

# HIGH SECURE LOCK – PRODUCT DOCUMENTATION

## TECHNICAL DATA SHEET

TDS023 REV 3

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**PRIMERA**

### PRODUCT OUTLINE

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Robust 2-way access control electromechanical lock solution for doorsets.



### KEY FEATURES

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- Robust construction makes the lock resistant to vandalism.
- Resistance of 40,000N lateral force, ensuring it unlocks even if internal pressure is applied to the door.
- 'Slam-shut' system – with the bolts locking in place as soon as the door is closed.
- Locks are frame-mounted, reducing the risk of breakout as typically seen from multipoint locking systems fitted to the door leaf.
- FD30 and FD60 fire rated for applications using Safehinge Primera Timber Sureclose doorset designs only. Unless otherwise stated in this document, all doorset technical and manufacturing details must be compliant with SHP technical information

# USE CASE CONSIDERATIONS

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## Unit/Ward type

- Suitable for all ward types, particularly those with high levels of service user aggression.

## Doorset type

- Recommended for doors requiring 2-way access control such as Air-lock, ward entrance and corridors. High secure locks are not appropriate for doors requiring free egress such as bedrooms or communal spaces.

## Doorset action

- Single action recommended, where door stops enhance robustness and help to ensure the door always closes to zero position and lock firing.
- **Double action - use with caution.** Double acting doors are much more difficult to control due to air pressure, smoke seal friction and door closer adjustment. If the door doesn't close to zero, the lock might not fire. The specifier must carefully consider the intended use case **and ensure suitability**.
- Anti-barricade is possible on single doors with Movastop (Timber frame) or Swiftstop and Swiftfit (steel frame NFR only)
- Anti-barricade is possible on Unequal pairs using an Astragal.

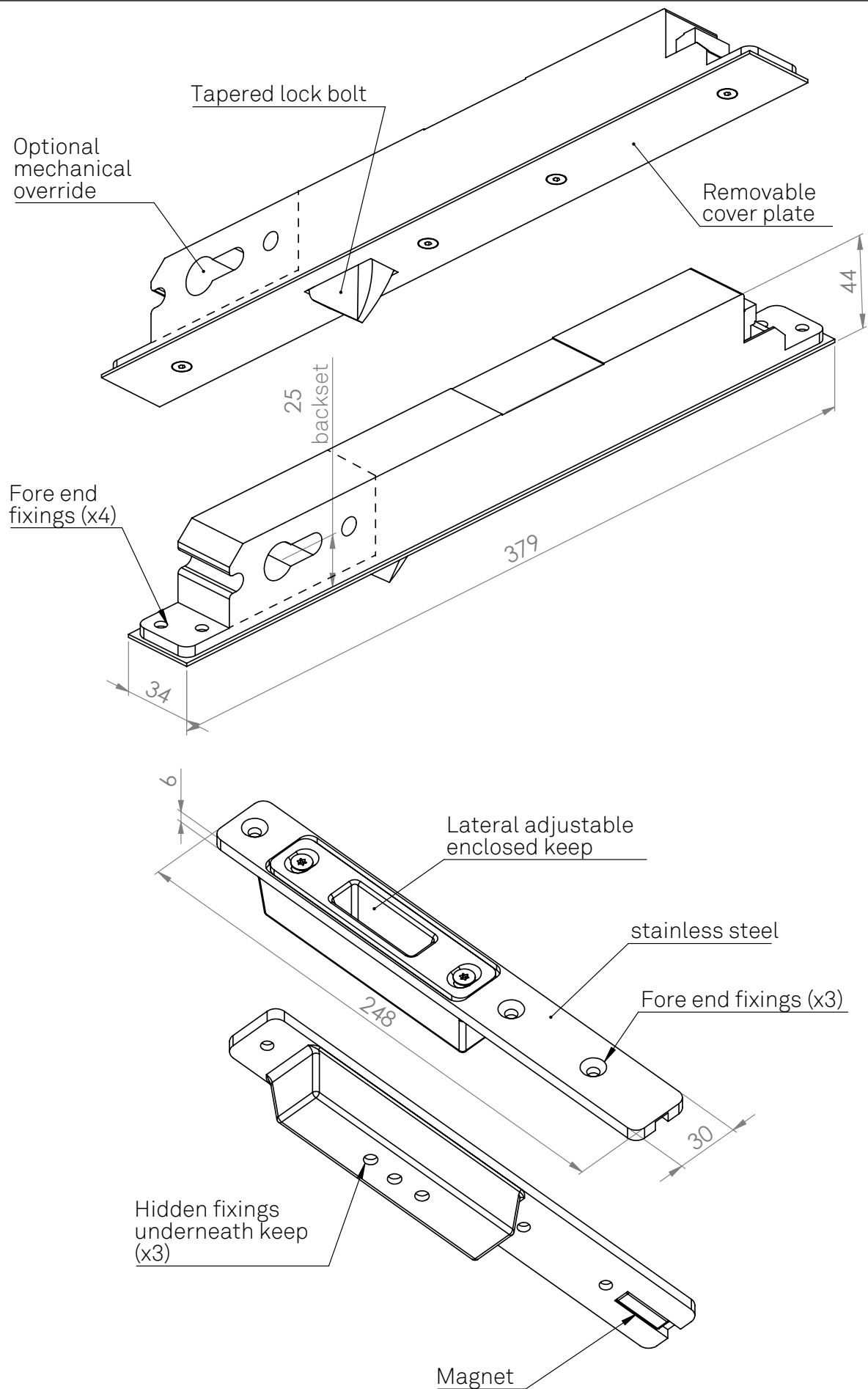
## Doorset configuration

- Can be used with single, unequal and equal pairs. Selection is typically driven by accessibility requirements.

## Opening direction

- Open in is strongly recommended where opening angle can be more easily restricted and door stops used to enhance robustness from attack on the opening face

## PRODUCT DIAGRAM



## SPECIFICATION OPTIONS

### FAIL SAFE OR FAIL SECURE?

Fail safe or fail secure refers to the default state of the lock when power is removed.

- Fail safe means when no power is applied the door is unlocked.
- Fail secure means when no power is applied the door is locked.

The inner workings of the lock determine the safe/secure function. Each model looks the same on the outside.

It is commonplace to use fail safe locks with battery back up system. This means the lock will retain normal operation for a period of time during a power failure. This approach can provide sufficient time to fix the power supply fault, thus preventing any disruption to the access control system users.

The specifier must consider which state is required for each doorset.



## SPECIFICATION OPTIONS

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### HTM COMPLIANT LOCK – YES OR NO?

According to Health Technical Memorandum guidelines, electromechanical locks with springs should be avoided unless the lock is guaranteed to fail safe open.

This is what the HTM guidelines state: -

Firecode – fire safety in the NHS (England)

Health Technical Memorandum

05-03: Operational provisions

Part K: Guidance on the fire risk assessments in complex healthcare premises

Page 50 (document page 41), Section 8.13

[Download the  
complete HTM  
guidance here](#)

*“Electromechanical devices comprise electromechanical lock-keeps and draw-bolts, which can be controlled by people inside the premises by entering a code or by using smart cards, which have been adapted to control the exit from certain areas. Electromechanical locking devices are not acceptable on escape doors, unless:*

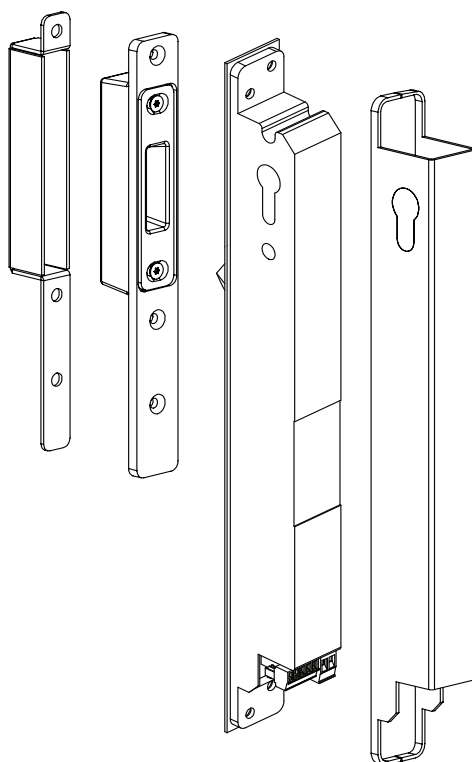
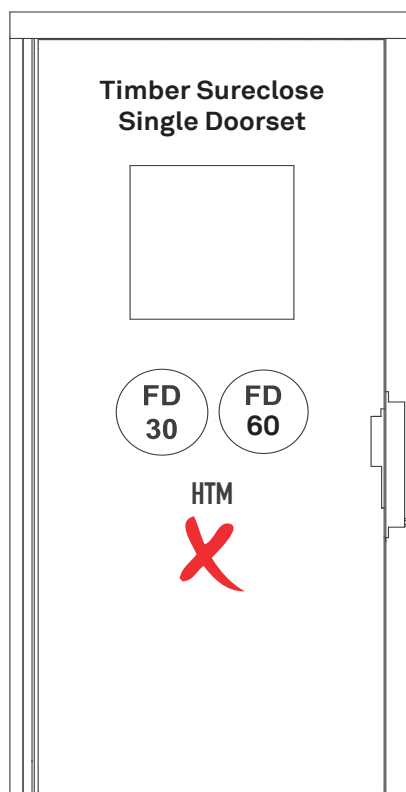
*(i) they are fitted with a manual means of overriding the locking mechanism such as a push bar, push pad or lever handle; or Panic hardware is not permissible for service user facing doorsets and whilst a euro cylinder key override would satisfy best practice, a key in the frame head is out of reach for a lot of people and unlikely to be accepted.*

*(ii) they do not rely on a spring mechanism, they fail-safe open and they are not affected by pressure, in which case the criteria for electromagnetic devices should be applied.”*

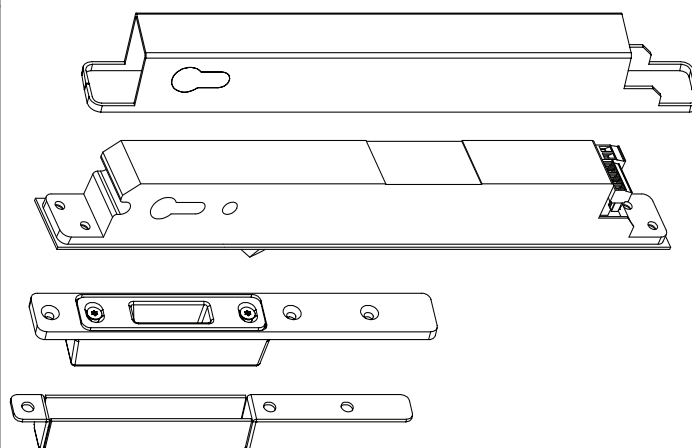
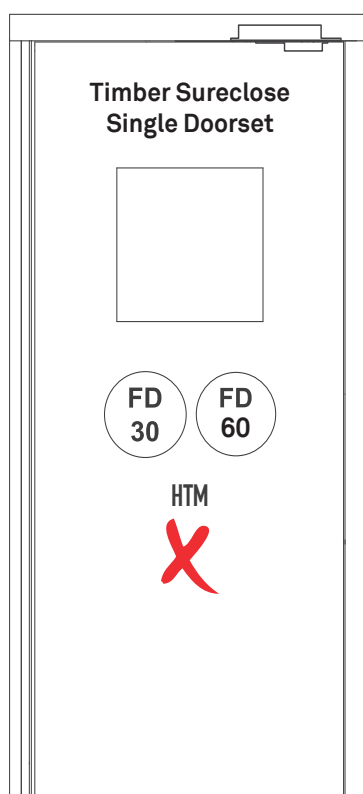
Electromagnetic locks are not included in SHP's current fire test evidence and have been identified as prone to failure under abuse conditions.

# DOORSET CONFIGURATION OPTIONS

## SINGLE DOOR



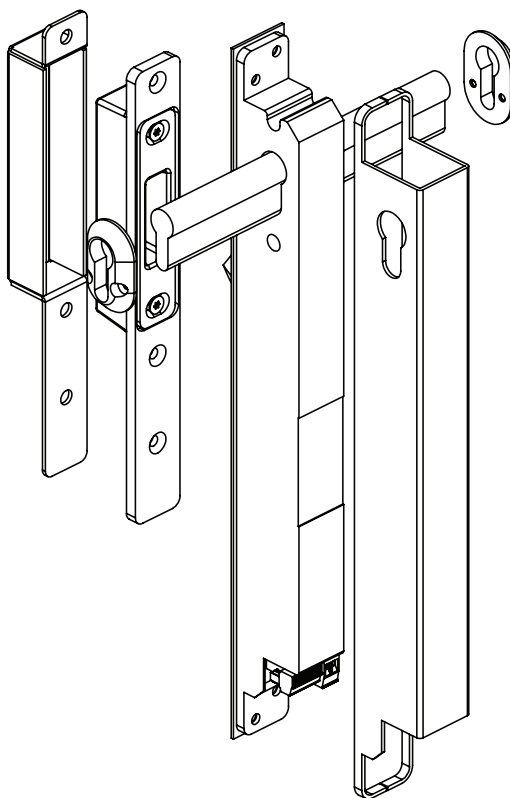
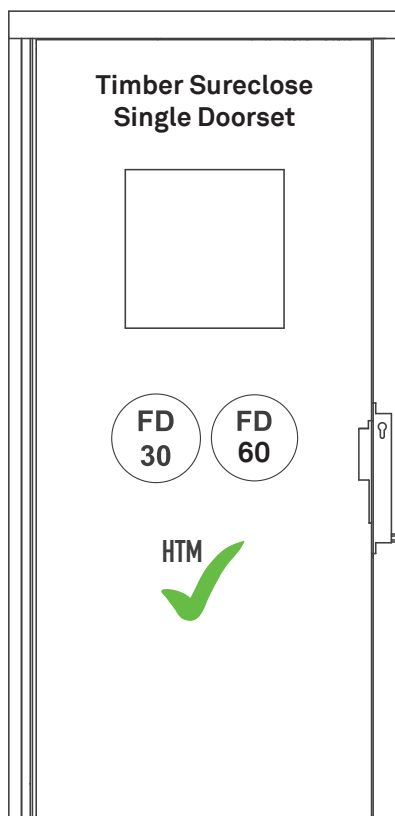
This option places the lock in the closing jamb of the door frame, with no access to the override cylinder mechanism.



This option the lock is located in the frame head.

Using the cylinder override model is not possible since the key would be too high to reach for certain users.

## DOORSET CONFIGURATION OPTIONS SINGLE DOOR



This option places the lock in the closing jamb of the door frame.

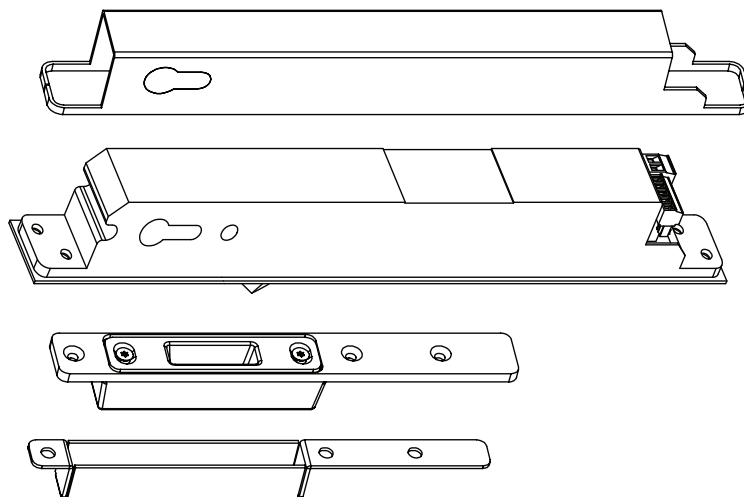
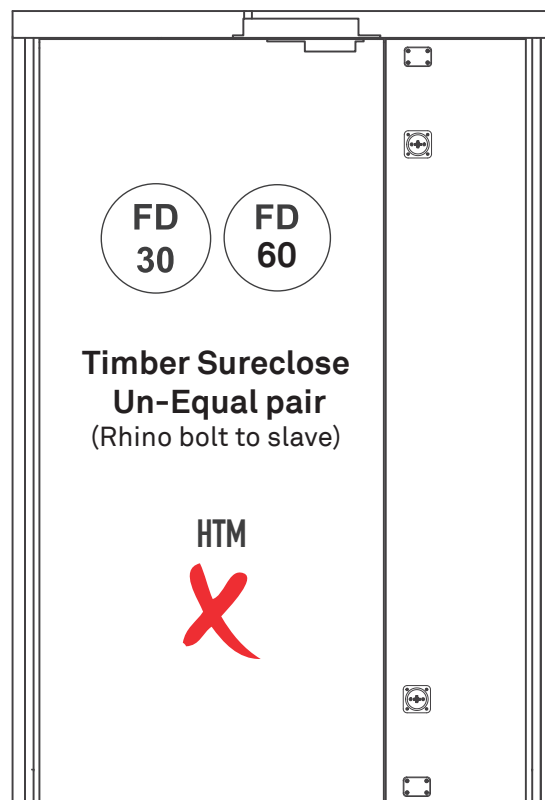
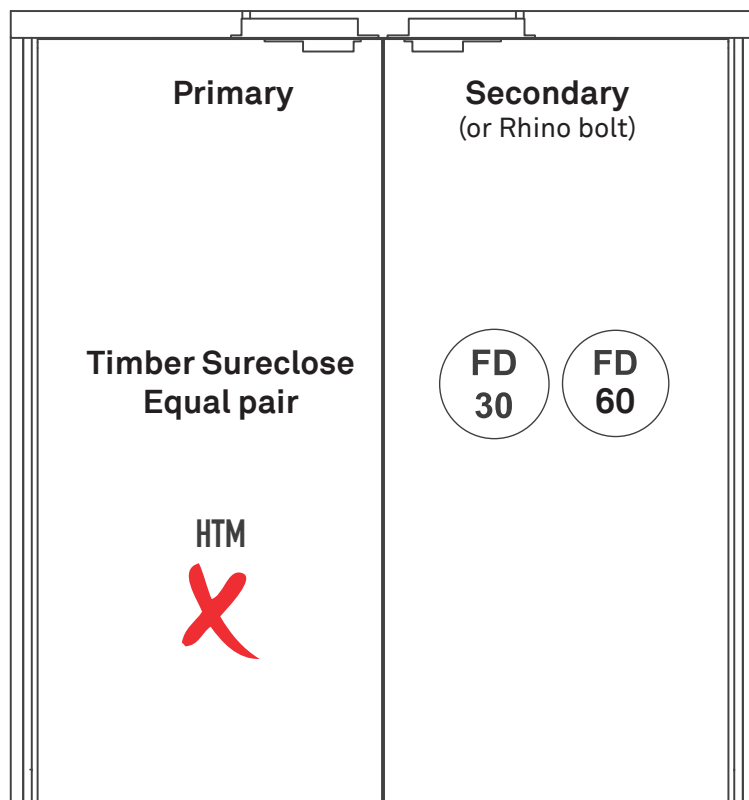
In the event of power failure and potential spring failure, A Euro cylinder passes through the frame and allows mechanical actuation of the lock via a suited or unique key.

### Notes

1. Not all scenarios will require emergency cylinder access on both sides. The specifier must consider the risks associated and select single or double sided override.
2. SHP do not supply euro cylinders. See cylinder size guide below.
3. It is recommended to use a frame depth of 125mm.

## DOORSET CONFIGURATION OPTIONS EQUAL & UNEQUAL PAIR – WITHOUT OVERRIDE (NOT HTM COMPLIANT)

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For all Equal and Unequal pair doorsets, the lock is located in the frame head.

Using the cylinder override model is not possible since the key would be too high to reach for certain users.



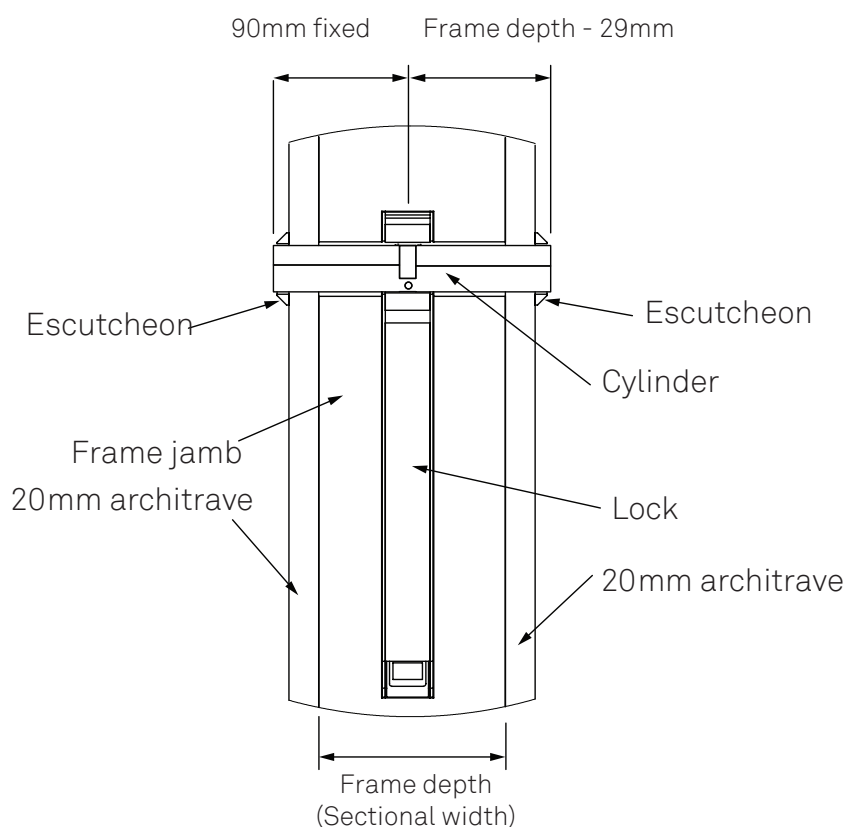
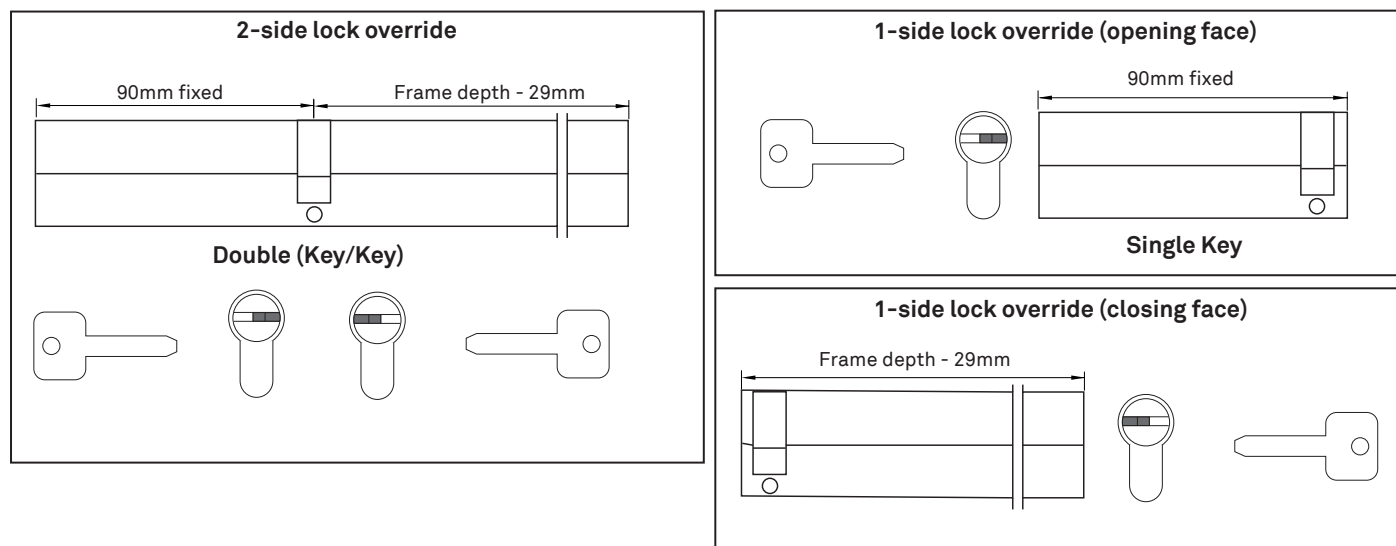
## DOORSET CONFIGURATIONS SUMMARY

| SHP doorset             | Fire rating   | Doorset configuration | Primary leaf     | Secondary leaf   | Override method | HTM compliant | Override operation        |
|-------------------------|---------------|-----------------------|------------------|------------------|-----------------|---------------|---------------------------|
| <b>Timber Sureclose</b> | FD30/<br>FD60 | Single                | High secure lock |                  | None            | No            |                           |
|                         |               |                       |                  |                  | Euro cylinder   | Yes           | Single side<br>Both sides |
|                         | FD30/<br>FD60 | Unequal Pair          | High secure lock | Rhino bolt locks | None            | No            |                           |
|                         |               | Equal Pair            | High secure lock | High secure lock | None            | No            |                           |
|                         |               |                       |                  | Rhino bolt locks | None            | No            |                           |

## SINGLE DOOR EURO CYLINDER SIZE GUIDE

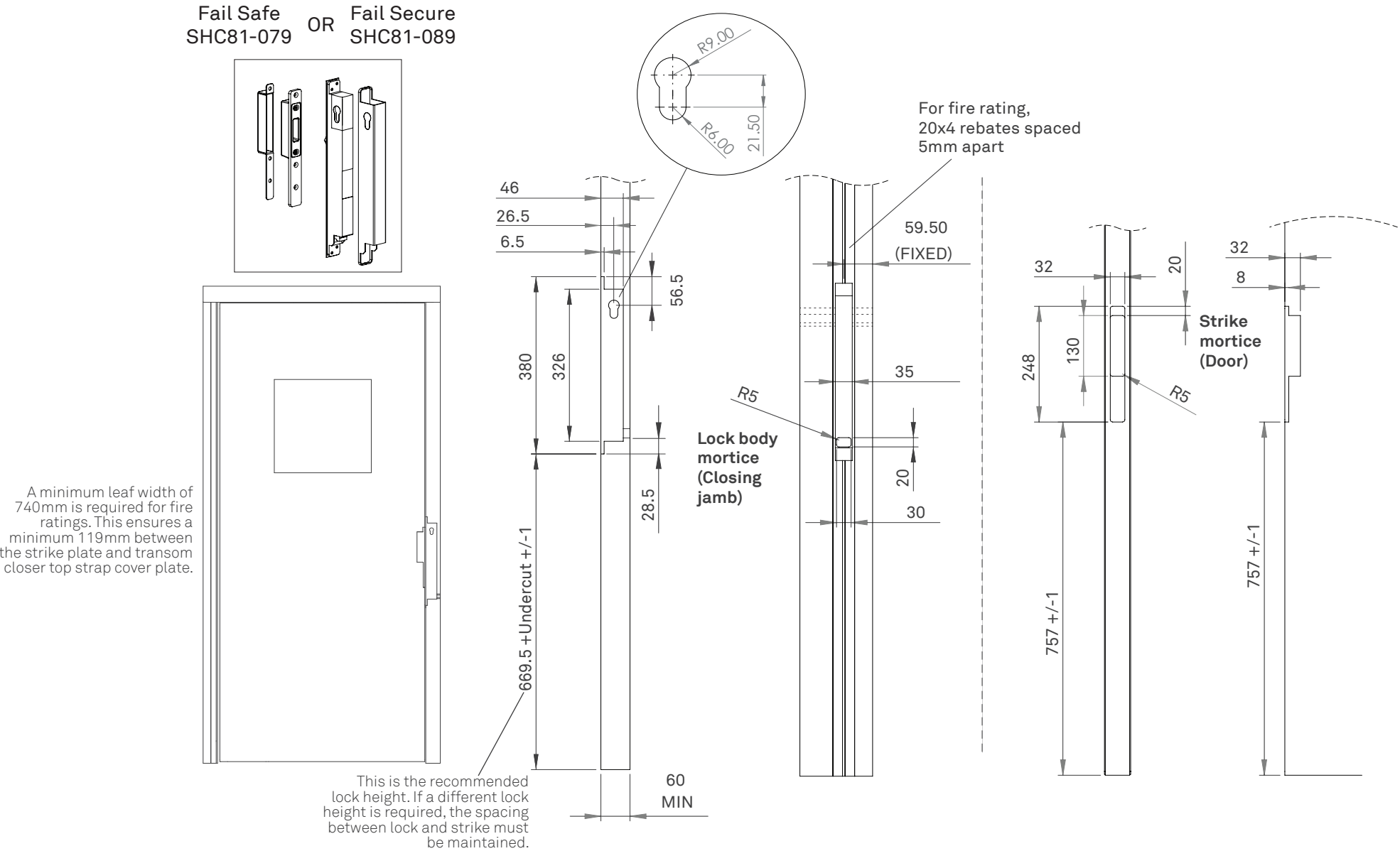
The diagrams below serve as a guide only. Due to suiting requirements, cylinder to be supplied and fitted by others. It is recommended to standardise the frame section width at 125mm.

The dimensions below represent the cylinder passing through the frame with 20mm thick architraves.



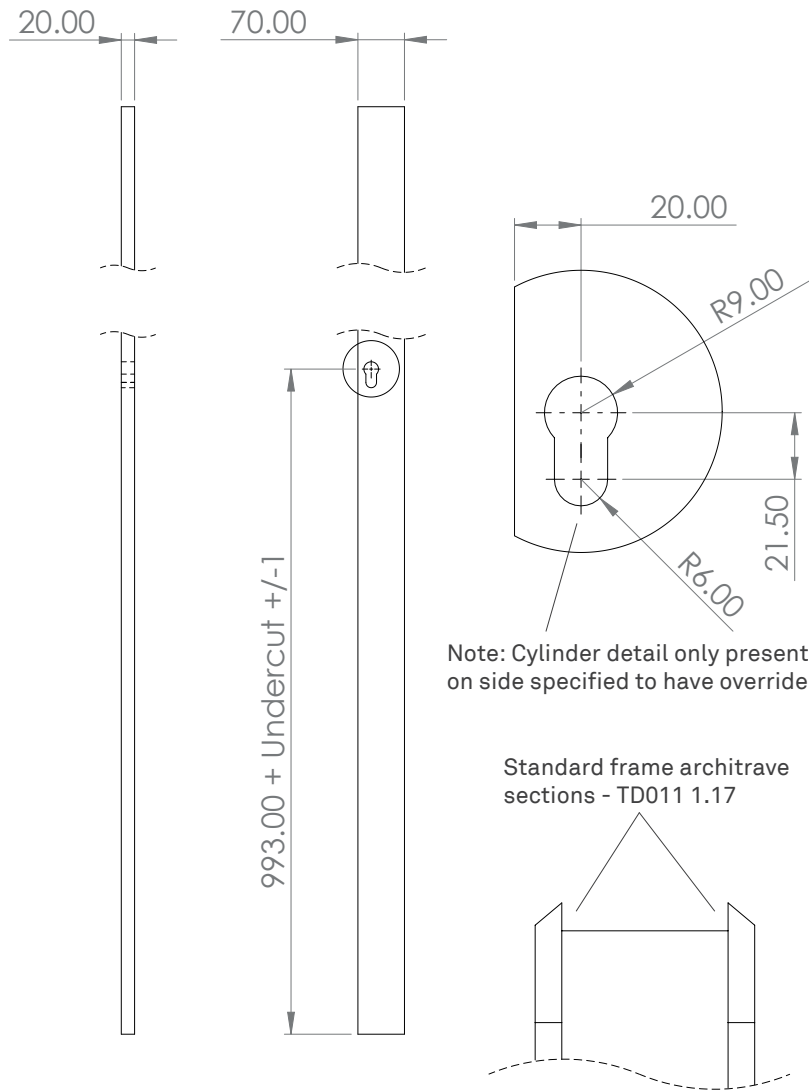
# MANUFACTURING GUIDELINES -TIMBER SURECLOSE SINGLE DOORS -FRAME

Locks can only be used within a Sureclose transom closer doorset design. Refer to TD027 for Sureclose technical and manufacturing information.

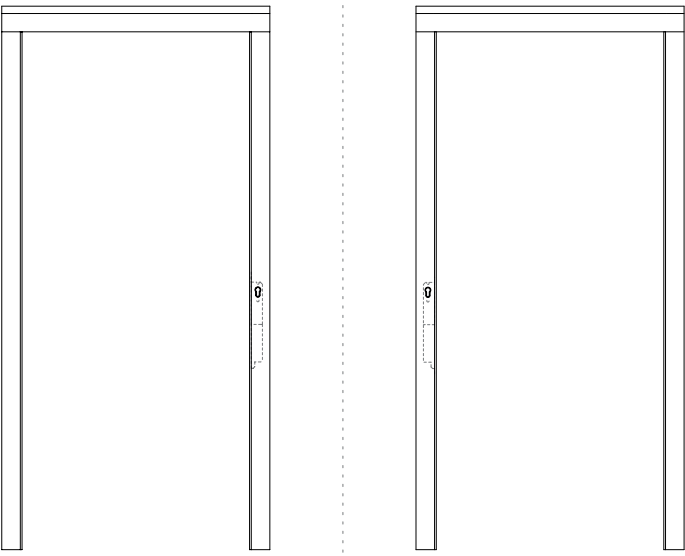


# MANUFACTURING GUIDELINES -TIMBER SURECLOSE SINGLE DOORS - ARCHITRAVE

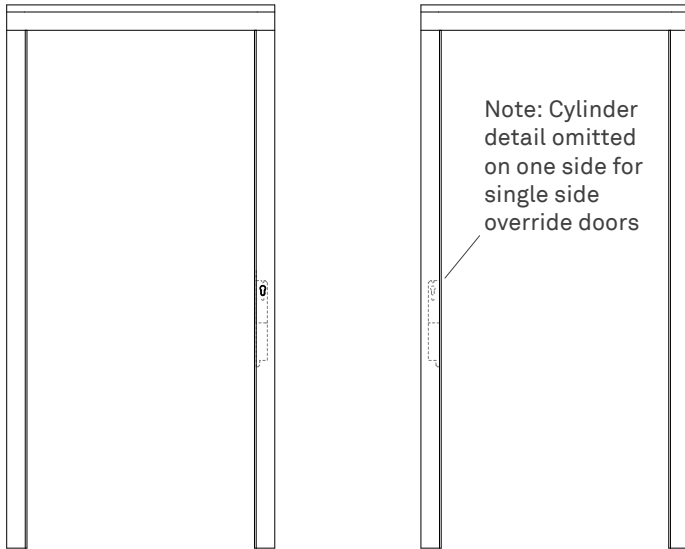
Dimensions below are SHP recommendations.



## Double Sided Override

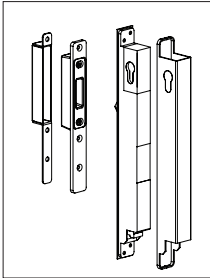


## Single Sided Override

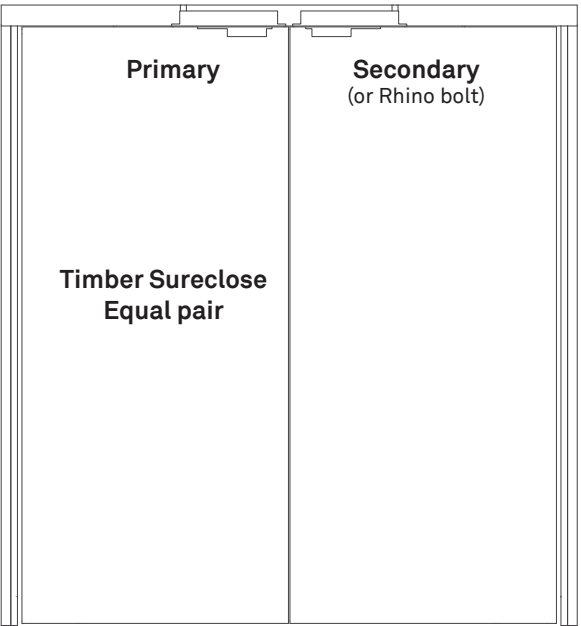


# MANUFACTURING GUIDELINES -TIMBER SURECLOSE EQUAL / UN-EQUAL PAIR

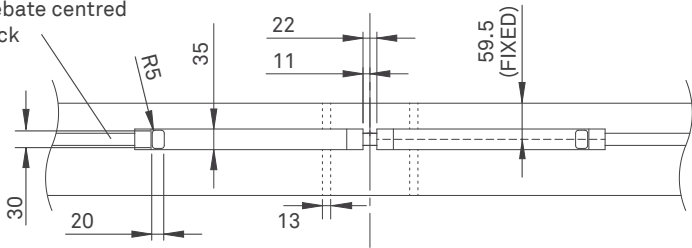
Fail Safe SHC81-079 OR Fail Secure SHC81-089



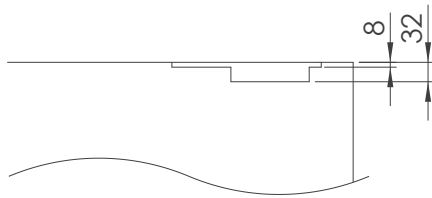
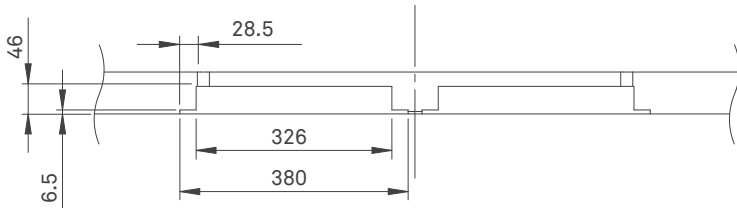
A minimum leaf width of 740mm is required to achieve fire ratings. This ensures at least 119mm of clearance between the strike plate and the transom closer's top strap cover plate.



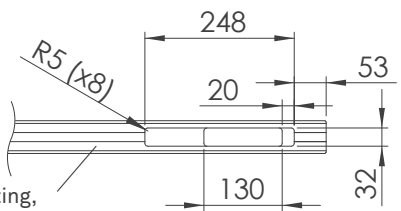
For fire rating,  
20x4 rebate centred  
with lock



Lock body mortice - Frame head



Strike mortice - Door Head



For fire rating,  
15x4 rebates spaced  
15mm apart

# OPERATION GUIDELINES

## JAMB MOUNTED LOCK

The lock override system is designed to mechanically open the door lock in event that the lock cannot be opened by usual means, e.g credential reader. This system is designed for use in emergencies.

The instructions below serve as a guide only. Due to suiting requirements, cylinder to be supplied and fitted by others.

### DISCONNECTING POWER FROM LOCK



To override the lock, insert the key into the cylinder on the door frame. Rotate the key 180°, this will only be possible in one direction. This first rotation will disconnect the power from the lock. The lock should automatically open. If it is faulty and does not open, proceed to the next step.

### MANUALLY OPENING LOCK



Continuing to turn the key, you will feel it interact with the spring loaded lock mechanism, continue to turn the key and this will retract the door bolt and allow the door to be opened.

## RESET LOCK



To reset the lock, follow the previous steps in reverse. The door should lock when closed.

# MAINTENANCE GUIDELINES

## REPLACING LOCK CYLINDER

To fit a new cylinder to the jamb mounted high secure lock the door must be opened and instructions below followed.

### RELEASING CYLINDER FIXING SCREW



To replace the lock cylinder, first remove the lock faceplate. Then use a slotted screwdriver to remove the cylinder fixation screw.

### REMOVING CYLINDER



Remove the cylinder from the frame. You may need to turn the key in the cylinder to ensure the cylinder cam is correctly aligned.



## INSTALL NEW CYLINDER



Follow the previous steps in reverse to install the new cylinder.

## MAINTENANCE SCHEDULE

It is essential that the customer implements a regular maintenance regime to support the correct function of all our products. **The frequency of checks recommended is a guideline and should be commensurate with frequency of use/severity of the environment in which it is installed.**

The following section outlines checks that should be carried. **If any product fails any of these tests, please contact your maintenance provider.**

|                                                                                                              | Maintenance                                                                                                                                                                                                                                                             |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Weekly</b><br>These items should be checked weekly and adjustments made where necessary.                  | <b>Visual Inspection</b> - A visual inspection of the product and the surrounding environment to check there is no signs of damage. Check that all hardware is flush to the wall with no ligature risks. Check keyways for signs of obstruction and clear if necessary. |
|                                                                                                              | <b>Cleaning</b> - All parts should be cleaned with mild detergent only with a damp cloth. Avoid contacting these components with aggressive cleaning fluids or excessive fluids of any kind.                                                                            |
| <b>Quarterly</b><br>These items should be checked on a quarterly basis and adjustments made where necessary. | <b>Override Test</b> - Complete a full cycle of the override system to check it is functioning correctly.                                                                                                                                                               |
|                                                                                                              | <b>Fixing Checks</b> - Ensure the fixings are holding the product securely in place.                                                                                                                                                                                    |

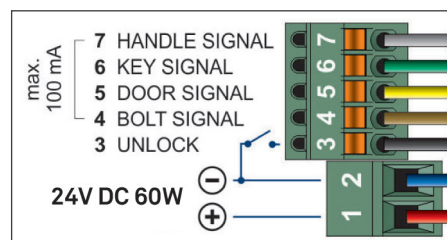
## ELECTRONIC LOCK WIRING

SHP does not supply access control infrastructure. Wiring information provided is for reference only. Please consult the M&E contractor to determine the specific access control requirements for the intended doorset application.

### CONNECTOR 1 (2-pole):

pin 1 (red, 1.5mm<sup>2</sup>) = +24Vdc/60W

pin 2 (blue, 1.5mm<sup>2</sup>) = GND



### CONNECTOR 2 (5-pole):

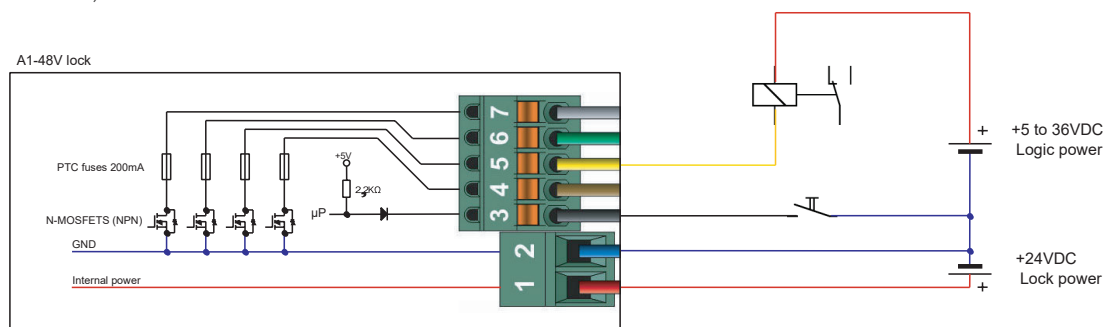
pin 3 (black, 0.22mm<sup>2</sup>) = **UNLOCK** - opening impulse - NO contact connects pin 2 (GND) and pin 3 to unlock

pin 4 (brown, 0.22mm<sup>2</sup>) = **BOLT SIGNAL** - transistor switch to GND when bolt is locked 5Vdc to 36Vdc - max. load 100ma

pin 5 (yellow, 0.22mm<sup>2</sup>) = **DOOR SIGNAL** - transistor switch to GND when bolt is locked 5Vdc to 36Vdc - max. load 100ma

pin 6 (green, 0.22mm<sup>2</sup>) = **KEY SIGNAL** - transistor switch to GND when bolt is locked 5Vdc to 36Vdc - max. load 100ma

pin 7 (grey, 0.22mm<sup>2</sup>) = **HANDLE SIGNAL** - transistor switch to GND when bolt is locked 5Vdc to 36Vdc - max. load 100ma



## TECHNICAL SPECIFICATIONS – ELECTRONIC LOCK

- Voltage 24V DC Consumption 2,35A activation current - 130mA holding current
- Fail safe only (= unlocked without power)
- No option for mechanical key override
- Adjustable strike plate as standard
- Locking components, housing and striker plate in stainless steel
- Unlocking Access control makes contact between pin 2 and 3 on the lock, the bolt retracts by spring force
- Automatic locking Electrically, each time the door closes
- Signalisation Position of the door (open/closed) and position of the bolt (unlocked/locked) as well as the use of the cylinder, transistors switch actively to GND (24V DC / max. 100mA)
- Resistance of the bolt 40,000N side load (measured directly on the bolt)
- Throw of the bolt 20mm (in less than 100 milliseconds)
- Temperature resistance range -25°C to +70°C
- Certification EN 14846:2008 (classification 3 M 9 0 0 L 7 1 1)
- DIN 18251-deel 1 (class 5)
- DIN EN 12209 (class 7)
- DIN V ENV 1627 (class 6)

Recommended power supply (PSU)

PULS CP5.241

Output: 24-28 VDC

Nominal Power: 120 W (5 A @ 24 VDC) - can supply 2 locks simultaneously

# SUPPORT

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## REPORTING A FAULT

Issues should be reported to your maintenance provider. If you need manufacturer's support please contact SHP: [support@safehingeprimera.com](mailto:support@safehingeprimera.com) or 0125 320 7096.

## SPARES

Spares are available on request, contact SHP for details and support: [info@safehingeprimera.com](mailto:info@safehingeprimera.com) or 0330 058 0988.

## MANUFACTURER'S WARRANTY

Refer to SHP document SCT056 for details of Safehinge Primera Product Warranties. Contact SHP to obtain the warranty document: [info@safehingeprimera.com](mailto:info@safehingeprimera.com) or 0330 058 0988.

**t** 0330 058 0988

**e** [info@safehingeprimera.com](mailto:info@safehingeprimera.com)

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