can cause an explosion.

- Only use the batteries specified in the technical specifications.

NOTICE

Batteries can be a fire hazard

Batteries may pose a fire or burn hazard if handled incorrectly.

- Do not attempt to charge, open, heat or incinerate the batteries.
- Do not short circuit the batteries.

The device may only be installed, placed into initial operation and troubleshooted by qualified personnel and people trained in electrical engineering.

2 Installation and programming

2.1 Installation

The installation is described in detail on the leaflet included in the scope of delivery.

2.2 Configuration

The configuration and the management of the components are described in a separate documentation:

Opendor card components

- Configuration with card set: *Interflex Offline Components*
- Configuration with the DoorManager software: in the corresponding technical manual

The software *DoorManager* and the technical manual can be found on our FTP server:

https://ftpservice.interflex.de

user: CD-Software
password: 14gBD00ktH96

Opendor air components

- Technical manual for IF-4041 Gateway
- IF-6040 Online help

The technical manual can be found on our website:

https://interflex.com/de-de/services/wissenszentrum/

3 Operation

The following sections describe the basics of operation. The technical basics can be found in the document *Offline Components*.

3.1 Opening doors

To open a door that is secured with, hold the credential in the read area of the component.

Depending on the configuration, the lock is automatically locked after the closing time has elapsed or it remains unlocked until a new booking is made.

LEDs and tone indicate the status of the booking:

Visual signal		Audible signal	Description
	Blue		Error reading the credential
	Green	Configurable with door initialization card (*sound during motor* flag)	Authorized credential

Visual signal		Audible signal	Description
	Red		Reading error
	Red		Credential unauthorized, details can be found in DoorManager under DiagnosticsDiagnostic (Opendor [card]) or in IF-6040 under **Access > Access management > NoC readers > Information > Last bookings** (Opendor [air])

If you are using a credential with the *Permanently open* function, only hold the credential in front of the reader unit as long as the LEDs are flashing. Otherwise, the *permanently open* operating mode is activated.

3.2 Activating/deactivating the permanently open mode

IF-281 Cylinder provides for *Permanently open* mode. In this operating mode, the door can be opened without further bookings.

For reasons concerning safety regulations, the *Permanently open* mode must not be activated in connection with an anti-panic cylinder. Please contact the lock manufacturer.

For electronic cylinders, the option Permanently open / Permanently close is enabled by default in the DoorManager software. In this case, each credential can activate and deactivate the permanently open mode.

If the option is not enabled, activation and deactivation of the permanently open mode requires a credential that has been activated for this function.

Activating the permanently open mode

- Hold the credential to the reader unit for more than three seconds

The component indicates the *Permanently open On* log file entry:

	3 x green	Standard + Permanently open
	Green	Permanently open

Deactivating the permanently open mode

- Hold the credential to the reader unit for more than three seconds

  The component indicates the *Not permanently open* log file entry:

	3 x green, 1 x red	Standard + Permanently open
	Red	Permanently closed

In case of credentials that **only** have the *Permanently open* function, the activation / deactivation takes place immediately after the reader unit has read the credential.

4 Maintenance, cleaning, and disinfection

Maintenance work and firmware updates put a great load on the batteries. If in doubt, replace the batteries before performing these tasks.

NOTICE

Damage due to improper cleaning of mat stainless steel surfaces

The use of inappropriate cleaning agents may damage the natural passive protective layer of the stainless steel.

a) Do not use any ferritic auxiliaries such as steel wool, brush or abrasive paper. These materials can damage the protecting passive layer and thus provide a surface for corrosion to occur.

b) Clean the device regularly using the adequate detergents to prevent impurities or rust depositing on the the surface.

c) Do not use any aggressive cleaning agents or disinfectants for cleaning.

d) Apply regularly an additional protective coat on the surface using adequate preservative agents or caring oil.

e) Only use disinfection agents that are specifically intended for disinfecting sensitive surfaces.

4.1 Battery replacement

When presenting a credential, IF-281 Cylinder signals that the charging level of the batteries is low (three-level signaling).

Low battery warning levels

Offline components indicate the low battery level during booking in three stages:

Description	Visual signal	Audible signal
Stage 1		Red
Stage 2		Red 
Stage 3		Red

We recommend changing the battery at stage 2. If the batteries are empty, LED signaling and bookings are no longer possible.

NOTICE

Damage due to improper handling of the batteries

Improper handling of the batteries may damage the components and shorten the battery life.

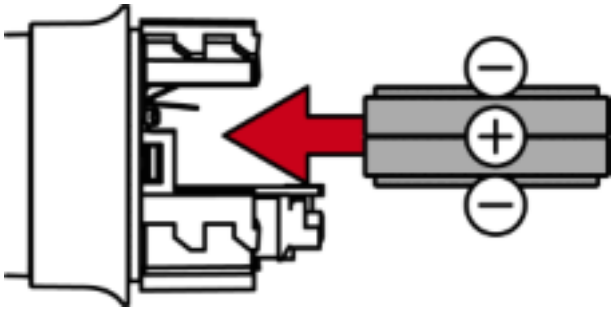
- Batteries may only be changed by qualified personnel
- When changing batteries, wear grease-free, clean cloth gloves to prevent fingerprints from contaminating the batteries. Fingerprints on the batteries can significantly reduce the battery life.
- Only use the installation/battery wrench accessory to change the battery
- Always replace all batteries when changing batteries
- Observe the polarity of the batteries

Procedure

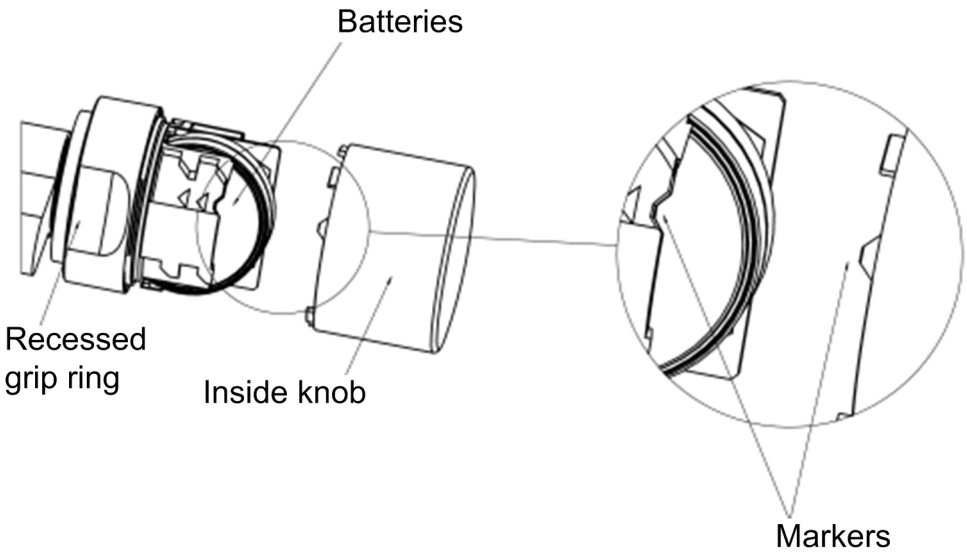
To change the batteries:

1. Place the battery/installation key on the knob in such a way that its two teeth lock into the openings in the locking disc. If necessary, turn the knob until both teeth of the key engage into the knob.

   The installation/battery key must be placed flat on the inside front surface of the recessed grip ring to ensure that it can engage into the locking disc.
2. Hold the electronic knob firmly and carefully turn the battery/installation key about 30° in a clockwise direction until a click can be heard.
3. Remove the battery/installation key from the knob
4. Push recessed grip ring backwards towards the door, so that it comes away from the knob
5. Hold recessed grip ring and turn knob counterclockwise about 10° and remove
6. Squeeze the battery holder at the level of the three small arrows so that the antenna bracket loosens
7. Fold the antenna bracket out without applying any mechanical force to it
8. Remove the circuit board
9. Remove the top battery from the holder
10. Turn the knob 180° to remove the second battery The battery will automatically drop from the holder.
11. Insert the new batteries into the holder at the same time with the positive poles facing each other



12. Snap the antenna bracket into place on both sides
13. Put on the knob cover (align the three triangle marks as in the diagram) and fasten by turning it about 10 ° in a clockwise direction



14. Push recessed grip ring back onto the knob, so that the knob and ring close together in a flush fit
15. Place the battery/installation key on the knob in such a way that its two teeth lock into the openings in the locking disc.

    If necessary, turn the knob until both teeth of the key engage into the knob.
16. Turn the knob counterclockwise about 30° until you can hear it click into place

Hold the battery replacement card in front of the reader unit briefly. This lets the IF-281 Cylinder detect the battery change and signals the battery status, if necessary. If you leave out this step, battery change will not be detected until the next battery measurement takes place. The battery measurement is performed every 24 hours.

4.2 Opendor card only: Factory reset (cold boot)

In the event of an error or a system change, you can reset the Opendor card component to its factory settings with the DoorManager software. This process deletes all internal data such as booking memory, time profiles and door groups are deleted, with the exception of the diagnostic events.

Procedure

1. Log in to DoorManager with *Facility card* or *Site/Installation* mode
2. Click the **cold start** button

   The component indicates that the cold boot was successful:

	Purple (approx. 7 sec.), orange (short), red (approx. 1 sec.)

4.3 Opendor air only: Unpair

- Press the reset button for more than 8 seconds

  Component and IF-4041 Gateway are unpaired

At the end of the procedure, the LED lights up in orange for several seconds.

5 Technical specifications

Power supply

Battery	2 lithium batteries, CR2450, 3 V
Battery life	Up to 200,000 actuations depending on the technology used at 20°C, up to 12 years on standby

Equipment

Modes of operation	Online wireless, offline NoC
Interfaces	Bluetooth® 5 to Gateway
Credential reader	RFID: MIFARE® Classic/DESFire LEGIC® advant/prime Smartphone: Bluetooth® Low Energy/NFC
Read range	RFID max. 1 cm, Bluetooth® optional

Frequency range/Transmitting power	RFID (13,56 MHz): 13,553 MHz to 13,567 MHz/ < 42 dBµA/m (dist. 10 m) Bluetooth® 5 (2,4 GHz): 2,400 GHz to 2,4835 GHz/ < 10 mW
Installation type	Indoor and outdoor areas, suitable for fire protection and escape doors
Signaling	Audible: buzzer Visual: color LED

General data

Degree of protection	IP54, IP66 optional
Ambient temperature	-25 °C to +55 °C
Humidity	Max. 95%, non-condensing
Standards	DIN EN 15684, DIN EN 1303, DIN EN 1906, DIN EN 1634-2
Variants	Standard cylinder, anti-panic cylinder, half-cylinder and self-locking half-cylinder
Installation length	Basic length inside/outside 30/30 mm in increments from 5 mm to 140 mm
Thumb-turn diameter	31 mm
Color	Silver, with black cap

6 Disposal

Once its service life comes to an end, the device must be disposed of properly as electronic waste. You can dispose of the device yourself or return it to the supplier.

Dispose of batteries according to the laws and regulations of your country.

Dispose of batteries at a collection point or insulate the contacts and send the batteries marked *Old batteries for disposal* to the supplier of the product.

7 Declarations of conformity

7.1 EU Declaration of Conformity

Hereby, Interflex declares that the products comply with the EU Directives 2014/53/EU (RED) and 2011/65/EU (RoHS).

The full text of the EU Declaration of Conformity can be found on our website www.interflex.com.

7.2 UK Declaration of Conformity

Hereby, Interflex declares that the products comply with the following UK legislations:

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

Radio Equipment Regulations 2017

The full text of the UK Declaration of Conformity can be found on our website www.interflex.com.

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