ABLOY

ELECTRIC LOCKING
TECHNICAL INFORMATION



OVERVIEW OF ESCAPE STANDARDS

ESCAPE DOORS, NOT FIRE EXITS!!

Doors that are classified as 'fire doors' are not necessarily emergency or panic escape route doors.

Historically we have called our Emergency or Panic exit doors "Fire Exits" or "Fire Escape Doors", this in itself has caused a great deal of confusion and incorrect specification.

The European interpretation describes these doors as emergency or panic escape doors.

Emergency or panic is clearly a better description of the door's use. Fire is just one reason to escape a building. The emergency may be as a result of a gas leak or terrorist incident?







PSA 67

- PSA 67:2021
- EN 179 & EN 1125 · EN 179 – Exit devices operated by lever handle or push pad · for when the building occupants are aware of the building environment
- EN 1125 – Exit devices operated by horizontal bars · EN 13637 systems can only be used in conjunction with EN 179 and/or EN 1125 · for environments used by the general public.
- EN 13637 systems cannot be used on escape routes in lieu of an EN 179 or EN 1125 system
- EN179 & EN1125 are harmonized standards. EN13637 was introduced to control the flow of people.
- We have an element of responsibility when providing a locking solution. Failure to comply can end in the termination of your PSA license.

Building regs control regulations – Definition from building regs on escape route.

Escape route - A route by which a person may

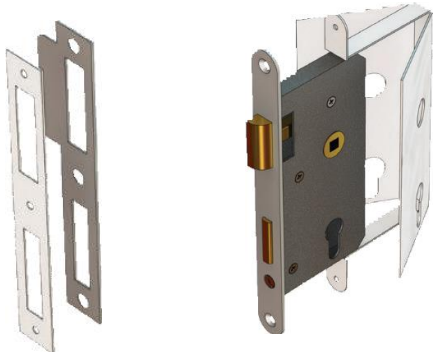
reach a place of safety, and, in relation to any point

in a building, a route from that point to a place of

- safety.

Intumescent Packs for Fire Doors

- Can Provide 30–60 minutes fire resistance.
- Wrap the intumescent jacket around the lock, receiver plate & door loop.
- May require referral to test report conducted by Abloy.



The solution is bigger than a lever, a paddle or panic bar.

BS EN 179 Emergency escape door type ‘A’



BS EN 179 Emergency escape door type ‘B’



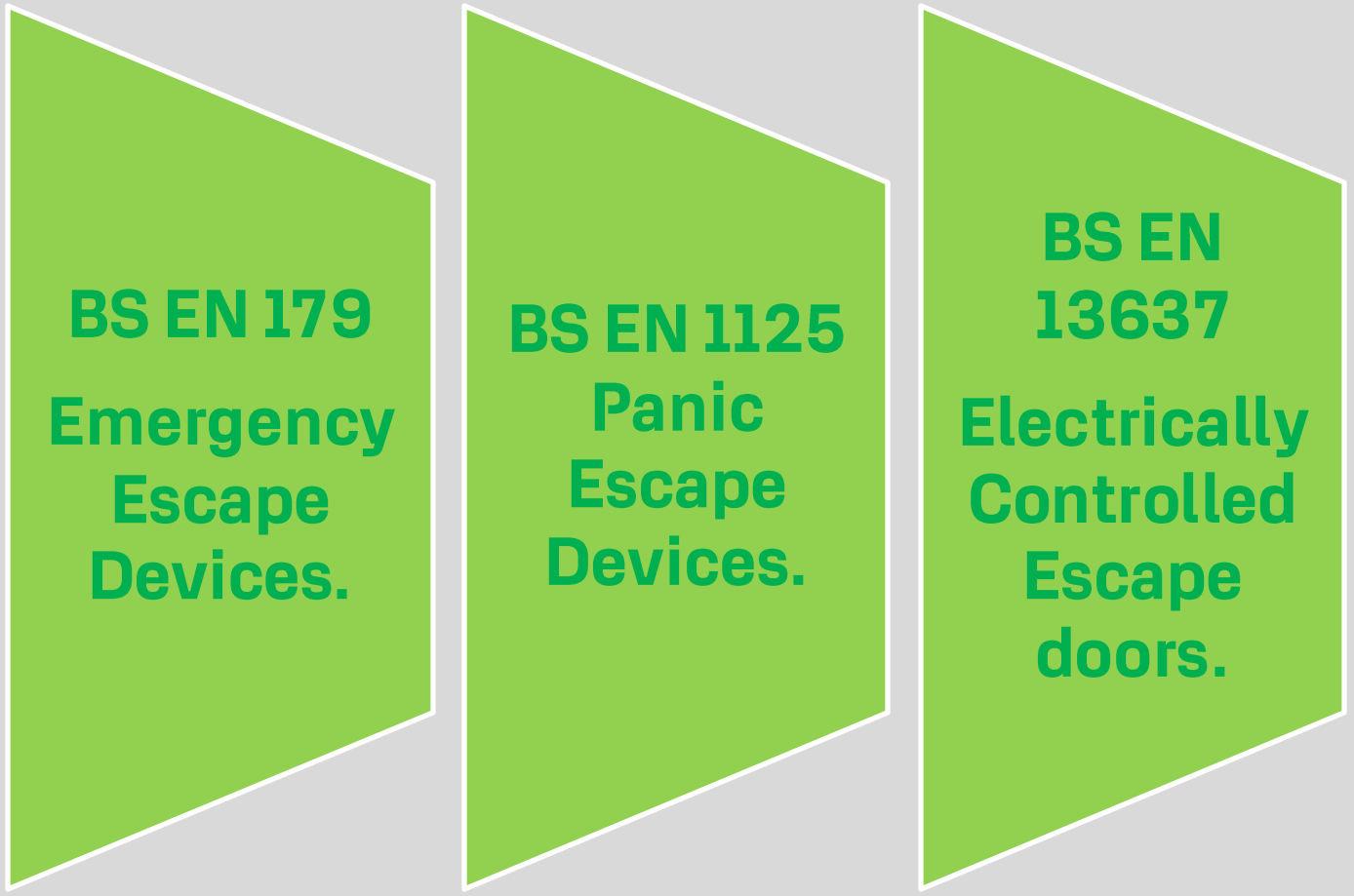
BS EN 1125 Panic escape doors type ‘A’



BS EN 1125 Panic escape doors type ‘B’



The addition of **BS EN 13637**, completes the picture offering a 'Compliant Solution' for all **Escape Door** applications.





BS EN 13637

Electrically controlled Escape Door Systems

For special applications including 'read in read out' applications
Delayed egress.
Blocked Egress

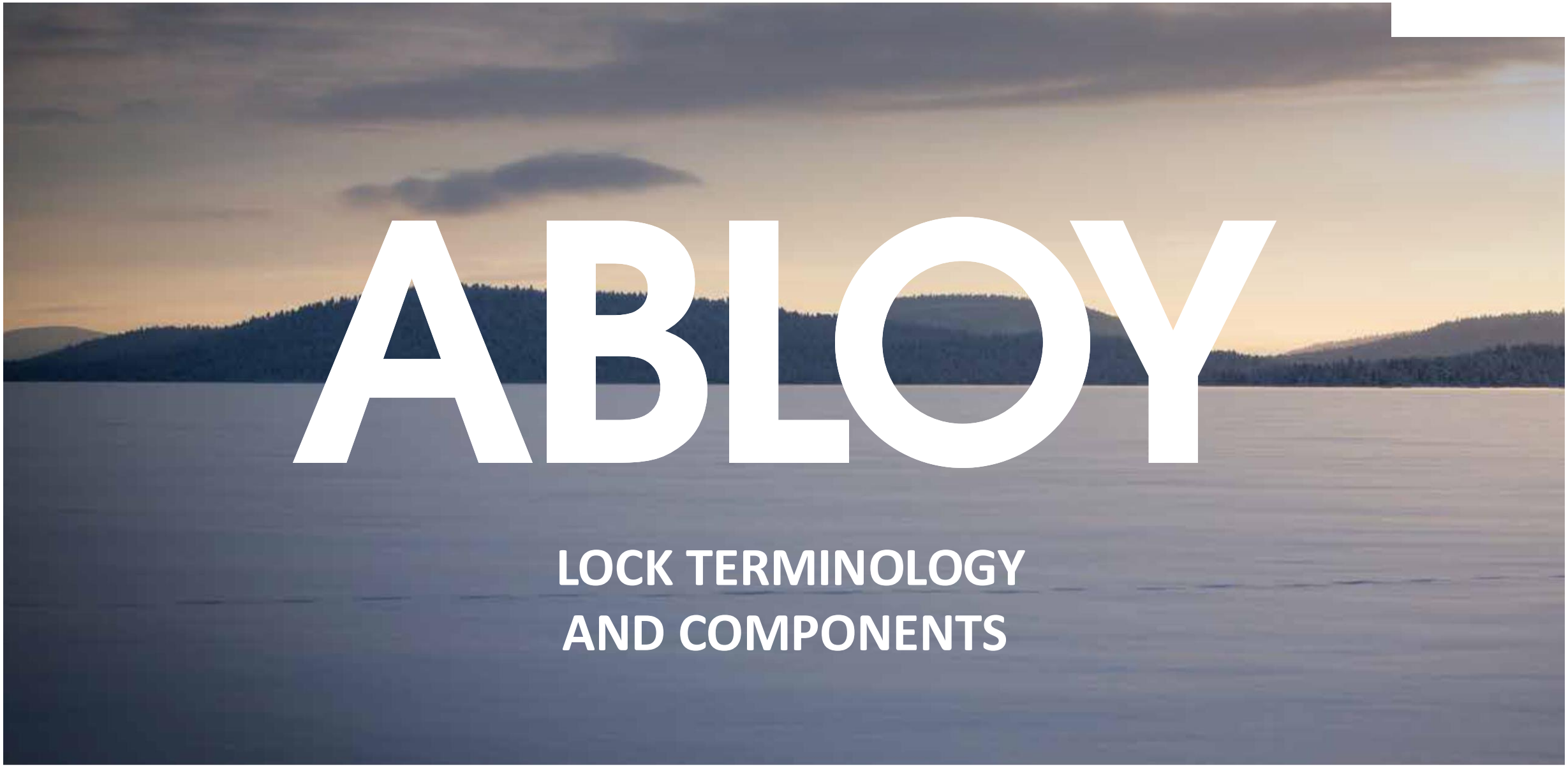
These can be electric lock only
or
overlaid on top of an BS EN 179 or BS EN 1125 solution.

BS EN 179

Emergency Escape Devices

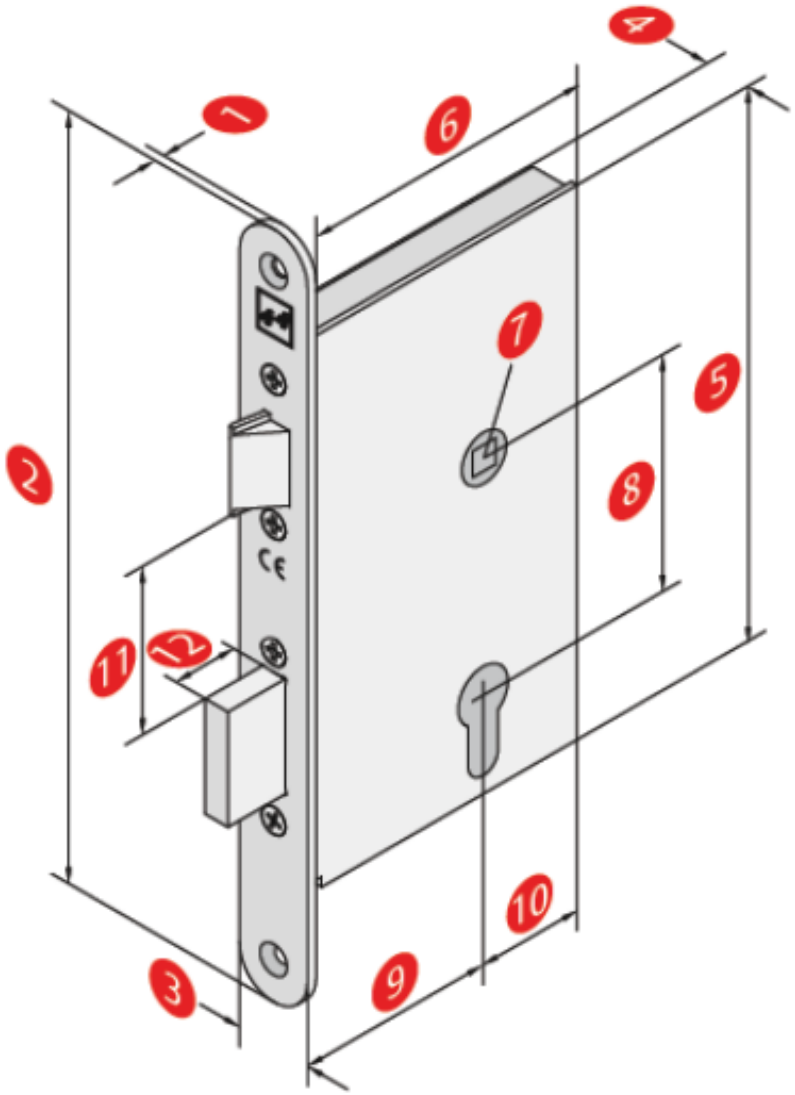
BS EN 1125

Panic Escape Devices



LOCK TERMINOLOGY AND COMPONENTS

LOCK TERMINOLOGY –



1.Forend Thickness.

2.Forend Length.

3.Forend Width.

4.Case Width.

5.Case Height.

6.Case Depth.

7.Follower.

8.Distance between Centres.

9.Backset.

10.Rear Backset.

11.Distance between Latch and Bolt.

12.Bolt Throw.

LOCK TERMINOLOGY – CASE DEPTH



Case Depth

Check that the door stile is wide enough to accept the full depth of the lock case.

Lock case depth is usually related to lock backset. Some manufacturers size their locks on case depth and some using backset. All Abloy locks are sold requiring backset to be stated.

When measuring for electric locks make sure that an allowance is made for the cable to run behind the lockcase. i.e. A 98mm deep lock would require a minimum mortice cutout of 110mm to allow for the cable. A door stile width greater than this is required to prevent the tips of mortice cutters breaking out of the rear of the door stile, especially on glazed doors.

LOCK TERMINOLOGY – FOLLOWER



807227 Follower Reducers.
Provided with locks which require these, also sold in singles as a spare part.

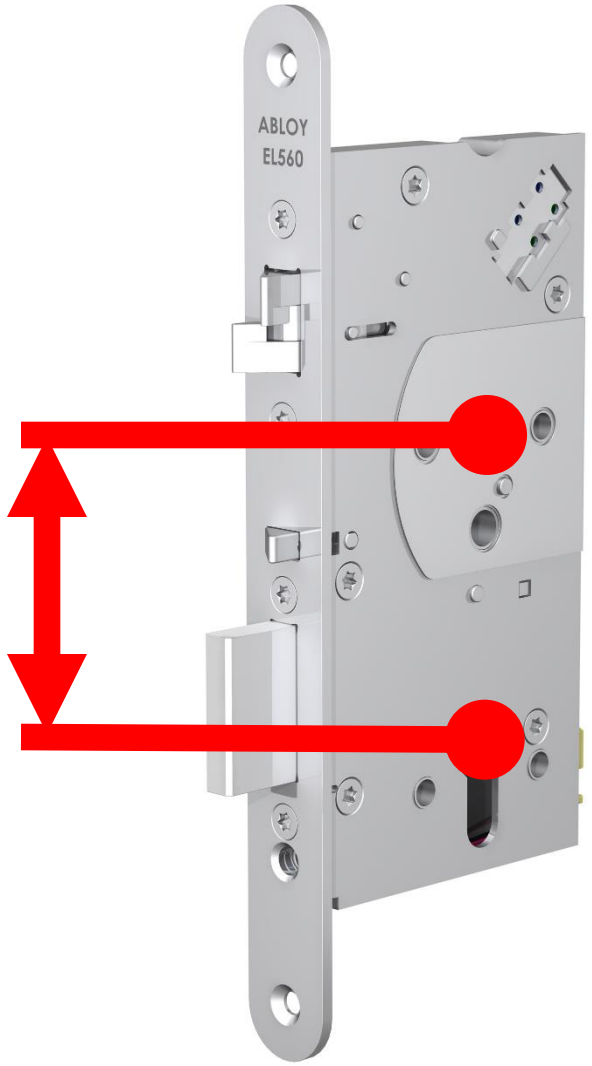


The lock follower is the component which the handle spindle passes through and would normally drive the door latch. In the case of escape locks, the follower will also drive the lock deadbolt into the lock body.

Generally in the UK and Ireland we have 8mm followers and spindles. DIN standard specifies 9mm followers and so Abloy DIN locks have 9mm followers and 8mm reducers are supplied. The French market uses 7mm spindles and so 7mm reducers are supplied with the French versions of our DIN locks.

If follower reducers are required it is important that they are installed on both sides of the lock. The installation of one or no reducers can cause lock malfunction, handle drooping and in some cases manipulation from the non secure side of the door.

LOCK TERMINOLOGY – DISTANCE BETWEEN CENTRES



The distance between centres is important for several reasons –

The Equality Act 2010 requires a minimum of 72mm centres or the cylinder to be above the handle (Scandinavian style).

Where possible when retrofitting, and particularly on fire doors, it is preferable to re-use existing fixing holes preventing unnecessary additional holes.

Lever handles on long plate require the correct centres dimensions to be stated when specifying.

Common centres dimensions are:

- UK lever locks 57mm
- UK cylinder locks 47.5mm (varies +/- 1mm between manufacturers)
- DIN narrow profile 92mm
- DIN full leaf 72mm
- Scandinavian 105mm
- Finnish 68mm

LOCK TERMINOLOGY – SPINDLES

There are different types of spindles used in locks.

Across the Abloy range of locks we use either solid or split spindles.

Solid spindles are used where both lever handles have the same function or single lever handles are required.

Split spindles are used where the lever handles have different functionality on each side of the door.



The correct spindle is always required to provide the correct lock functionality.

When follower reducers are required they MUST be installed.

Spindles of both types are available in lengths to suit almost any door thickness.

LOCK TERMINOLOGY – SOLID SPINDLES

Locks which require a solid spindle **do not** include a spindle in the box. The spindle will be supplied with the door handles.

All ABLOY spindles have a hole running down the length of the spindle. This hole must be positioned so that it faces towards the handle grub screw. ABLOY handle grub screws have a point/pip on the end which must pierce the spindle to ensure correct fixing and location.

The grub screw will ensure that the spindle does not 'drift' out of position.



Locks which require a split spindle will be **supplied** with an EA288/02 split spindle as standard. Other spindle lengths are available as an additional part.

Examples of locks that use a solid spindle are:
EL060
EL160
EL461
EL467
EL561
EL567
EL482
EL582
EL420
EL520
Plus all other motor locks.

LOCK TERMINOLOGY – SPLIT SPINDLES



When split spindles are required, they are supplied with the lock case.

Whilst alternative split spindles are available the ABLOY EA288 spindle has been especially designed to suit ABLOY locks. Failure to fit the ABLOY split spindle invalidates the escape certification to BS EN 179. BS EN 1125 and any 'CE' marking.

It is imperative that the spindle is fitted in the correct orientation.

Examples of locks supplied with a split spindle are:

EL460
EL560
EL466
EL566
EL480
EL580
PE580

The MOST common problems with Handle Controlled Locks is due to the incorrect installation of the spindle and/or the follower convertors.

Incorrect installation can result in non-compliance to escape standards, lock failure, lock manipulation and 'handle droop'.

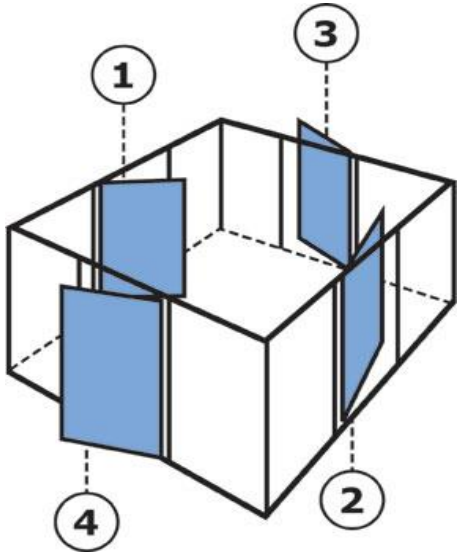
Poor morticing of the lock and drilling of holes for the furniture also impacts on the lock functionality due to the alignment of the lock case and furniture. This can also make installation of the spindle connector pin difficult.

ABLOY

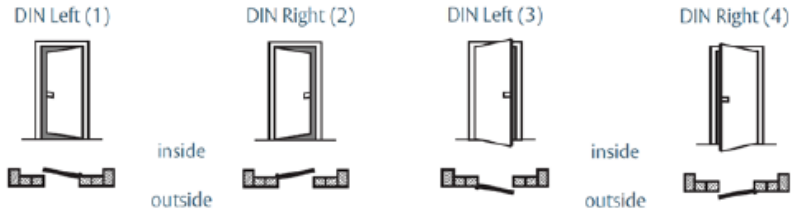
LOCK TERMINOLOGY – DOOR HANDING

Most ABLOY locks can be re-handed when required. There are however some which required the handing to be stated when ordering. This also applies to some of our handle and panic bar products.

ABLOY door handing is determined using four numbered types, see chart below:



Other manufacturers comparison:



Abloy Handing	①	②	③	④
Abloy & Nemef Locks	1	2	3	4
Abloy Handles (when handed)	1/4	2/3	2/3	1/4
Abloy Rebate Sets	1/3	2/4	1/3	2/4
effeff	4	5	4	5
Tesa (SMARTair)	RH (D)	LH (I)	LH (I)	RH (D)
Kamlock Electric Locks	RH	LH	RH	LH
Cabinet/Coin Locks	N/A	N/A	LH	RH
UK Rim & Mortice Locks	LH	RH	RH Rev	LH Rev
Door Handles	LH	RH	RH	LH
Overhead Door Closers:				
Door Mounted, Standard Arm	Fig 1	Fig 1	N/A	N/A
Door Mounted, Parallel Arm	N/A	N/A	Fig 66	Fig 66
Transom Mounted, Standard Arm	N/A	N/A	Fig 61	Fig 61

N.B. Most German lock manufacturers use the same handing as effeff.

LOCK TERMINOLOGY – STRIKE PLATES

Most ABLOY locks are supplied with a strike plate.

The strike plate provided will suit the most popular UK door frames.

To be **'Standards Compliant'** the strike plate selected for your lock must be listed on the products DoP for the locking application (for **Escape** and/or **Fire** Doors).

Door manufacturers often leave the strike plate out or create a similar product. These should not be used unless they have been certified with the lock it is to be used with. The strike plate is an engineered solution to meet with escape regulations.

For example, ABLOY DIN lock strike plates have an oversized aperture for the lock deadbolt ('D'), this is 2mm wider than the latch aperture ('L'). This ensures that the deadbolt cannot be subject to side pressure and therefore ensures **escape**.

Alternative tested striking plates are available for other applications.



LOCK TERMINOLOGY – CABLE TRANSFER

ABLOY compliant lock PACKAGES for Timber Doors are supplied with an EA280 cable transfer, a 6m connection cable, door furniture and cylinder.

The ABLOY connection cable is 8mm diameter and we recommend that the door is core drilled with a 10mm hole. A 10mm hole was used in our fire testing.

Vision panels and hinges can cause complications when core drilling a door.

The EA280 and EA281 cable transfer devices can only be used on hinged doors. For doors hung on pivots, a surface mounted door loop or current transfer device must be used.



EA280 – for doors opening up to 110°
EA281 – for doors opening up to 180°



Standard connection cables are 6m long.
Alternative 10m cables are available.

LOCK TERMINOLOGY – CABLE TRANSFER

ABLOY compliant lock PACKAGES for Metal Doors are supplied with A DL8 surface mounted door loop (except EL402), a 6m connection cable, door furniture (where required) and cylinder.

We can offer the 71KP Frame Bridge or effeff power transmitters for hinged metal or uPVC doors. PLEASE NOTE these products CANNOT be installed into pivoting doors.

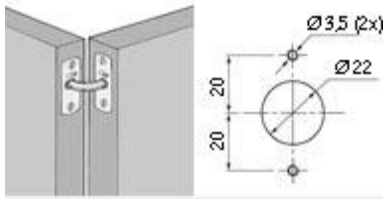
The DL8 should be specified if it is uncertain which type of hinging the door is mounted on.

Other models of the effeff Power Transmitters are available.





71KP



effeff Power Transmitters





INDIVIDUAL LOCK SETUP – SOLENOID LOCKS

EL560, EL561, EL566 & EL567

EL560: Handle Controlled – Read In / Free Egress
EL561: Handle Controlled – Read In / Read Out
EL566: Multipoint Version of EL560
EL567: Multipoint Version of EL561



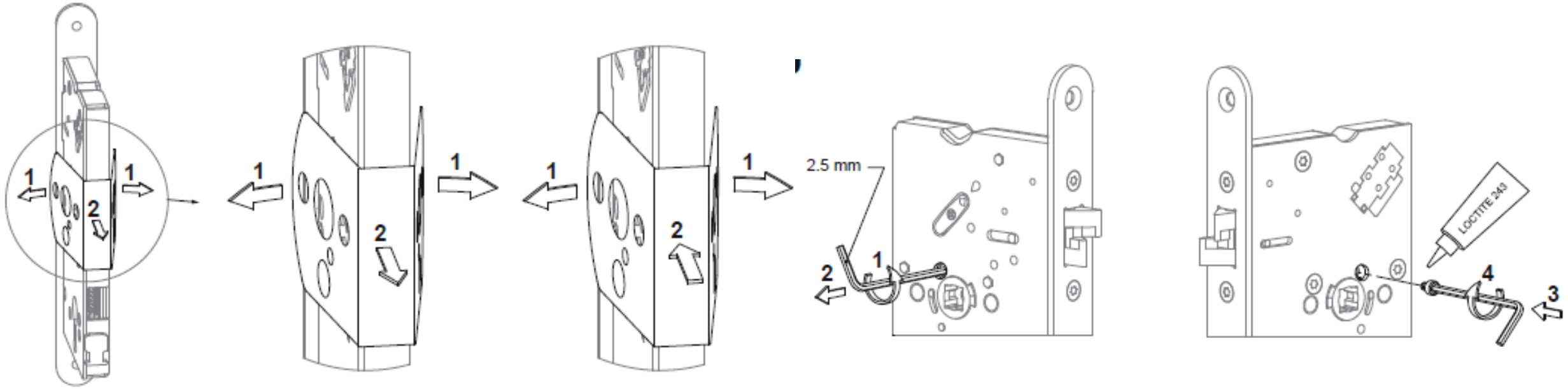
Feature	Information
Standard Backsets	55, 60, 65 mm
Special Backsets	80, 100 mm
Reversible Handing	☑
Operating Voltage	12–24V DC
Can be used on Double Action Doors	⊗
Can be used in conjunction with Door Automation	⊗

Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	EL560 EL566	When fitted with tested lever or paddle handle
BS EN 1125	Panic Escape Doors	EL560 EL566	When fitted with tested panic bar
Suitable for installation in Fire Doors		☑	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	☑	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	EL560 EL566	Must be installed with the relevant tested ironmongery

CHANGING THE FREE EGRESS SIDE

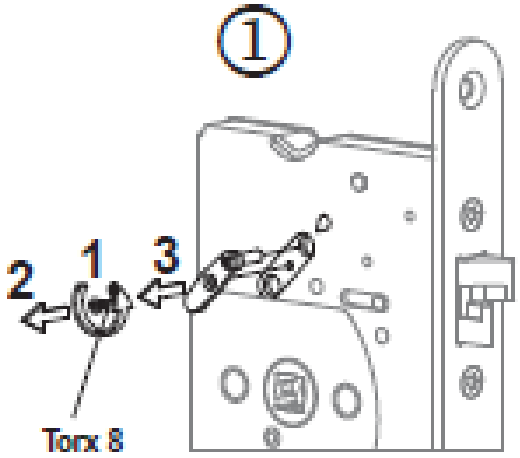
Free egress will be from the side with the handle control screw installed.

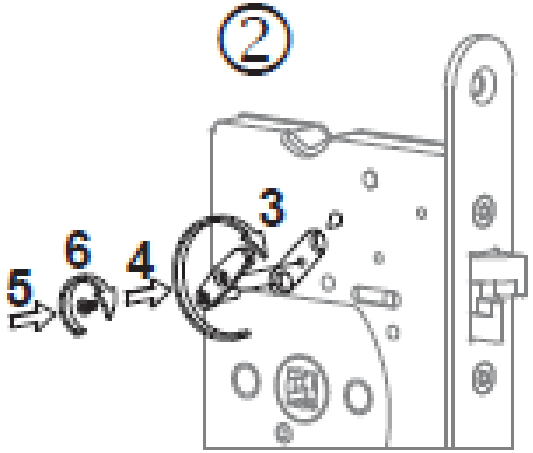
N.B. Removal of the screw completely to make an EL560 operate like an EL561 will negate the CE marking and therefore unsuitable for installation on a fire rated door.

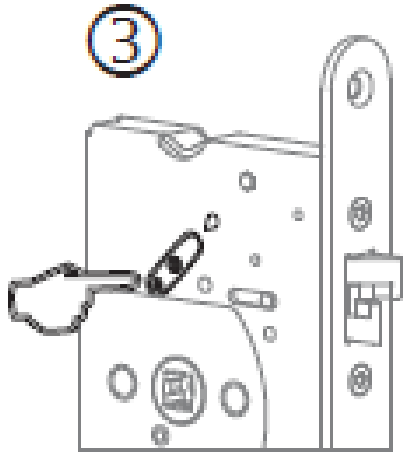


CHANGING THE ACTION — FAIL LOCKED / FAIL UNLOCKED

The lock will always be supplied in a ‘Fail Locked’ mode. This can be changed in the field to Fail Unlocked.









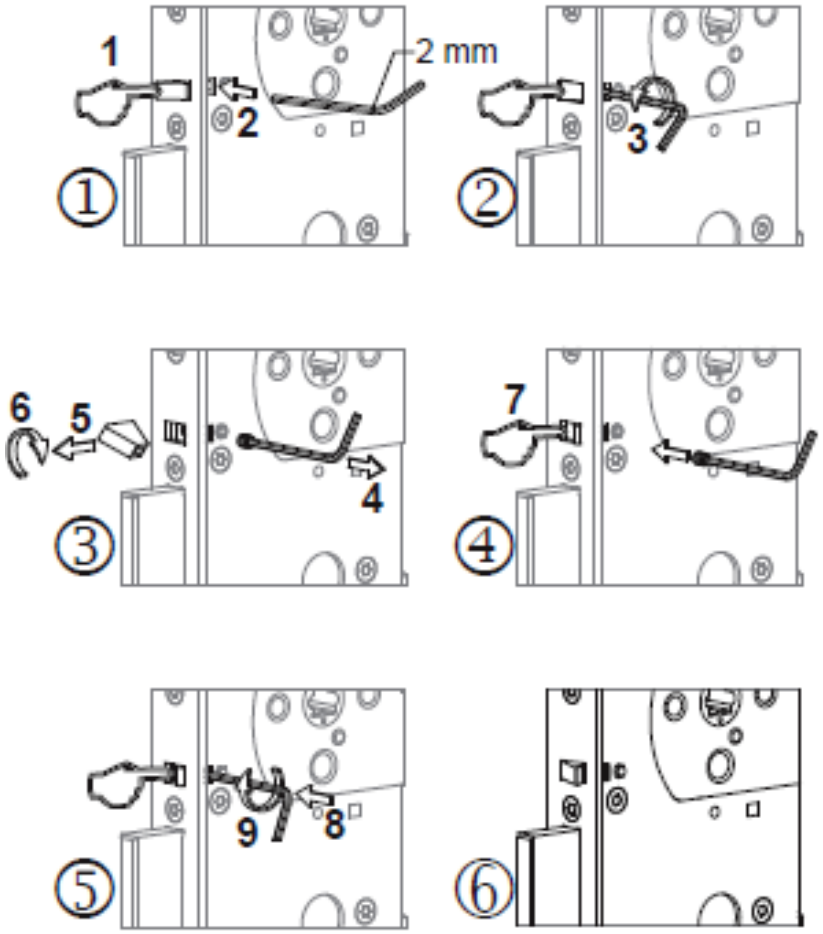
Fail Locked



Fail Unlocked

HANDING AND CABLE CONNECTION

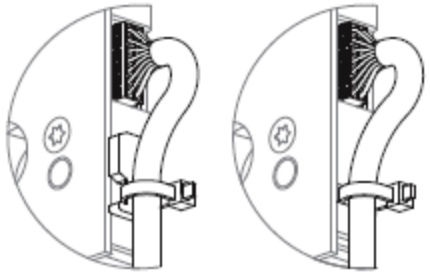
REVERSING THE TRIGGER BOLT



When reversing the trigger bolt, there is no need to remove the lock forend.

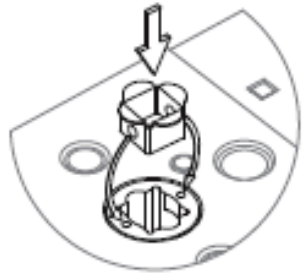
CONNECTING THE CABLE –

Ensure that the cable tie is installed. This will prevent the plug from disconnecting.



INSTALLING THE SPINDLE FOLLOWER REDUCERS –

Align the dimples on the reducer with the dots on the lock follower





EL460, EL461, EL466 & EL467

EL460: Handle Controlled – Read In / Free Egress
EL461: Handle Controlled – Read In / Read Out
EL466: Multipoint Version of EL460
EL467: Multipoint Version of EL461

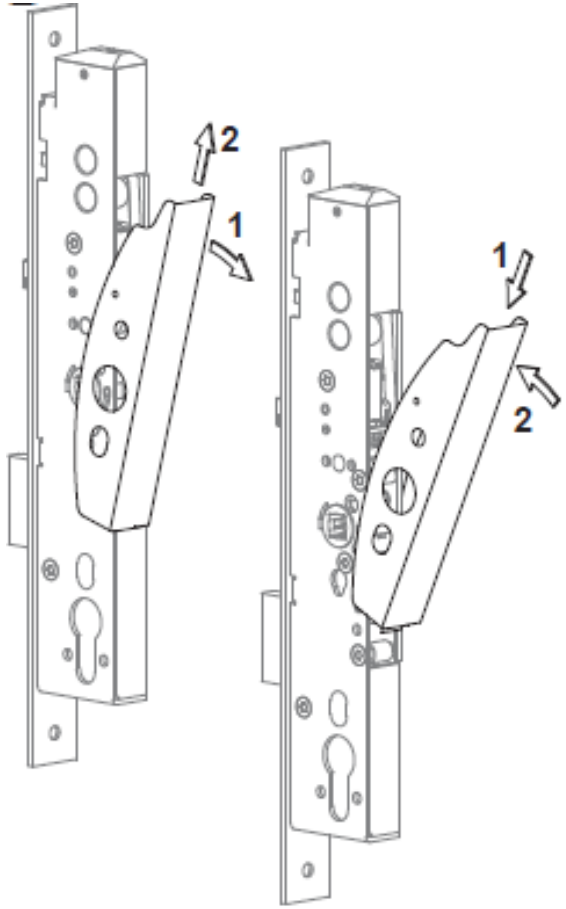
Feature	Information
Standard Backsets	30, 35 mm
Special Backsets	40, 45 mm
Reversible Handing	☑
Operating Voltage	12-24V DC
Can be used on Double Action Doors	⊗
Can be used in conjunction with Door Automation	⊗

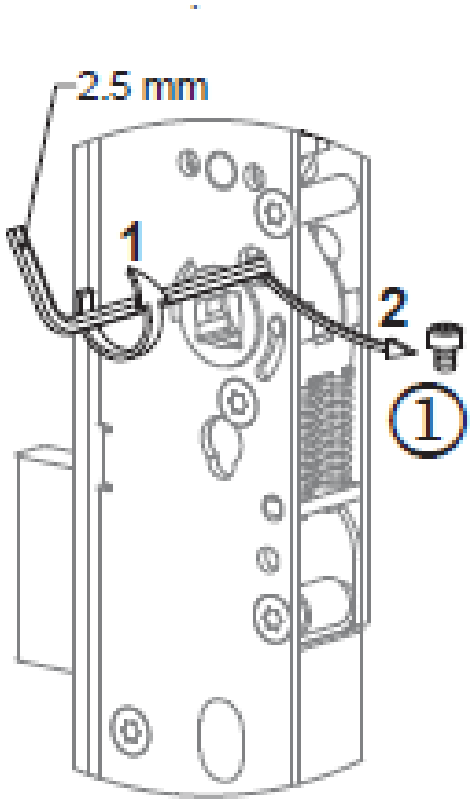
Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	EL460 EL466	When fitted with tested lever or paddle handle
BS EN 1125	Panic Escape Doors	EL460 EL466	When fitted with tested panic bar
Suitable for installation in Fire Doors		☑	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	☑	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	EL460 EL466	Must be installed with the relevant tested ironmongery

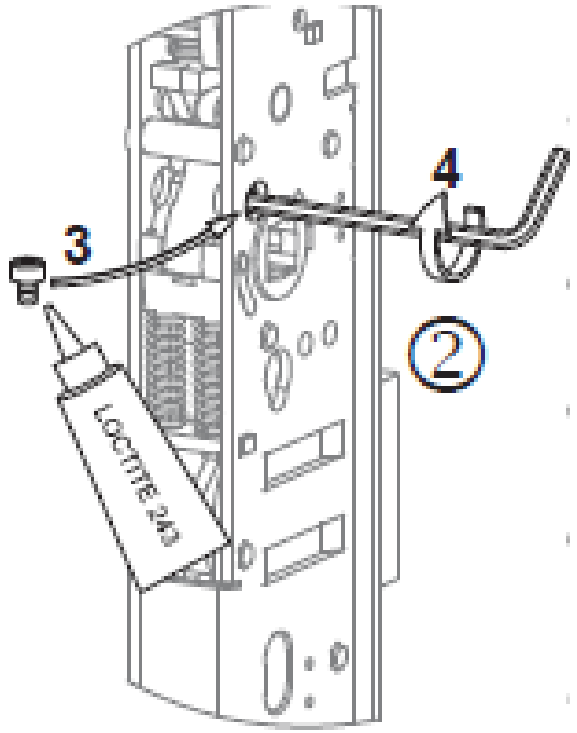
CHANGING THE FREE EGRESS SIDE

Free egress will be from the side with the handle control screw installed.

N.B. Removal of the screw to make an EL460 operate like an EL461 will negate the CE marking and therefore unsuitable for installation on a fire rated door.



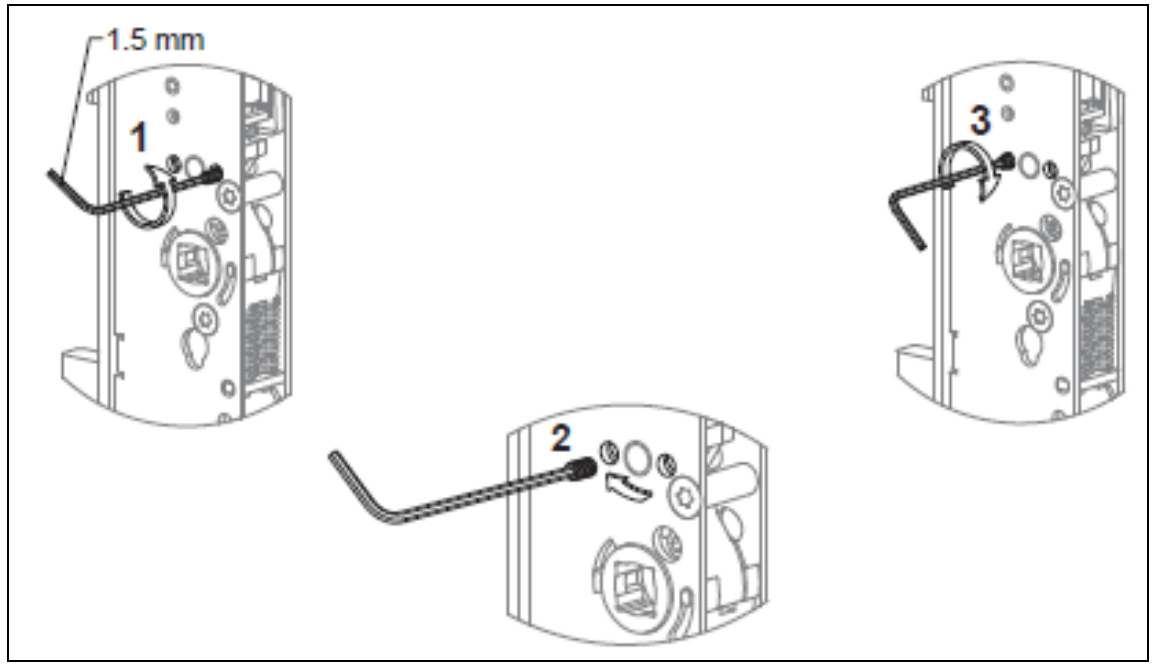




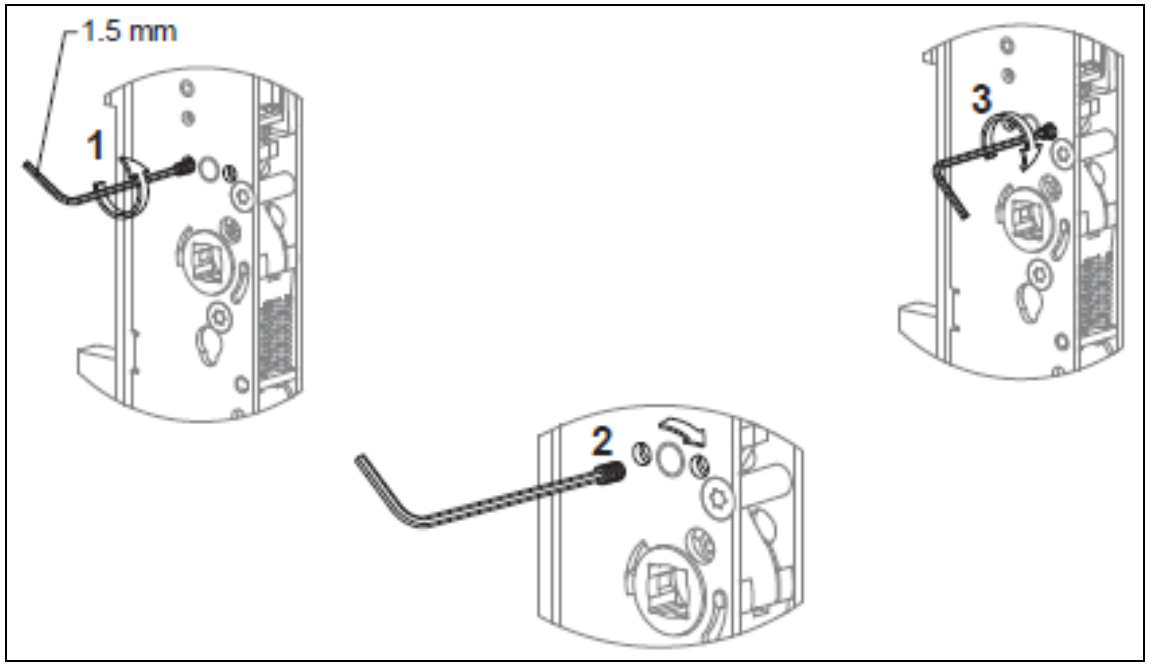
CHANGING THE ACTION – FAIL LOCKED / FAIL UNLOCKED

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Fail Locked to Fail Unlocked

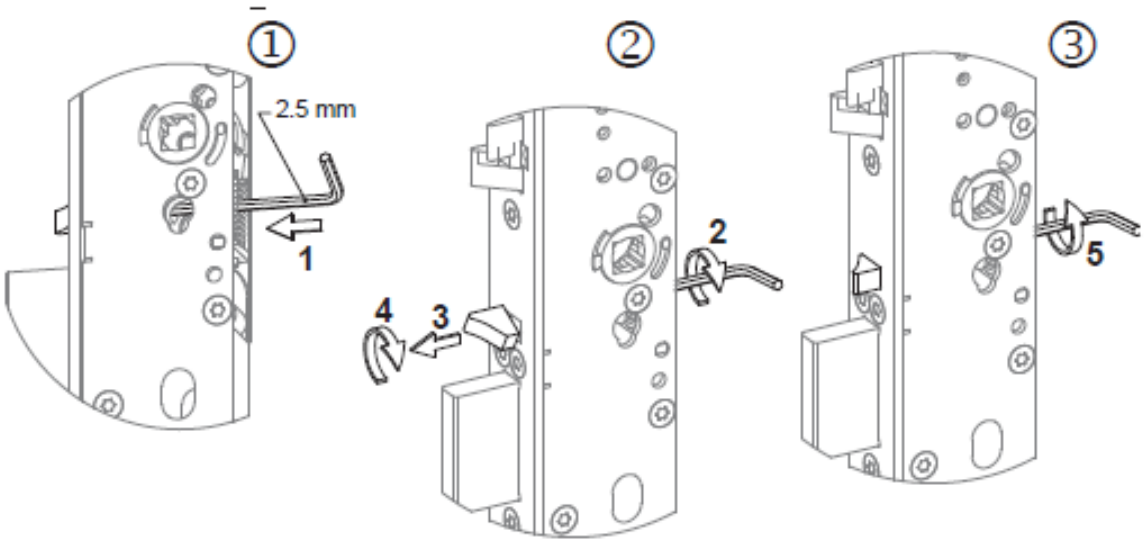


Fail Unlocked to Fail Locked



HANDING AND CABLE CONNECTION

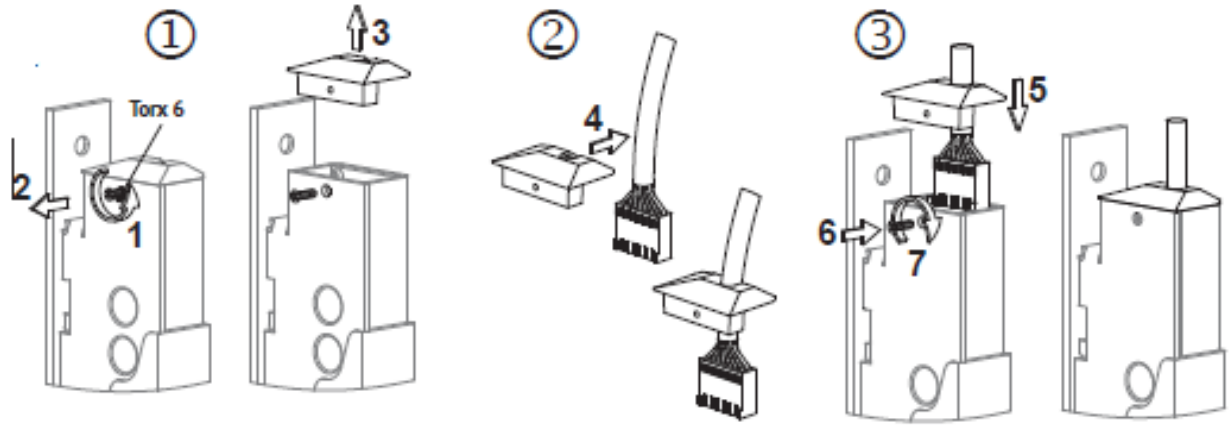
REVERSING THE TRIGGER BOLT



When reversing the trigger bolt, there is no need to remove the lock forend.

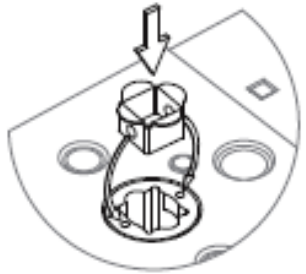
CONNECTING THE CABLE –

Ensure that the black cap and screw are installed. This will prevent the plug from disconnecting.

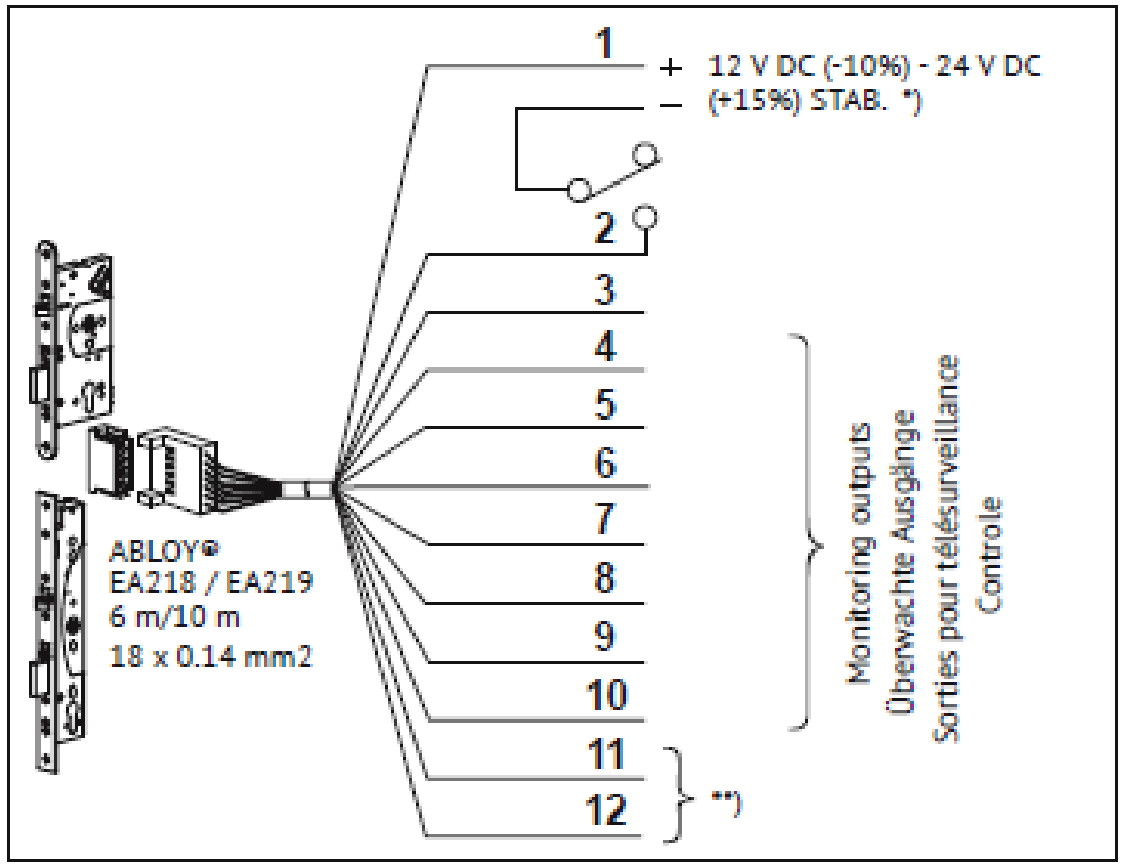


INSTALLING THE SPINDLE FOLLOWER REDUCERS –

Align the dimples on the reducer with the dots on the lock follower



WIRING FOR EL560 & EL460 SERIES LOCKS



No	Colour	Function
1	White	+
2	Red	-
3	Green/Red	Key cylinder used
4	Blue	Handle Down
5	Violet	Common for handle down & key cylinder used
6	Turquoise	Bolt deadlocked
7	Yellow/Red	Common for bolt deadlocked
8	Brown	Door status (trigger bolt)
9	Orange	Bolt in
10	Yellow	Common for bolt in/door status
11	Grey	Sabotage loop
12	Pink	

N.B. The gap between the lock forend and the striking plate should be between 2mm and 5.5mm maximum, ideal gap = 3mm.

EL580, EL582 & PE580

EL580: Handle Controlled – Read In / Free Egress
EL582: Handle Controlled – Read In / Read Out
PE580: Handle Controlled – Read In / Panic Bar Egress



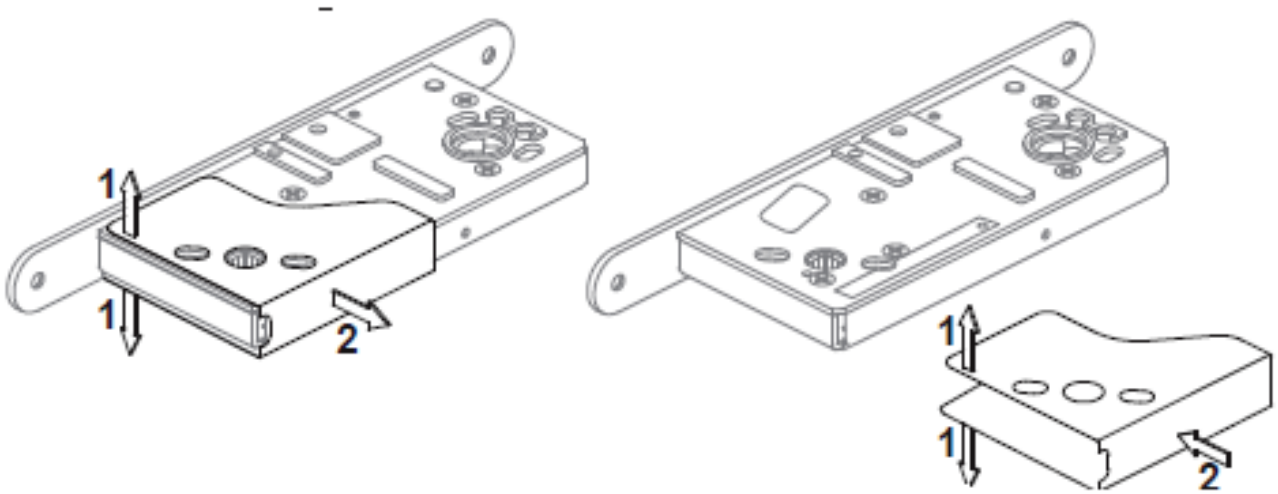
Feature	Information
Standard Backsets	50, 70 mm
PE580 Backset	50mm only
Reversible Handing	☑
Operating Voltage	12-24V DC
Can be used on Double Action Doors	⊗
Can be used in conjunction with Door Automation	⊗

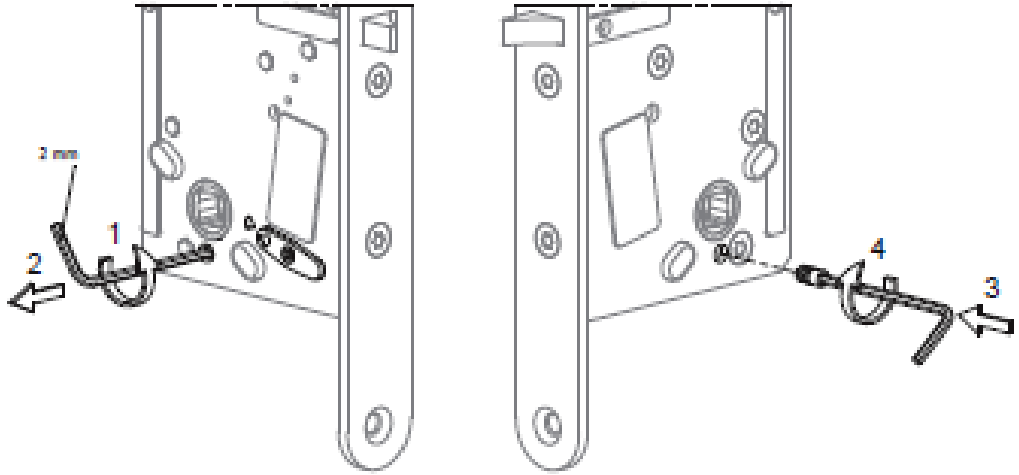
Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	EL580 PE580	When fitted with tested lever or paddle handle
BS EN 1125	Panic Escape Doors	PE580 only	When fitted with tested panic bar
Suitable for installation in Fire Doors		☑	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	☑	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	EL580 PE580	Must be installed with the relevant tested ironmongery

CHANGING THE FREE EGRESS SIDE

Free egress will be from the side with the handle control screw installed.

N.B. Removal of the screw to make an EL580 operate like an EL582 will negate the CE marking and therefore unsuitable for installation on a fire rated door.

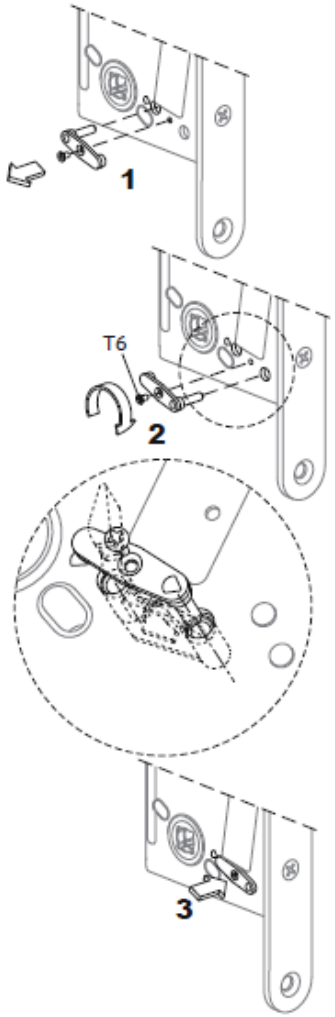




CHANGING THE ACTION – FAIL LOCKED / FAIL UNLOCKED

The lock will always be supplied in a ‘Fail Locked’ mode. This can be changed in the field to Fail Unlocked.

Fail Locked to Fail Unlocked





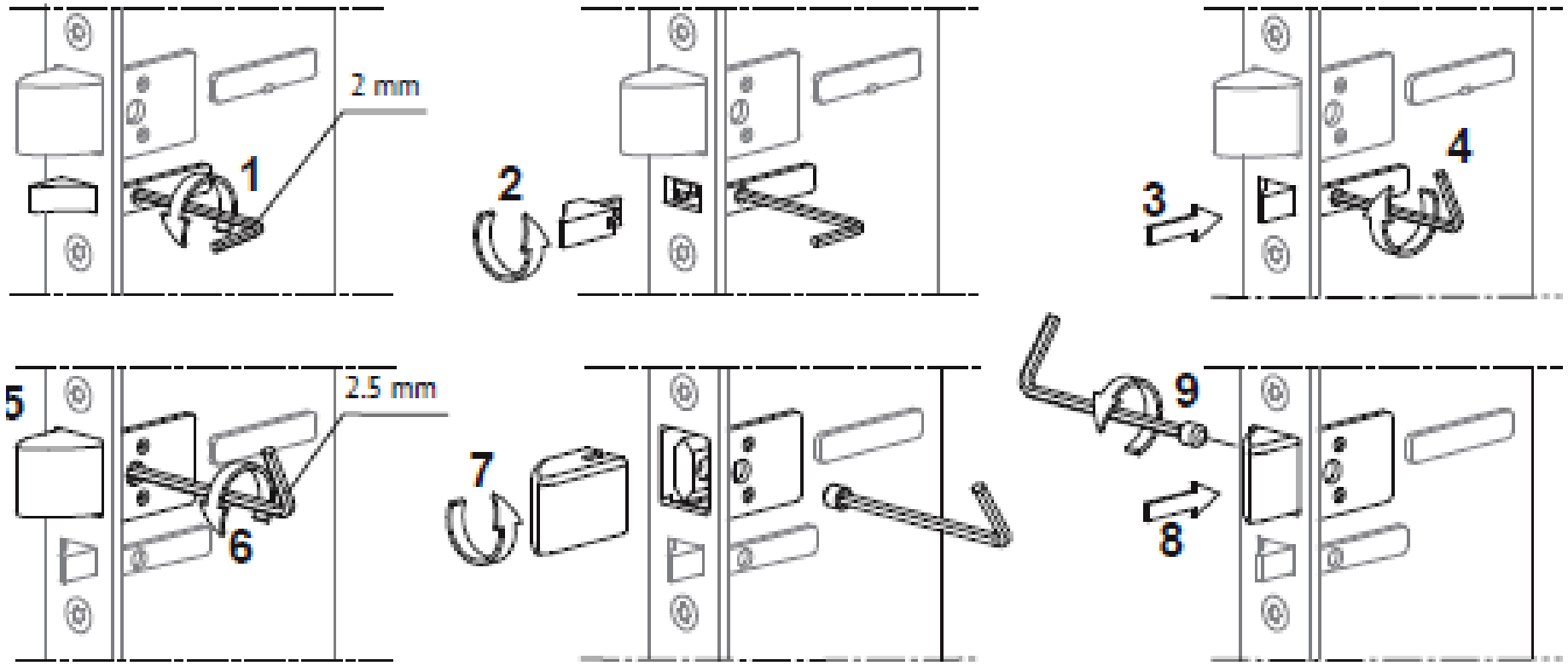
FAIL LOCKED



FAIL UNLOCKED

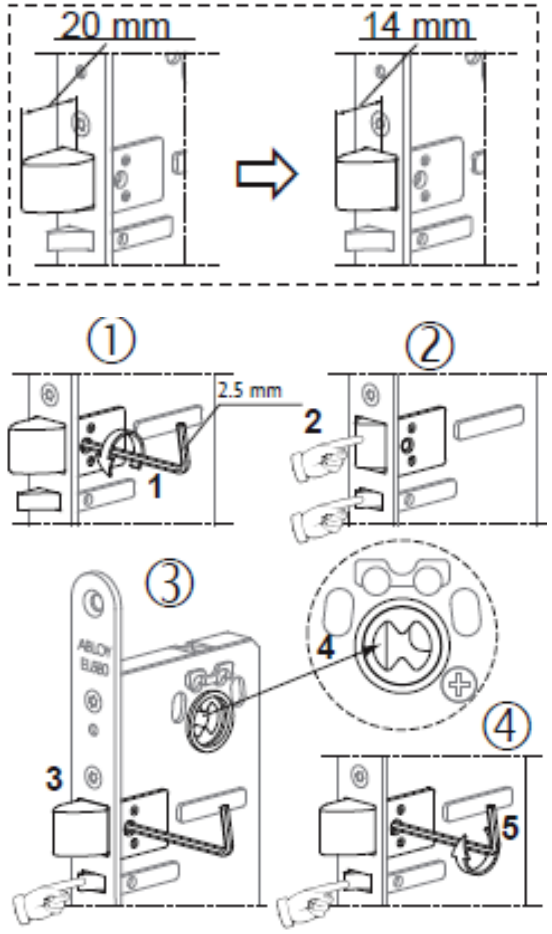
HANDING

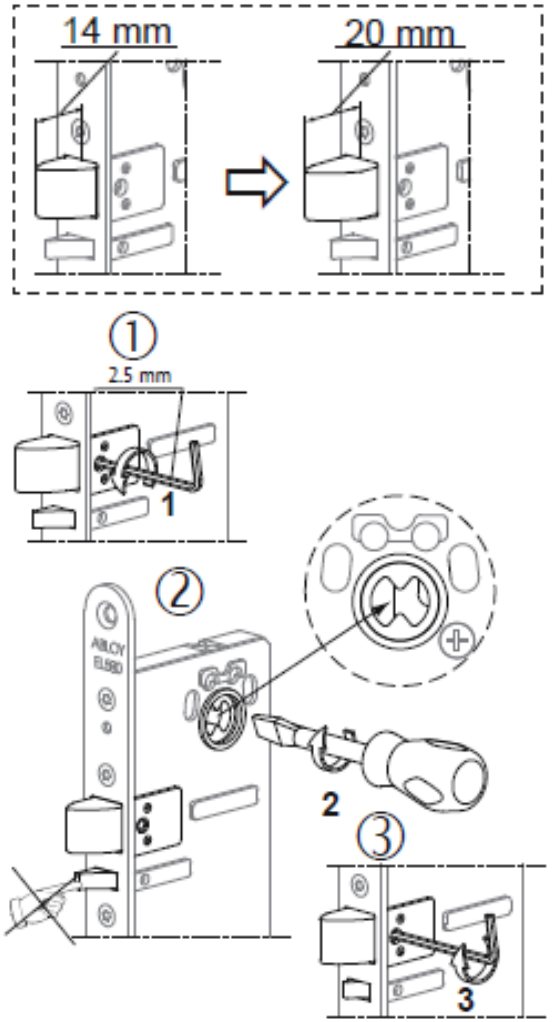
REVERSING THE TRIGGER BOLT & LATCH BOLT



SETTING THE BOLT LENGTH

EL580: BOLT LENGTH MUST BE SET TO 14mm ON ESCAPE DOORS
PE580: BOLT LENGTH IS FIXED AT 14mm.







EL480 & EL482

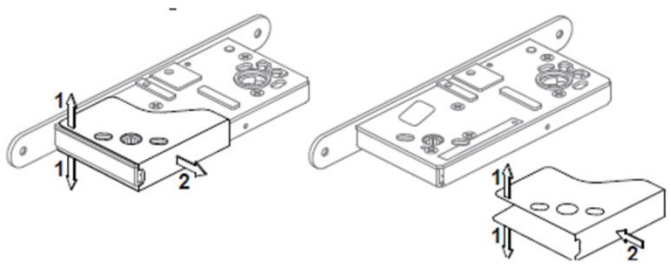
EL480: Handle Controlled – Read In / Free Egress
EL482: Handle Controlled – Read In / Read Out

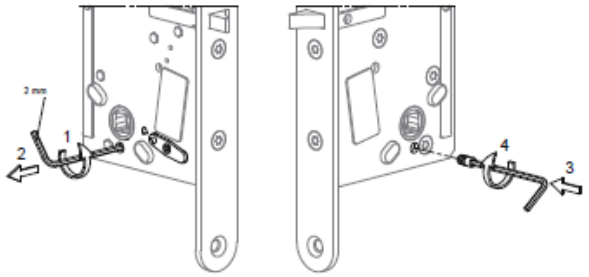
Feature	Information
Standard Backsets	29 mm
Special Backsets	35 mm
Reversible Handing	N/A
Operating Voltage	12-24V DC
Can be used on Double Action Doors	⊗
Can be used in conjunction with Door Automation	⊗

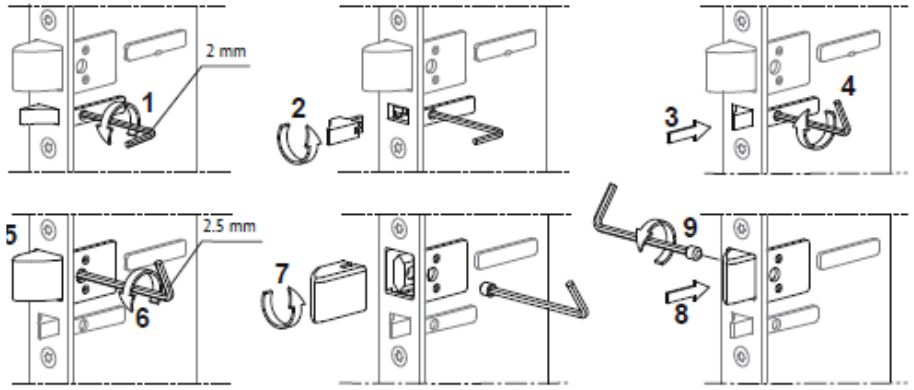
Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	EL480	When fitted with tested lever or paddle handle
BS EN 1125	Panic Escape Doors	EL480	When fitted with tested panic bar
Suitable for installation in Fire Doors		☑	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	☑	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	EL480	Must be installed with the relevant tested ironmongery

SETUP

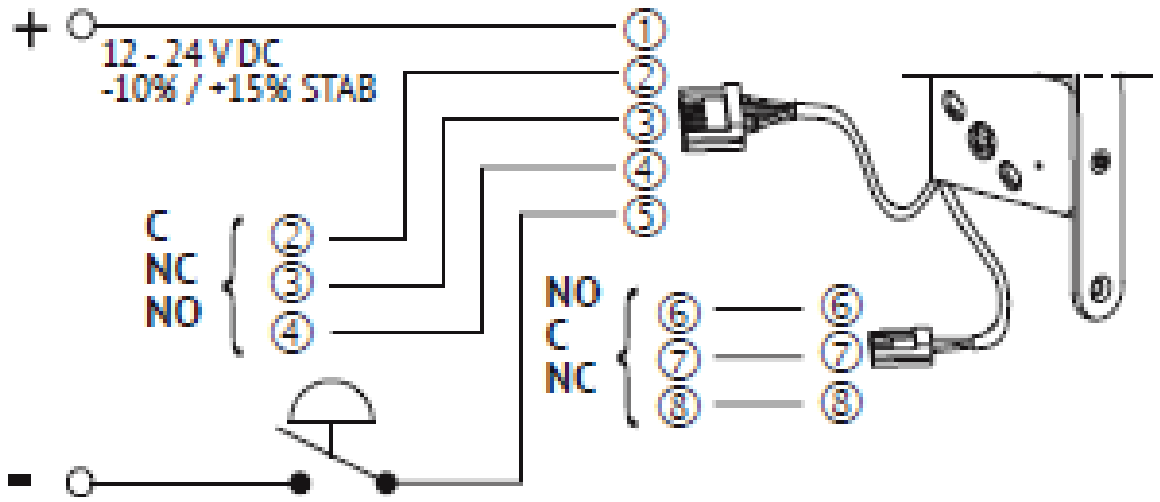
- Most of the setup is the same as the larger backset versions (EL580 & EL582)
- The Bolt length is a fixed 14mm.
- A panic bar is available for the EL480 without the need for a special PE version of the lock.







WIRING FOR EL480 & EL580 SERIES LOCKS



No	Colour	Function
1	Red	+
2	Black	Lock monitoring common
3	Yellow	Locked
4	Blue	Unlocked
5	Green	-
6	Brown	Handle down
7	Orange	Handle common
8	Grey	Handle up

EL402 & EL502

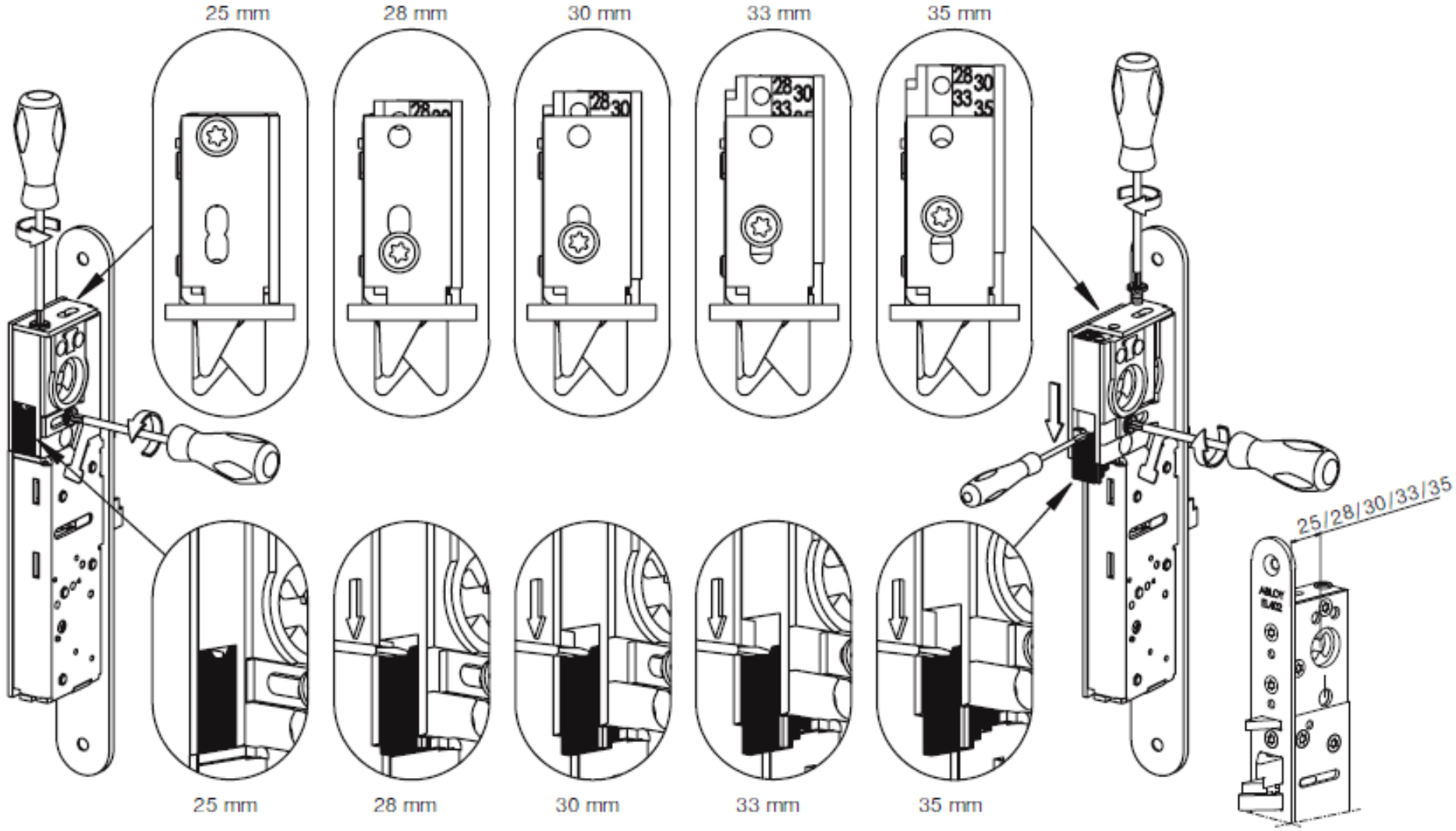
Scandinavian Solenoid Locks for Double Action Doors



Feature	Information
EL402: Adjustable Backsets	25, 28, 30, 33, 35 mm
EL502 Backsets	50 mm
Reversible Handing	N/A
Operating Voltage	12-24V DC
Can be used on Double Action Doors	☑
Can be used in conjunction with Door Automation	☑

Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	☑	When fitted with tested paddle handle
BS EN 1125	Panic Escape Doors	⊗	
Suitable for installation in Fire Doors		⊗	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	⊗	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	

ADJUSTING THE BACKSET ON EL402



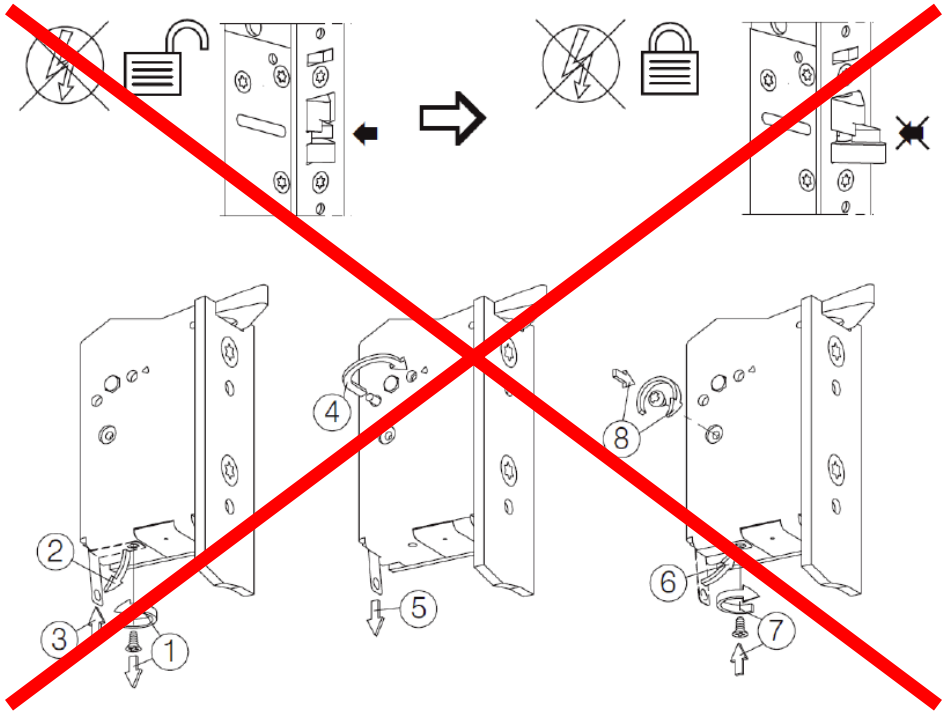
FAIL LOCKED / FAIL UNLOCKED

Previous versions of these locks were able to be changed between fail locked and fail unlocked.
This is no longer possible on the current version and so locks must be ordered with the correct functionality.

Fail Locked Versions: **Fail Unlocked Versions:**

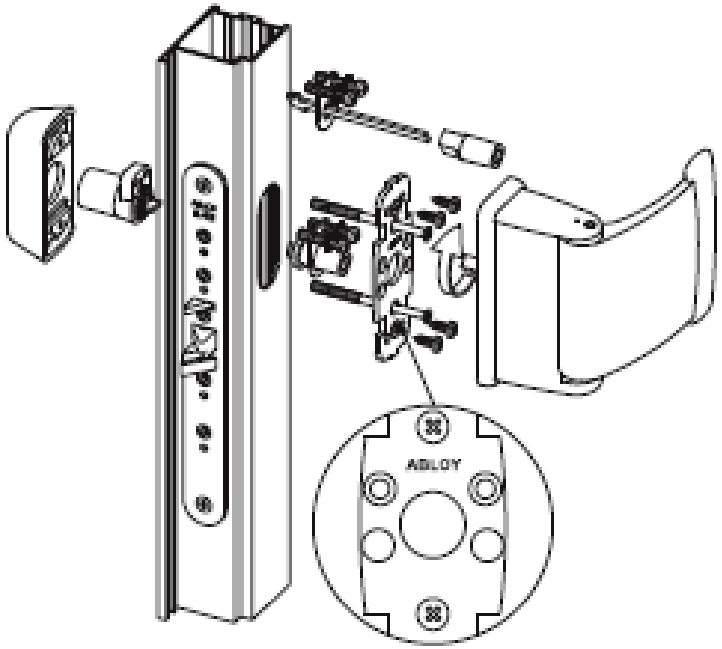
EL402 **EL402 F/UN**

EL502 **EL502 F/UN**

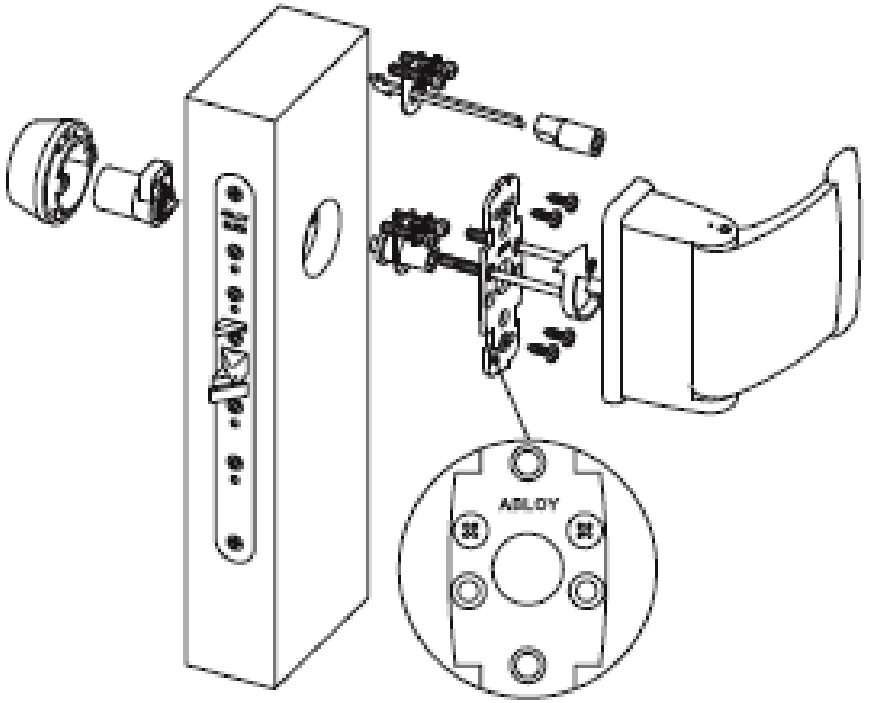


EN179 APPLICATION

EL402 fitted with CY080 Finnish Cylinder and Paddle Handle



EL502 fitted with CY077 Finnish Cylinder and Paddle Har



Paddle handle without cylinder available for both locks, PPE004
Paddle handles may be fitted to both fail locked and fail unlocked versions to comply with EN179.



EL404

Euro Profile Solenoid Locks for Double Action Doors

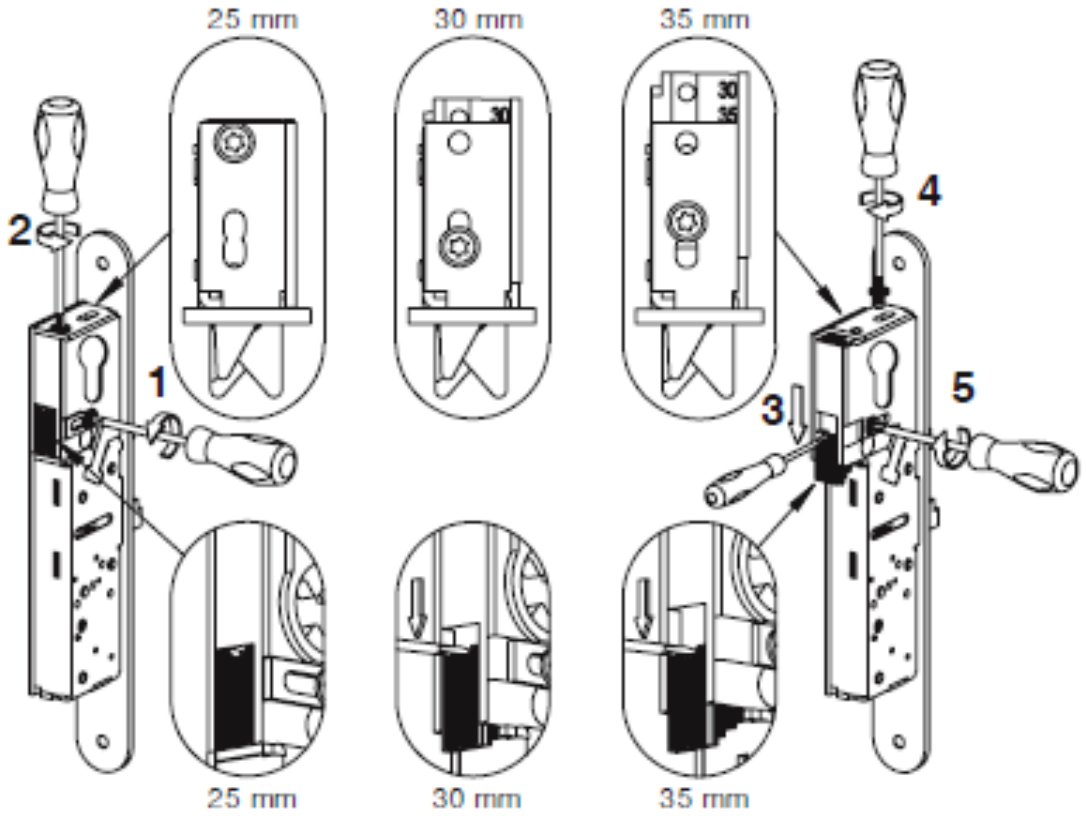
Feature	Information
EL404: Adjustable Backsets	25, 30, 35 mm
Reversible Handing	N/A
Operating Voltage	12-24V DC
Can be used on Double Action Doors	☑
Can be used in conjunction with Door Automation	☑

Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	⊗	
BS EN 1125	Panic Escape Doors	⊗	
Suitable for installation in Fire Doors		⊗	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	⊗	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	

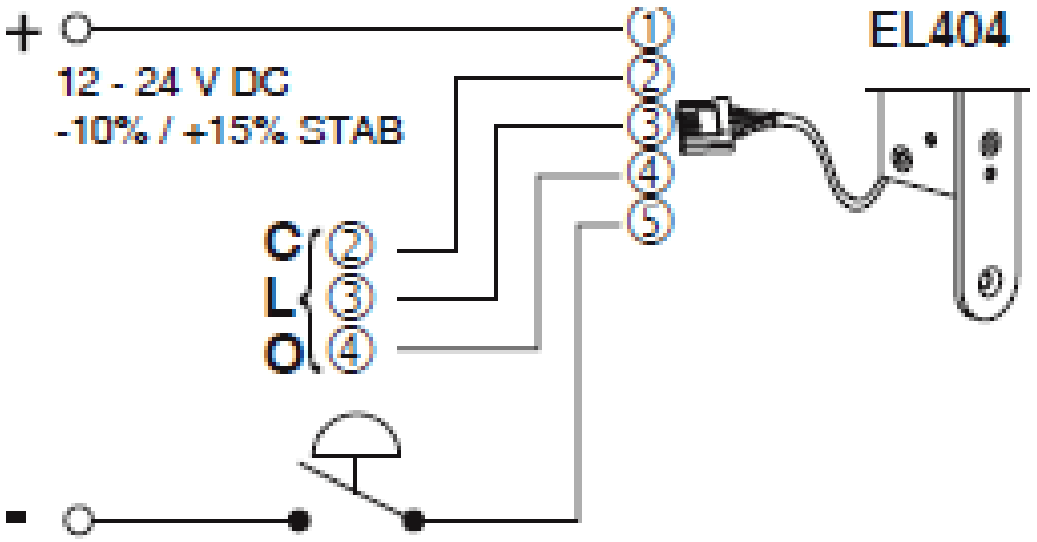
ADJUSTMENTS

Like the EL402 and EL502, the previous EL404 used to be able to change from Fail Locked to Fail Unlocked.
This is no longer available in the current version.
Locks must be ordered as either EL404 (Fail Locked) or EL404 F/UN (Fail Unlocked)

Adjusting the backset:



WIRING FOR EL402, EL502 & EL404



No	Colour	Function
1	Red	+
2	Black	Common for bolt deadlocked
3	Yellow	Bolt deadlocked
4	Blue	Bolt unlocked
5	Green	-

EL410 & EL411

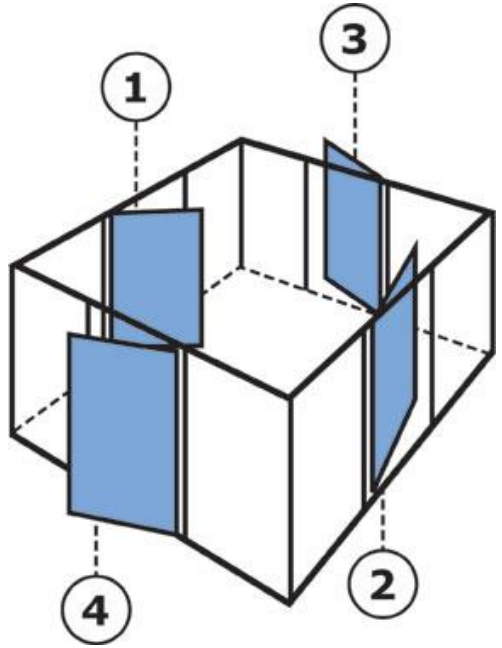
Euro Profile Solenoid Locks for Double Action Doors



Feature	Information
Standard Backsets	24.6, 28.6 mm
Operating Voltage	12V DC or 24V DC
Reversible Handing	⊗
Can be used on Double Action Doors	⊗
Can be used in conjunction with Door Automation	☑

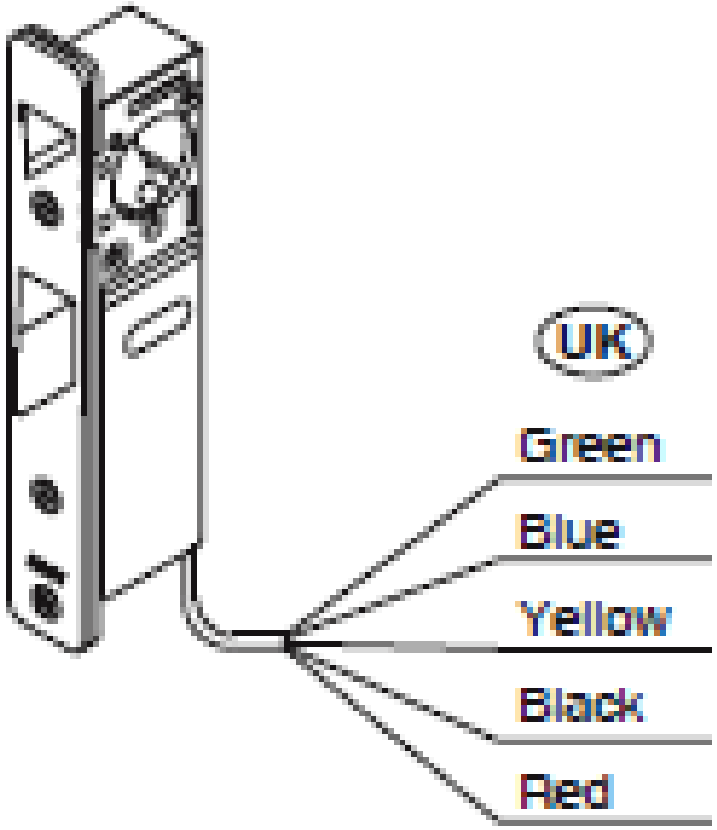
Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	⊗	
BS EN 1125	Panic Escape Doors	⊗	
Suitable for installation in Fire Doors		⊗	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	⊗	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	

EL410 & EL411 – ORDERING



- Voltage must be stated, 12V DC or 24V DC
- Backset must be stated, 24.6mm or 28.6mm
- Handing to be specified, Hand 1 & 3 or 2 & 4
- Can be used in conjunction with door automation
- Can be fitted with handles, cylinders and paddle handles (4591) designed for ANSI threaded cylinder lockcases

WIRING FOR EL410 & EL411



No	Colour	Function
1	Red	+
2	Black	Common for bolt deadlocked
3	Yellow	Bolt deadlocked
4	Blue	Bolt unlocked
5	Green	-

351 U80, 351 M80 & 352 M80

Solenoid Lock





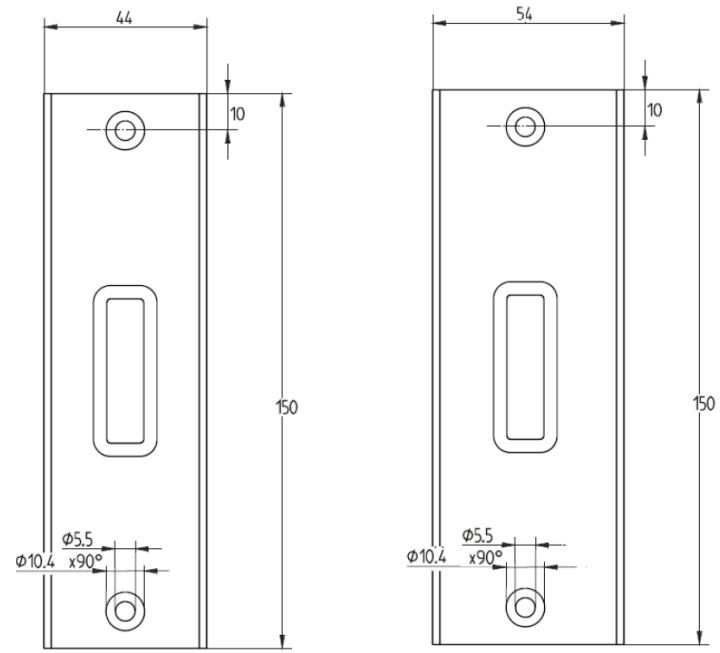
Feature	Information
Standard Backsets	N/A
Operating Voltages – 351 U80 351 M80 352 M80	12V DC or 24V DC 12 – 48V DC 12 – 24V DC
Reversible Handing	N/A
Can be used on Double Action Doors	☑
Can be used in conjunction with Door Automation	☑

Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	⊗	
BS EN 1125	Panic Escape Doors	⊗	
Suitable for installation in Fire Doors		☑	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	⊗	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	351 U80 352 M80	Must be installed in conjunction with a tested Escape Door System
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	

FEATURES

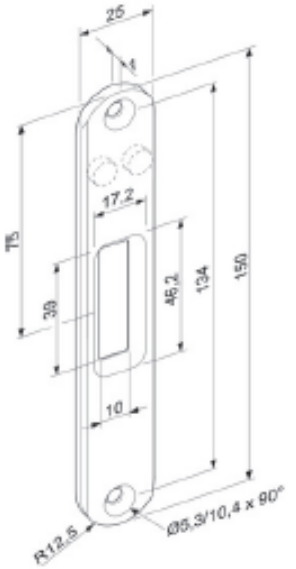
351 U80

- Bolt remains extended at all times
- Voltage must be stated on ordering, 12V DC or 24V DC
- Door Thickness must be stated when ordering, 44mm or 54mm
- Can be used with ‘Escape Door Terminals’ to EN 13637

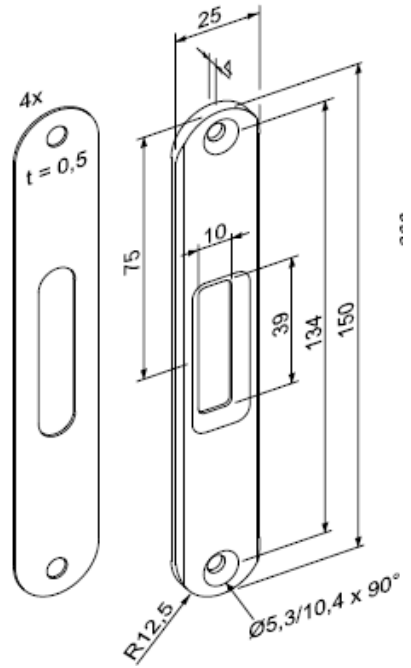


351 M80

- Bolt retained in lockcase whilst unlocked and the door has been opened
- Operating voltage range, 12V DC to 48V DC
- Quieter operation due to lock bolt being retained in the lockcase until the door is closed
- Standard strike plate will suit all door thicknesses
- **Not** suitable for installation with escape terminals to EN 13637



FEATURES



352 M80

- Bolt retained in lockcase whilst unlocked and the door has been opened
- Operating voltage range, 12V DC to 24V DC
- Quieter operation due to lock bolt being retained in the lockcase until the door is closed
- Standard strike plate will suit all door thicknesses
- **Suitable** for installation with escape terminals to EN 13637

The 351 U80, 351 M80 and 352 M80 are all suitable for installation in fire doors; in the frame leg, door edge or frame transom.

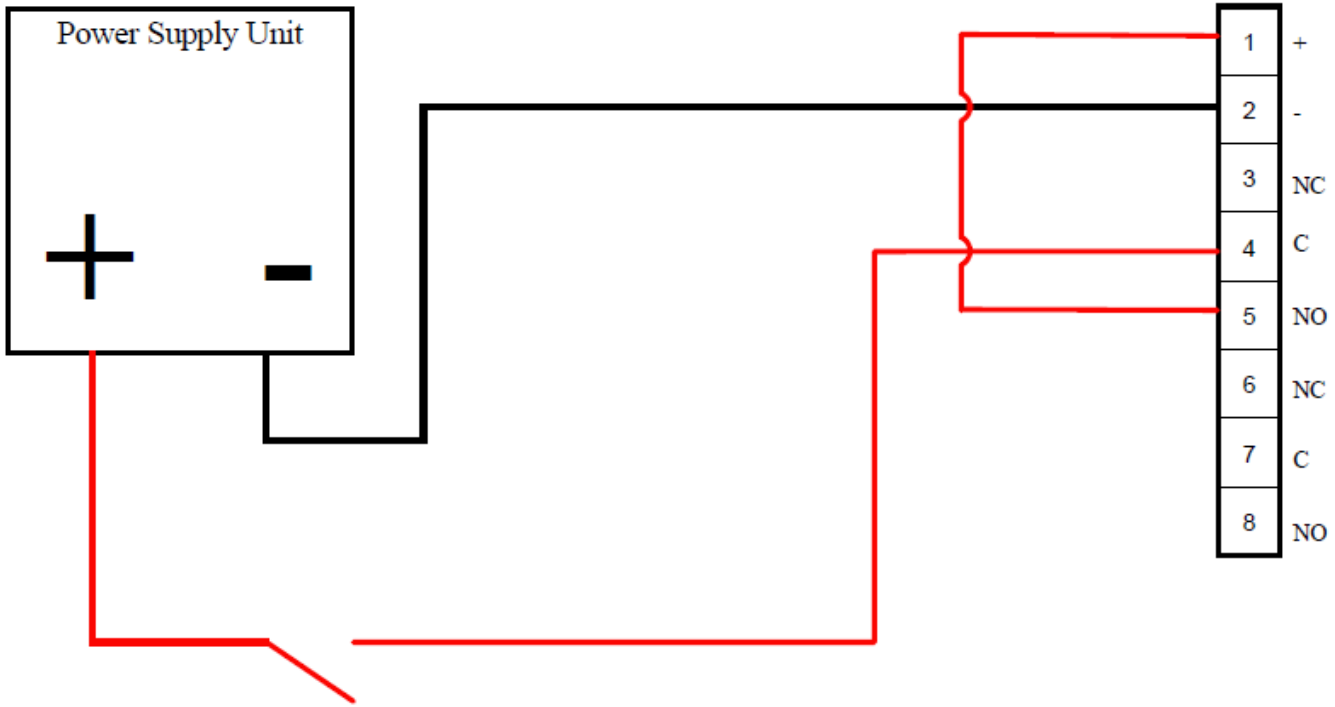
The 352 M80 must be installed in a vertical position or locking downwards.

When installed in the frame transom, the lockbolt must be positioned so that it is closest to the door hinges. incorrect orientation can cause the lock to activate before the door is closed and so prevent the door from closing fully and locking. This applies to all three models, 351 U80, 351 M80 & 352M.80.



WIRING FOR 351 U80

351U80, Trigger Bolt



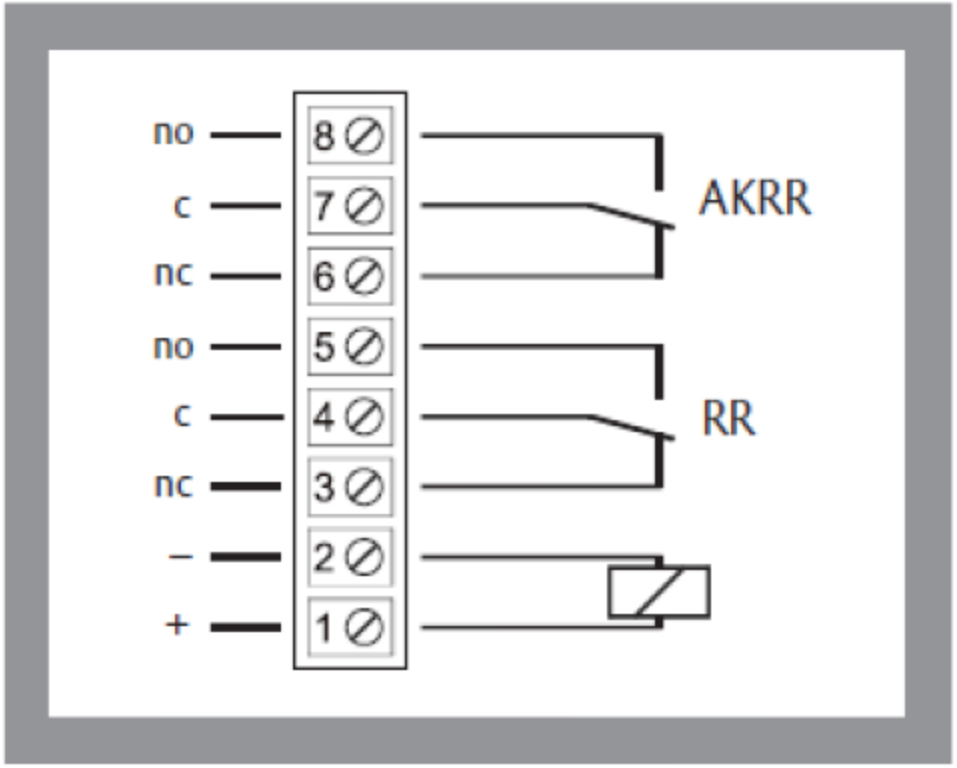


No	Colour	Function
1		+
2		-
3		NC trigger bolt
4		Common trigger bolt
5		NO trigger bolt
6		NC armature
7		Common armature
8		NO armature

** Red Link Cable on Connection Strip Must be Cut **
when using Ak monitoring for Access Control System

WIRING FOR 351 M80

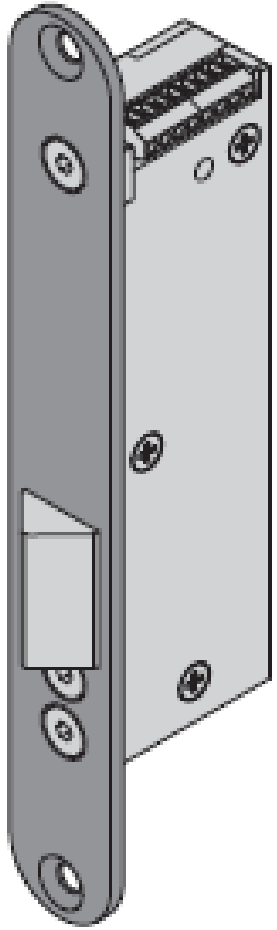
Pic. 6: Connection diagram with door contact RR and armature contact AKRR

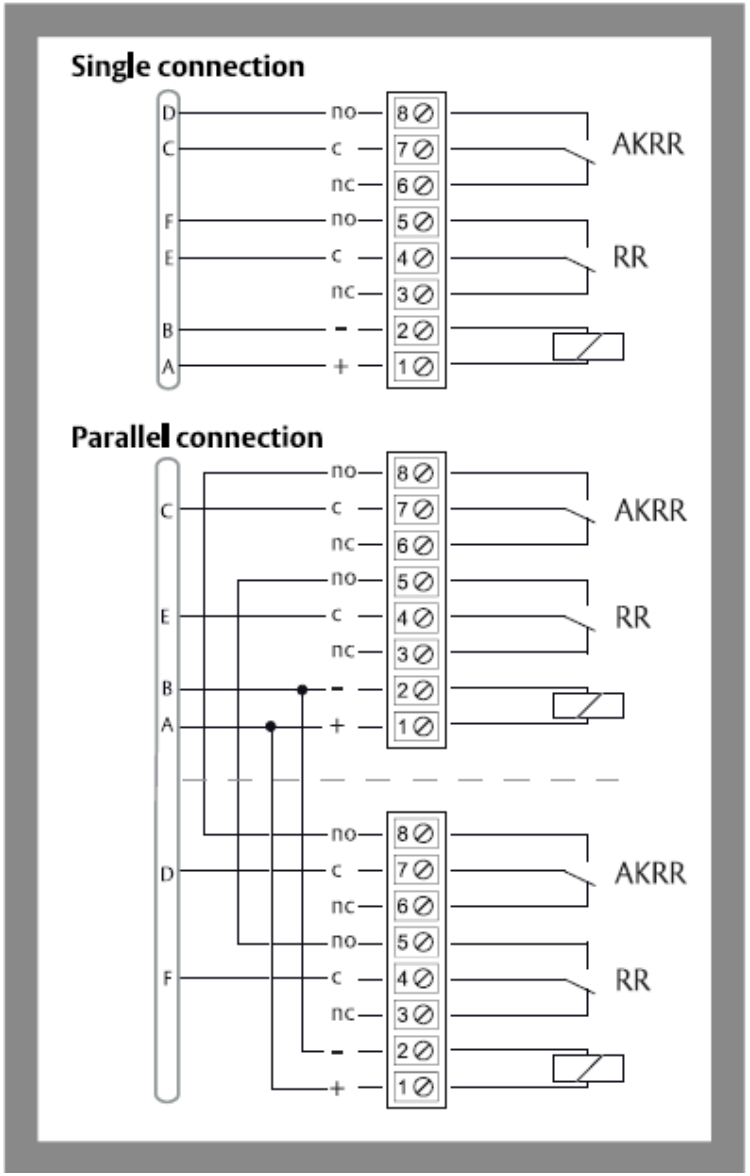




No	Colour	Function
1		+
2		-
3		NC door contact
4		Common door contact
5		NO door contact
6		NC armature
7		Common armature
8		NO armature

WIRING FOR 352 M80





No	Colour	Function
1		+
2		-
3		NC door contact
4		Common door contact
5		NO door contact
6		NC armature
7		Common armature
8		NO armature



INDIVIDUAL LOCK SETUP – MOTOR LOCKS



EL520, MP520, EL420 & MP420

EL520 & EL420: Motor Lock – Read In / Free Egress
MP520 & MP420: Multipoint Versions of the above locks

Feature	Information
Standard Backsets for EL520 & MP520	55, 60, 65 mm
Special Backsets for EL520 & MP520	80, 100 mm
Standard Backsets for EL420 & MP420	30, 35 mm
Special Backsets for EL420 & MP420	40, 45 mm
Reversible Handing	☑
Operating Voltage	12–24V DC 12–18V AC
Can be used on Double Action Doors	⊗
Can be used in conjunction with Door Automation	☑

Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	☑	When fitted with tested lever or paddle handle
BS EN 1125	Panic Escape Doors	☑	When fitted with tested panic bar
Suitable for installation in Fire Doors		☑	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	☑	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	☑	Must be installed with the relevant tested ironmongery

EL520, MP520, EL420 & MP420 – SETUP

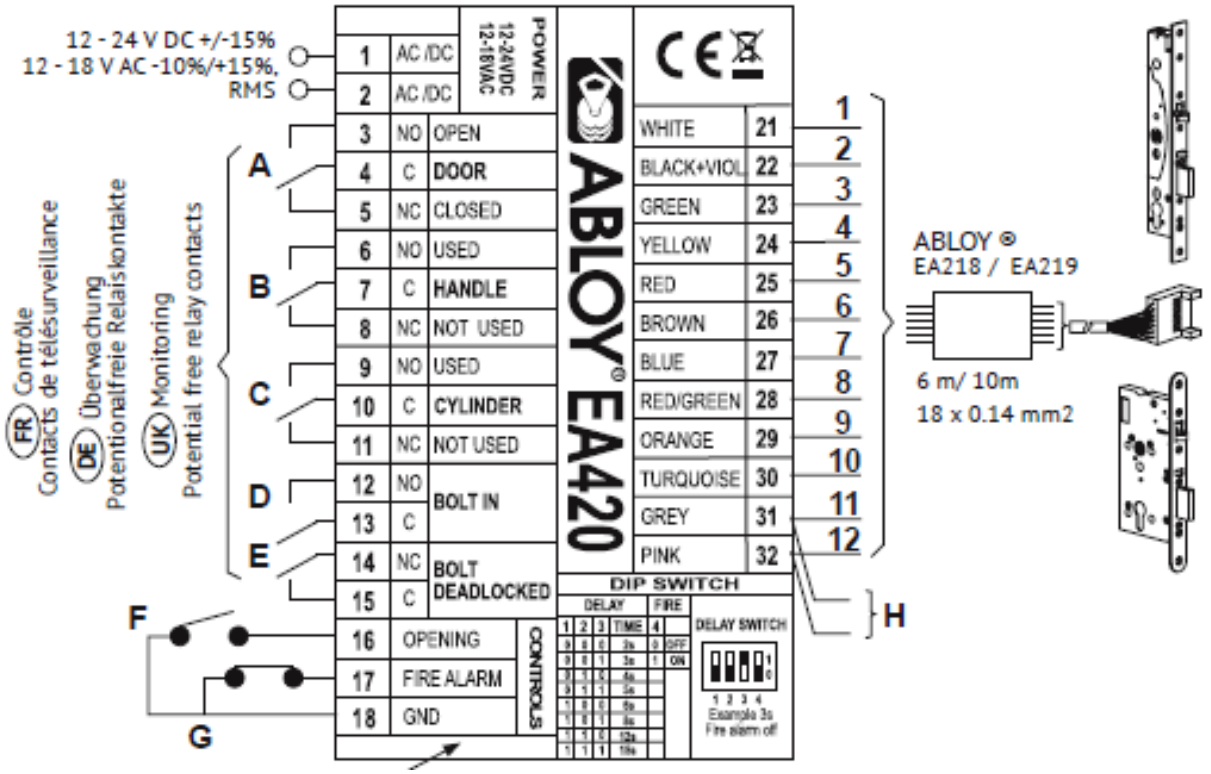
Most of the setup for these locks is the same as the solenoid versions EL560 and EL460.

With the exception of:

- There is no ‘escape side’ as the lever handle or panic bar is only required on one side of the door
- These locks have a separate control unit, EA420
- These locks require a permanent power supply and are operated via a switched negative ‘trigger’
- Panic bars and a selection of lever handles are available
- Can be used in conjunction with door automation



EL520, MP520, EL420 & MP420 – WIRING



- The lock is connected to an EA420 control unit along with the access control and power supply.
- There is no direct functionality to the lock wires and so all colours should be connected.
- Power connection to 1 & 2 plus a switched negative to connection 16 is the minimum requirement on the access control side of the board. Other connections at the discretion of the installer.
- Black +Violet cable not to be confused with the navy blue cable with a purple band. Individual Black and Violet cables are connected to connection 22.
- The door gap between the lock forend and the striking plate MUST be between 2mm & 5.5mm.

EL590 & PE590

EL590: Motor Lock – Read In / Free Egress
PE590: Motor Lock – as EL590 but for use with panic bars



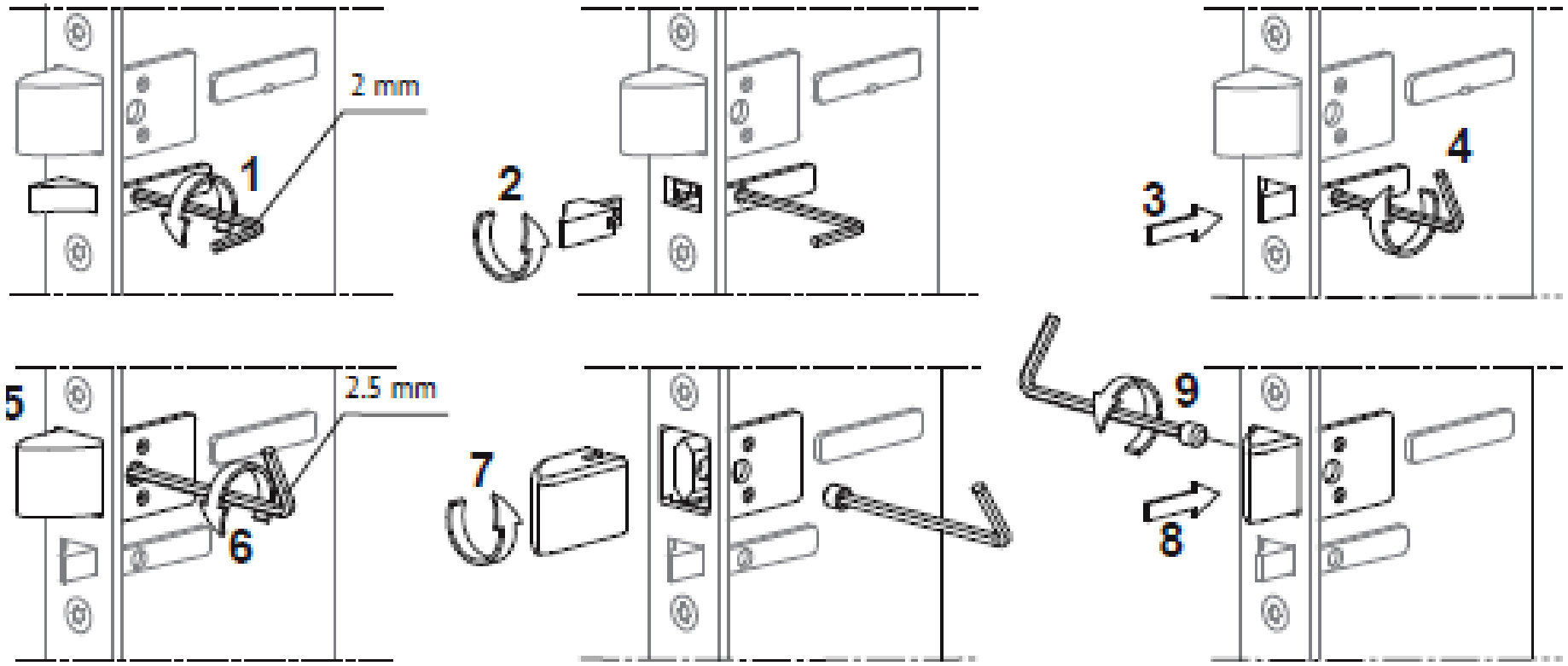
Feature	Information
Standard Backsets	50 mm
Reversible Handing	☑
Operating Voltage	12-24V DC
Can be used on Double Action Doors	⊗
Can be used in conjunction with Door Automation	☑

Standard	Description	Compliance	Notes
BS EN 179	Emergency Escape Doors	☑	When fitted with tested lever or paddle handle
BS EN 1125	Panic Escape Doors	☑	When fitted with tested panic bar
Suitable for installation in Fire Doors		☑	
BS EN 14846	Electromechanically Operated Locks & Striking Plates	☑	
Primary Blocking Device to BS EN 13637	Electrically Blocked Escape Route Doors	⊗	
Secondary Blocking Device (Overlaid) to BS EN 13637	Electrically Blocked Escape Route Doors	☑	Must be installed with the relevant tested ironmongery

Please note that the EL590 is due to be superseded by the EL595, EL595FU and EL595FL in the near future. The PE590 will remain for escape compliant with EN 1125.

HANDING

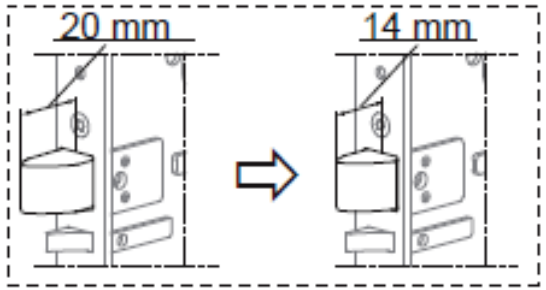
REVERSING THE TRIGGER BOLT & LATCH BOLT

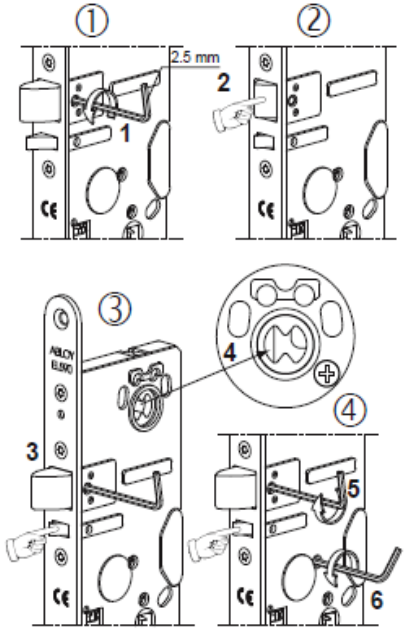


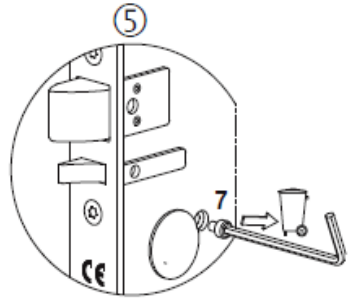
SETTING THE BOLT LENGTH

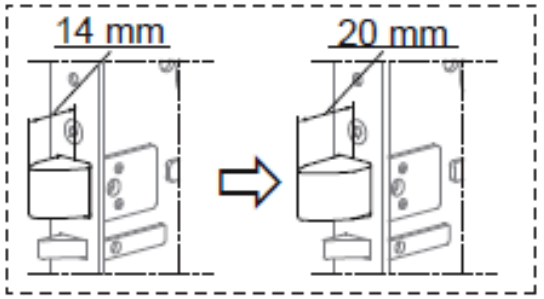
EL580: BOLT LENGTH MUST BE SET TO 14mm ON ESCAPE DOORS
PE580: BOLT LENGTH IS FIXED AT 14mm.

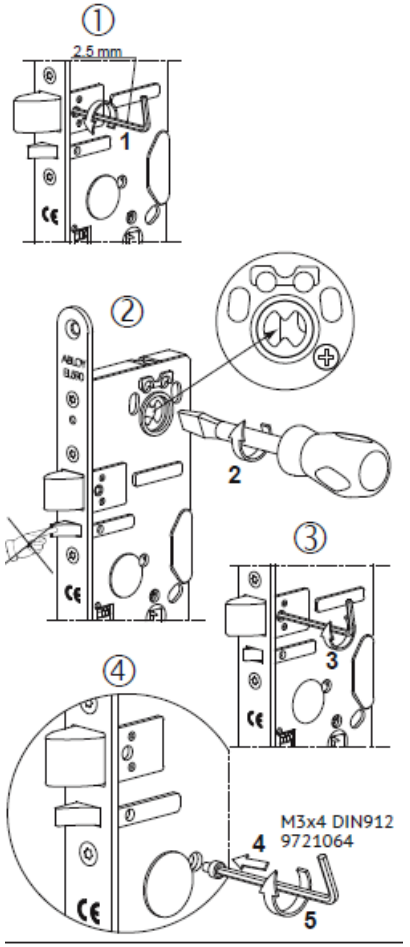
The motor drive screw (image ⑤ action 7) MUST be removed when setting the bolt to 14mm or damage to the mechanism will occur.





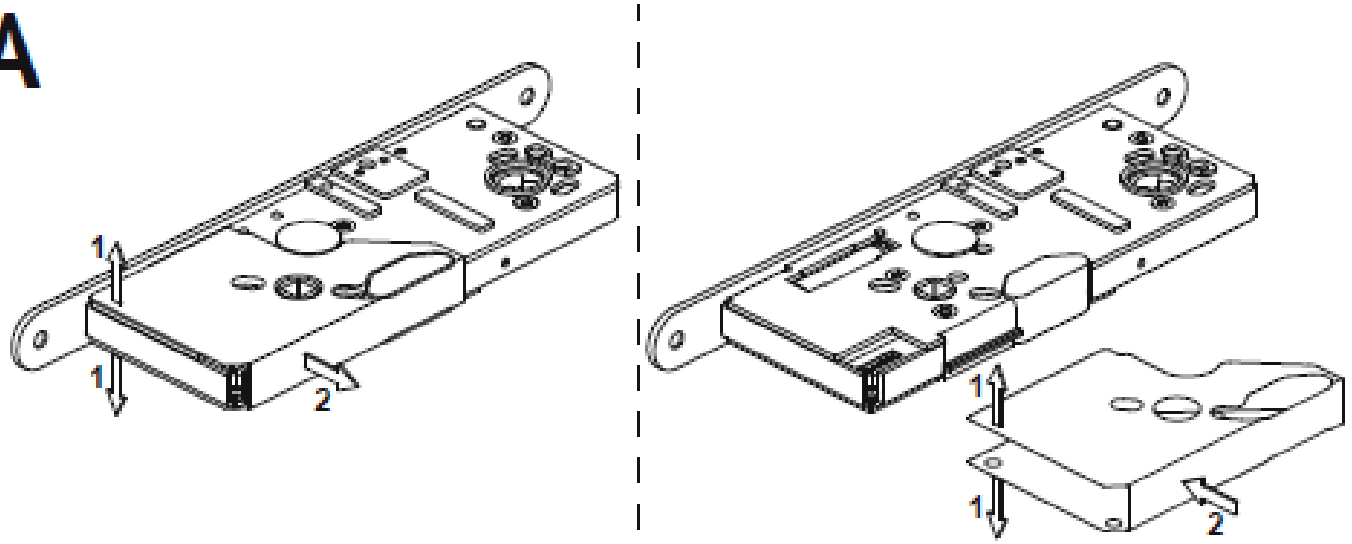




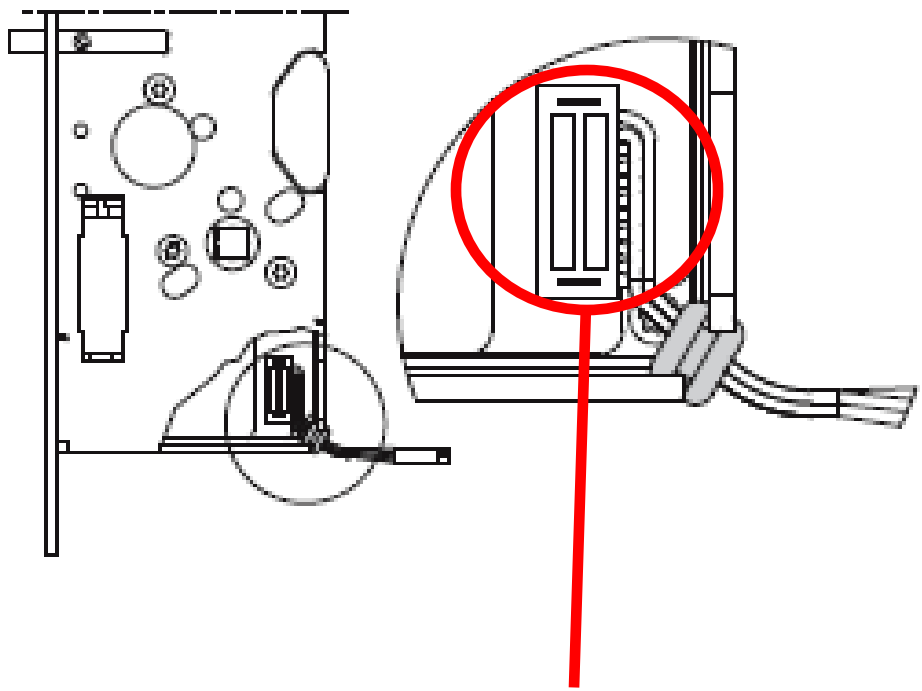


CONNECTING THE CABLE

A

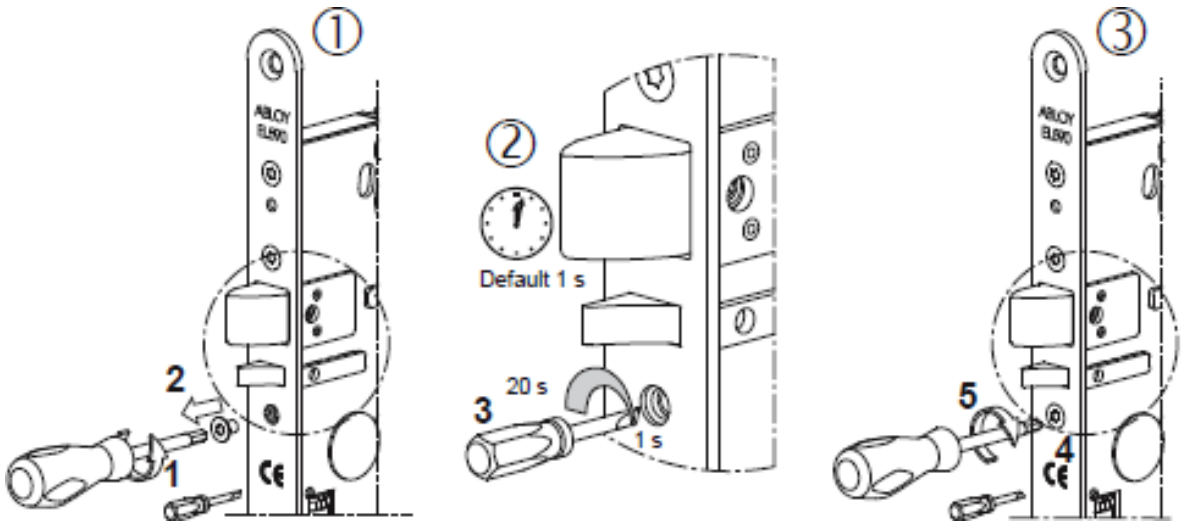


B



When inserting the cable plug into the socket, please note that with a new lock the socket will be filled with a protective grease. There is no need to remove the grease.

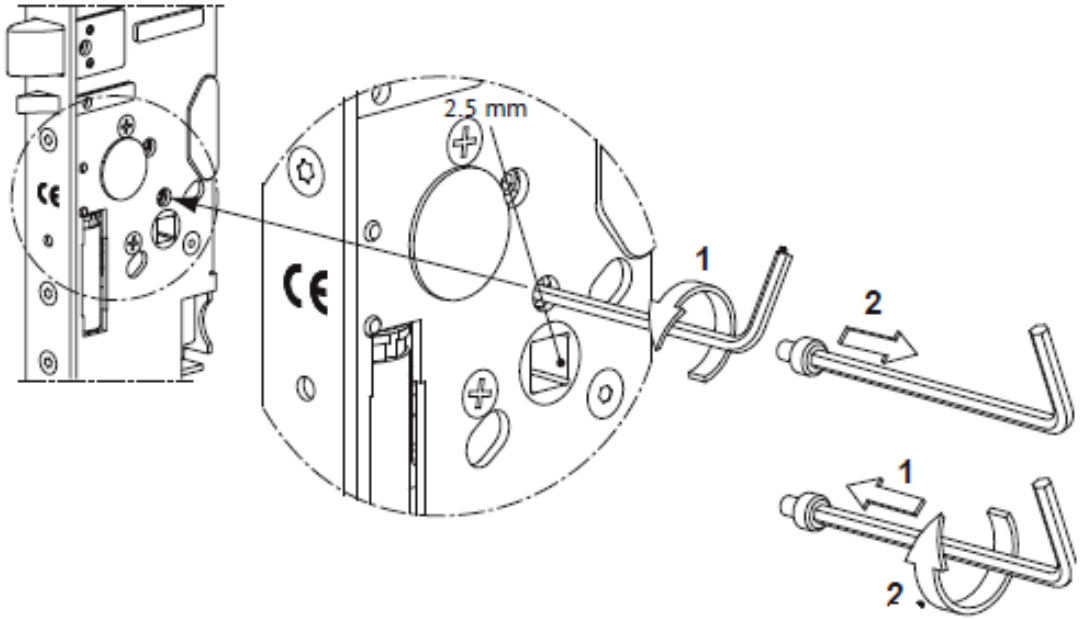
OTHER SETTINGS



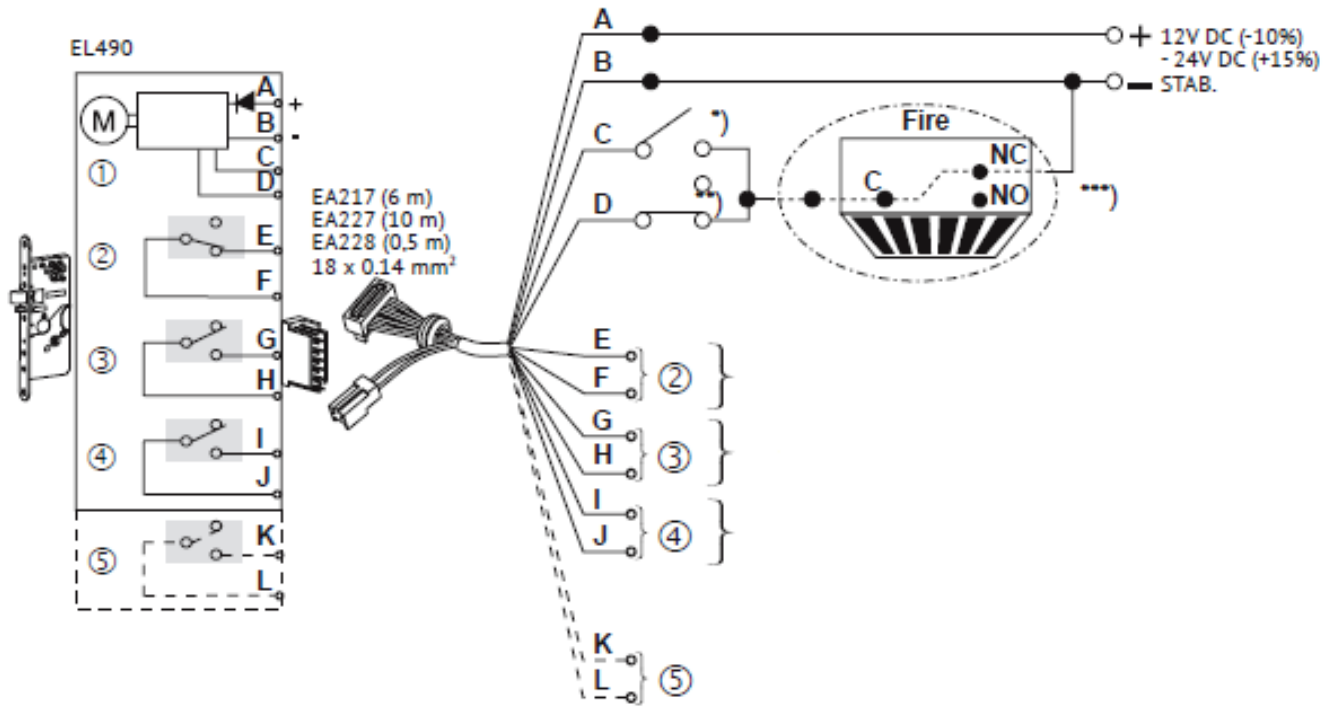
To adjust the delay time before the lock re-locks, adjust the screw as above.

To activate 'HANDLE CONTROL' remove the screw as below. As this lock will now switch the escape handle/panic bar electrically, **this action negates compliance for escape to both EN 179 and EN 1125.**

To reinstate (switch off Handle Control) simply replace the handle control screw.



Wiring



No	Colour	Function
A	Red	+
B	White	-
C	Green	Unlocking trigger
D	Violet	Handle control
E	Black	Lock bolt out
F	Yellow	Common lock bolt out
G	Blue	Lock bolt in
H	Grey	Common lock bolt in
I	Orange	Handle down
J	Brown	Common handle down
K*	Pink	Key/thumbturn operation
L*	Turquoise	Common key operation
*	Optional extra	

N.B. The use of 'Handle Control' negates compliance to EN179 and EN 1125.



LOW ENERGY LOCKS

FEATURES – Low Energy Locks

- Operate on voltages between 3.6 V DC min. and 27.6V DC max.
- Current consumption as low as 0.012mA at 3.6V DC. A typical 12V DC installation would consume 0.017mA when locked and 0.073mA when unlocked.
- Can run on battery operated systems.
- The majority of the setup is the same as the standard versions of the locks.
- Will only operate in 'Fail Locked' mode.
- Requires a permanent power feed and unlocks via a –ve trigger.





DOUBLE DOOR SOLUTIONS

DOUBLE DOOR SOLUTIONS

Many of the ABLOY electric locks are only escape compliant for installation on single leaf doorsets.

Double Door solutions are available when installation is required on double doorsets.

There are too many variants to include on this course but documentation is available to assist with specification.

The double door locks are all variations of the locks included in this course and so setup of the primary leaf locks will be the same as their single leaf version.

The secondary leaf locking unit is available in 100mm backset for full leaf doors and 35mm backset for metal profile doors.

Both electric locking and mechanical locking options are available as well as solutions for door sets with door automation.



