

OPERATING MANUAL

Technical description. Installation manual. Certificate.

PATENT FOR INVENTION

No.2420640

1. PURPOSE

Electromechanical locks series Promix-SM213 with a locking mechanism based on a skewed bar (below called the locks) are intended for locking swing doors, gates and wickets located in the open air, which can be opened remotely by energizing/de-energizing (depending on the version) the lock with DC supply voltage by means of switches (buttons) or controllers of access monitoring and control systems, audio and video intercoms, code panels or other devices. The lock design and mounting method allow them to be installed on practically any door types.

2. LABELING

The label stuck to the lock body contains the following information:

1. Lock model.
2. Patent number.
3. Nominal supply voltage.
4. Nominal consumed current.
5. Date of manufacture and QCD mark
6. Identification number.
7. Manufacturer's website.



An example of information layout on the label.

Promix-SM213.XX

Supply voltage:

0 - 12V. 1 - 24V

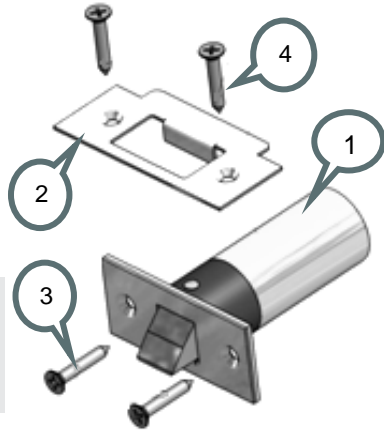
Version:

0 - normally opened, 1 - normally closed

For the list of lock modifications that can be ordered, see 5.2.

3. SET OF DELIVERY

1 – Lock	1 pc.
2 – Locking plate	1 pc.
3 – Self-tapping screw 3.5x32	2 pcs.
4 – Self-tapping screw 3.9x32	2 pcs.
5 – Operating manual	1 pc.



Check completeness of the lock set when buying! After buying, the manufacturer will not accept claims related to incomplete set.

4. DESIGN AND PRINCIPLE OF OPERATION

The locks are produced in two versions: normally opened (NO), and normally closed (NC). NO lock is in the open state when de-energized and in the closed state when voltage is supplied. NC lock is in the closed state when no voltage is supplied, and in the open state when the lock is energized. For opening the door, it is necessary first to de-energize a normally open lock or to supply voltage to a normally closed lock; only after that the door can be opened.

The lock Promix-SM213 has a genuine mechanism of the catch “folding” into the lock body during opening the door.



- During closing the door (regardless of the lock version and the presence of voltage), the catch is sunk into the lock body just like an ordinary mechanical door lock.
- As voltage is supplied (for NO lock) or voltage is removed (for NC lock), the lock catch is block and does not permit the door opening.
- As voltage is removed (for NO lock) or supplied (for NC lock), the lock catch is deblocked and, as the door is opened, is “folded” into the lock body.

5. TECHNICAL DATA

5.1 OPERATING CONDITIONS

The environment of the lock must be explosion-safe, free of current-conducting dust or gases that cause metal corrosion and destroying insulation of current conductors and electric elements, free of current-carrying dust and preventing ingress of fuel and lubricants.

Climatic conditions of service are in accordance with GOST 15150-69 YXII2 with stiffening of service conditions:

- ambient temperature: from -40 to +50 °C;
- relative air humidity: not higher than 95% at 35°C or lower temperatures, under conditions of moisture condensation and hoar-frost formation;
- installation indoors or outdoors under direct impact of atmospheric precipitation and sunlight, without formation of glazed frost.

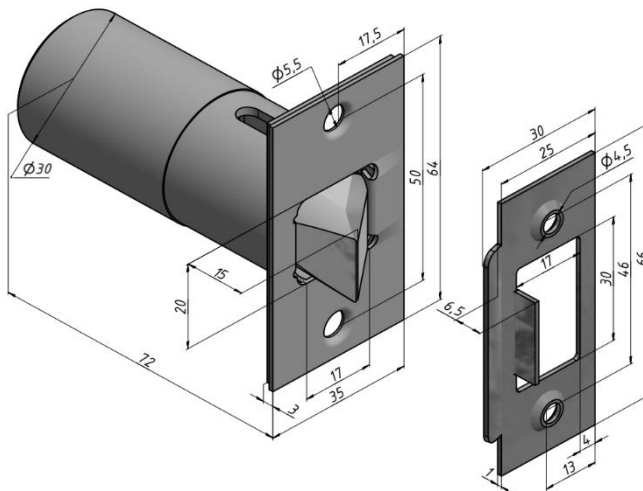
NC locks are not intended for outdoor installation.

5.2 TECHNICAL DATA

Modification	Promix-SM213.00	Promix-SM213.01	Promix-SM213.11*	Promix-SM213.10*
Version	normally opened		normally closed	
DC supply voltage U, V	12±2	24±2		12±2
Current consumed, A	100 0.1 (at 12V)	35 (at 24V)	75 (at 24V)	160 0.1 (at 12V)
Supply pulse duration (not more than), s	not rated.		120 (at 23-26V)	120 (at 11-14V)
Minimum pause between pulses, s	not rated.		120	
Holding force (not less than), kg	300			
Lock weight (not more than), kg	0.3			
Power wire length, m	0.1			

* - Manufactured against order

Lock and locking plate overall and mounting dimensions.



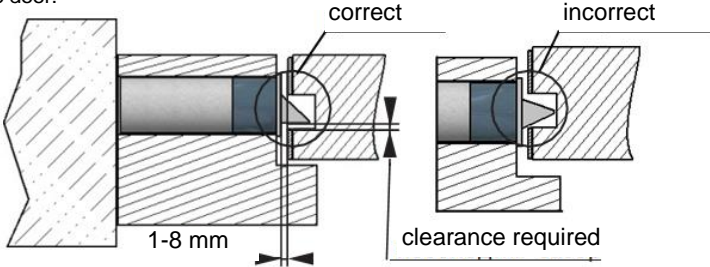
6. INSTALLATION AND CONNECTION

6.1 LOCK MOUNTING

The lock design allows mounting it in the door frame or in the door leaf.

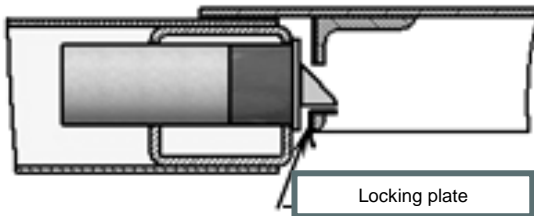
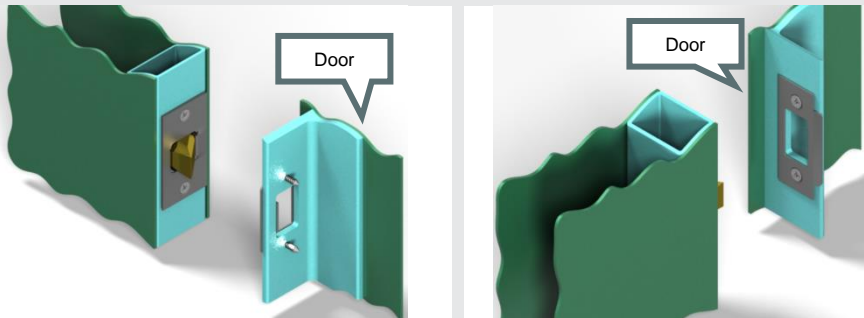
During mounting, a clearance of 1-8 mm must be provided between the locking plate and the fastening plate of the lock. Meeting this condition guarantees a door holding force of 300 kg and a smooth operation of the door without wedging up.

It is necessary to provide a clearance between the catch and the locking plate in the closed state of the door.

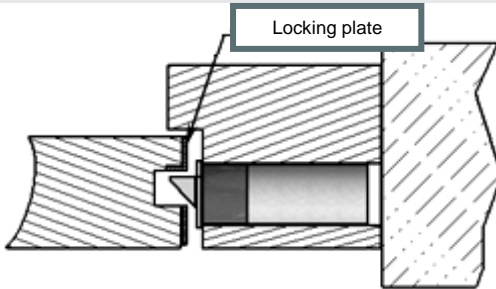
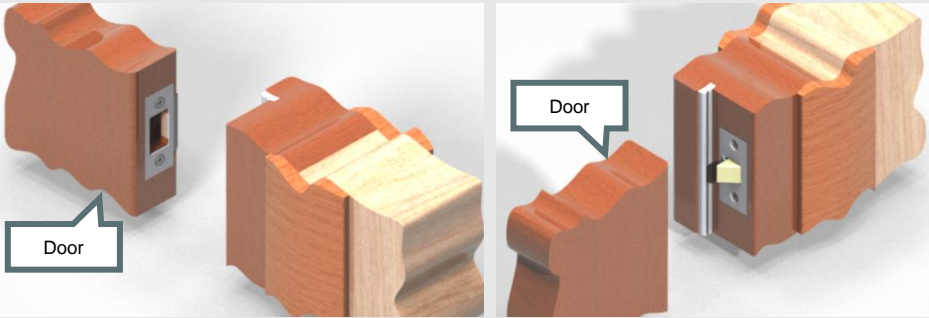


The lock mounting together with the locking plate included in the delivered set is OBLIGATORY! This will provide smooth operation and extend the lock service life.

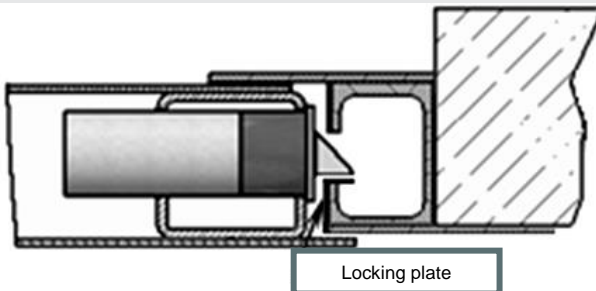
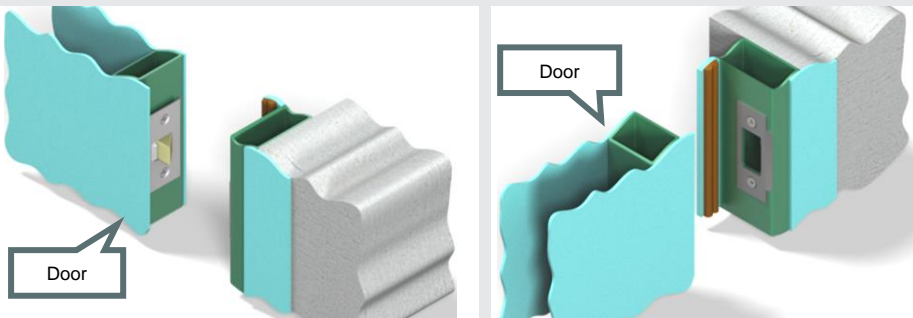
Example of the lock installation in a pipe of metal wicket frame.



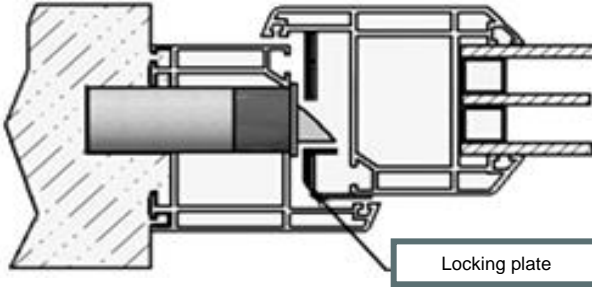
Example of the lock installation in the door frame of a wooden door.



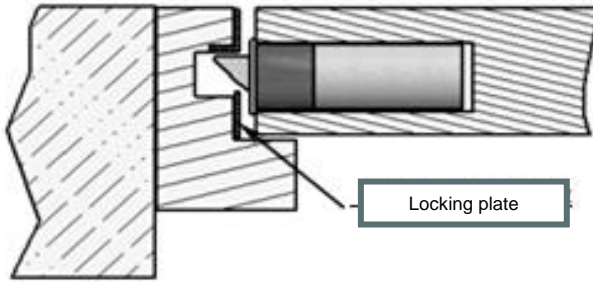
Example of the lock installation in the leaf of a metal door.



Example of the lock installation in the door frame of a plastic door.

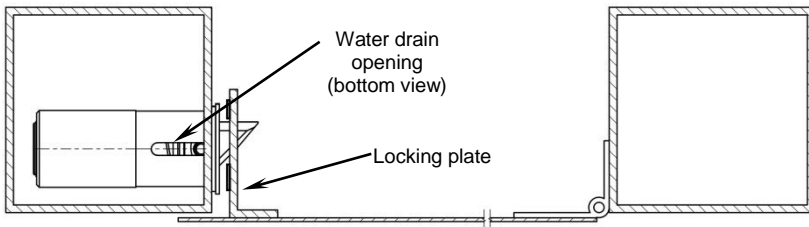


Example of the lock installation in the leaf of a wooden door.



For mounting the lock, drill 4 holes 2-2.5 mm in diameter for self-tapping screws and the locking plate, 30-32 mm in diameter for lock mounting.

Before mounting the lock in the prepared opening, remove one red sticker from its body; the sticker is on the bottom surface of the lock in the mounting position! The sticker covers an opening for water drain from the lock. Remove white protective film from the locking plate and the lock.



Do not transfer the lock to the closed state until you make sure that the required clearances are provided!

6.2 CONNECTING PROCEDURE

The lock operation is controlled by means of energizing and de-energizing. For this purpose, a controller (control board) or a switch (button) is generally used. The controller is mounted in accordance with its certificate.

Connect the lock power wires adhering to the following polarity:

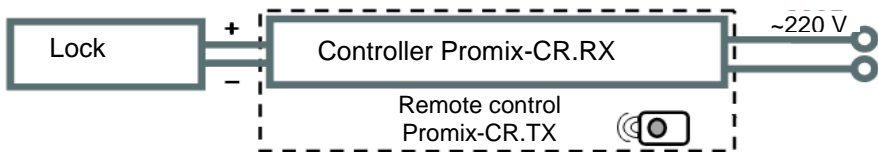
Red (black with a red stripe) – positive pole of the power supply;

Black – negative pole of the power supply;

Application of voltage of reverse polarity does not provide the lock operability but does cause its failure.

See operating voltage range in 5.2. Avoid application of a higher voltage or excessive pulse duration.

Example of the lock connection to the remote control system Promix-RDS.



Provide a reliable electriccontact. To prevent short-circuit, insulate places of connection.

7. SPECIAL ASPECTS OF INSTALLATION AND OPERATION

- 1) The possibility of using of the locks for restriction of access to the premises and the place of installation (outdoors or indoors) are determined by the **installation organization** on the basis of the design features and the mounting method, room criticality level, the purpose of the access restriction regime and other factors (the presence of security providers, video surveillance, etc.).
- 2) During mounting the lock and the locking plate, it is necessary to ensure their coaxial alignment within the catch free movement allowance.
- 3) NO lock may be mounted outdoors on condition that in winter it is closed (energized) for most time. This prevents freezing of lubricant in the mechanism due to release heat. **NC locks are not intended for outdoor installation.**
- 4) The properly mounted lock provides the necessary free motion (play) of the door. If the free play is absent, NC lock may **fail to open** when energized, and NO lock may **fail to close** when energized (see section 8).
- 5) Operation of an installed NC lock should be tested only if the supply voltage can be applied thereto.
- 6) When using NC lock for restriction of access to rooms or in evacuation routes. Mounting of the lock deblocking mechanism Promix-AD.KM.01 (delivered separately) is obligatory, since it is necessary to provide exit for people in case of an emergency (e.g., fire).

8. TROUBLE-SHOOTING

Troubles and problems	Remedies
<p>NC lock does not open when supply voltage is applied.</p> <p>NO lock does not close when supply voltage is applied.</p>	<p>Using a tester, check integrity of the lock power circuit.</p> <p>Check polarity and conformity of the lock supply voltage to the required value.</p> <p>Check the presence of the required clearances (see section 6).</p>
<p>The lock closes with difficulty, the catch does not operate smoothly.</p>	<p>Check the presence of the required clearances (see section 6).</p> <p>Check whether the locking plate and the fastening plate are skewed, if necessary, remove skewing.</p> <p>In case of strong rubbing of the catch against the locking plate, lubricate the places of contact with grease (SHRUS).</p>
<p>The door has sunk during operation, therefore, the catch does not enter the opening in the locking plate.</p>	<p>Restore the door position. If this is impossible, remove the locking plate from the door. Fasten the locking plate to the door providing the required clearances.</p>
<p>NC lock does not close when supply voltage is applied.</p> <p>NO lock does not open when supply voltage is applied.</p>	<p>Check the presence of required clearances between the catch and the locking plate (see section 6)</p>

9. MAINTENANCE

The lock Promix-SM213 is lubricated by the manufacturer and does not need additional lubrication or any special maintenance. However, if dust or dirt penetrated inside the lock during service, and the lock began to show malfunction, then dismantle the lock, unstick the protective film carefully from the slot in the body. Wash the lock immersing it in white spirit or petroleum solvent with the catch downwards, to a depth of the thinned portion of the body (not deeper!).

Dry the lock and make sure that its operability has restored. Lubricate inner walls of the body and slot ends through the slots, without sinking the catch; use a water-resistant, antifriction plastic grease (e.g., SHRUS).

Then sink the catch and lubricate inner walls of the body on the side of the catch. Replace the protective film removed earlier, and mount the lock on the door.

It is prohibited to use silicone grease and WD-40.

10. STORAGE AND TRANSPORTATION

Until putting into operation, the locks must be stored in the manufacturer's packing, in rooms with an ambient temperature of -30 to +50 °C and a relative humidity not higher than 98% at 25° C in compliance with storage conditions as per GOST 15150-69.

Locks transportation conditions must comply with group C as per GOST 23216-78 in terms of exposure to mechanical factors, and Ж2 as per GOST 15150-69 in terms of exposure to climatic factors.

11. SAFETY REQUIREMENTS

The design of the locks ensures safety of personnel involved in mounting and maintenance.

Due to low DC supply voltage, the products correspond to class III as per GOST 12.2.007.0-75 and are electrically safe.

Fire safety of the locks is ensured by use of non-combustible or hardly combustible materials, and low supply voltage.

12. DISPOSAL

The product is not hazardous for human life and health or for the environment; disposal after its service life is performed without taking any special measures for environment protection.

13. WARRANTY LIABILITIES

The manufacturer, ETC PROMIX LLC, warrants conformity of Promix-SM213 locks to requirements of current Technical Specifications provided that transportation, storage, installation and operation rules established in this Manual are followed.

The warranted operation period is 12 months from the date of sale but not longer than 18 months from the day of acceptance by the manufacturer's QCD.

Within the period of warranty, ETC PROMIX LLC undertakes to repair defective products free of charge. Expenses for transporting the product to the place of repair and back will be borne by the Buyer.

Warranty liabilities do not cover any defects and damages caused by:

- Improper maintenance by the Buyer;
- Use of the product under conditions that do not comply with the operation requirements;
- Mechanical damages or disassembly of the products by the Buyer;
- Non-observance of the transportation and storage rules.

Faulty products are accepted for repair only together with the latch, on the obligatory condition that factory labels are retained on the product body.

On expiration of the warranty service period, the manufacturer provides after-warranty service on a contractual basis.

To improve product quality the manufacturing plant reserves the right to make modifications to the product design without prior notice.

14. ACCEPTANCE AND PACKING CERTIFICATE

Electromechanical lock Promix-SM213 in quantity of ____ pieces (1 pc. by default) bearing the manufacturing date and QCD mark on the body, was manufactured and accepted in compliance with Specifications, obligatory requirements of state standards and current technical documentation, recognized as fit for operation and packed by ETC PROMIX LLC.

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