

dormakaba YD30D Double Sideload Lock



dormakaba YD30D Double Sideload Lock Instruction Manual

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dormakaba YD30D Double Sideload Lock



Product Information

Specifications

- **Product Name:** YD30D Double Sideload Lock
- **Compliance:** CE Directives, UK Legislation, EN14846:2008, WEEE Directive, RCM for Australia and New Zealand, UL/C-UL certification

Product Description

- The YD30D Double Sideload Lock is a high-quality locking mechanism designed for secure installations. It is compliant with various safety and regulatory standards, ensuring reliable performance.

Package Contents

- The package includes the YD30D Double Sideload Lock along with necessary mounting accessories and installation instructions.

Technical Data

- **Grade:** 0
- **Suitable** for use on fire/smoke doors as an auxiliary locking device
- **Wiring:** Fail Safe and Fail Secure connections

Product Usage Instructions

Pre-Installation Assessment

Before installation, assess the mounting requirements, wiring connections, and operating mode to ensure proper functionality.

Mounting

- **Mortise Installation (Solid Wood):** Detailed instructions for installing the lock in solid wood doors.
- **Mortise Installation (Metal Extrusion):** Instructions specific to metal extrusion doors.
- **Surface Mounting Installation (Solid Wood):** Steps for surface mounting on solid wood surfaces.
- **Surface Mounting Installation (Glass):** Guidelines for mounting on glass surfaces.

Wiring

- Follow the wiring guide provided to establish either Fail Safe or Fail Secure connections based on your requirements.

Operating Mode

- Understand the Fail Safe and Fail Secure operations for the lock to choose the appropriate setting for your needs.

Maintenance

- Regular maintenance and cleaning are essential for prolonged service life. Refer to the maintenance instructions for proper care of the lock.

FAQ

Is this lock suitable for fire/smoke doors?

The lock is suitable for use on fire/smoke doors as an auxiliary locking device when installed alongside a primary latching device with appropriate test evidence.

What certifications does the product have?

The product is compliant with CE Directives, UK Legislation, EN14846:2008, WEEE Directive, RCM for Australia and New Zealand, and bears UL/C-UL certification.

Contents and Purpose

- This document describes the installation, connection, operation, and maintenance of the lock SL30DBL. Read the document carefully and observe the instructions it contains.
- They contain important information for reliable installation and trouble-free operation.

Target Group

- The Target groups of these instructions are.
- Installer
- Service Technician
- Installers and service technicians are skilled personnel who have the specialist knowledge required for installation, commissioning, and maintenance.

Safety and Compliance

Safety Information

WARNINGS

- Live parts inside.
- The handling and installation of this device is recommended for a professional.
- Use of an unsuitable power supply unit may cause product failure or injury.
- Do not remove the cover plates or face plates.
- Ensure installation does not expose the sharp edges of the product to users.

UL REQUIREMENTS

- If the unit is installed on a fire exit door the product installation shall be allowed only if accepted by a local AHJ authority having jurisdiction and comply with NFPA 101.
- The unit is to be connected and controlled via a UL 294 or FWAX7-listed Access Control Unit.
- The unit shall be installed under NFPA 70 along with any additional requirements imposed by the local authority of jurisdiction.
- Do not connect the unit to a receptacle controller by a switch.
- If the unit is installed in conjunction with panic hardware the lock shall be installed in a manner to not impair panic device operations.
- The unit shall be powered by a UL 294 or UL 2610 listed power supply with a Class 2 power limited output.
- All factory-tested grades were not evaluated by UL.
- UL1034 rating only applies when the product is installed in a mortised application.
- UL10C rating only applies when the product is installed in a vertical position

Regulatory Compliance Information

- This product complies with the CE Directives including the Electromagnetic Compatibility (EMC) Directive, the Restriction of the Use of Certain Hazardous Substances (RoHS) Directive, and the Registration, Evaluation, Authorisation, and Restriction of Chemicals (REACH) Regulation.
- This product complies with the United Kingdom (UK) Legislation including the Electromagnetic Compatibility Regulation 2016, and the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012.
- CE and UKCA Declaration of Conformity is available at www.dormakaba.com.

EN14846:2008								
1	2	3	4	5	6	7	8	9
3	X	9	0*	/	G	2	1	1

- Grade 0 for classification 4 'Suitability for use on fire/smoke doors' applies only to the product when used as a primary latching device for a fire/smoke door.
- The product is suitable for use on a fire/smoke door when installed as an auxiliary locking device alongside a primary latching device with appropriate test evidence.
- This appliance is labeled under European Directive 2012/19/EU concerning used electrical and electronic appliances (waste electrical and electronic equipment WEEE).
- The guideline determines the framework for the return and recycling of used appliances as applicable throughout the EU.
- In Countries Outside the European Union and EEA (Norway, Iceland, and Liechtenstein): If you wish to dispose of this product please contact your local authorities and ask for the correct way of disposal.
- This product is in compliance with the Regulatory Compliance Mark (RCM) for Australia and New Zealand.
- This product is regulated by the UL/CSA and bears UL/C-UL certification.
- **Certifications:** UL294, UL1034, ULC-S533-15
- **UL File Number:** BP7604, R22400
- **UL Catagories:** CVXY, ALVY, FWAX7, GWXT

UL294	Line Security Level I Standby Power Level I Attack Level I Endurance Level IV
UL1034	Static Strength: 1,500 lbf (6,673N) Dynamic Strength: 70 ft·lbf (95J) Endurance: 250,000 cycles
UL10C	For use in a vertical orientation with any UL swinging type fire door frame rated up to and including 3 hours.

FCC

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, according to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential, commercial, or industrial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used under the instruction manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. Modifications: Any modifications made to this device that are not approved by the manufacturer may void the authority granted to the user by the FCC to operate this equipment.

Innovation, Science and Economic Development Canada ICES-003: CAN ICES-3(B)/NMB-3(B)

Product Description

The SL30DBL is a motor-driven low voltage electric lock designed to secure commercial and residential swing-through (180°) doors. The lock has been designed to address the two biggest issues in concealed electric locking today;

1. The ability to 'pull' a door into alignment even if the door has not closed in a central position.
2. The ability to release when requested even if there is excessive load on the door.


The design of the SL30DBL is unique as it has two motors that independently operate two bolt pins. The bolt pins operate on a cam action which enables each bolt pin to pull a door into place. In practice, as the door closes it may come to rest in a position that is not fully closed. The SL30DBL senses when the door is within 8mm (5/16 inch) of being fully closed in either direction and activates the bolt pin. This is an effective 16mm (10/16 inch) alignment window. The bolt pin then rotates out and pulls the door from its resting position to the closed and secured position. With the door secured and locked the SL30DBL can be given an unlock signal and it will instantly unlock. If the door is loaded (pre-load) when the unlock signal is given the SL30DBL will still unlock, even with loads

over 100kg on the door from either side. Critically the ability of the SL30DBL to instantly release with excessive pre-load on the door even occurs in the event of a power failure if the lock is configured as fail-safe.

Additional features of the SL30DBL are;

- Multi-voltage input (12 – 24VDC)
- Very low current consumption
- Door position and bolt position monitors
- High physical strength
- Fail-safe / Fail-secure on-site conversion with the re-positioning of a single switch

Package Contents

1x Lock	1x Strike Plate
	
4x 10G self-tapping screws	1x 300mm 7-way wire loom
	

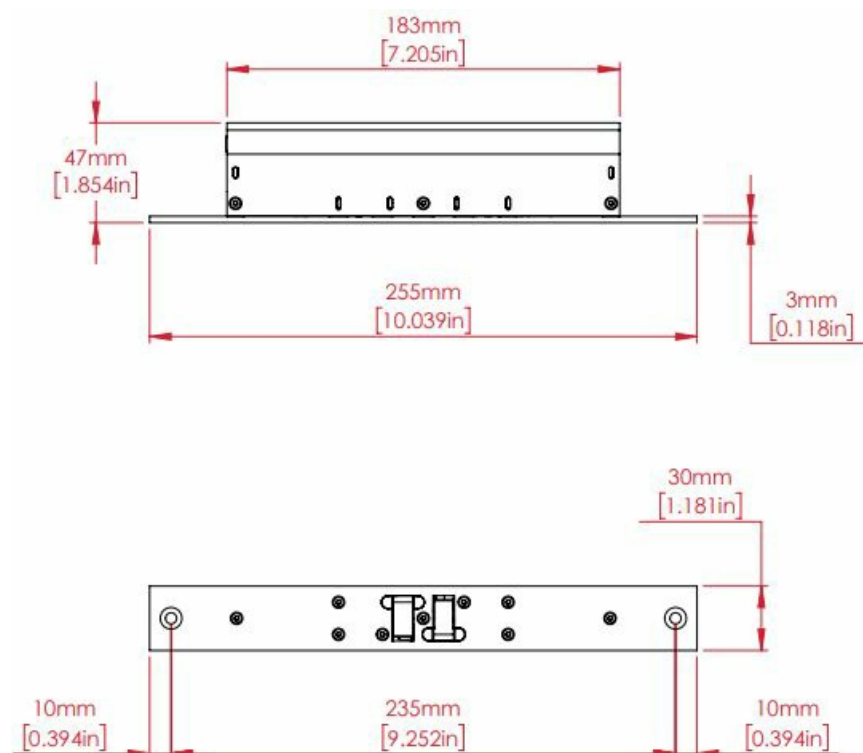
Technical Data

Materials		
Bolt	Stainless Steel 17-4PH	
Lock / Strike Plate	Stainless Steel 304	
Mechanical		
Bolt Extension	13mm	
Door Gap	max. 6mm (1/4 inch)	
Misalignment Correction	max. 8mm (5/16 inch)	
Cycle Life	1,000,000 cycles	
Holding Force	10,000N (2,250 lbf) (factory tested only)	
Side Load Release	6,000N (1,350 lbf) (factory tested only)	
Locking Time	1.0 seconds (typical)	
Unlocking Time	0.3 seconds (typical)	
Environmental		
Operating Temperature	-10°C to +55°C	
Electrical		
Power Requirements	12-24 VDC ±15%	
	Initial Power-Up Time	11 seconds
	Initial Current Draw	750mA@12VDC, 400mA@24VDC
	Standby Current	40mA@12VDC, 25mA@24VDC
Signal Contacts	Bolt Position (NO)	30VDC max., 100mA max.
	Door Position (NO)	
Compliance		
CE, UKCA, UL, FCC, IC, RCM, RoHS 2		

Product Dimensions

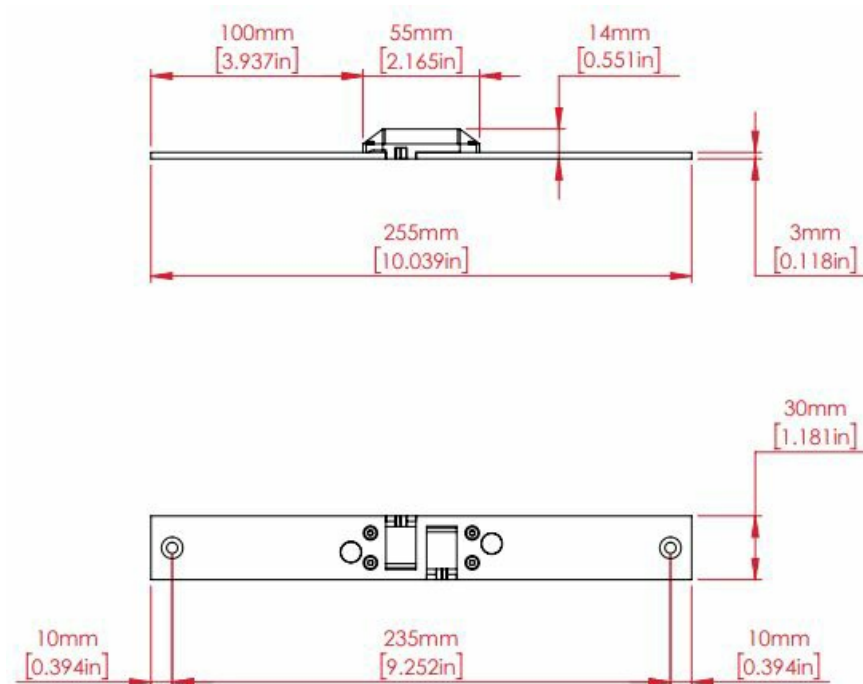
Lock Dimensions

The dimensions shown are approximate and subject to change without prior notice.



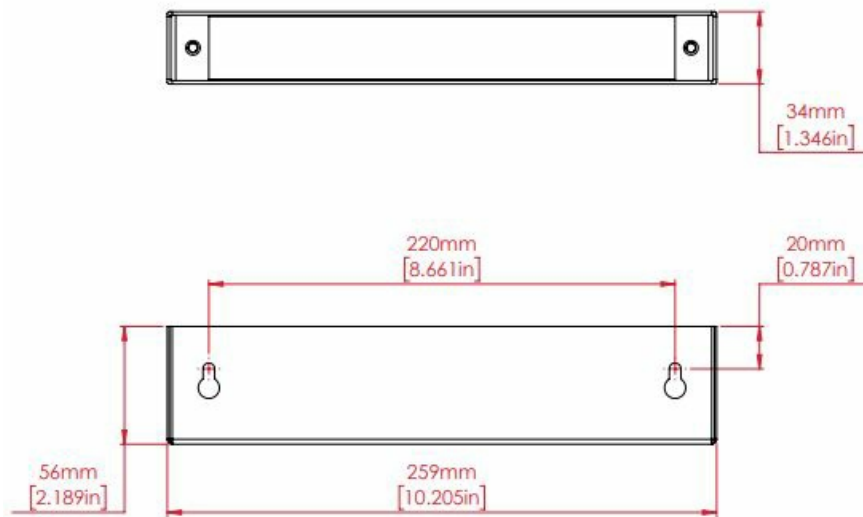
Strike Dimensions

The dimensions shown are approximate and subject to change without prior notice.

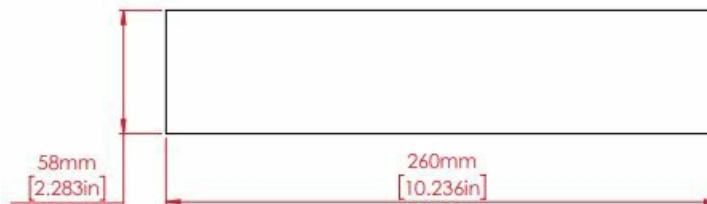


Housing Dimensions (Available Separately)

The dimensions shown are approximate and subject to change without prior notice.

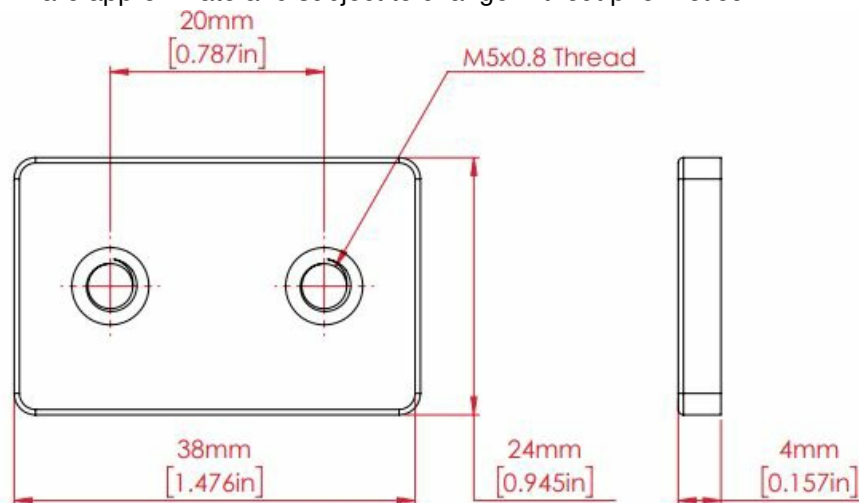


Dress Plate Dimensions (Available Separately)



Fitting Tab Dimensions (Available Separately)

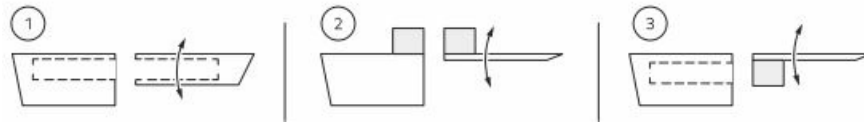
The dimensions shown are approximate and subject to change without prior notice.



Pre-Installation Assessment

Mounting Assessment

- The first decision regarding installation is whether the SL30DBL will be mortised or surface mounted.
- Mortise installation ensures a discrete solution as the lock and strike plate can be embedded into the door leaf and frame, however, in some instances, this is not possible.
- Glass doors for example require surface mounting which is done with the aid of the SL30DBL housing and dress plate (available separately).



- The lock and strike plate can be installed mortised (1), surface mounted (2), or a combination of the two (3).
- Regardless of the installation method, it is vital that the lock face plate and strike plate are aligned vertically to each other and that the gap between them does not exceed 6mm (1/4 inch) when the door is closed.
- When the door is closed, the resting position of the door leaf can be misaligned up to 8mm (5/16 inch) in either direction and the SL30DBL will pull the door into alignment with ease.
- This misalignment could be caused by an automatic door closer not aligning the door or natural distortions in the door assembly.
- The SL30DBL can be installed vertically or horizontally but is not designed to be mounted in a floor cavity firing upwards or in a wet environment. Must be installed vertically for UL10C applications.

Wiring Assessment

- Before installation begins, consideration must be made for where to run the wires and decide on what feedback is required from the lock.
- There are a total of seven available connections; three are compulsory power/control connections whilst the remaining four provide optional door and bolt position feedback.
- These optional connections can be integrated into access control or alarm systems to provide full monitoring.
- The correct gauge of wire needs to be chosen as the voltage drop across the power/control wires can limit the locks' operation. For all the remaining connections, a lower gauge wire can be used as these are only signal wires.
- The following table shows the maximum distance that the wire runs can be between the power supply and the lock, assuming the power supply outputs 12VDC or 24VDC.

Conductor Cross Sectional Area		Maximum Distance	
#AWG	(mm ²)	at 12VDC	at 24VDC
24	0.20	10m (33ft)	30m (98ft)
22	0.33	16m (52ft)	48m (157ft)
20	0.52	26m (85ft)	77m (253ft)
18	0.82	41m (135ft)	122m (400ft)
16	1.31	65m (213ft)	195m (640ft)
14	2.08	103m (338ft)	310m (1017ft)

Operating Mode Assessment

- The SL30DBL can be set to one of two operating modes before installation, Fail Safe or Fail Secure.
- When the operating mode is set to Fail Safe, the supply voltage is applied to the control input to lock the door, and the SL30DBL will unlock in the event of power loss.
- When the operating mode is set to Fail Secure, the supply voltage is applied to the control input to unlock the

door, and the SL30DBL will lock or remain locked in the event of power loss.

- The failure mode of the SL30DBL is factory set as Fail Safe. Before the lock is installed this can be changed to Fail Secure by repositioning the switch located at the end of the product.

Mounting

Mortise Installation (Solid Wood)

1. Cutting the mortise

- Referring to the product dimension drawings, a mortise is cut into the door frame to fit the lock, and a mortise is cut into the door leaf to fit the strike.
- Wooden doors and frames require full mortises with space made behind the lock body to accommodate the wire connections.
- It is crucial to ensure that the mortises in the door leaf and frame are aligned vertically and horizontally when the door is closed as this aligns the bolt pin to the strike opening and also the strike magnet to the lock internal door position sensor.
- Ensure that the final gap between the lock face plate and strike plate once it is installed will be no more than 6mm (1/4 inch).

2. Wiring the lock

- A hole needs to be drilled in the back of the mortise to bring the wires out and a connection can be made to the supplied wire loom which in turn plugs into the lock.
- Refer to the Wiring section of this document for detailed instructions on wiring.

3. Setting the operating mode

- Ensure the operating mode switch is positioned to the required state, Fail Safe or Fail Secure.
- Refer to the Operating Mode section of this document for detailed instructions on wiring.

4. Fitting the lock and strike plate

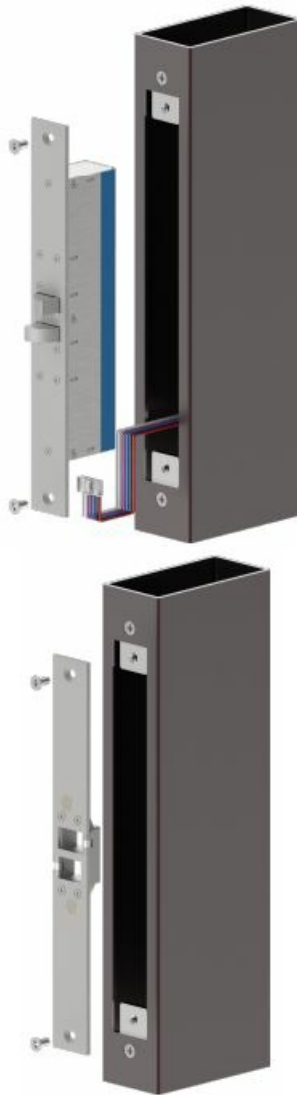
- The lock can be slid back into the door frame mortise, ensuring that the wiring integrity is maintained, and then secured in place with the supplied 10G self-tapping screws.
- Please ensure the lock is in the correct orientation to pull the door into the door jamb.
- The strike is then placed into the door leaf mortise and the remaining 10G self-tapping screws are used to secure it in place. Ensure the strike is oriented so that the bolt hole aligns with the lock bolt.





Mortise Installation (Metal Extrusion)

1. Referring to the product dimension drawings, a mortise is cut into the door frame to fit the lock, and a mortise is cut into the door leaf to fit the strike.
 - Metal doors and frames, being hollow, often only require a single rectangle cut-out to accommodate the lock face plate or strike plate. For these installations lock and strike can be installed flush using fitting tabs (available separately).
2. It is crucial to ensure that the mortises in the door leaf and frame are aligned vertically and horizontally when the door is closed as this aligns the bolt pin to the strike opening and also the strike magnet to the lock internal door position sensor.
 - Ensure that the final gap between the lock face plate and strike plate once it is installed will be no more than 6mm (1/4 inch).
 - Feed the wires out of the hollow chamber of the frame and a connection can be made to the supplied wire loom which in turn plugs into the lock.
 - Refer to the Wiring section of this document for detailed instructions on wiring.
3. Ensure the operating mode switch is positioned to the required state, Fail Safe or Fail Secure.
 - Refer to the Operating Mode section of this document for detailed instructions on wiring.
4. The lock can be placed into the door frame cutout, ensuring that the wiring integrity is maintained, and then secured in place with M5 machine screws (included with fitting tabs).
 - Please ensure the lock is in the correct orientation to pull the door into the door jamb.
 - The strike is then placed into the door leaf cutout and then M5 machine screws (included with fitting tabs) are used to secure it in place. Ensure the strike is oriented so that the bolt hole aligns with the lock bolt.



Surface Mounting Installation (Solid Wood)

1. Install two 10Gx1" self-tapping screws (included with housing) in the mounting surface, as per the product dimension drawings they should be 220mm apart, 20mm from the surface edge.
2. An 8mm hole should be drilled through the housing wall at the position chosen by the installer for the wiring to enter.
 - The wiring can be guided to the housing through surface mount conduit, or a hole in the mounting surface material.
 - Push a rubber grommet (included with housing) over the drilled hole to protect the wires from any sharp edges.
3. Position the keyhole cutouts of the housing over the screw heads and slide them into position flush with the surface edge, and then tighten the screws in place to secure the housing.
 - Feed the wires through the 8mm hole in the housing and a connection can be made to the supplied wire loom which in turn plugs into the lock.
 - Refer to the Wiring section of this document for detailed instructions on wiring.
4. Ensure the operating mode switch is positioned to the required state, Fail Safe or Fail Secure.
 - Refer to the Operating Mode section of this document for detailed instructions on wiring.
5. The lock can be placed into the housing, ensuring that the wiring integrity is maintained, and then secured in place with M5 machine screws (included with housing).

- Please ensure the lock is in the correct orientation to pull the door into the door jamb.



Surface Mounting Installation (Glass)

1. Fitting the housing

- Clean the glass surface with isopropyl alcohol and peel the protective layer from the double-sided tape of the housing.
- Position the housing flush with the edge of the glass, and press down to adhere the tape to the surface.

2. Fitting the dress plate

- Clean the glass surface with isopropyl alcohol and peel the protective layer from the double-sided tape of the dress plate.
- Position the dress plate flush with the edge of the glass and centered on the housing location, and press down to adhere the tape to the surface.

3. Fitting the strike plate

- The strike is then placed into the housing and then secured in place with M5 machine screws (included with housing).
- Ensure the strike is oriented so that the bolt hole aligns with the lock bolt.

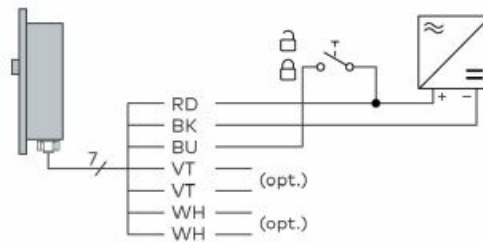


Wiring Guide

- The SL30DBL is supplied with a 7-way wire loom that plugs directly into the lock.
- The wires are color-coded as per the table below, with the power and control wires being essential connections and the four monitor connections being optional.

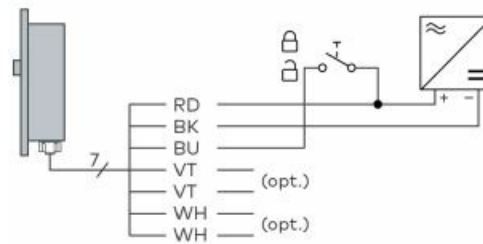
Wire Colour	Meaning	Description
RED	Power Supply (12 – 24VDC)	Positive connection to DC power supply, “+”
BLACK		Negative connection to DC power supply, “-”
BLUE	Control	Switched positive control input
VIOLET	Bolt Position Monitor	Normally open contact (NO), closed when the bolt pin is extended (optional)
VIOLET		
WHITE	Door Position Monitor	Normally open contact (NO), closed when the strike is aligned with the lock (optional)
WHITE		

Fail-Safe Connection



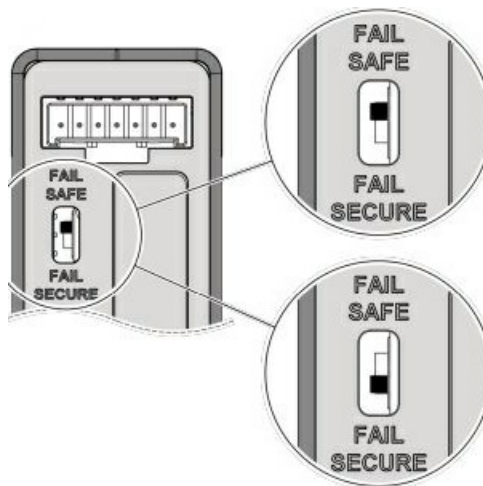
- When in Fail Safe configuration, applying a positive voltage to the control wire triggers the SL30DBL to lock (active-high locking signal).
- In the event of a power cut, the SL30DBL will unlock.

Fail Secure Connection



- When in Fail Secure configuration, applying a positive voltage to the control wire triggers the SL30DBL to unlock (active-low locking signal).
- In the event of a power cut, the SL30DBL will remain locked.

Operating Mode



Fail-Safe Operation

- Assume the lock is installed, wired, and set to fail-safe. The door is open and the positive supply voltage is applied to the BLUE wire. As the door closes the SL30DBL senses the door approaching and activates the bolt pin to pull the door into alignment.
- The Bolt Position and Door Position monitors will have changed to a closed contact state as the door is closed and secured.
- To unlock the door, the voltage is removed from the BLUE wire. The SL30DBL will immediately release and will do so even when a significant load is being applied to the door.

- With the door now open the Bolt Position and Door Position monitors change to open contact state. The SL30DBL will remain unlocked as long as the door is open but will instantly re-lock when voltage is applied to the BLUE wire and the door is closed.
- In the event of a power failure, the SL30DBL unlocks.

Fail Secure Operation

- Assume the lock is installed, wired, and set to fail secure. The door is open and the positive supply voltage is removed from the BLUE wire.
- As the door closes the SL30DBL senses the door approaching and activates the bolt pin to pull the door into alignment.
- The Bolt Position and Door Position monitors will have changed to a closed contact state as the door is closed and secured.
- To unlock the door, the voltage is applied to the BLUE wire. The SL30DBL will immediately release and will do so even when a significant load is being applied to the door.
- With the door now open the Bolt Position and Door Position monitors change to open contact state.
- The SL30DBL will remain unlocked as long as the door is open but will instantly re-lock when voltage is removed from the BLUE wire and the door is closed.
- In the event of a power failure, the SL30DBL will lock, or remain locked, if the door is closed.

Maintenance

Maintenance and Cleaning

- The lock has been factory-lubricated for life and is maintenance-free. The use of other lubricants is not permitted and will void the warranty.
- This lock contains electromechanical and electronic components that are subject to wear and tear depending on use and on-site installation conditions.
- The manufacturer does not influence these factors. As a result of this wear, the lock may fail at the end of its normal service life.

Interval	Activity
As needed:	Using a dry cloth, polish the face plate and strike the plate. Note: Look for traces of dirt and wear (dust, escaping lubricant).
Periodically, depending on frequency of use (to be determined by the operator):	<p>Check for:</p> <ul style="list-style-type: none"> • Tight fit • Smooth running • Noise during operation • Play of the latch • Contamination • Escaping lubricant • Moisture <p>If there are unusual noises, noticeable play, escaping lubricant, or similar; replace the lock.</p>

End of Service Life

- The capacitors of the lock are required to provide the fail-safe and fail-sure operation when power is lost.
- If a capacitor is compromised, it must be detected to ensure the failure operation can occur while the lock is still being supplied power as it will no longer occur after power is lost.
- The lock undergoes daily health checks on the capacitors. If a capacitor is found to be compromised the failure operation will occur, based on the position of the failure mode switch.
- Once this occurs, the lock will no longer operate. This operation will not work if the lock is wired using only two wires.

Our Sustainability Commitment

- We are committed to fostering a sustainable development along our entire value chain in line with our economic, environmental and social responsibilities toward current and future generations.



Door
Hardware



Electronic
Access & Data



Mechanical
Key Systems



Lodging
Systems



Entrance
Systems



Interior Glass
Systems



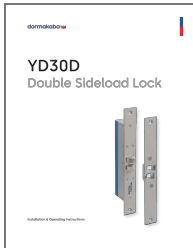
Safe
Locks



Service

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• [dormakaba.com](https://www.dormakaba.com)

Documents / Resources

	dormakaba YD30D Double Sideload Lock [pdf] Instruction Manual YD30D, YD30D Double Sideload Lock, Double Sideload Lock, Sideload Lock, Lock
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References

-  [dormakaba USA | For every place that matters](#)
- [User Manual](#)

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