

# xpr PXP-CY-MF Electronic Knob Module Instruction Manual

Home » xpr » xpr PXP-CY-MF Electronic Knob Module Instruction Manual







#### **OPERATING AND ASSEMBLY MANUAL**

#### **Contents**

- **1 ABOUT THIS DOCUMENT**
- 2 SAFETY
- **3 PRODUCT DESCRIPTION**
- **4 ASSEMBLY**
- **5 OPERATION**
- **6 CLEANING AND**
- **MAINTENANCE**
- **7 FAULTS DURING OPERATION**
- **8 DISASSEMBLY AND DISPOSAL**
- **9 KEY MANAGER SOFTWARE**
- 10 Documents / Resources
  - 10.1 References

#### ABOUT THIS DOCUMENT

This operation and assembly manual describes the electronic knob module. It is part of the product PXP-CY-MF and contains important information that is necessary for proper operation and maintenance.

This operating and assembly manual is valid for all versions of PXP-CY-MF and is intended for technicians responsible for assembling and disassembling, as well as for end customers. Read this operating and assembly manual carefully for smooth and safe operation and follow the instructions given in it before operating the knob module.

Keep the operating and assembly manual in a safe place. After the installation, hand over the manual to the end customer and make sure that the customer familiar with its use.

XPR does not assume any responsibility for disruptions or hazards such as non-access to injured personnel, malfunctions, property damage or otherdamages resulting from non-compliance with this operating and assembly manual or incorrectly configured knob modules. If there are still any doubts after reading this operating and assembly manual, please contact your respective dealer or XPR directly.

## 1.1 Warnings

Warnings warn against hazards that may arise when using the knob modules. There are two levels of warnings that can be identified based on the signal word.

Signal word Significance:

**CAUTION** – Indicates a hazard with a low risk that can lead to mild or moderate injury if not avoided.

**ATTENTION** – Indicates a hazard that results in property damage.

#### **SAFETY**

#### 2.1 Proper use

The PXP-CY-MF is intended for the installation in building doors and is meant for locking and unlocking doors. They should be fitted with a corresponding lock and fitting.

The PXP-CY-MF is intended for installation in DIN locks with Europrofile cylinders or in locks with Swiss round profile, depending on the version.

#### 2.2 Improper use

The PXP-CY-MF must not be used for locking up supplies required in case of emergencies (for example defibrillator, emergency medication, fire extinguishers, etc.).

#### 2.3 General safety instructions

Follow these basic safety instructions when using the knob cylinder:

Installation and battery replacement should only be done by qualified technicians according to the instructions in this operating and assembly manual.

Do not use the knob cylinder in potentially explosive areas.

Do not make any kind of modifications to the knob cylinder, with the exception of those described in this operating and assembly manual.

Do not apply paints or acids to the knob cylinder.

Do not heat the knob cylinder and battery beyond the specified storage temperature.

Use only original spare parts and accessories to prevent malfunctions and damages.

#### PRODUCT DESCRIPTION

# 3.1 Functional description

The reading unit, the communication electronics, the mechanical system and power supply, are integrated within the knob module.

Different transponder carriers can be used as key in the PXP-CY-MF, for example, ISO card or key fob.

The PXP-CY-MF has the following system properties:

- Up to 16,000 card authorizations can be stored
- Up to 65,000 readers per site (doors or rooms, please refer to the Key Manager manual)
- Up to 423 events registered in the reader memory
- · Up to 16 configurable holidays
- 255 door groups

- 1695 blacklist cards
- Door pulse time can be programmed from 1 to 15 seconds or toggle
- No cabling required
- 2 Lithium batteries CR2 3V
- Battery life cycle: up to 74,500 operations or 10 years, depending on the usage, environment and battery condition

#### 3.1.1 Battery management

The PXP-CY-MF knob module comes with a battery management system, which indicates the need for battery replacement by means of a visible and audio signal, when the battery power reduces (capacity loss) during the final 1,000 operations of the battery (see chapter7.2.1 Battery Replacement). Signaling happens in 3 phases:

#### Phase 1

The battery needs to be changed soon.

If an authorized key is held in front of the knob module, the locking access right is issued. The engagement is accompanied by red flashing (5x) and 5 short acoustic signals.

#### Phase 2

The battery needs to be changed.

If an authorized key is held in front of the knob module, the knob module first flashes green for 5 seconds, then the knob module engages. The engagement is accompanied by red flashing (5x) and 5 short acoustic signals.

#### Phase 3

The battery needs to be changed immediately.

If an authorized key is held in front of the knob module, no locking access right is issued, but rather the knob module goes to the battery change position. In addition, the knob module flashes red 5x and gives 5 short acoustic signals. The access data, the events log, the settings of the knob module and the time are stored on non-volatile memory and thus retained even when there is no power supply, for example, when changing the battery or if the battery goes completely flat.

The time is written to the non-volatile memory once every 30 minutes. If the power supply remains off, then the clock comes to a standstill after a few seconds and starts running from the last stored value onwards after the power supply is restored.

After every change of battery, remember to check the time. If required, set the current time.

## 3.1.2 Event log

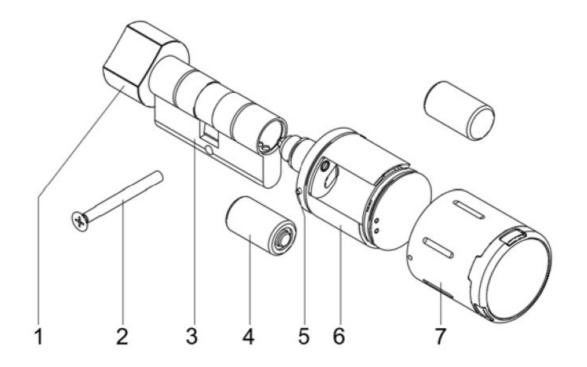
The last 423 events of the knob module are stored in the event log. Event logging can be enabled or disabled for each knob module individually, to be able to comply with specific data privacy guidelines. The event log can be read via event card or via the PXP-RS-USB radio stick.

#### 3.1.3 Locking time

The locking time defines how long the knob module remains connected after scanning an authorized card. It can be adjusted from 1 to 15 seconds or toggle (on/off mode). Default value is 3 seconds.

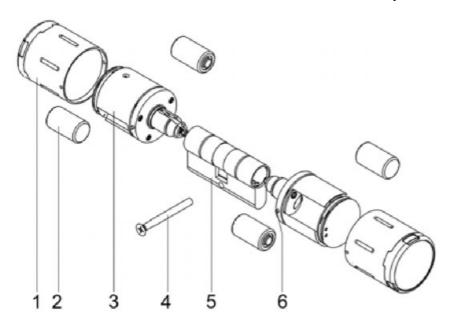
# 3.2 Design and scope of supply

3.2.1 Compact cylinder with electronic knob outside and mechanical knob: PXP-CY-MF + PXP-CY-x/y + PXP-CY-KB-29



- 1. Mechanical knob
- 2. Fixing screw
- 3. Cylinder casing
- 4. Battery
- 5. Sleeve locking pin
- 6. Electronic knob
- 7. Knob sleeve

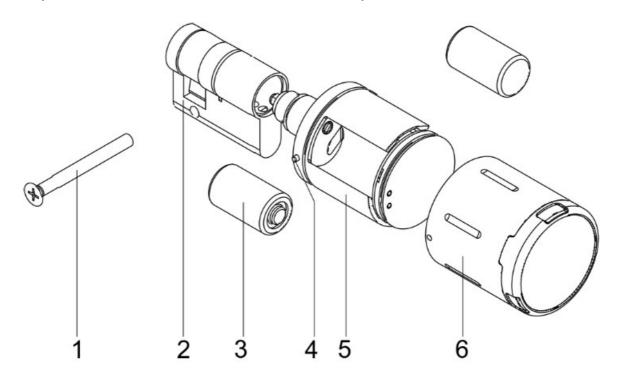
# 3.2.2 Compact cylinder with electronic knob on both sides: PXP-CY-MF + PXP-CY-x/y + PXP-CY-MF



- 1. Knob sleeve
- 2. Battery
- 3. Electronic knob
- 4. Fixing screw

- 5. Cylinder casing
- 6. Sleeve-locking pin

# 3.2.3 Half cylinder with electronic knob: PXP-CY-MF + PXP-CY-x/y



- 1. Fixing screw
- 2. Cylinder casing
- 3. Battery
- 4. Sleeve-locking pin
- 5. Electronic knob
- 6. Knob sleeve

#### 3.3 Versions

Different versions of the electronic locking cylinder are available for selection:

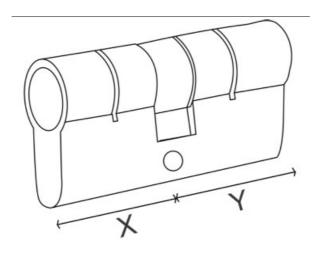
- For inside or outside use
- · Various cylinder casing lengths

#### 3.4 Technical data

## 3.4.1 General technical data

Description	Value
Dimensions of the cylinder	For Europrofil locks conforming to DIN 182 52

# Cylinder lengths



# X and Y do not have to be the same length

VERSIONS (Cylinder length side X)	REFERENCES	VEF (Cy
26 mm	PXP-CY-26/y	26 r
30 mm	PXP-CY-30/y	30 r
35 mm	PXP-CY-35/y	35 r
40 mm	PXP-CY-40/y	40 r
45 mm	PXP-CY-45/y	45 r
50 mm	PXP-CY-50/y	50 r
55 mm	PXP-CY-55/y	55 r
60 mm	PXP-CY-60/y	60 r
65 mm	PXP-CY-65/y	65 r
70 mm	PXP-CY-70/y	70 r

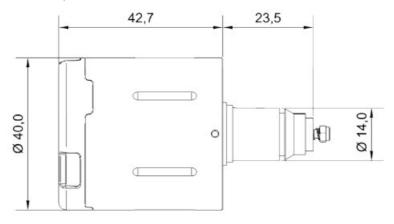
Length of the knob	42.7 mm (indoor version) 44.8 mm (outdoor version)
Diameter of the knob	40.0 mm (indoor version) 45.0 mm (outdoor version)
Transponder	MIFARE® Classic MIFARE® DESFire ®
Power supply	Battery CR2 3V (2 units)
Battery life	up to 74,500 operations or 10 years

# 3.4.2 Ambient conditions

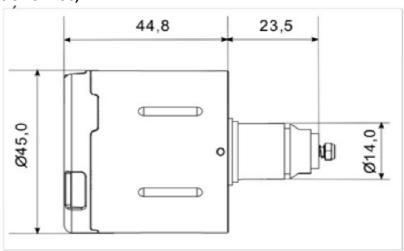
Description	Value
Operating temperature	-25°C to +65°C (outdoor version )
Storage temperature	-40°C to +65°C
Installation location	Inside or outside (depending on the product model)
Protection class	IP54 (indoor version) IP66 (outdoor version)

# 3.4.3 Dimensions

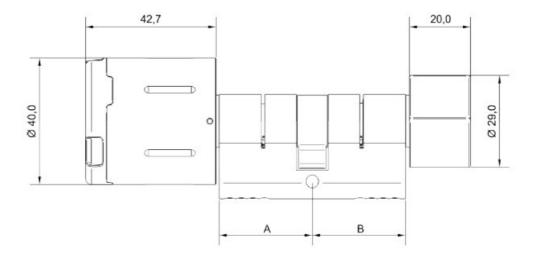
PXP-CY-MF IP54 (Electronic knob)



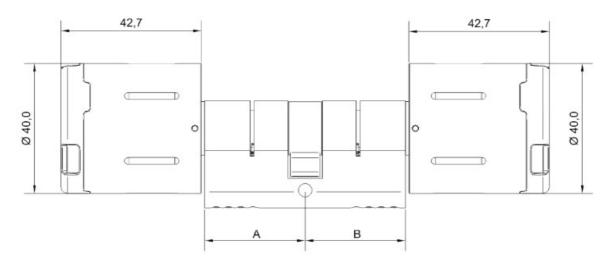
# PXP-CY-MF IP66 (Electronic knob)



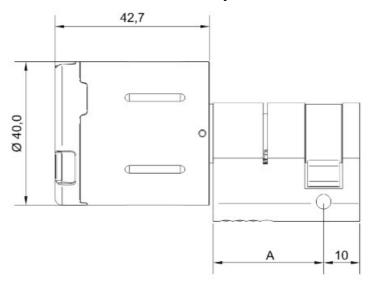
Compact cylinder with electronic knob and mechanical knob: PXP-CY-MF + PXP-CY-x/y + PXP-CY-KB-29



Compact cylinder with electronic knob on both sides: PXP-CY-MF + PXP-CY-x/y + PXP-CY-MF



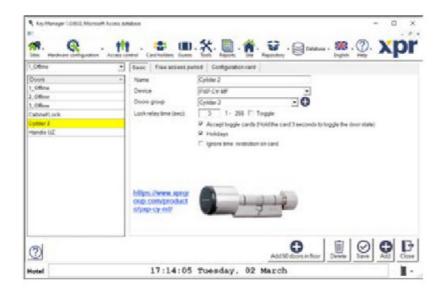
# Half cylinder with electronic knob: PXP-CY-MF + PXP-CY-x/y



# 3.5 Management accessories

# 3.5.1 Key Manager

The Key Manager management software helps easy management of the electronic locking system via the PC. The communication between the locking units and the management software takes place via programming cards or via USB radio stick.



#### 3.5.2 PXP-RS-USB radio stick (optional)

The USB Radio Stick is required for firmware upgrade.



## 3.5.3 PROX-USB desktop proximity reader

The USB desktop reader is used for read/write operations with the cards.



# 3.5.4 RF key card

If the RF key is presented in front of a component of the locking system, then it is possible to connect to the knob via USB radio stick and read the event log or update the firmware.

## 3.5.5 Battery change card

If a battery change card is held in front of a knob module, the knob module goes into the battery change position. It is now possible to remove the knob sleeve to access the batteries.

## 3.5.6 Disassembly card

If a disassembly change card is held in front of a knob module, the knob module goes into the disassembly position. It is now possible to dismount the knob module.

#### **ASSEMBLY**

#### 4.1 Assembly instructions

#### 4.1.1 General assembly instructions

Before assembling the PXP-CY-MF knob cylinder in a fire/smoke-resistant door, please recheck the fire certification to ensure conformity.

Ensure that the sealing affixed on the door does not hamper proper operation of the PXP-CY-MF.

Ensure that the knob cylinder projections do not obstruct the free swing of the door.

As electronic knob cylinders are supplied in a completely assembled state as standard, it may be necessary to perform the steps for disassembly, as described in chapter 4.3, before mounting.

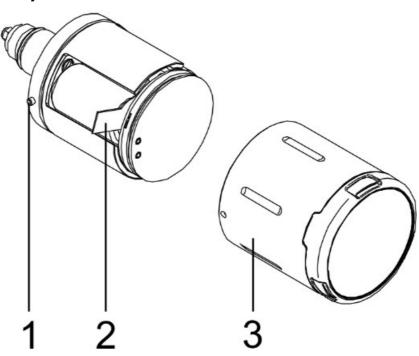
To activate the knob module, insert the batteries or remove the battery tag, if present, and close the casing (see chapter 6.2.1 Changing batteries).

Before mounting the knob module, always check that all components move freely.

Carry out the assembly with the door open.

Only for cylinders supplied as single components: During initial installation, put in 1 to 2 drops (max. 0.1 ml) of a non-resinous oil in the cylinder body. It should not be sprayed directly into the cylinder body with a spray can.

#### 4.1.2 Removing the battery tab

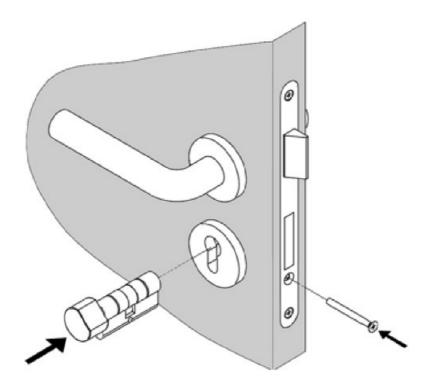


- 1. Remove the knob cover (3).
- 2. Remove the battery tab (2).
- 3. Press the cover locking pin in (1, the second battery locking pin is located on the opposite side of the knob module) and replace the knob cover (3). Please ensure that the locking pins are properly locked in the cover.

#### 4.2 Assembly

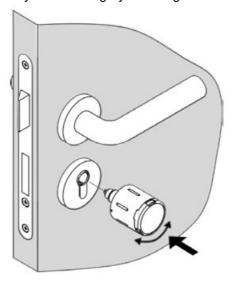
Remove the fixing screw of the existing cylinder and dismantle the current cylinder.

Push in the PXP-CY-MF cylinder casing and fasten with fixing screw. Tighten the fixing screw by hand, do not use a battery-operated screwdriver with a high torque.



The cylinder body must not exceed by more than 1 to 3mm outside its enclosing fitting, but should not be sunk completely in the upholstery neither.

The electronic knob is mounted onto the cylinder casing by inserting and turning at the same time.



Make sure that the knob cylinder operates easily and smoothly with the door open.

#### **OPERATION**

## 5.1 Automatic wake up

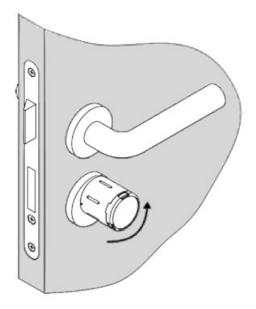
The knob module is in sleep mode as long as it is not used. To check the authorization of a card, it needs to be woken up from the sleep mode. This normally happens automatically when a card is held in front of the reader unit.

If, however, the knob module has been woken up 24 times (for example by metallic objects in the surroundings) without reading a card, then automatic wake up is disabled.

In this case the knob module has to be woken up manually.

urn the knob module few times to wake up the reading unit, until an LED starts glowing.

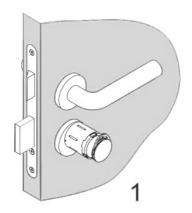
Hold up an authorized card in front of the reading unit only after this.

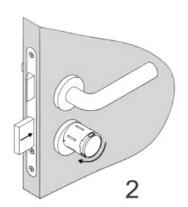


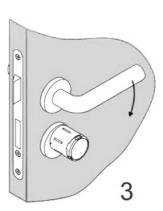
The automatic activation is reactivated when an authorized card is scanned.

In addition, the wake up sensitivity (that is the number of times the knob module needs to be turned to wake up the reading unit) can be set.

# 5.2 Opening the door







- 1. Hold the authorized card in front of the reading unit until the green LED starts glowing.
- 2. Rotate the knob module in the direction counter to the locking direction until it stops.
- 3. The door can now be opened with the door handle.

## 5.3 Toggling the knob module

Hold the with toggle authorization for at least 3 seconds in front card ont of the reading unit.

The knob should be configured to "Accept Toggle Cards" and the card should be configured to "Hold the card 3 seconds to toggle the door state".

Depending on the initial state, the knob module either engages or disengages permanently.

## 5.4 Indications

Operation	Signal (audible and visible) and explanation	
Rest mode	No audible or visible signal	
Start of service mode	Long audible signal followed by a short audible signal	
End of service mode	Short audible signal followed by a long audible signal	
Read mode (after waking)	Red LEDs are flashing	
Card not authorized	Long low audible signal, red LEDs start glowing	
Card authorized	Green LEDs start glowing	
Time changeover / toggling On	Long high audible signal, green LEDs start glowing	
Time changeover / toggling Off	Long high audible signal, red LEDs start glowing	
Battery warning Phase 1:	5 brief high audible signals, red L EDs flash 5 times simultaneously	
Batteriewarnstufe 2:	udible signals, red LEDs flash 5 times simultaneously, then 5 seconds engagem ent delay, green LEDs start flashing at the same time	
Battery warning Phase 3:	5 brief high audible signals, red L EDs flash 5 times simultaneously, no connection but change battery position	

# **CLEANING AND MAINTENANCE**

# 6.1 Cleaning

Clean the knob module only with a commercially available household cleaning agent and a damp cloth. Do not use any abrasive or caustic cleaning agents.

# 6.2 Maintenance

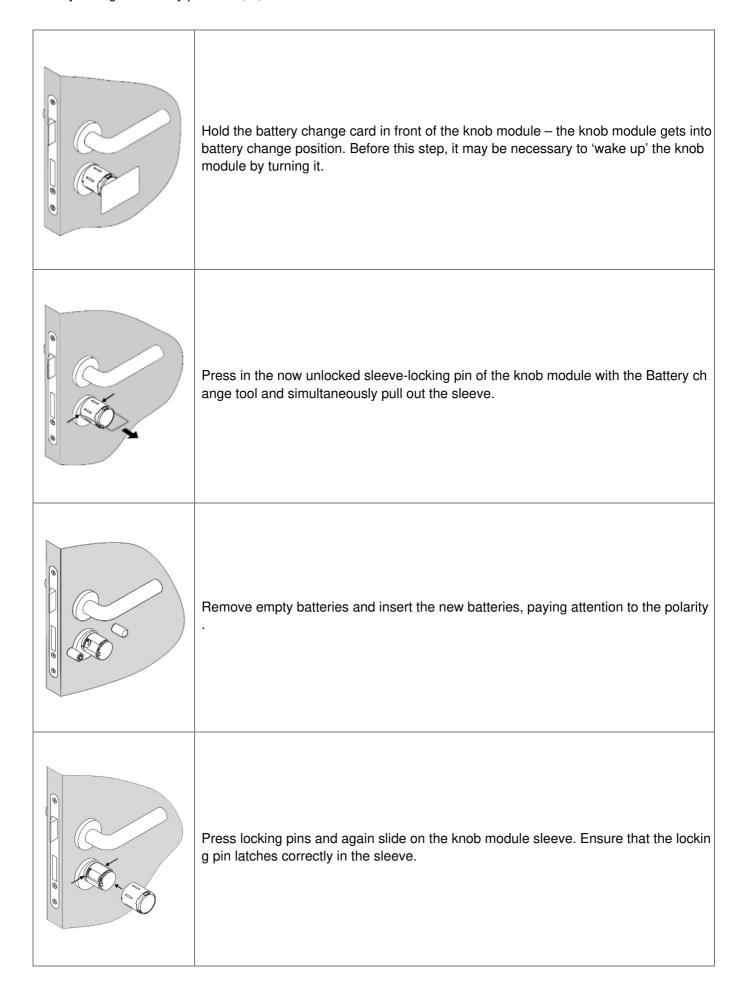
# 6.2.1 Replacing the battery

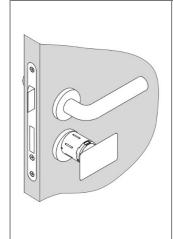
# CAUTION

Danger of injury caused by improper use

- Do not charge, open or heat the battery.
- Always replace discharged batteries with new batteries.
- Pay attention to the correct polarity when inserting the batteries.

Change the battery only with the door open. As long as the battery is removed, the knob module cannot engage and thus cannot open the door.





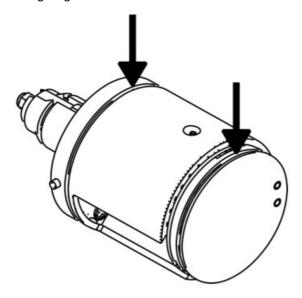
After the battery change, the knob module is still in the battery change position. By r epeating the step 1 or by presenting an authorized card, the knob module returns to the home position.

# 6.2.2 Replacing the sealing ring CAUTION

Damage to the sealing ring caused by improper handling.

Do not use any sharp objects and do not stretch the sealing ringmore than what is required for mounting. Prerequisite: knob sleeve is removed (see chapter 6.2.1 Replacing the battery)

If the knob sleeve is open, both sealing rings are visible. The smaller one is on the side away from the door.



To remove the sealing rings, hold the respective sealing ring on one side with the thumb, while pushing on the opposite side with the fingernail of the middle finger. The sealing ring can now be grasped by the index finger. In the case of IP66 model, there is only one sealing ring on the side facing the Outdoor door.

#### **FAULTS DURING OPERATION**

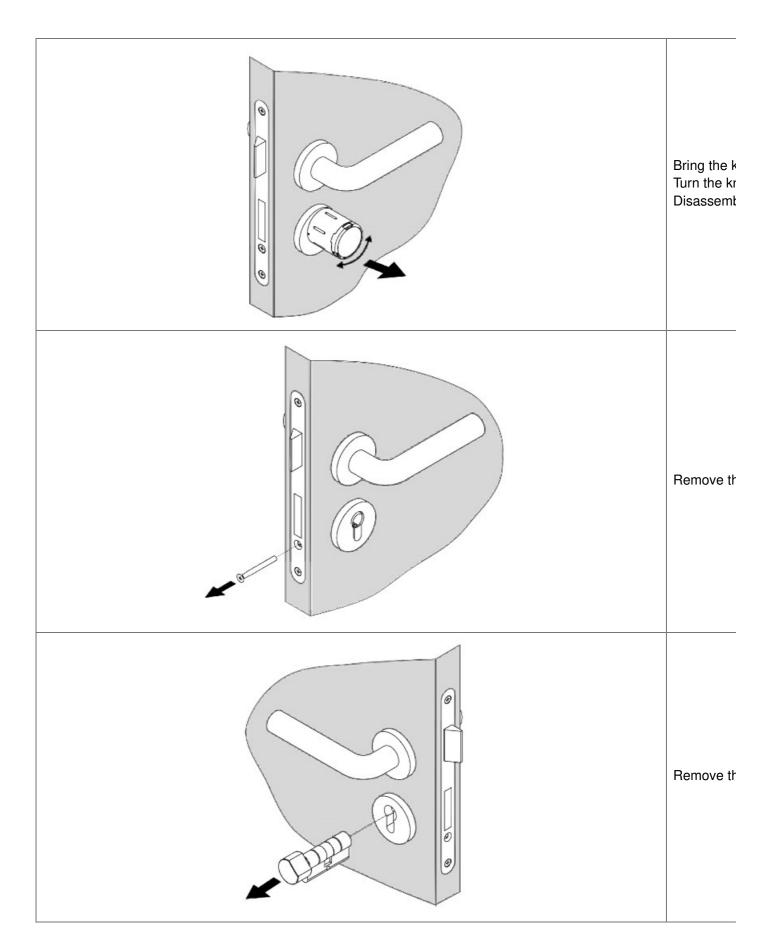
7.1 Fault indications

Operation	Audible signal	Explanation
Memory fault / configuration fault	•	5 long audible signals, 1 brief audible signal
Coupling error	•	5 long audible signals, 2 brief audible signals
RTC fault (clock)	••	5 long audible signals, 3 brief audible signals
Internal fault (unhandled interrupt )		5 long audible signals, 4 brief audible signals
Internal fault (Bus conflict)		5 long audible signals, 5 brief audible signals
Internal fault (Bus conflict)		5 long audible signals, 6 brief audible signals
Internal fault (Bus conflict)		5 long audible signals, 6 brief audible signals

If the faults mentioned above occur repeatedly, then please contact the concerned dealer.

# **DISASSEMBLY AND DISPOSAL**

# 8.1 Disassembly



# 8.2 Disposal

Do not dispose of the knob module with domestic waste. Disposal should be in accordance with the European Directive 2002/96/EC at a collection point for electrical waste.

Defective or used batteries should be recycled in accordance with the European Directive 2006/66/EC.

Follow the local regulations on separate disposal of batteries.

Recycle the packaging in an eco-friendly manner.

#### **KEY MANAGER SOFTWARE**

Before you add PXP-CY-MF units in the software, make sure that you have already taken these steps:

- Create buildings (Key manager mode only)
- Create floors (Key manager mode only)
- Create door groups
- Define Holidays

#### 9.1 Initialization of PXP-CY-MF

By factory settings, the knob will not read any card until it is initialized.

#### To initialize the knob reader:

- 1. Go to Hardware Configuration/Doors (or Rooms).
- 2. Add new door. Put name, select the type of the knob (PXP-CY-MF) and adjust the other settings.
- 3. Save the door and it will appear in the list on the left.
- 4. Go to Configuration card tab.
- 5. Put the Initialization card on the USB Desktop Reader and click on "Initialization Card". Wait for confirmation message Initialization Card created.
- 6. Hold the card in front of PXP-CY-MF. If the initialization is good, you will hear 3 long beeps and 3 short beeps. The LED will be green long and red short in the end.

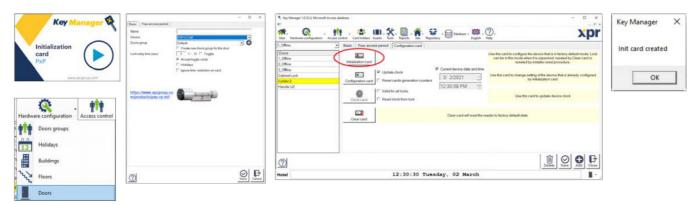
**Note:** Init card is valid only for one knob. You can use the same card to initialize another knob, but you have to reissue it.

Init card can be the one from KM-PROGRAMMING-KIT, but it is not mandatory.

You can use ANY Card that is Desfire Ev1 or Ev2, 2K or more.

After initialization of the knob, you can change any setting only with configuration card.

**Important Note:** Make sure that you have created backup copy of the Key Manager database on safe place. The knob can not be disassembled if the database is lost and you don't have the Disassembly Service Card!



## 9.2 Clear PXP-CY-MF

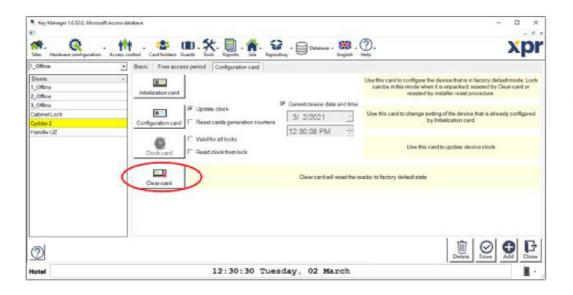
To revert the knob to factory default state, issue a clear card.

- 1. Go to Hardware Configuration/Doors.
- 2. Configuration card tab. Click on "Clear Card". Wait for confirmation message Clear Card created.
- 3. Hold the card in front of PXP-CY-MF. If the clear procedure is good, you will hear 3 long beeps and 3 short beeps. The LED will be green long and red short in the end.

**Note:** Clear Card is valid only for one knob. You can use the same card to clear another knob, but you have to reissue it.

You can use ANY Card that is Desfire Ev1 or Ev2, 2K or more.

To use the knob again, you need to issue initialization card.





Key Manager

Config. card created

OK

#### 9.3 Configure PXP-CY-MF

To change any setting in the door knob, you can use Configuration Card.

- 1. Go to Hardware Configuration/Doors. Select the door, make the necessary changes and click Save.
- 2. Go to Configuration card tab. Click on "Configuration Card" and all the settings from all tabs will be transferred to the card. Wait for confirmation message Config Card created.
- 3. Hold the card in front of PXP-CY-MF. If the configuration is good, you will hear 3 long beeps and 3 short beeps. The LED will be green long and red short in the end.

**Note:** Config Card is valid only for one knob. You can use the same card to initialize another knob, but you have to re-issue it.

**Note:** Configuration card can be the one from KM-PROGRAMMING-KIT, but it is not mandatory. You can use ANY Card that is Desfire Ev1 or Ev2, 2K or more.





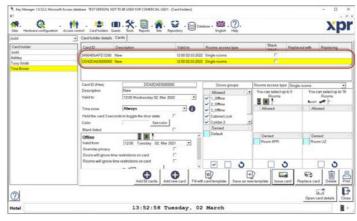
#### 9.4 Adding Card holders

Up to 16000 Cards can be used in the system. One card holder can have more than one card.

- 1. Go to Card Holders.
- 2. Add new. Put a name and save it.
- 3. The added card holder will appear on the list left. Select that card holder, place a card on the USB Desktop Reader and click on Add new card. Confirmation message Card created.
- 4. The newly added card will appear on the list above.
- 5. Select all the needed settings for that card, including door groups and validity period and click on Issue Card. Wait for confirmation message Card created. From than on, the card can be used.

**Note:** Card holder card can be any card that is Mifare Desfire or Mifare Classic (should be enabled in Site settings).





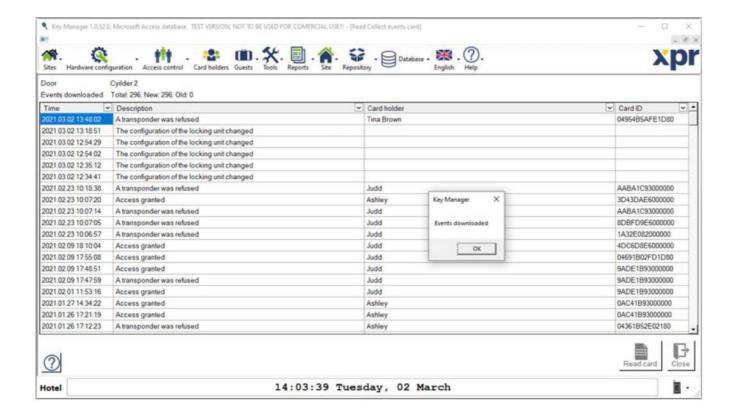
## 9.5 Downloading events and report viewing

- 1. Go to Reports/ Create Collect events card.
- 2. Put the card on the USB desktop reader. Click on Create Collect events card (PXP). Wait for confirmation message Card created.
- 3. Hold the card in front of PXP-CY-MF. Hold it longer than 5 seconds, until you will hear 3 long beeps and 3 short beeps.
- 4. Put the card back on the USB desktop reader.
- 5. Go to Reports/ Read Collect events card. Wait for confirmation message Events downloaded.

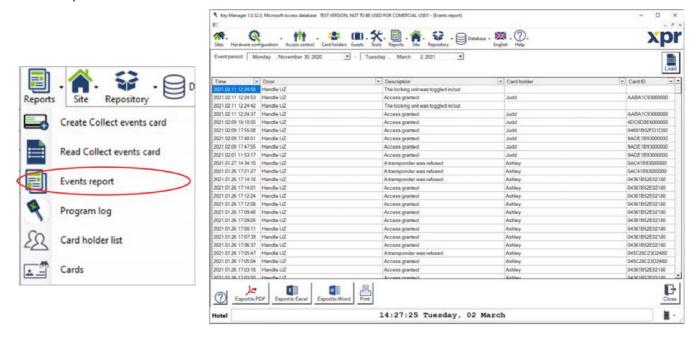
Note: Event Collect Card is valid for all locks in the system.

**Note:** Event Collect card can be the one from KM-PROGRAMMING-KIT, but it is not mandatory. You can use ANY Card that is Desfire Ev1 or Ev2, 8K.





To obtain the events already downloaded, go to Reports/ Event Report. Select the period and click on Load.



Additional filtering can be done by time, door, event type, card holder... The reports can be exported in PDF or XLS.

www.xprgroup.com

**Documents / Resources** 



xpr PXP-CY-MF Electronic Knob Module [pdf] Instruction Manual

PXP-CY-MF-IP66, PXP-CY-MF-IP54, PXP-CY-MF, PXP-CY-MF Electronic Knob Module, Electronic Knob Module, Knob Module

# References

X XPR Group - Safe access systems provider

Manuals+,