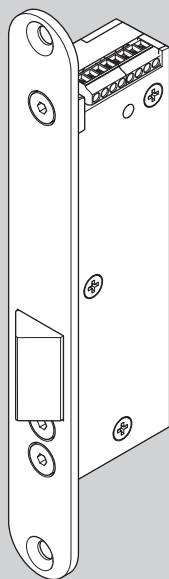


Pendeltüröffner



Elektrischer Pendeltüröffner 351M80


ASSA ABLOY

Installations- und Montageanleitung

D0068504

ASSA ABLOY, the global leader
in door opening solutions

**Read this manual carefully prior to use and keep it safe for later reference.
In the event that the product is sold, hand the manual over to the purchaser
together with the product.**

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Product information

Electric strike 351M80

General

with electric
motor drive

The *electric strike 351M80* is equipped with an electric drive and serves to single action doors and swing doors. It is suitable for horizontal or vertical installation in the door frame or door leaf.

The door contact and the armature contact are designed as potential-free switching contacts. The door contact is switched magnetically when the door is closed. The armature contact can be used to monitor locking status.

Fail-unlocked

The *electric strike 351M80* operates according to the fail-unlocked operating principle and is suitable for escape doors. If the power is shut off or the power fails, the bolt can be pushed back.

Functions

The bolt is extended by motor. The activation is simple: If electric current is introduced while the door is closed, the bolt extends after a time delay of approximately one second. If the power is shut off, the bolt is released.

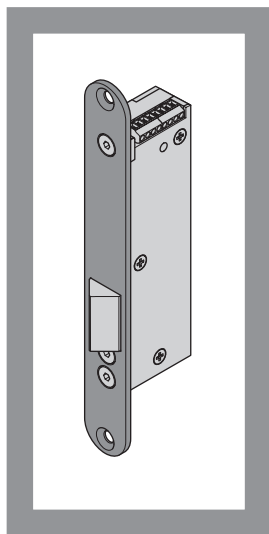
The electric strike 351M80 offers

- break-in resistance up to 5000 N,
- use for DIN left and DIN right,
- a door contact (reed contact) and an armature contact (relay contact) are integrated in The *electric strike 351M80*,
- noise reduction and
- installation compatibility with model 351U80.

Supplied accessories

- Four spacers for mounting.

Pic. 1:
Electric strike
351M80



Notes

About this manual

This installation and mounting manual was written for qualified electricians and trained personnel. Read this manual in order to safely install and operate the device and to utilise the permissible usage possibilities it offers.

The manual also provides information about how key components work.

Meaning of symbols



Danger!

Safety notice: Non-observance leads to death or severe injury.



Warning!

Safety notice: Non-observance can lead to death or severe injury.



Caution!

Safety notice: Non-observance can lead to injury.



Attention!

Note: Non-observance can lead to material damage and impair the function of the product.



Note!

Note: Supplemental information for the operation of the product.

Safety instructions



Warning!

Only connect while the power is shut off: There is a risk of electric shock when the voltage is switched on. This can lead to death or severe injury.



Caution!

Working on the door leaf: The *electric strike 351M80* must be removed for work on the door leaf or the door frame, such as drilling or cutting work.

Factor in the rebate gap: Install the door so that the “rebate gap” (distance between face plate and striking plate) is 3 mm (2 to 4.5 mm).

Do not open the electric strike: The *electric strike 351M80* may not be opened, because it would be damaged in the process.

Do not paint: The *electric strike 351M80* may not be coated with paint or other substances.

Protect against water and moisture: The *electric strike 351M80* must be protected against penetrating water. Water impairs the function of The *electric strike 351M80*.

Observe the EMC Directive: For reasons of electromagnetic compatibility, individual cables may not be connected in parallel in order to maintain a large conductor cross-section. Always use individual cables with the appropriate cross-section surface.

Intended use

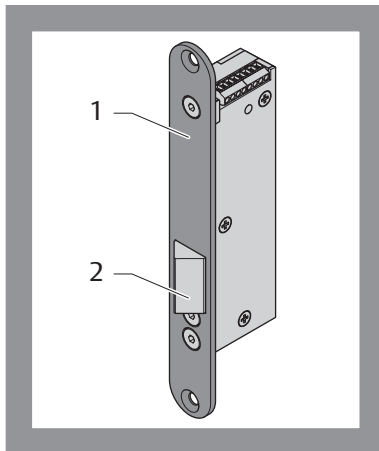
for locking doors
in public
buildings

The *electric strike 351M80* is used for locking doors in public buildings (such as universities or hospitals). The device is suitable for installation in the frame and in the door leaf according to the installation instructions. It is not intended for any other type of use.

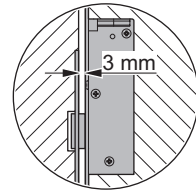
Explanation of terminology

Term	Description
– Fail-unlocked	According to the <i>fail-unlocked</i> locking principle, locking takes place when electrical current flows.
– Striking plate	The <i>striking plate</i> is the counterpart to the strike installed in the door leaf.
– Rebate gap	The <i>rebate gap</i> is the distance between the face plate and striking plate (Pic. 3).
– Lock pocket	The <i>lock pocket</i> is the recess in the door or in the door frame for the acceptance of The electric strike.
– Armature contact	The <i>armature contact</i> is a monitoring contact. The <i>armature contact</i> signals whether the bolt is locked or unlocked.
– Door contact	The <i>door contact</i> is a monitoring contact. The <i>door contact</i> signals whether the door is closed, whereby the sensor system of The electric strike detects that the face plate and striking plate are precisely aligned, facing each other.
– Sensor system	The <i>sensor system</i> is comprised of reed contacts in The electric strike and magnets in the striking plate so that the contact is closed when the face plate and striking plate are precisely aligned, facing each other.
1 Face plate	The <i>face plate</i> is used for the fastening of The electric strike in the lock pocket.
2 Bolt	The <i>bolt</i> moved by electric motor extends into the recess of the striking plate and locks the door.

Pic. 2:
Schematic view of
The electric strike



Pic. 3:
Rebate gap



Functions and use



Note!

Doors along escape routes: The safety features of this product are an essential requirement for its conformity with the valid guidelines and standards. No changes which are not described in this manual may be undertaken.

Functional principle

When the door is closed the bolt is extended to the locking position by electric motor.

suitable as an
escape door lock

As long as electric current flows, the bolt is held in place and the door is locked (fail-unlocked operating principle). The *electric strike 351M80* is suitable and approved as a bolt for escape doors.

Monitoring contact

potential-free
door contact
potential-free
armature contact

The *electric strike 351M80* is equipped with door recognition. The door state (door closed or open) is reported by a potential-free contact.

The integrated potential-free armature contact can be used to electronically monitor the locking status.

The locking status of the door can be monitored with the monitoring contacts, meaning, for instance, a system can only start up if the door concerned is securely locked.

System requirements

The *electric strike 351M80* can also be used in rebate doors.

double acting
swing door closer

With the use of double acting swing doors the door to be locked must be equipped with a double acting swing door closer. The closing force and closing speed must be adjustable for the safe positioning of the door leaf so that it is ready to lock.

The double acting swing door closer must be adjusted so that the door is closed precisely to the locking position.

Installation

Notes



Warning!

Danger to life due to electric shock: Improper wiring is life-threatening and can ruin The *electric strike 351M80*. The connection of the power supply may only be carried out by a trained, qualified person.



Caution!

Risk of injury due to damage: Damages can lead to electric shock. Damages to the metal parts can lead to injury. A damaged device is a safety hazard. Check the packaging and The *electric strike 351M80* for damage. A damaged device may not be put into operation.

Trip hazard created by installation in the floor: The *electric strike 351M80* may not be installed in the floor. There is a trip hazard and The *electric strike 351M80* can be ruined when stepped on as well as from penetrating dirt.

Risk of injury due to sharp edges and chips: When drilling and carrying out other cutting work, there is a risk of injury due to sharp edges and chips. Take particular care to protect your eyes using suitable protective goggles. Have an appropriately trained, qualified person carry out the work.



Attention!

Do not drill into the device: The *electric strike 351M80* is damaged by additional drilled holes.

Protected against the penetration of dirt and chips: The *electric strike 351M80* can be damaged from the penetration of chips or dirt.

Clean the lock pocket before the installation: Before installing The *electric strike 351M80* in the door or door frame, the lock pocket and all holes must be cleaned (blown out or vacuumed). The *electric strike 351M80* can be damaged if chips fall in.



Attention!

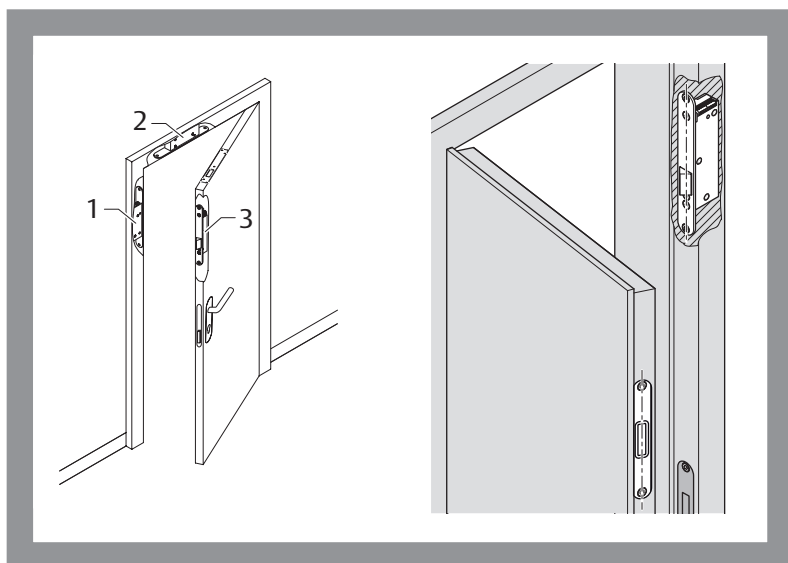
Torsion-free installation: The *electric strike 351M80* must be installed free of torsion. Check whether the door stops properly and does not show any signs of warpage before mounting.

Observe the tolerances for the voltage supply: The operating voltage measured on The *electric strike 351M80* at rated current must lie within the specified tolerance limits. Damage and malfunctions will occur if the tolerance limits are exceeded or undercut.

Check The electric strike 351M80 after mounting: The *electric strike 351M80* must move with consistent ease in all functions. The bolt must move easily when closing. An inconsistent or sluggish movement of the bolt can indicate a mounting error or distorted installation.

Installation in a normal position for locks: Large leverage forces arise on doors, whereby The electric strike, door frame and door leaf can be damaged when the installation position is incorrect. The *electric strike 351M80* must be installed as far from the door hinge as possible.

Pic. 4:
The three possible
mounting positions



Mounting The electric strike 351M80

Preparation for mounting

Prepare and clean the lock pocket

- 1 Create the lock pocket at a suitable mounting position (Pic. 4).
 - 2 Finish the holes for the fixing screws (Pic. 4, Pic. 7 and Pic. 8).
 - 3 Clean the lock pocket and all holes by blowing them out or vacuuming.
- ✓ The lock pocket is now ready for the mounting.

Electrical connections

- 1 Connect the control cable (voltage supply) and the monitoring contacts ("Electrical connection", page 34).

Mounting The electric strike 351M80

The sensor of The *electric strike 351M80* requires exact positioning of The electric strike plate and The electric strike. The tolerance amounts to ± 4.5 mm vertically.

Screw in The electric strike 351M80

- 1 Screw in The *electric strike 351M80* in the lock pocket (Pic. 4).
 - 2 Check The *electric strike 351M80* for ease of movement.
- ✓ With the striking plate mounted, The *electric strike 351M80* is ready for operation.

Mounting the striking plate

Screw in the appropriate striking plate for The electric strike 351M80.

- 1 Create the striking plate pocket and finish all holes.
 - 2 Clean the striking plate pocket and all holes by blowing them out or vacuuming.
 - 3 Screw in the appropriate locking plate for The *electric strike 351M80* to be screwed in.
The rebate gap must be 3 mm (2 mm - 4.5 mm) („Falzluft einstellen“, Seite 12):
 - If necessary, use the supplied spacer plate and the positioning plate SetlaM5 ("Mounting plate SETLA M5", page 41).
 - 4 Check The *electric strike 351M80* for ease of movement.
- ✓ The *electric strike 351M80* is ready for operation.

Testing The electric strike 351M80

- 1 Test all functions of The *electric strike 351M80*. For this purpose, observe the chapter "Warranty", page 41.
- ✓ The *electric strike 351M80* is completely mounted and ready for operation.

Mounting in the door frame

If The *electric strike 351M80* is mounted in the door frame, the striking plate position can be adjusted by 2 mm (Pic. 5 a, b, c) with the use of the mounting plate SETLA M5 ("Mounting plate SETLA M5", page 41) by changing the alignment. With the spacer plate the exact adjustment can be carried out in 0.5 mm increments (Pic. 5 d, e and 4).

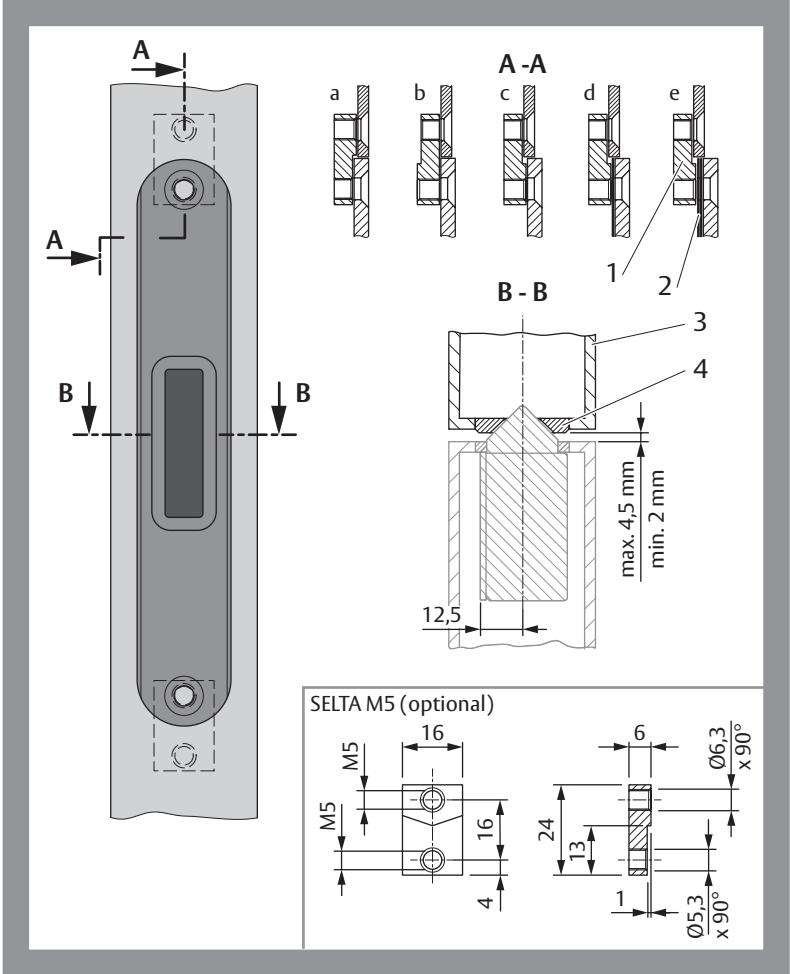
Pic. 5 does not show all combination possibilities of SETLA M5 and spacer plates. The spacer plates can also be used if the mounting plate SETLA M5 is installed in the directions a or b.

Adjusting the rebate gap

The distance between The *electric strike 351M80* and the striking plate facing it must be adjusted so that the bolt can be fully extended and engage in the striking plate without any play.

- 1 Mount the mounting plate SETLA M5 and the spacer plates corresponding to the examples (Pic. 5 a, b, c, d, e).
 - 2 Check whether the rebate gap is 3 mm (2 to 4.5 mm). If not, change the arrangement of the mounting plate SETLA M5 and the spacer plates.
- ✓ The rebate gap is correctly adjusted, the bolt is fully extended and the door is locked without any play.

Pic. 5:
 Mounting with
 mounting plate
 SETLA M5 and
 spacer plates
 1 - SETLA M5
 2 - Spacer plates
 3 - Door frame
 4 - Striking plate



Electrical connection

The *electric lock 351M80* is equipped with potential-free monitoring contacts. A reed switch as a door contact (RR) is switched by magnets in the striking plate and reports the closed status of the door. In the process, the bolt is prevented from extending while the door is closed.

A relay contact as an armature contact (AKRR) reports the locking status of The *electric strike 351M80*.



Warning!

Only connect while the power is shut off: There is a risk of electric shock when the voltage is switched on. This can lead to death or severe injury.



Attention!

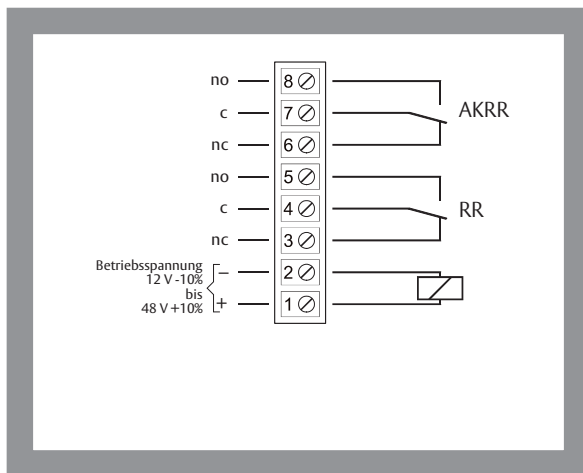
The voltage supply must match the operating voltage. The electric strike will be ruined or will not function with an unsuitable voltage supply. The *electric strike 351M80* is available in three versions with different operating voltages (""", page 38).

Connecting The electric strike 351M80

The *electric strike 351M80* is supplied with voltage by the control lines.

- 1 If necessary, connect the potential-free armature contact for the electronic monitoring of the locking status.
 - 2 Connect the control cables (voltage supply) (Pic. 6).
- ✓ The *electric strike 351M80* is now electrically connected and can be mounted.

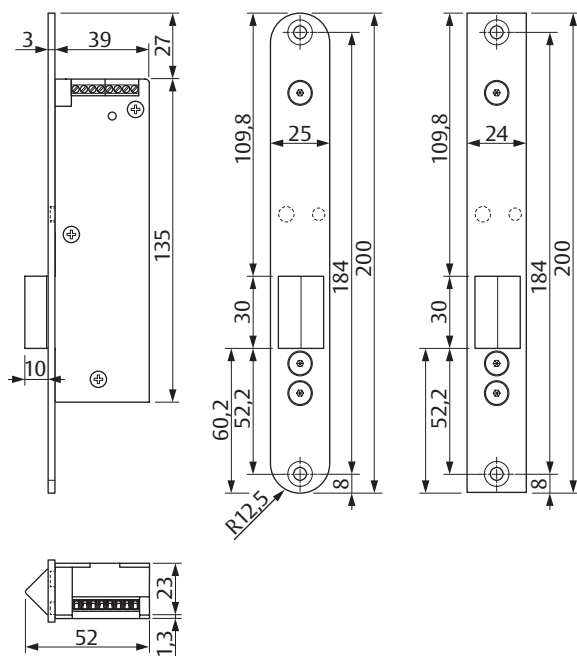
Pic. 6:
Connection
diagram with door
contact RR and
armature contact
AKRR



Dimensions of face plates

Pic. 8:
 Technical drawing
 with mounting
 dimensions of
 electric bolt,
 and face plates

Electric strike 351M80 Face plates



Technical data

Feature	Characteristic
Resistance to forced entry	5000 N
Housing	Stainless steel, laser-welded
Dead bolt	Steel
Operating temperature	-15°C ... +50°C
Bolt throw	10 mm
Installation position	universal
Rebate gap	3 mm (2 mm – 4.5 mm)
Assembly tolerance of the sensor	±4.5 mm vertically
Maximum preload unlocking	5000 N
International protection	IP40
NFS 61937	✓
Compatibility with other products	Electric strike 351U80

Electrical data

Feature	12V DC	24V DC	48V DC
Operating voltage	+/- 10%	+/- 10%	+/- 10%
	Regulated DC voltage		
Max. current consumption in cont. operation	480 mA	270 mA	150 mA
Max. current consumption with motor operation (approx. 1 s)	880 mA	520 mA	270 mA
Max. contact loading capacity of the armature	25 V / 500 mA ohmic load		
Max. contact loading capacity of the door contact	25 V DC / 100 mA ohmic load		
Fail-unlocked operating principle	✓		



Achtung!

SELV geprüfte und zertifizierte Spannungsversorgung verwenden.

Der *elektrische Pendeltüröffner 351M80* darf nur mit einer Spannungsversorgung betrieben werden, die den SELV-Vorschriften (Secure Extra Low Voltage) entspricht und nach diesen geprüft und zertifiziert ist.

Accessories, maintenance, warranty, disposal

Accessories

Mounting plate SETLA M5

The mounting plate SETLA M5 described in the chapter “Installation”, page 29 is not included in the scope of delivery of The *electric strike 351M80* and can be ordered separately:

effeff – Mounting plate SETLA M5

SETLA M5

Maintenance

The *electric strike 351M80* is maintenance-free. The contact surfaces are permanently lubricated.

Fire doors must
be inspected
once per month

A fire door must be checked for safe function at least once per month. Observe the following in particular:

- Inspect and operate all functions of The *electric strike 351M80* and make sure that all parts of the lock (Electric strike and striking plate) function safely.
- All parts of the lock must be clean in order to prevent clogging and blocking.
- A fire door may not be modified retroactively; no additional locking devices may be added.
- Check whether all components of the system still correspond to the list of original approved components delivered with the system.
- Check whether all operating elements are safely mounted.
- Measure the actuating forces for the release of the escape door lock with a force meter and record the results.

Check whether the actuating forces for the release of the escape door lock have not changed significantly since the initial installation.

ASSA ABLOY is the global
leader in door opening solutions,
dedicated to satisfying
end-user needs for security,
safety and convenience



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