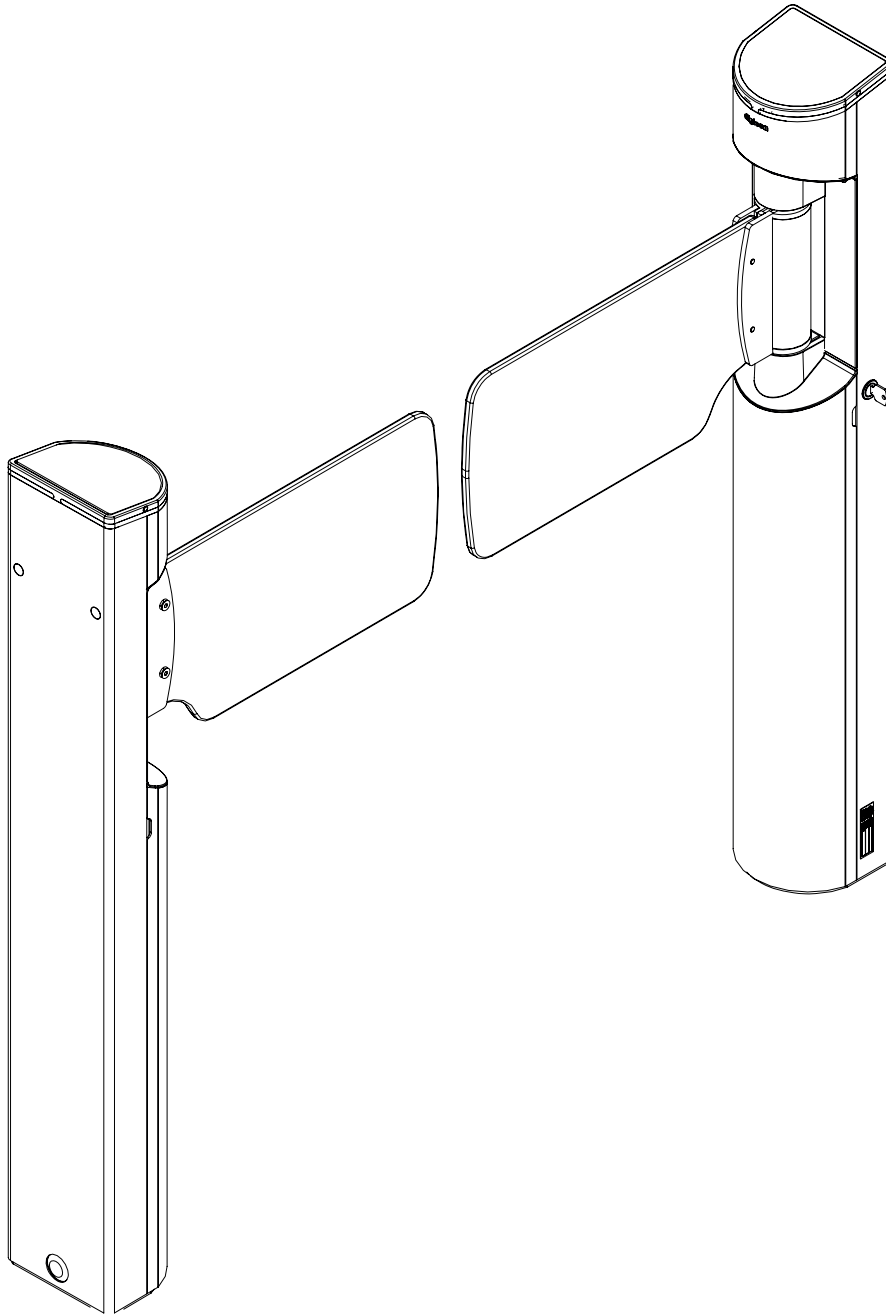

d*slim*



digicon

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Documentation Department - EDS

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Note: If you wish to obtain the history of all versions of this manual, please contact your representative or Digicon directly.



WARNING!: Digicon reserves the right to modify the features of its products at any time to adapt them to the latest technological developments.



WARNING!: Digicon reserves the right to change the information contained in this manual without prior notice.



WARNING!: “After the product’s useful life, dispose of it in accordance with the National Waste Policy.”

- The disposal should not be in regular trash, as it can cause harm to the environment and human health. You can send it to one of our addresses in Gravataí/RS or Barueri/SP or take it to a selective collection point in your area.

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1. Presentation

When innovation meets robustness and design meets reliability, you find the best access control solution. Digicon introduces a solution designed with meticulous attention to detail to bring innovation, quality, and design to the access control market. The dSlim is the result of an intensive research process into global trends and exhaustive engineering work.

Learn more about our products by visiting our website, using the QR code below:



www.digicon.com.br

2. Safety Instructions

2.1 Symbols

You will find the symbols below in the Product Manual. They indicate important Caution and Care notices regarding the safety, installation, operation, and maintenance of the equipment(s).



ATTENTION!: Describes something important that should be known by the qualified technical professional and the user.



CAUTION - DANGER OF INJURY/HARM!: Describes situations of risk that can lead to injuries and/or harm.



CAUTION - DANGER OF DEATH!: Describes high-risk situations that can lead to death. These cases are related to interaction with the internal part of the equipment, and it is advisable to use a qualified technical professional.

Read and keep the instructions in this manual: Read and keep this Product Manual for future reference. Carefully read all safety, unpacking, installation, operation, and maintenance instructions before operating this equipment.

Follow the instructions and warnings of attention and caution: Follow all installation, operation/use, and maintenance instructions. Pay attention to all caution, care, and precautionary warnings in the operation instructions, as well as those affixed to this equipment. Caution and care warnings are essential for the protection of the user and the qualified technical professional, as well as for the longevity of equipment use.

2.2 Terminology

The terms defined below are used in this document. The given definitions are based on those found in safety standards:

Qualified Technical Professional: The term qualified technical professional applies to individuals trained and certified by Digicon who are authorized to install, replace, or provide technical support for its equipment. It is recommended that the qualified technical professional utilize their expertise, technical skills, and best practices to prevent potential injuries to themselves and others in restricted access areas. This approach should be taken to mitigate risks and also to enhance the equipment's lifespan.



CAUTION!: Installation and/or maintenance performed by a non-qualified technician may void the equipment's warranty.

User: The term 'user' applies to individuals who are not qualified technical professionals and operate the equipment.

2.3 Risks

The following safety information and warnings are provided to protect you from injury and prevent damage to the equipment. Children and individuals who require assistance may be unable to assess the risks associated with using the equipment, which could result in injury or life-threatening situations. Special attention should also be given to animals that are near the equipment.

Below, we will mention risks that should be observed in various situations;

2.3.1 Risk of unpacking the equipment



CAUTION!:

- Always use the appropriate tools;
- Always use the necessary PPE (gloves, shoes, and safety glasses).



CAUTION - RISK OF INJURY:

- Handle the equipment packaging with care;
- The packaging is heavy, be careful not to tip it over, as it can cause injuries and equipment damage;
- Be cautious when removing the packaging lid, as it can fall and cause injuries and equipment damage;
- Be mindful of your hands and feet when removing the equipment from the packaging and placing it at the installation site.

2.3.2 Risks During Equipment Installation



WARNING!:

- All installation steps must be carried out by a qualified technical professional, and appropriate tools and PPE (Personal Protective Equipment) must be used;
- Before connecting the electrical power, perform a detailed inspection of the installation .



CAUTION - RISK OF INJURY:

- Be careful when positioning this equipment in the installation location, as its size and weight can cause injuries;
- During the initial operation phase, the doors may move. Keep the passage area clear to prevent them from colliding with objects and people.



CAUTION - RISK OF DEATH!:

- This equipment operates with dangerous electrical voltages. To avoid the risk of electric shock, installation must be carried out exclusively by a qualified technical professional;
- Before performing any procedure, make sure the electrical power is turned off.

2.3.3 Risks in equipment usage



CAUTION - RISK OF INJURY / WOUND!:

- Caution, this is an access control equipment, the doors may close in certain situations. The impact of the doors on the human body can cause bruises and even fractures;



CAUTION - RISK OF DEATH!:

- Children and people who need assistance should be constantly supervised, as they may be unable to assess the risks associated with the use of the equipment, which could result in injury or life-threatening situations.

2.3.4 Risks in Equipment Maintenance

 ATTENTION!:

- All maintenance steps must be carried out by a qualified technical professional, and appropriate tools and PPE (Personal Protective Equipment) must be used.

 CAUTION - RISK OF INJURY/HARM!:

Be cautious of your hands and fingers during the maintenance process, as the door movement mechanisms can cause serious injuries.

 CAUTION - RISK OF DEATH!:

- The equipment contains glass parts. Always use safety goggles;
- Before performing any procedures, make sure the electrical power is turned off;
- Failure to follow the above recommendations can result in serious injuries and a risk of death.

2.3.5 Risks during the equipment cleaning process

 ATTENTION!:

- Use the necessary PPE (Personal Protective Equipment) throughout the cleaning process (gloves and safety goggles).

 CAUTION - RISK OF INJURY/HARM!:

- Be cautious during the cleaning process, as the doors may close in certain situations. The impact of the doors on the human body can result in bruises and even fractures;
- In the cleaning chapter of this manual, appropriate cleaning products are listed. The use of the correct products protects both the equipment and the skin of the person performing the cleaning.

3. Characteristics of the dSlim

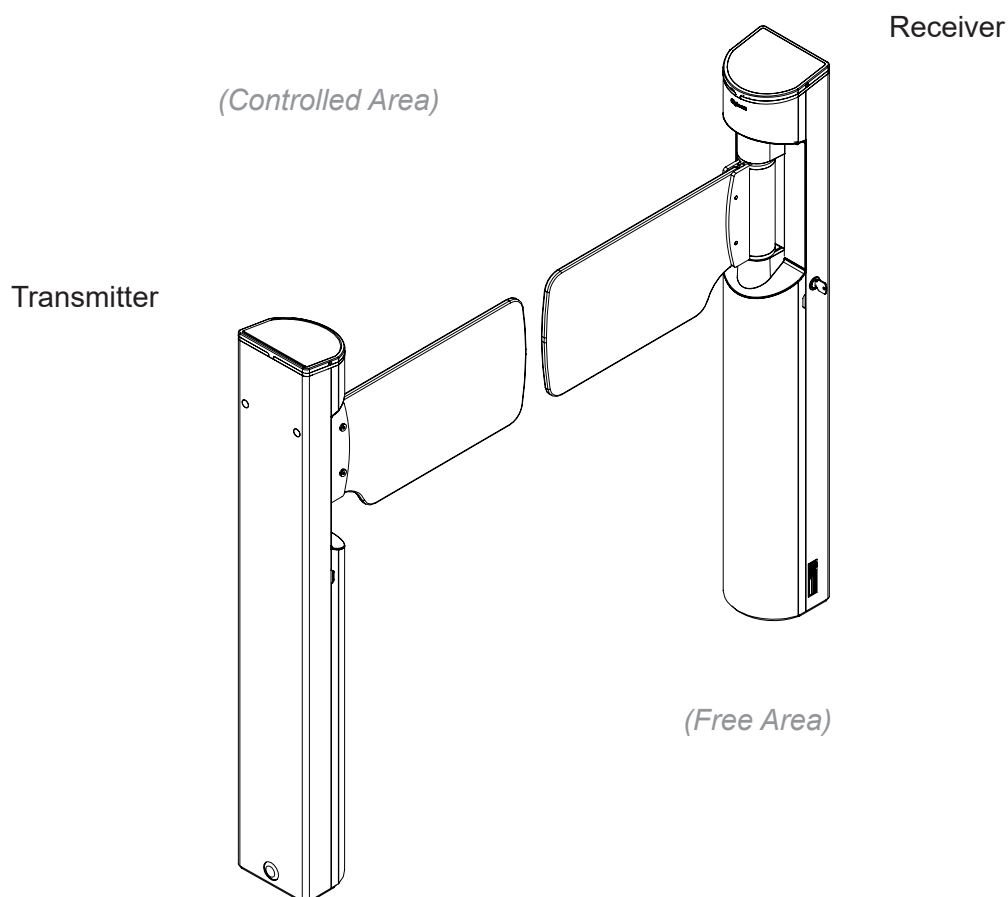
1. Innovative design;
2. Robust solution with a motorized system and proprietary technology control;
3. Reinforced structure for floor mounting;
4. Multiple door options, such as 9,90mm / 0,39" polycarbonate or stainless steel clip-style doors;
5. Available with 9,90mm / 0,39" polycarbonate doors;
6. Configurable door movement speed;
7. Optional mechanical door brake;
8. Equipped with pictograms to indicate authorization for passage (green LEDs) or non-authorization (red LEDs);
9. Audible signal (Beep) for configurable access control;
10. Bidirectional door movement;
11. Inputs for door opening or closing control;
12. Allows for proximity reader installation on the top cover;
13. Available with a 2D/QR Code barcode reader option;
14. Easy integration with access controllers available in the market;
15. Easy interconnection between "R" and "T" cabinets;
16. Configurable passage time control modes;
17. Configurable safety mode;
18. Available in versions with and without passage sensing.

3.1 Functional Description

The dSlim features a motorized system for opening and closing access doors, which is activated after the user's identification and authorization. It also offers the option of a sensor system used to monitor the passage of individuals during access, controlling the direction of passage. These sensors also serve to protect the user.

The equipment operates with a mechanism driven by brushless permanent magnet motors. Because the motor does not rely on a set of brushes for electrical activation, there is no mechanical wear of electrical contacts, thus extending the motor's lifespan.

To create a passage, two modules are always required. On the right side, when looking at the passage from the open area to the controlled area, there will be a Receiver module, while on the left side, there will necessarily be a Transmitter module. See the example below:



When configuring the system with sensors, the following definitions apply:

Receiver (R): This is the side that houses the receiving sensors and the electrical panel. It includes components such as the interconnection board, control board, power terminal block (BN1), and the power module. The interconnection cables are factory-installed on the receiver side.

Transmitter (T): This is the side that houses the transmitting sensors and the interconnection board (BN2).

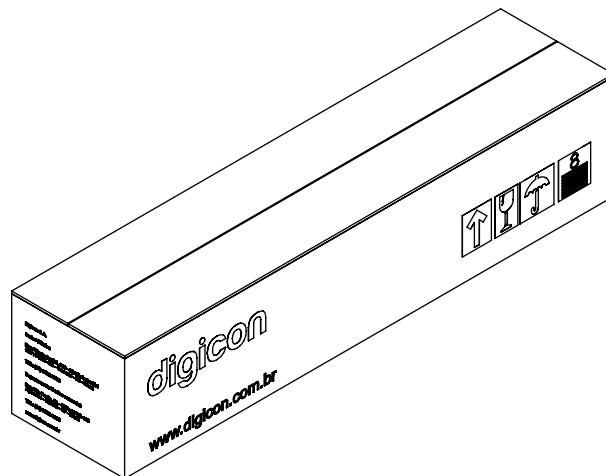
4. Unpacking, Mounting, and Electrical Connection

⚠ ATTENTION! - Only allow **qualified technical professionals** to install this equipment. Installation must comply with all local standards and regulations.

4.1 To open the packaging

As the items in the packaging may vary depending on the customer's request, it is of utmost importance to perform a careful visual inspection before starting the installation and assembly process. All Digicon packaging comes with a checklist that serves as a guide for this inspection. Be sure to follow the provided checklist to verify that all necessary components and accessories are present and in good condition before proceeding with the installation. This will help prevent issues during the assembly process and ensure that the equipment functions as expected.

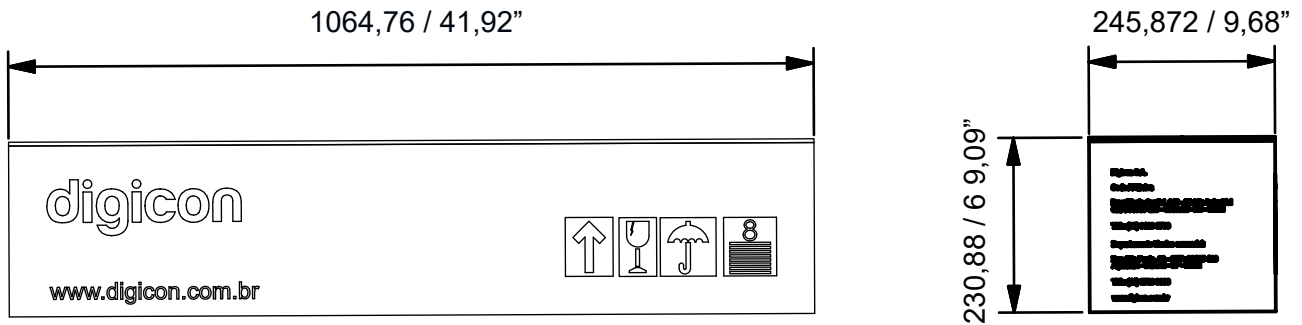
⚠ ATTENTION! - Upon receiving the equipment, please check for any damage to the packaging. If damage is observed, take photos and send them to the responsible carrier.



⚠ CAUTION - RISK OF INJURY/HARM! The packaging is heavy, and it requires suitable transport equipment, such as a pallet jack, to move it safely.

⚠ CAUTION - RISK OF INJURY/HARM! Always use the necessary PPE (Personal Protective Equipment) such as gloves, safety shoes, and protective eyewear.

4.1.1 Packaging Dimensions:



⚠ ATTENTION! - The measurements of the dSlim are illustrated in millimeters and inches.

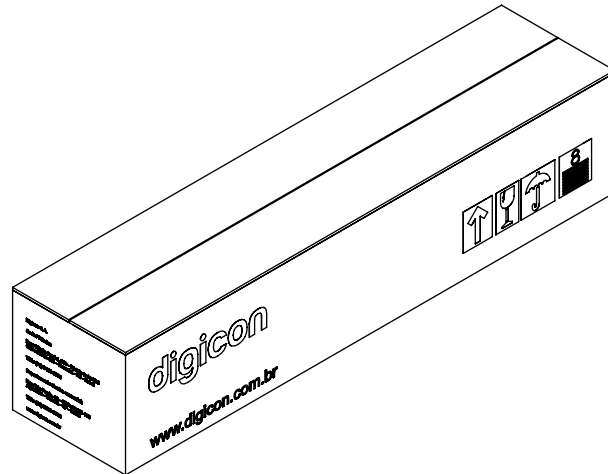
4.1.2 Tools required:

- Gloves for protection (PPE);
- Scissors or utility knife

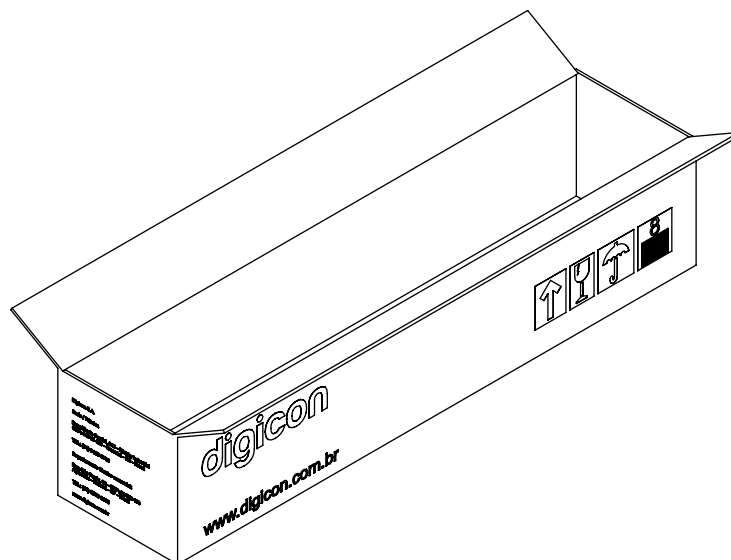
⚠ CAUTION - RISK OF INJURY/HARM!: When handling the cutting tools required for opening the packaging. They can pierce or cut the person unpacking the equipment.

4.1.3 Step-by-step unpacking of the packaging:

1. To open the cardboard box, the tapes securing the box to the pallet should be cut using scissors or a utility knife;

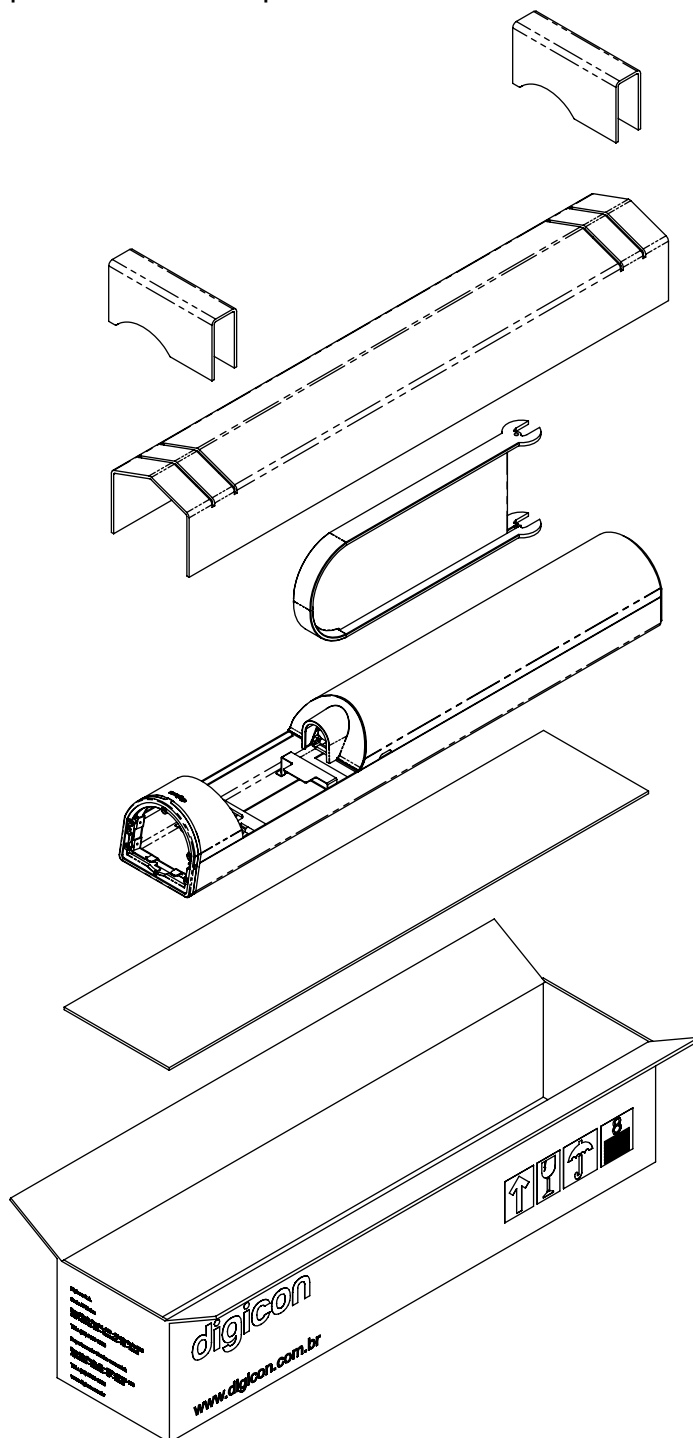


2. Remove the staples on the box lid, and then proceed to open the four sections of the packaging lid;



3. After opening, the parts of the dSlim can be removed;

 **CAUTION!** - Use appropriate protective footwear as heavy parts may fall on the feet of the qualified technical professional.

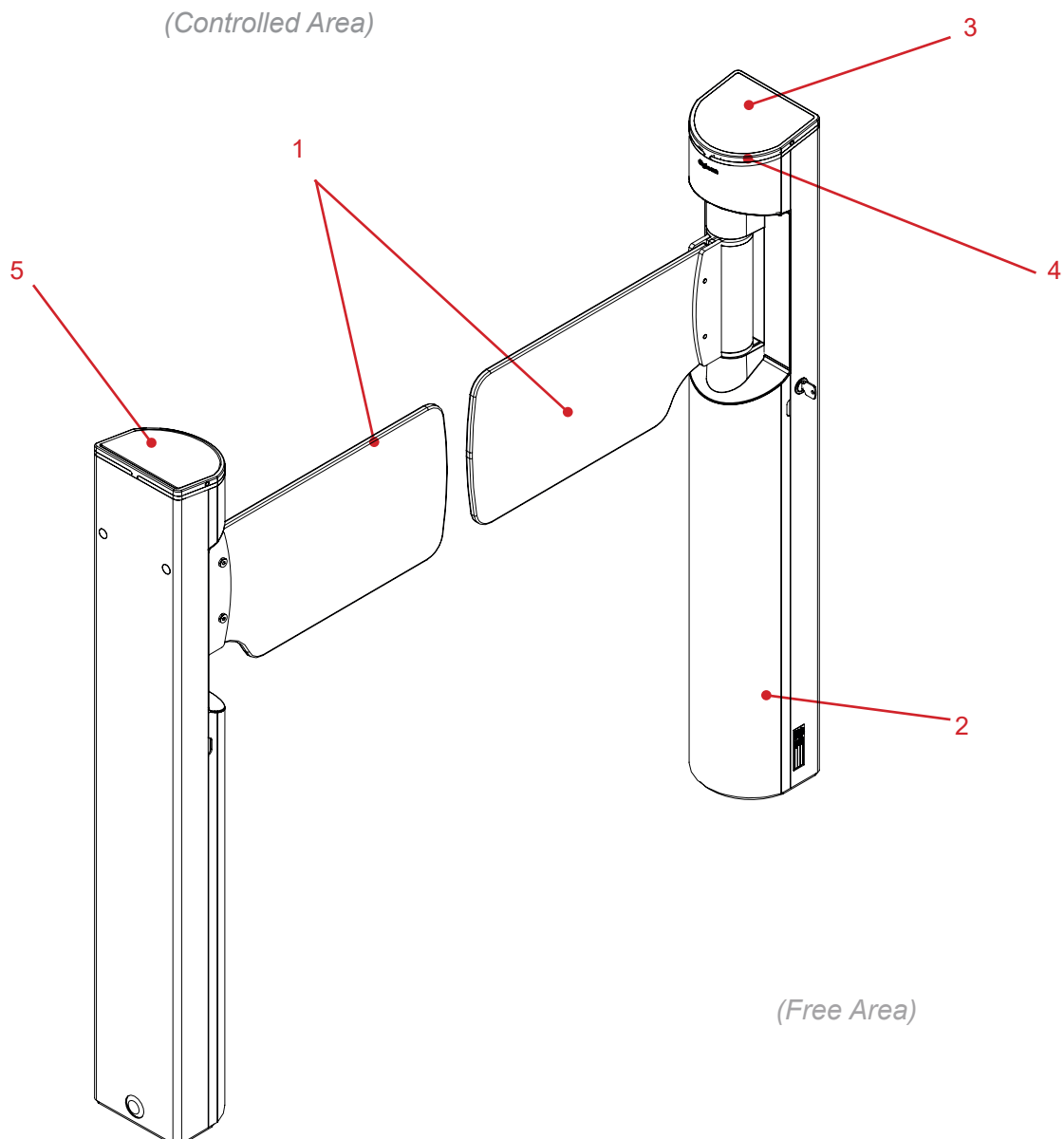


 **CAUTION - RISK OF INJURY:** It requires at least two people to move the module.

4.1.4 Key Parts of the Product

The external parts of the equipment are listed below and identified by numbers in the figure below:

1. Polycarbonate door or Clip model in stainless steel.
2. Front door for access to the dSlim's electronics and mechanism (1020 or stainless steel).
3. Location for optional reader (Biometrics, barcode, Mifare, etc.).
4. Operation and guidance pictogram (top).
5. Top cover (1020 steel).



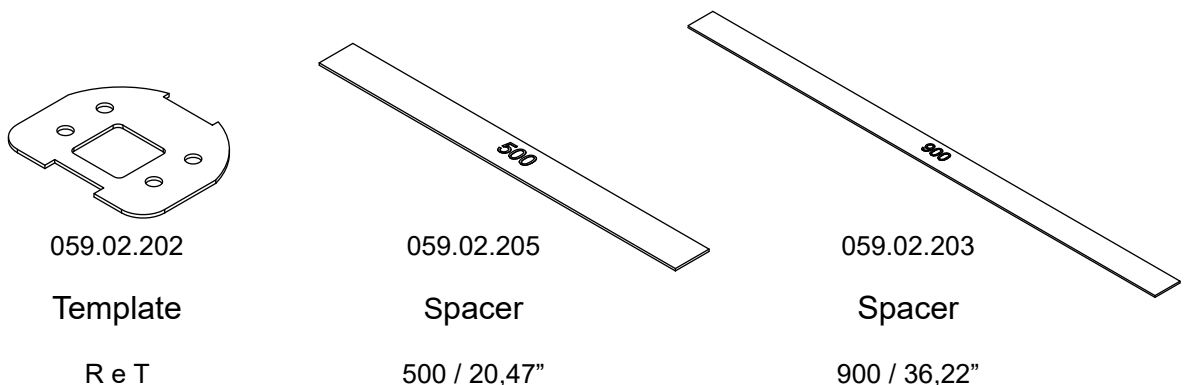
4.2 Installation

4.2.1 Before installing the dSlim, please verify the following:

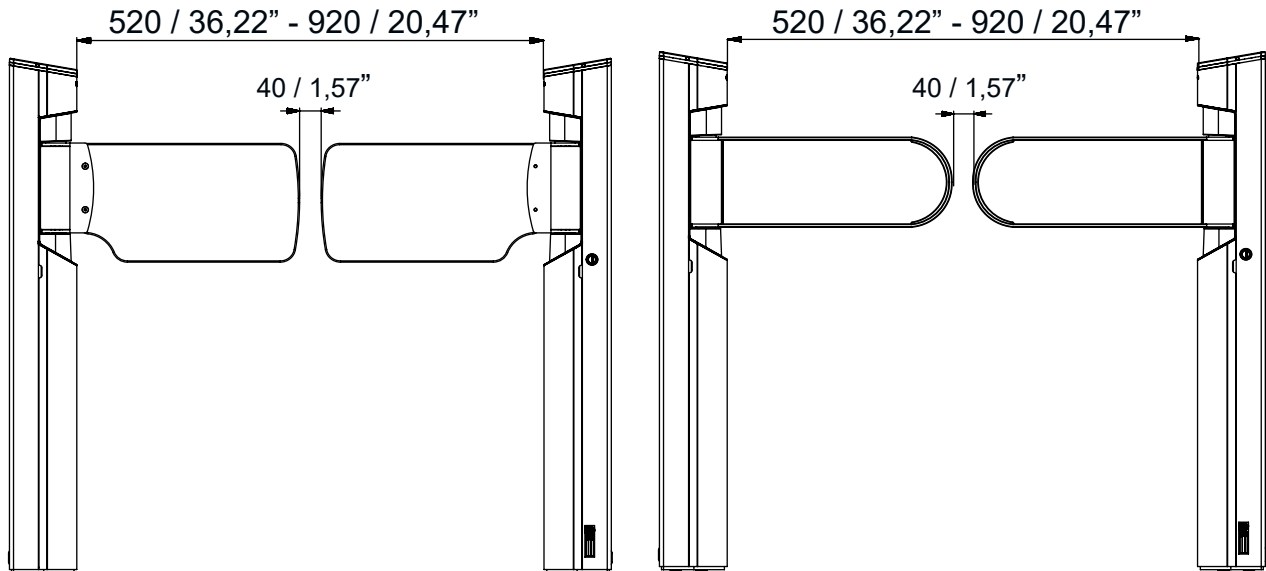
1. If the chosen location for equipment installation is firm and level. It should meet the following flatness and leveling requirements respectively (Standards: ASTM E 1155-96 and ACI 117-90):
 - **PP $\geq$ 25 (Floor Flatness)**
 - **NP $\geq$ 20 (Floor Levelness)**
2. If there is a power source near the location that is compatible with the equipment's power consumption.
3. If the chosen location is suitable for installing the access controller (indoors).
4. If the floor is in a condition to receive anchors (minimum of 40 mm / 1,57") of concrete with a strength of FCK15 M.P.A. or equivalent). Digicon recommends HILT brand anchors.
5. If the embedded boxes and conduits for electrical and data cables are properly installed.
6. If all necessary tools are available.
7. If all required personal protective equipment (PPE) for installation is available.

 **ATTENTION!** - Since the installation of the dSlim requires drilling into the floor, it is extremely important to choose the installation location carefully.

Positioning template: The positioning template should be requested separately; it is sold as an additional item and is not included with the product.

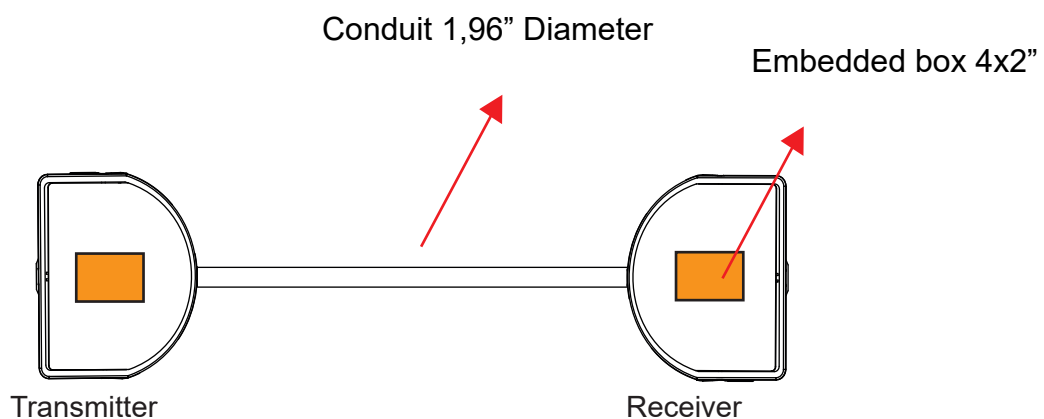


The distance between the boxes depends on the size of the doors. The doors should be adjusted to have a small gap between them of approximately 1,57".



This gap is important to ensure that even when the door is closed, it does not harm the user.

⚠ ATTENTION! - The measurements of the dSlim are illustrated in millimeters and inches.



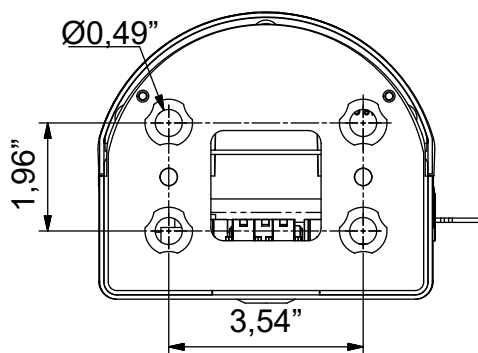
4.3 Floor fixation

- The image below indicates the product's floor fixation points.
- The surface should be firm and level to ensure proper operation of the passage control sensor and to maintain the alignment of the doors.
- Fixation should be done using mechanical anchor bolts, also known as expansion bolts, or through chemical fixation.
- For mechanical anchor bolts, the minimum floor thickness should be 3,93". For cases where the floor thickness is less than 3,93" or for special floors, chemical fixation should be used.

⚠ ATTENTION! - To facilitate tightening the screws, a long extension should be used.

(Controlled Area)

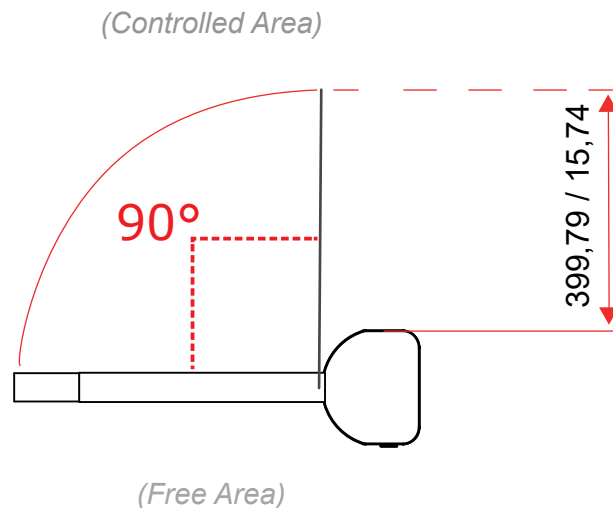
Receiver or Transmitter (R or T)



(Free Area)

⚠ ATTENTION! - The measurements of the dSlim are illustrated in millimeters and inches.

It is essential to check the alignment of the doors in the closed position during installation. The distance between the doors must be the same from the top to the bottom.

Passage clearance:

⚠ ATTENTION! - The measurements of the dSlim are illustrated in millimeters and inches.

Digicon complies with the ABNT NBR 9050 Accessibility to Buildings, Furniture, Urban Spaces, and Equipment standard.

Step by step:

1. Use a (0.47") drill bit to make a hole with a depth of 3,54" (3.54 inches) (M10 threaded rod).
2. Clean the hole with a blower or vacuum to remove dust residue.
3. For the installation of the anchor (mechanical or chemical), refer to the manufacturer's instructions.

4.4 Door Fixation

The dSlim is packaged with the doors uninstalled, which means they are included with the equipment but separate from it. This is done to prevent damage to the equipment and doors during shipping.

To install/attach the doors, simply follow the step-by-step instructions below:

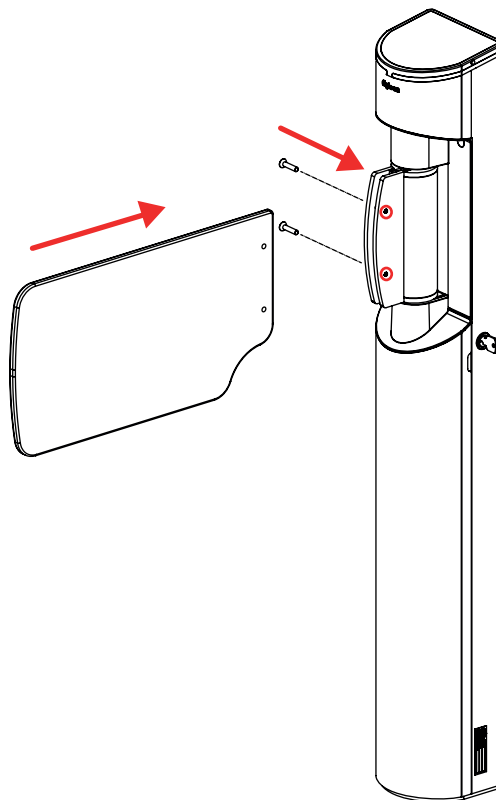
Step 1

- Insert the two door axles into the holes in the equipment's pivot rod.

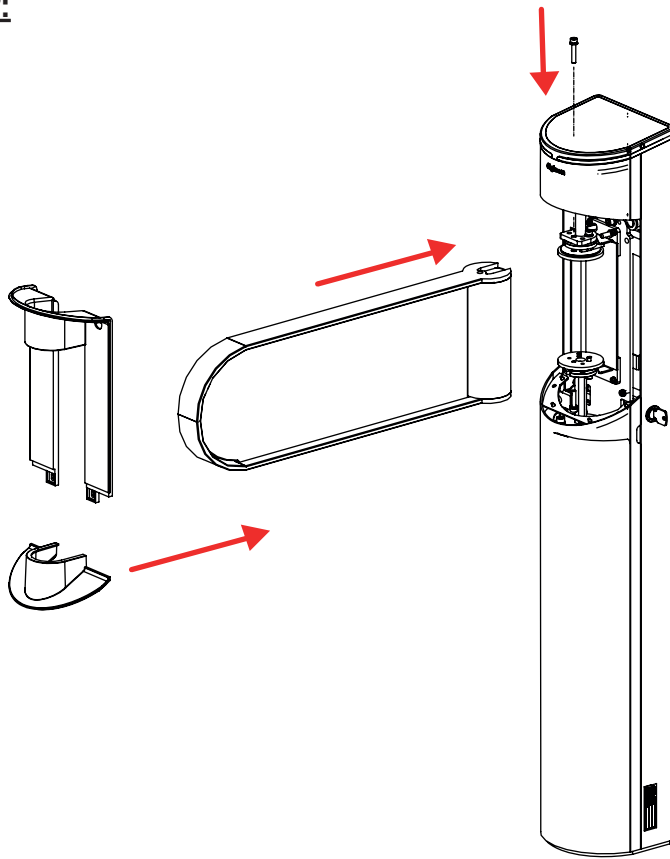
Step 2

- Using a 0,98" Allen wrench, place the M6 Allen screws (provided with the doors) in the two holes located behind the door attachment points, thus securing the door system to the equipment's pivot rod. Recommended torque is 10Nm.

Polycarbonate door:



Clip door:



4.5 Access to dSlim after assembly

⚠ CAUTION - DANGER OF DEATH! Avoid electrical shock! Opening or removing the doors of this equipment may expose you to dangerous voltages.

⚠ CAUTION - DANGER OF DEATH! To reduce the risk of electrical shock, before performing maintenance, turn off the equipment's power by switching the circuit breaker to the OFF position. All maintenance services should be performed by qualified technical professionals only.

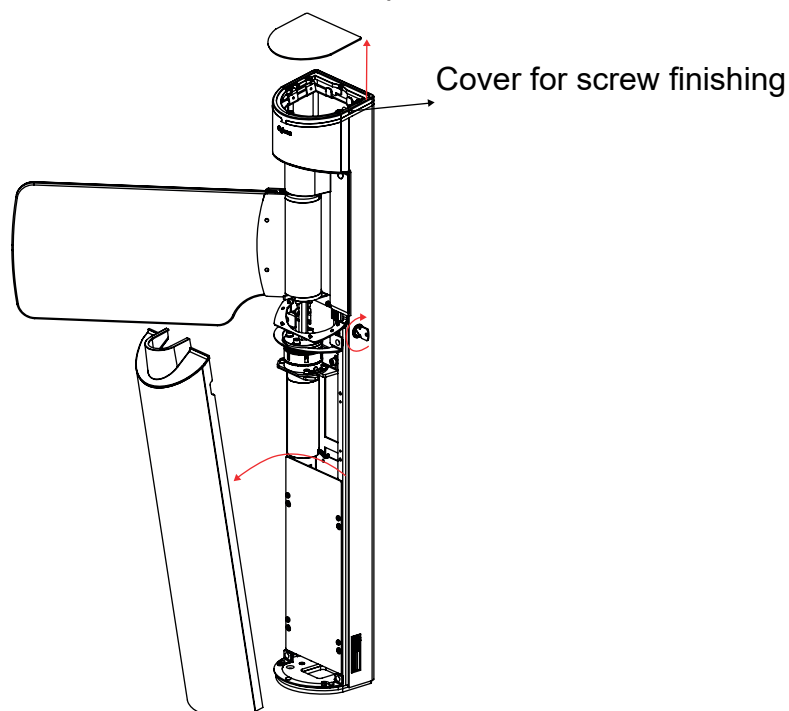
After the dSlim is installed and assembled, access to the inside of the equipment can be achieved through two means:

1st Through the top cover: Provides access to the readers, pictograms, and motor plate.

- Remove the finishing caps from the screws;
- Use a 0,98" Allen wrench to remove the screws.

2nd By the access door: it provides access to the controller board, interconnection board, AC terminal blocks, circuit breaker, motor power supply, and brake.

- Turn the key, which comes with the product, clockwise;
- Pull the door and set it aside in a safe place.



4.6 Connecting to the Electrical Network

⚠ CAUTION - RISK OF DEATH! To reduce the risk of electric shock, before performing maintenance, disconnect the equipment from the electrical power and switch the circuit breaker to the OFF position. All maintenance services should be performed by qualified technical professionals only.

⚠ ATTENTION! -

Digicon recommends using the NBR 5410 standard as a reference for electrical installations of the equipment.

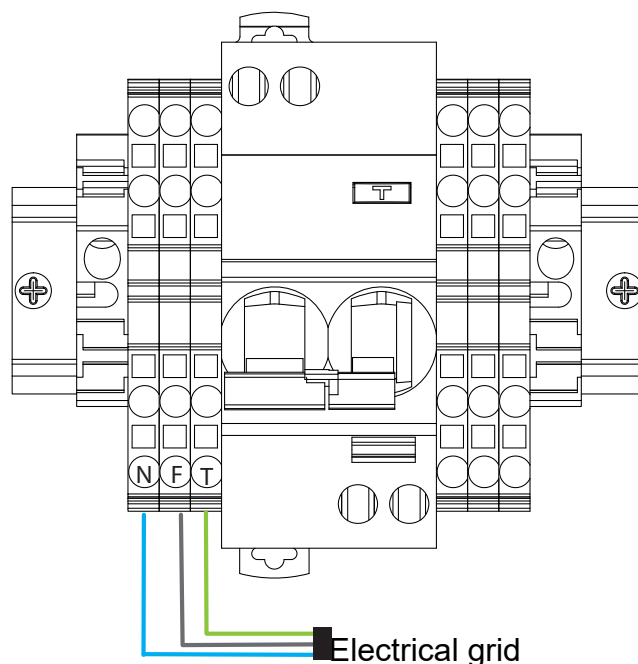
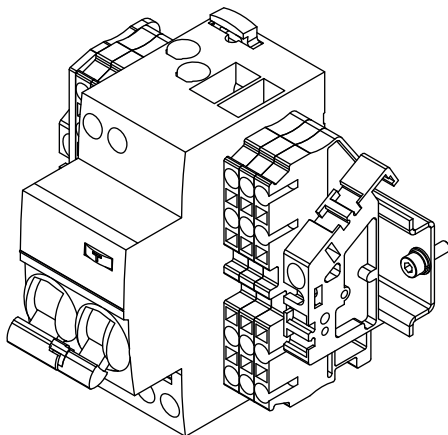
We recommend that the AC grounding cable be of good quality and with dimensions compatible with the distance to the distribution panel. The data cable should be of the CAT5E type.

The connection must be made according to the configured item, and the terminal block assembly may or may not have an RCD (Residual Current Device), as illustrated below:

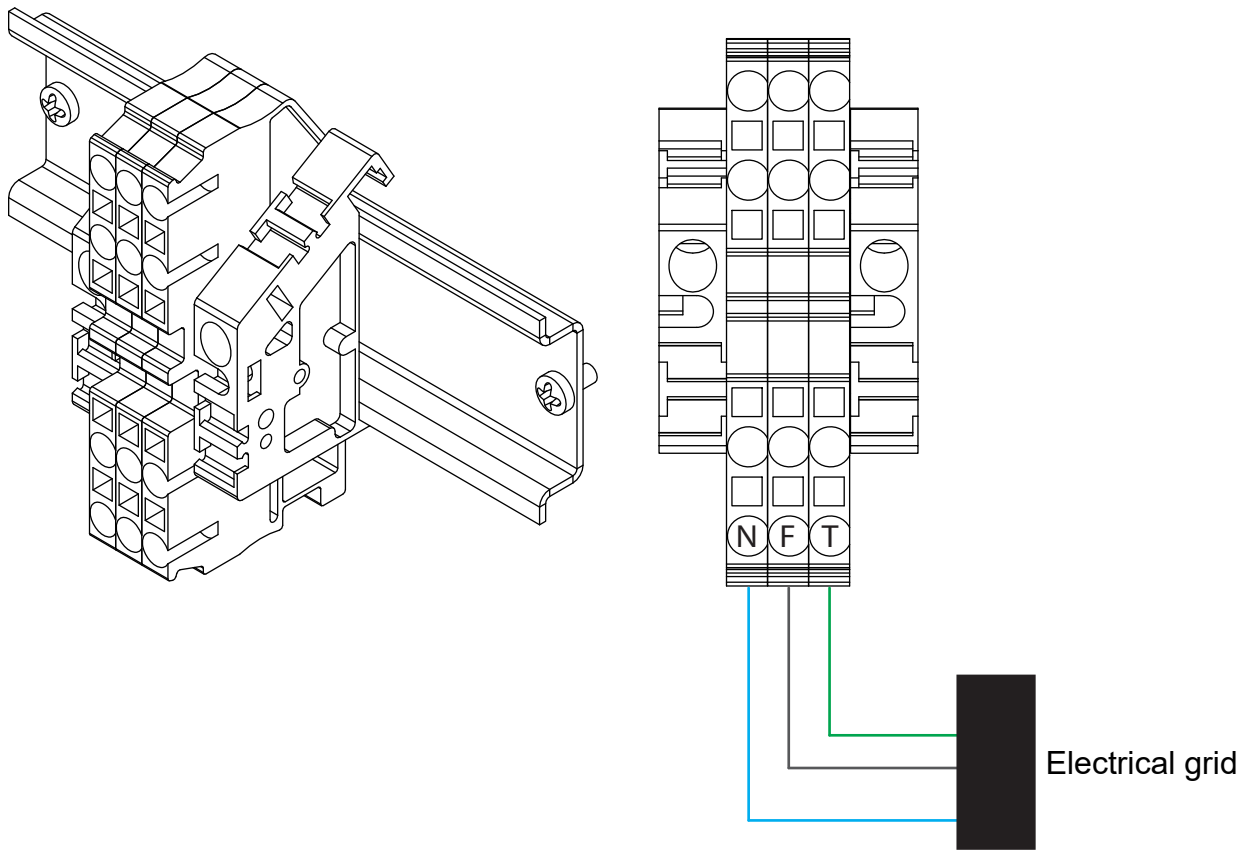
The power cables for electrical supply must be connected to the terminals as indicated: Phase (F), Neutral (N), and Ground (T).

For more details, refer to the drawing below:

Terminal block with circuit breaker:



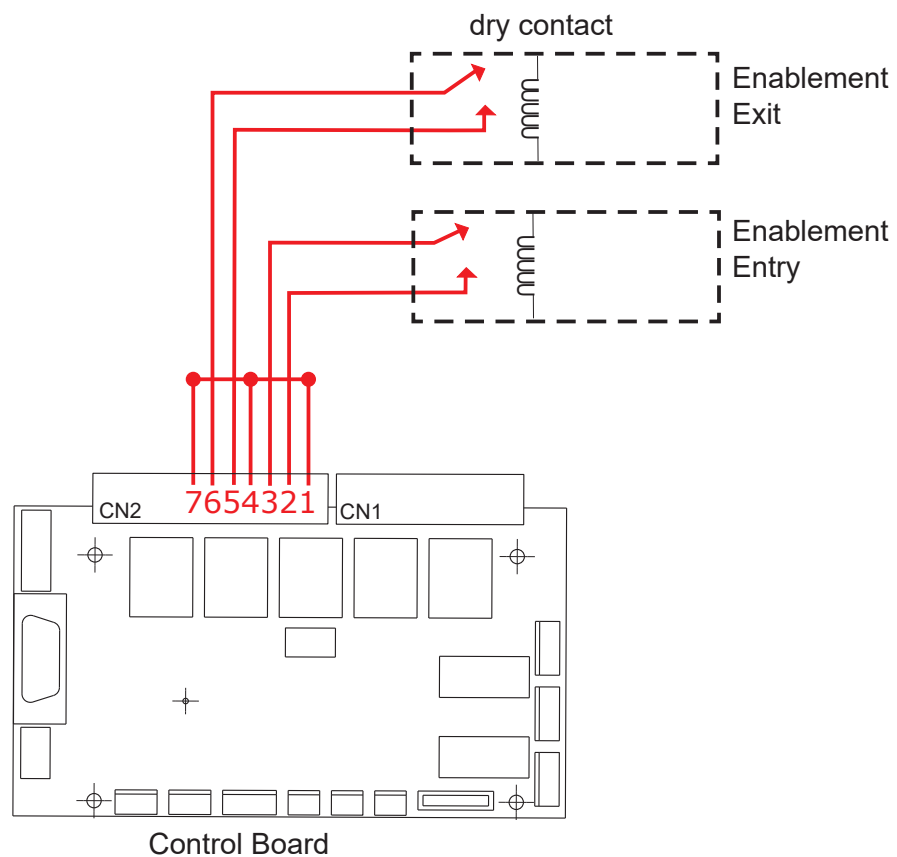
Terminal block without circuit breaker:



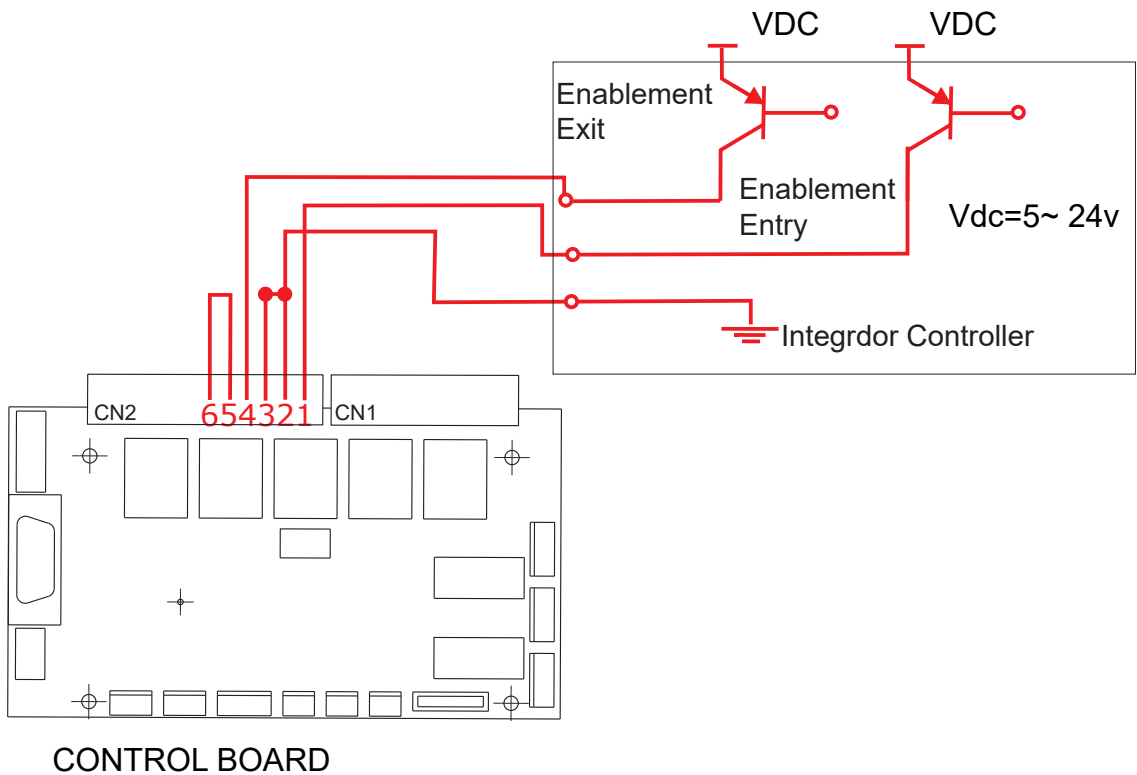
4.6.1 Connection of control signals

⚠ CAUTION - DANGER OF DEATH! To reduce the risk of electric shock, before performing maintenance, turn off the electrical power to the equipment and switch the circuit breaker to the OFF position. All maintenance services should be carried out by a qualified technical professional.

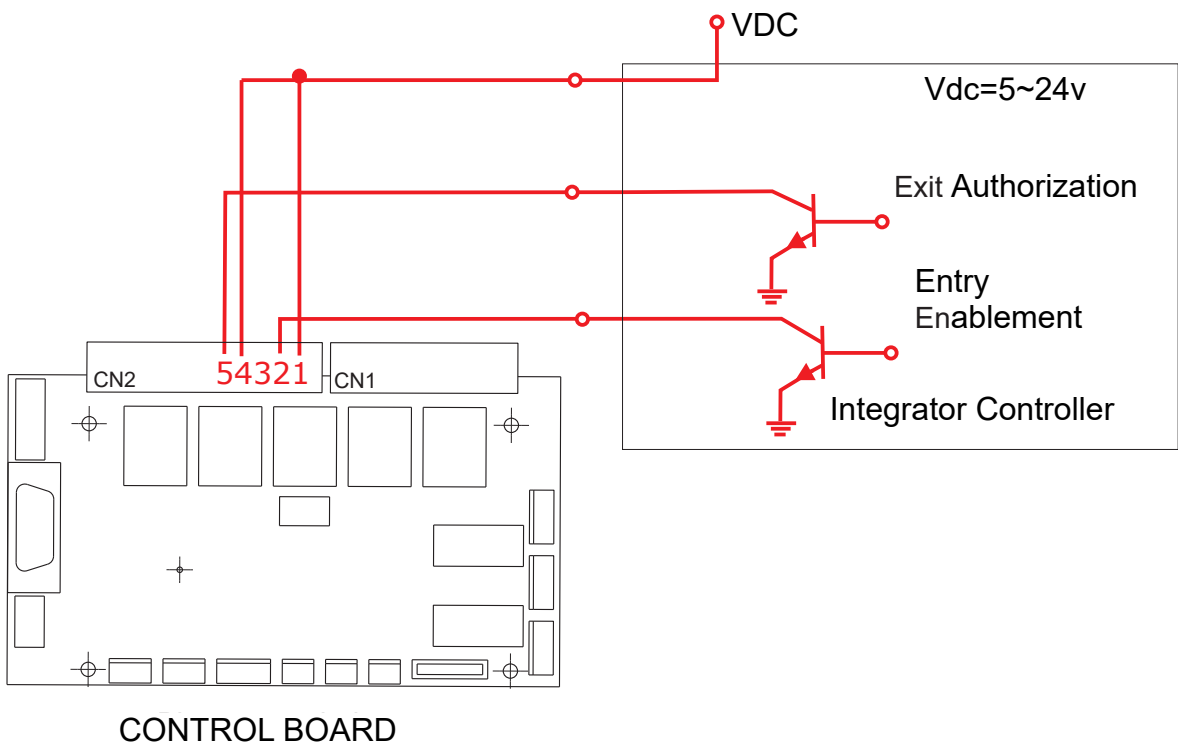
Activation by dry contact 2 relays:



Solid-state enablement (positive, positive voltage):

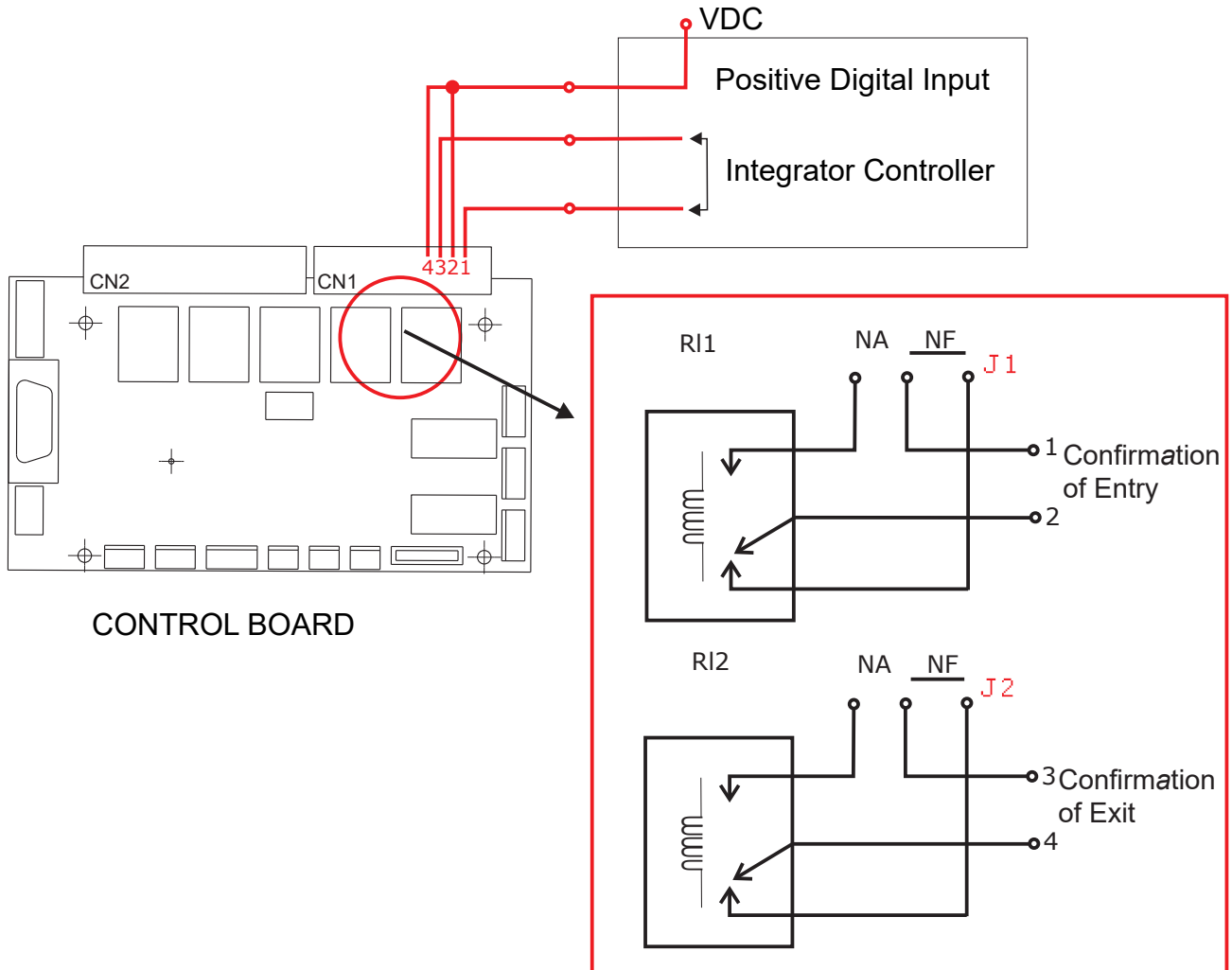


Solid-state enablement (negative):

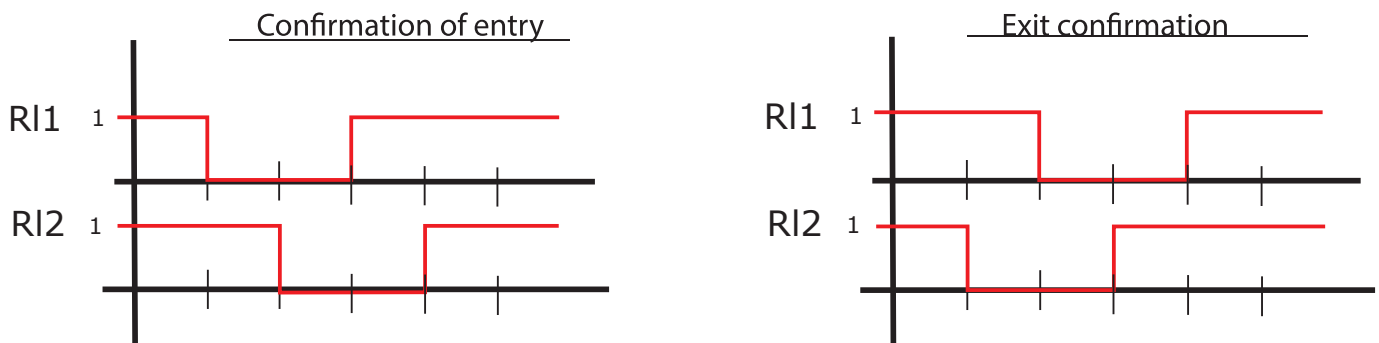


Passage confirmation

Vdc - true logic level, configured in “disk emulation” DIP Ds2 no. 7 in ON.

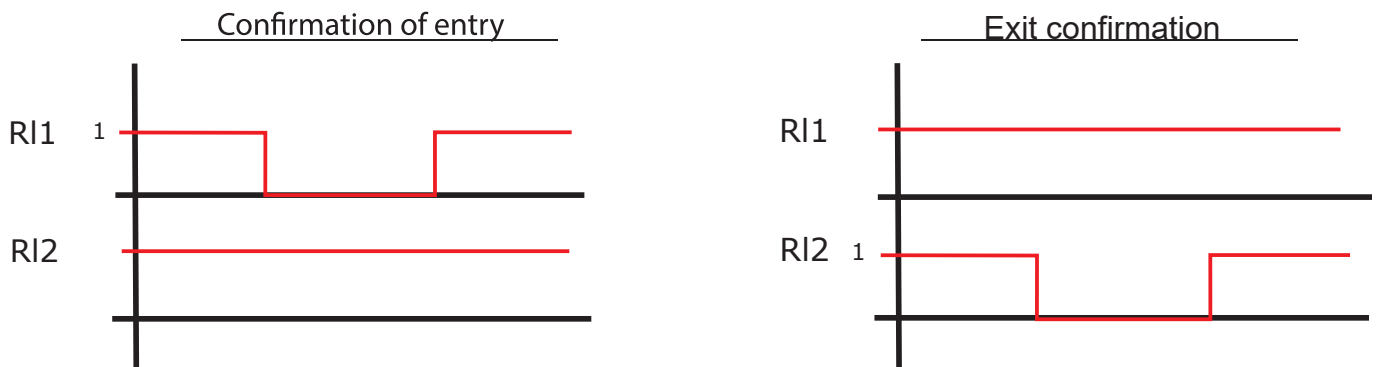


Passage confirmation through disk emulation



In this operating mode, either of the passage confirmation outputs - output RI1 or RI2 - can be used to activate an electromechanical counter to tally the passage flow in both directions of the equipment..

Passage confirmation by pulses



In this operating mode, output RI1 can be used to trigger an electromechanical counter to count the passage flow in the entrance direction of the equipment. Similarly, output RI2 can be used to count the passage flow in the exit direction.

Passage confirmation by pulse or “disk emulation” can be configured through dip switch DS2, number 7. If the switch is in the **ON** position, disk emulation will be enabled. Otherwise (**OFF**), passage confirmation by pulse will be generated.

5. Interconnections

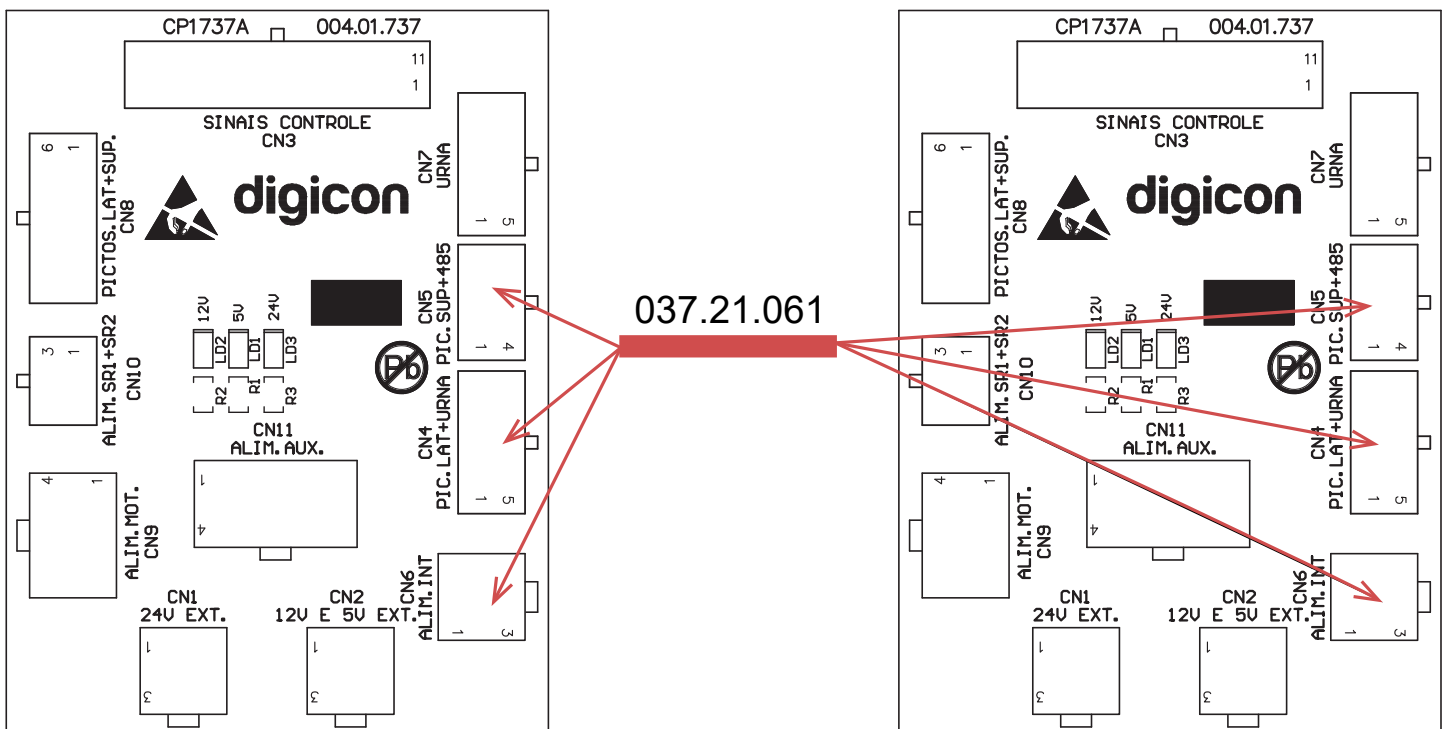


CAUTION - DANGER OF DEATH! To reduce the risk of electric shock, before maintenance, turn off the equipment's electrical power and switch the circuit breaker to the OFF position. All maintenance services should be performed by qualified technical professionals only.

The interconnection cables are located in the dSlim R and should pass through the ducts as follows:

Duct for interconnection of signal cables and DC power supply:

- **037.21.061** -Interconnection harness for signals and DC power supply - dSlim
- Insert connectors CN4, CN5, and CN6 into their respective locations as indicated by the silkscreen on the dSlim interconnections board.



6. dSlim functioning

 **CAUTION - DANGER OF DEATH!:** To reduce the risk of electric shock, before maintenance, turn off the equipment's power and switch the circuit breaker to the OFF position. All maintenance services should be performed by a **qualified technical professional**.

The dSlim R will always be the master module of the lock. In this module, the controller board responsible for the lock's operation is installed

6.1 Controller board

The controller board has the functionality to control user passage, pictograms, sensors, and the entire system logic, receiving signals from the access control board.

6.2 Calibrating the dSlim ports

 **CAUTION - RISK OF INJURY:** All configuration steps must be performed by a qualified technical professional using appropriate tools and PPE (Personal Protective Equipment).

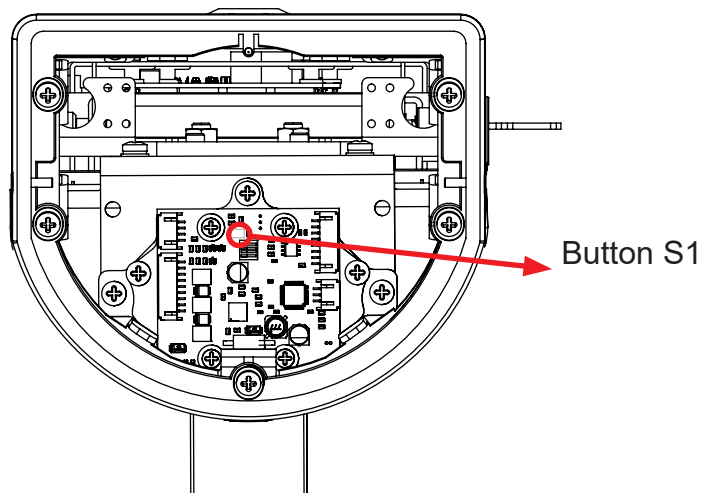
 **CAUTION - RISK OF DEATH!:** Before connecting the electrical power, conduct a detailed inspection of the installation.

 **CAUTION - RISK OF INJURY / HARM!:** During the calibration process, the doors will move automatically. Keep the passageway clear and well marked to prevent them from colliding with objects and people.

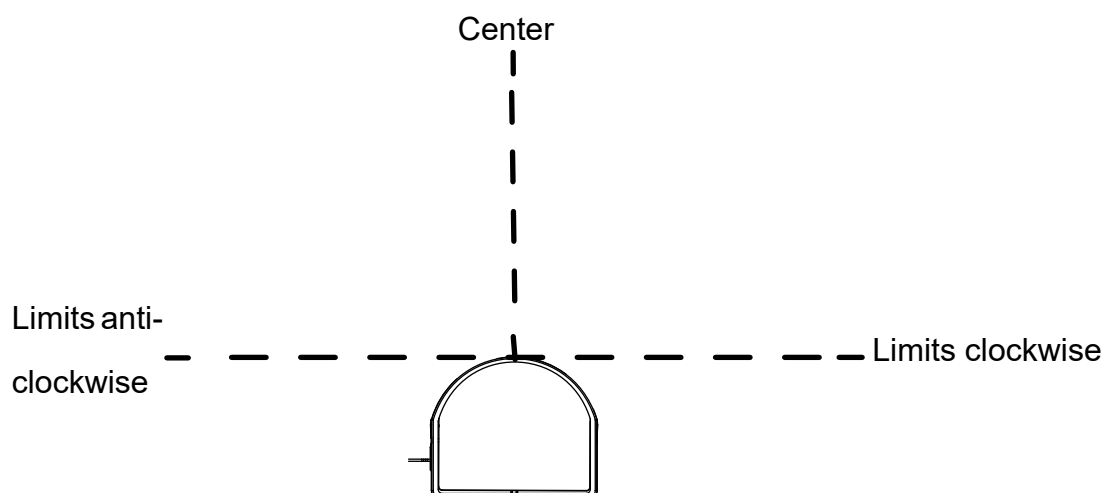
The calibration process involves storing the positions of both ends (maximum positions limited by the equipment's mechanics) and the central position of the door. Calibration of the dSlim doors is done individually (dSlim R and T) and can be performed using the following process:

Open the top cover of the equipment to access the motor board.

Press button S1 on the motor controller board for 3 seconds;



The door will move counterclockwise until it identifies the limit of the door's movement and will remain in this position for 5 to 15 seconds to record the information in memory. After that, it will repeat the movement in the opposite direction, i.e., clockwise.



6.3 Features

Diverse functions can be programmed using the DS1 and DS2 selection switches located on the control board.

To program DS1 place each switch in the desired position according to the following table.

DIP SWITCH DS1								
Key	1	2	3	4	5	6	7	8
Activates audible intrusion alarm	ON							
Deactivates audible intrusion alarm	OFF							
Input signal for enablement: normally open contact		ON						
Input signal for enablement: normally closed contact		OFF						
Allows invasion			ON					
Does not allow intrusion			OFF					
Activates entry access granted (keep in off)				ON				
Deactivates entry access granted (keep in off)				OFF				
Activates exit access granted (keep in off).					ON			
Deactivates exit access granted (keep in off).					OFF			
Activates the audible alert 2 seconds before closing.						ON		
Deactivates the audible alert 2 seconds before closing						OFF		
No maximum time, waits for valid passage.							ON	ON
Maximum time of 5 seconds.							OFF	ON
Maximum time of 10 seconds.							ON	OFF
Maximum time of 15 seconds.							OFF	OFF

(The gray squares (in bold) in the table above indicate the default configuration, i.e., the factory settings.)

- After the door has moved in both directions, the equipment will automatically position the door in the midpoint between the two ends. At this moment, if necessary, the door will be free for the user to move it manually to align it in the central position of the passage.
- The calibration process should be completed by pressing the S1 button on the motor control board once more.

To program DS2, place each switch in the desired position according to the following table.

DIP SWITCH DS2								
Key	1	2	3	4	5	6	7	8
Final time to close the door: 0.50 seconds	ON	ON						
Final time to close the door: 1.2 seconds	OFF	ON						
Final time to close the door: 2.00 seconds.	ON	OFF						
Final time to close the door: smart speed.	OFF	OFF						
Activates credit accumulation			ON					
Deactivates credit accumulation			OFF					
Door movement speed: low.				ON				
Door movement speed: high.				OFF				
Activates safe mode (does not close the doors even with the sensors obstructed)					ON			
Deactivates safe mode (closes the doors even with the sensors obstructed).					OFF			
Card retention time in the reader: 1 second.						ON		
Card retention time in the reader: 2 seconds						OFF		
Passage confirmation for disk emulation							ON	
Passage confirmation by pulse.							OFF	
operating mode with sensor								ON
operating mode without sensor								OFF

(The gray squares (in bold) in the table above indicate the default configuration, i.e., the factory settings.)

To program DS2, place each switch in the desired position according to the following table.

When dSlim contains dual sensors in its configuration, user passage detection will be very strict, requiring the following events to occur in this order:

1. Block the first sensor.
2. Block the second sensor (without releasing the first). At this point, both sensors should be blocked.
3. Release the first sensor.
4. Release the second sensor.

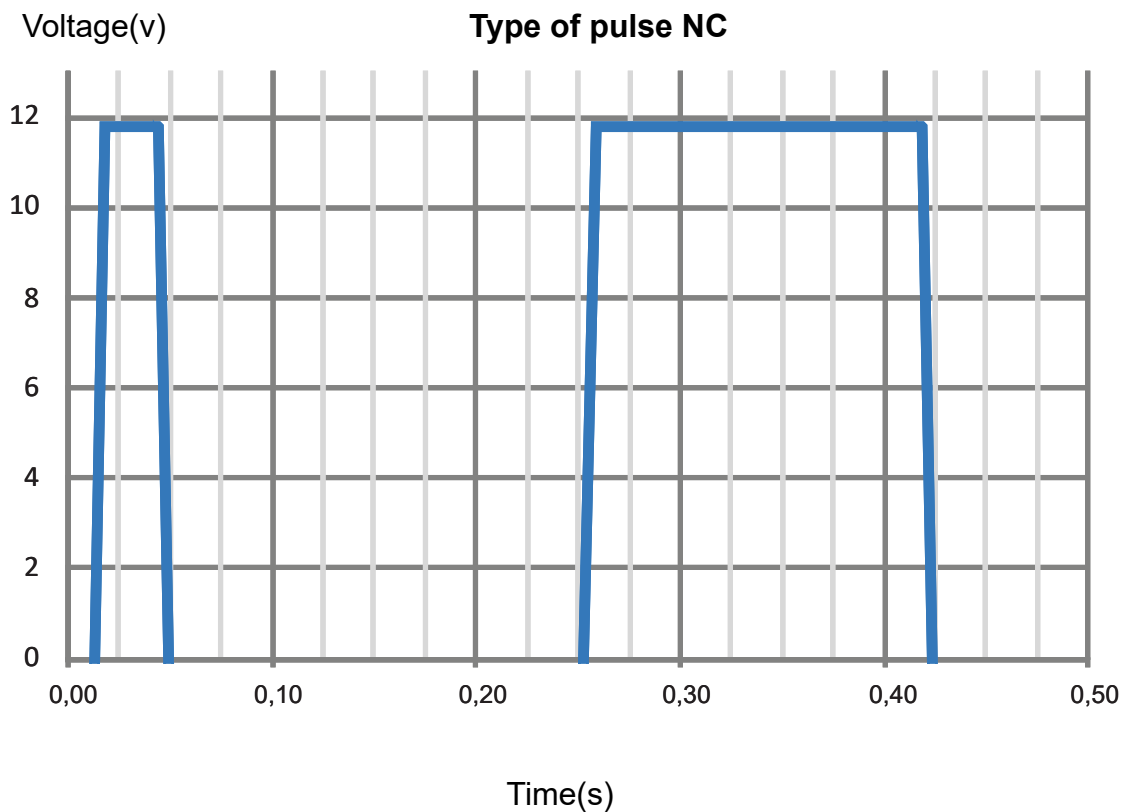
If the events mentioned above do not occur in the specified order, the system may interpret this change as intrusion, tailgating, or abandonment, and will signal accordingly.

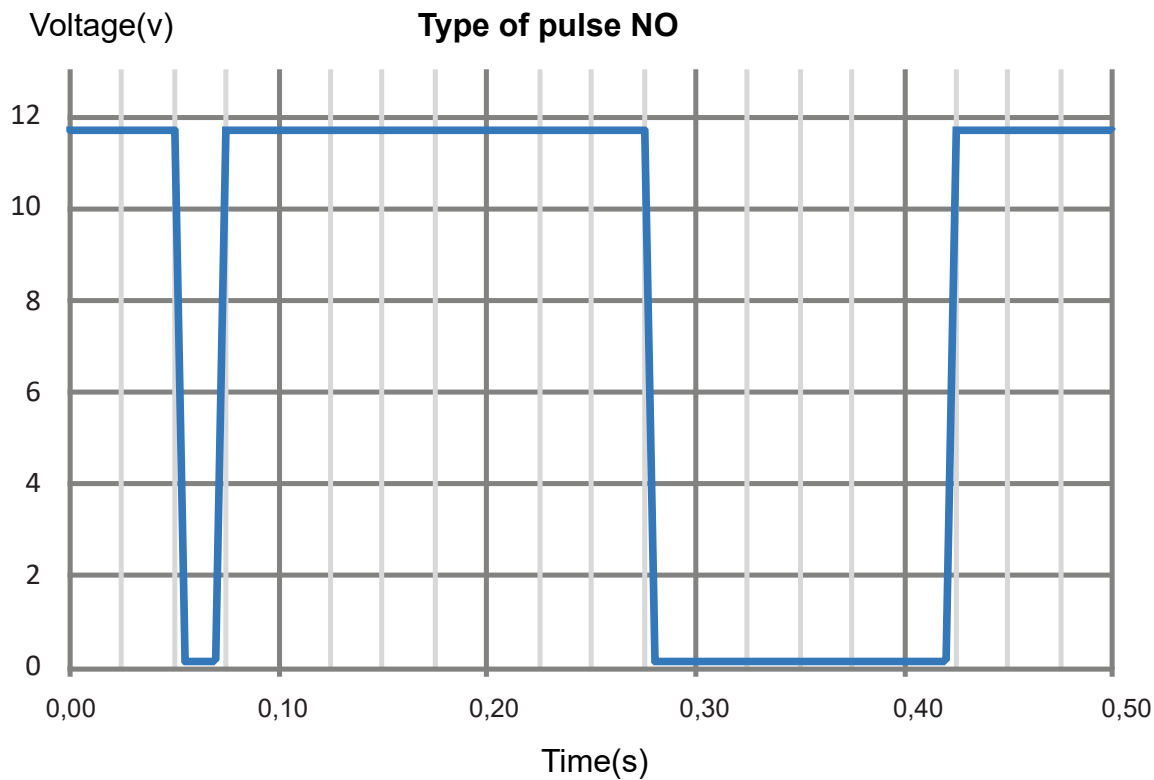
a) Enable Pulse:

The enable pulse is a signal (dry relay contact) sent by the access control system, indicating that the user has been identified and cleared for passage. Passage enablement occurs based on the voltage level of the enable pulse, which must have a minimum duration of 20ms and respect the minimum interval of 20ms between pulses. If the pulse does not respect these intervals, the enablement will be ignored. If the pulse has a duration longer than the passage cycle, a new passage will not be released, meaning that the signal must be turned off for 20ms.”

⚠ ATTENTION! - This function also depends on the access management system supporting the queue for consecutive accesses

In the figures below, NC (Normally Closed) and NO (Normally Open) contacts respectively, each image illustrates two examples of valid pulses, one of 20ms and another of 150ms with a 200ms interval between them. In this situation, if the credit accumulation function is enabled, the dSlim would count two accesses, allowing two people to pass in succession without the door closing





6.3.1 Configurable Functions (via inputs)

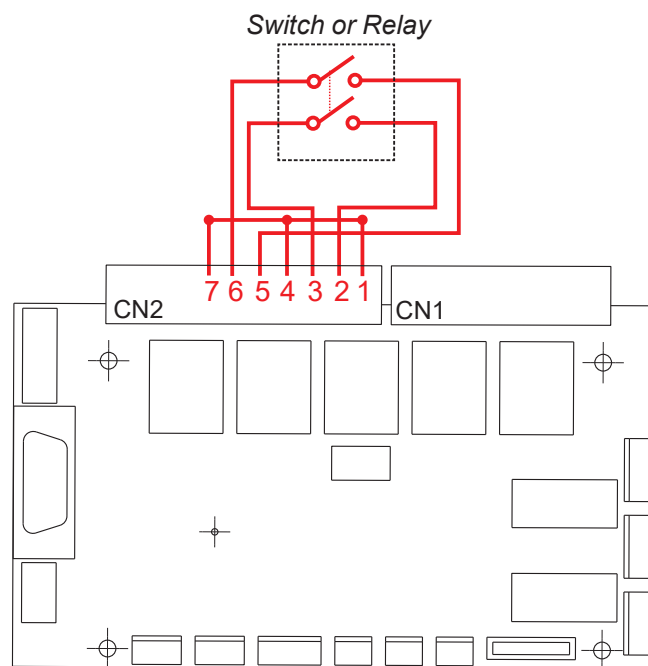
a) Free passage:

Activation: Send input and output commands simultaneously and keep them active. The free passage mode is suitable for situations that require the system to remain unlocked indefinitely and without passage control. It can be used as an emergency mode in locations where regulations allow simple control for release. Where regulations are more demanding, a master switch should be used to disconnect the system’s power supply, leaving the door free. During free passage mode, the door remains open for exit, and the upper pictograms flash indefinitely. This mode remains active as long as the input and output enable signals are present.

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b) Bidirectional Release:

In this mode, the equipment waits for user interaction to determine in which direction it should release passage and, thus, open the door correctly. This interaction is done by gently pushing the door in the desired direction after the equipment has indicated the release. This type of release is useful, especially in passages that share a single reader for both directions. Bidirectional release is activated by sending the input and output command simultaneously for a minimum enable time of 20ms.



(Switch or relay with two poles and single throw.)

6.3.2 Configurable Functions (via DS1)

a) Audible Intrusion Alert:

Selection: DS1-P1 ON. This function, when activated, emits audible alerts when the following events occur: intrusion from either side of the access area with the door closed, intrusion in the opposite direction of the authorized passage with the door open, and if a user attempts to piggyback without authorization.

b) NO or NC Contact:

Selection: DS1-P2 ON for NO contacts, OFF for NC contacts. Allows the selection of the logic for enabling the access pulse, which can be through relays with normally open or normally closed contacts.

c) Passage with or without intrusion:

Selection: DS1-P3 ON allows intrusion, OFF does not allow intrusion. This function defines whether, in standby mode, the lock accepts or does not accept intrusion, i.e., whether it allows or does not allow obstruction of the sensors. If the function is configured not to allow intrusion, whenever one of the sensors is obstructed, the upper pictograms will indicate the intrusion, and the audible alert, if enabled, will beep. In this situation, passage will not be allowed, even if the user has authorization. Conversely, if the function allows intrusion, then no alerts will be issued, and user validation will proceed normally.

d) Access Granted Mode:

Selection: DS1-P4 and DS1-P5.

The access granted mode can be used in special events where it is necessary to keep the equipment unrestricted in a specific direction, whether it is for entry or exit. It can also be used as a test to verify the operation of the door. When switch DS1-P4 is activated, the door will open for entry and remain in this state until it is disabled.

The same applies to DS1-P5, but in this case, the door opens for exit. By keeping both switches activated, the equipment remains in demonstration mode, where it continuously performs opening and closing movements at approximately 4-second intervals.

e) Closing Audible Alert:

Selection: DS1-P6 ON. This function, when enabled, emits a continuous beep two seconds before reaching the maximum passage time and subsequent door closure. The maximum passage time is defined in DS1-P7 and P8.

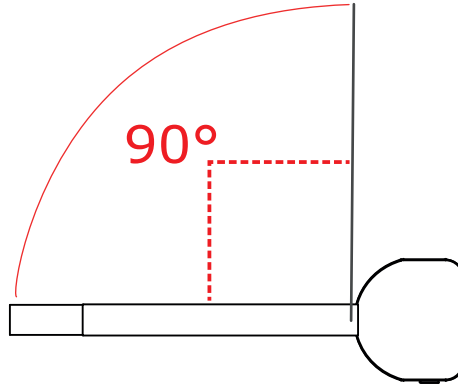
f) Maximum Passage Time:

Selection: DS1-P7 and DS1-P8. This function sets the maximum accepted time for the user to complete the passage. You can define times of 5s, 10s, 15s, and an indefinite time (waits until a valid passage occurs).

6.3.3 Configurable Functions (via DS2)

a) Wait Time at the End of Passage:

Selection: DS2-P1, DS2-P2. This functionality allows you to select the wait time for closing the door at the end of a valid passage. The times can be 0.5 seconds, 1.25 seconds, 2.0 seconds, or Smart Speed. In the Smart Speed option, the system measures the passage speed and calculates the time for the person to safely pass through the blocking zone. The blocking zone extends up to the maximum distance the door can reach plus an additional 3,93" as indicated in the shaded region of the figure below. In the Smart Speed function, the minimum and maximum times are 0.5 and 10 seconds, respectively. The Smart Speed function works correctly as long as the passage speed is sufficient for the door to complete the closing process safely.



b) Accumulation of Validations (Access Queue):

Selection: DS2-P3. With this functionality, it is possible for multiple consecutive releases to be counted so that a queue of users can continue to pass without closing the door. To be recognized, the next person in the queue must release while the first person is passing (before the door begins to close).

c) Door Movement Speed:

Selection: DS2-P4. Allows you to configure the speed of the equipment's doors during the opening and closing cycles. Slow movement speed corresponds to 30% of the equipment's nominal speed.



CAUTION - RISK OF INJURY/HARM!: High door movement speeds can injure users in the event of a collision, especially if they are elderly or children.

d) Safe Mode:

Selection: DS2-P5. With this configuration enabled, the equipment's doors remain open while the user is obstructing the sensors present in the equipment. When disabled, the doors close even if the user is within the door's operating zone, requiring users to clear the passage space.



CAUTION - RISK OF INJURY/HARM!: The door may hit the user if they are not authorized to pass from the free area side to the controlled area side.

e) Passage Confirmation Configuration:

Selection: DS2-P7. (Configuration present only in sensorless mode) Allows for the confirmation of a user's passage through the passage space. To identify this event, the equipment initiates a slight movement of the door (invitation) and waits for the user to signal their intention to pass by giving the door a gentle push. Upon detecting the passage, the equipment generates confirmation based on the DS2-P7 configuration, which can be either pulse confirmation or disc emulation confirmation..

f) Operating Mode:

Selection: DS2-P8. Selects the operating mode of the equipment, which includes:

Sensor Mode: Where sensors track the user throughout the passage.

Sensorless Mode: Which operates without the assistance of sensors for passage control and relies solely on passage timeout for door closure.

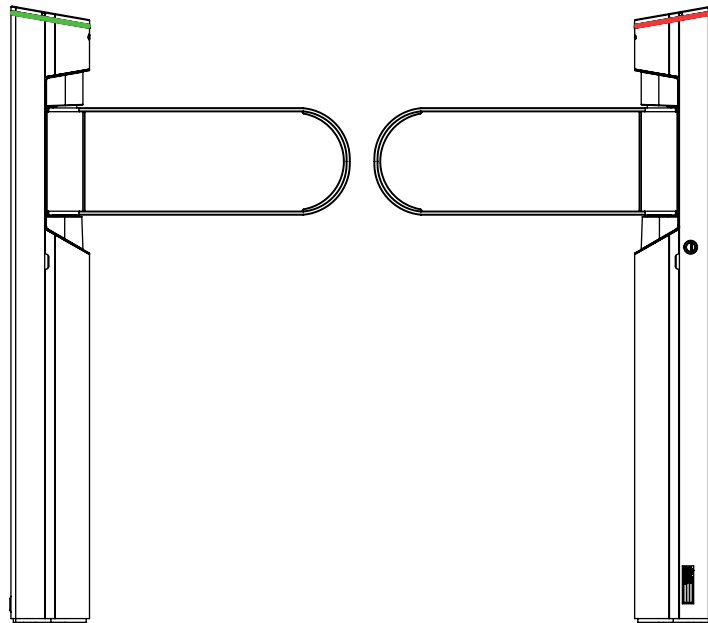


CAUTION - RISK OF INJURY/HARM!: The equipment does not have user detection sensors to prevent accidents. There is a risk of door collisions with users, which can lead to falls and injuries, especially for elderly and children.

6.4 Operation/Orientation Pictogram:

- The orientation pictogram is installed at the top of the equipment and is represented by activating either the green or red color.
- The red pictogram informs the user that the equipment is not operating in this direction or that passage is not allowed in that direction at the moment.
- The green pictogram informs the user of the direction in which the dSlim lock is operating.
- The enabled or disabled direction can be configured for one-way passage (entrance only).
- The allowed or denied direction means that when a user releases passage in the opposite direction, the flow is denied.

Enabled = Green

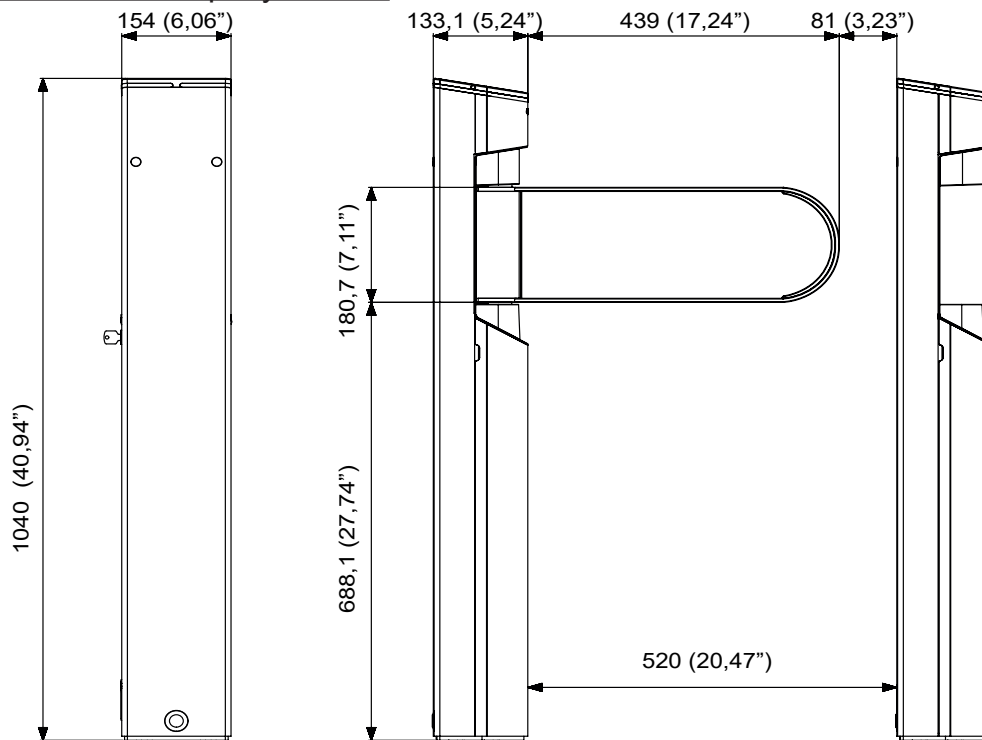


Denied = Red

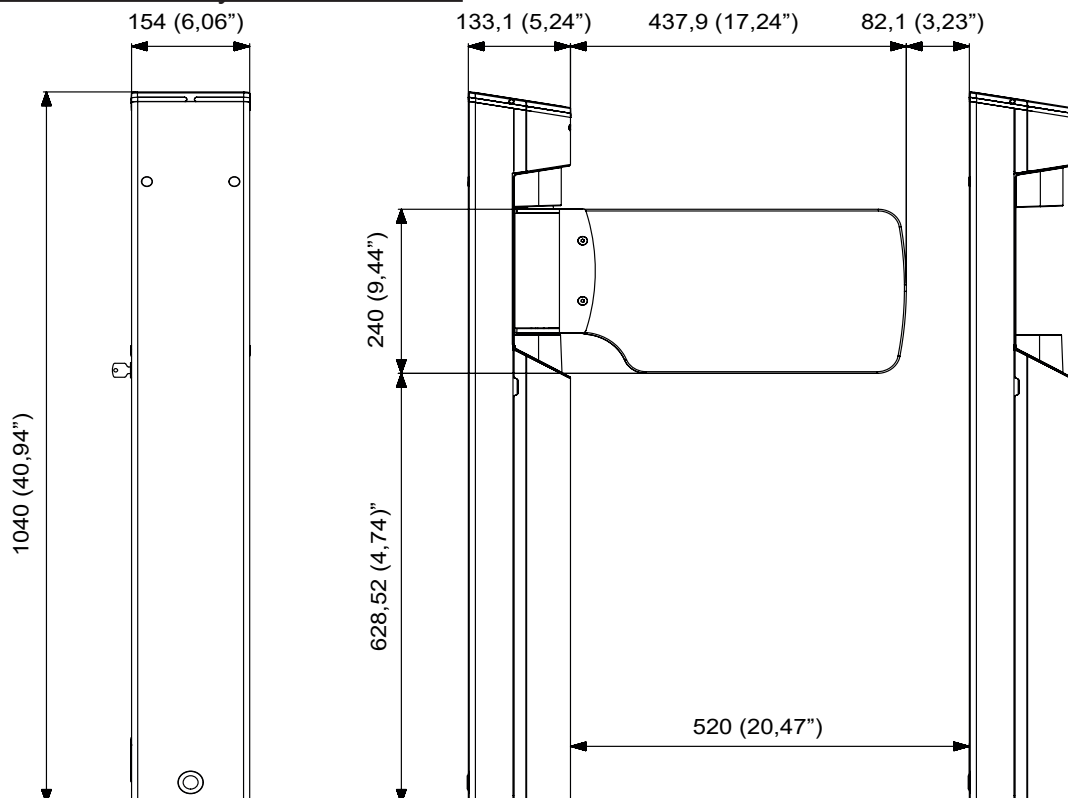
7. Technical Specifications

7.1 Dimensions

- dSlim R or T with Clip-style Door:



- dSlim R or T with Polycarbonate Door:



ATTENTION! - The measurements of the dSlim are illustrated in millimeters and inches.

7.2 Other information

TECHNICAL DATA	Characteristics
Power Supply (Internal Source)	100-240 VAC; 4,6 -3 , 3A
Power Supply (External Source)	24 VDC; 5 A (+/-5%) (One power source per passage space)
Frequency	50/60 Hz
Average Door Open/Close Time	As per the configuration
Operating Temperature	0°C e 50°C
Approximate Weight	25 kg per module (approximate)

	Consumption per passage	
	127VAC	220VAC
STANDBY	23W	39W
OPERATION	36W	62W

8. Troubleshooting

DEFECT	POSSIBLE CAUSES	ACTION
dSlim R doesn't power on	External AC Power Supply for dSlim R.	It is verified that the wiring of the AC electrical power supply network complies with item: (Reference in the AC electrical connection manual, cable 037.13.208).
	Internal DC Power Supply for dSlim R.	Check the power status LEDs (LD1, LD2, and LD3) on the dSlim R interconnection board.
		Check connectors CN1 and CN2 on the dSlim R interconnection board.
dSlim T doesn't power on	Internal DC Power Supply for dSlim R.	Check the power status LEDs (LD1, LD2, and LD3) on the dSlim R interconnection board
		Check connection CN6 interconnection cable between dSlim R and T.
When turning on the dSlim, the circuit breaker immediately switches off.	Short circuit in the AC electrical network..	Remove the interconnection to isolate dSlim T and review whether the Phase, Neutral, and Ground wires are properly connected to the correct locations in accordance with: (the references for AC power connections).

DEFECT	POSSIBLE CAUSES	ACTION
An intermittent audible warning and operation/ orientation pictograms in red without obstruction in the lock.	Misalignment of emitter and receiver sensors.	Check alignment of dSlim R and T.
	Power and Sensor Signals dSlim R.	Check the connection between the cable from the sensors and connector CN16 on the control board.
	Sensor Power Supply dSlim T.	Check the power supply of the board and the connection between the sensor cables and connector CN10 on the interconnection board.
Operational Pictograms/ Red Orientation.	Communication failure between the controller board and the motor control board.	Addressing the control board of the dSlim R motor: SW1-01 ON SW1-02 ON SW1-03 ON SW1-04 ON
		Addressing the dSlim T motor control board: SW1-01: ON SW1-02: OFF SW1-03: OFF SW1-04: ON
		Check connector CN10 (control board), connectors CN3, CN9, and CN5 (interconnection boards of the modules), and connector CN1 (motor boards of the modules).
The dSlim doors are not moving.	Power supply failure on the motor board.	Check the connections of connectors CN9 on the interconnection board and CN1 on the motor control board.
	Connections between the motor and the motor control board.	Connections between the motor and the motor control board CN6..

DEFECT	POSSIBLE CAUSES	ACTION
Mechanical brake for the dSlim door.	Connection of the brake actuation cable.	Check the connection of the brake coil cable to CN4 on the motor control board.
	Dip Switch motor control board.	SW1-01 should be in the ON position.
Out-of-alignment dSlim doors.	Door calibration.	Perform the calibration procedure. (Refer to the 'Door Calibration' section in the dSlim manual.)
Pictograms (without movement) on the upper dSlim R are turned off..	Control or power cable disconnected.	Check the connection of connectors CN12 and CN13 on the dSlim control board.
		Check connectors CN3, CN8, and CN11 on the dSlim interconnection board.
The upper pictograms (without movement) on dSlim T are turned off.	Control or power cable W disconnected.	Verify the connection between the connecting cable and the upper LED strips on dSlim.
		Check the 24V status LED on the dSlim interconnection board.
		Check the connection of connectors CN12 and CN13 on the dSlim R control board.
		Check connectors CN8, CN11, and CN4 on the dSlim interconnection board.
		Verify the connection between the connecting cable and the upper LED strips of the dSlim.
		Check the 24V status LED on the dSlim interconnection board.

9. Preventive maintenance

Estimated preventive maintenance times were based on 1600 passages/day and 30 days/month as reference values. Since these values can vary depending on the customer's usage mode, the customer should make the necessary adjustments to obtain new times.

Calculation basis:

Cycle of passages: 1600 (Estimated passages in one day).

Mês (days): 30

Ciclos em um month: 48000

Cycles	Month of Maintenance
300 Thousand	6 Months
500 Thousand	10 Months
1 million	22 Months
1,5 millions	32 Months

9.1 Table of Preventive Actions:

Action	Frequency
To calibrate the doors.	1x / 3 Months
Analyze the operation of the doors to identify any noises, heavy mechanisms, and deviations from the standard operation.	1x / 6 Months
Analyze the operation of the upper LEDs on the equipment.	1x / 6 Months
Analyze the operation of the entrance and exit pictograms.	1x / 6 Months
Analyze the operation of the buzzer through validations and invalid inputs.	1x / 6 Months
Check for the 24V voltage supply in the sources that power the motor.	1x / 6 Months
Check the operation of the mechanical door brakes.	1x / 6 Months
Check the operation of the biometric reader(s).	1x / 6 Months
Check the operation of the contactless card reader(s).	1x / 6 Months
Check the tightness of the door fastening screws.	1x / 6 Months
Check the operation of the bearings.	1x / 10 Months
Visually inspect the keyways.	1x / 6 Months
Check the operation of the motor.	1x / 22 Months
Visually inspect the condition of the doors.	1x / 6 Months
Check the operation of the locks.	1x / 22 Months

Manufacturer	
Company: Digicon S.A.	Contacts: +55 51 3489.7000 www.digicon.com.br

Product		
Model:	Code:	Serial number:

Installation		
Company:	Contacts:	Date:

[illegible]

10. Cleaning

10.1 Maintenance and conservation of stainless steel:

Do not use chemicals, bleach, or household cleaning products;

Routine cleaning: You are absolutely right! To preserve stainless steel, mild and neutral products such as water, soap, mild detergents, and ammonia-based cleaners are the best. Here are some steps for effective cleaning and preservation of stainless steel:

Mix mild detergent or ammonia-based cleaner with warm water in a container.

Apply the solution to the stainless steel surface using a soft cloth or a nylon sponge. Be sure to follow the grain direction (brush lines) of the stainless steel, if visible, to avoid scratches.

Gently scrub the surface to remove dirt, stains, or fingerprints.

Rinse thoroughly with warm water to remove any soap or detergent residue.

Dry completely with a soft cloth to prevent water spots.

These cleaning practices will help keep your stainless steel clean and shiny.

Fat, Oils and Grease: Wipe off thick deposits with a soft cloth or paper towel. Then, apply a warm solution of detergent or ammonia. Follow the routine cleaning procedures afterward.

Fingerprints: Remove them with a soft cloth or paper towel moistened with isopropyl alcohol (found in compounding pharmacies) or organic solvent (ether, benzene).

Labels, stickers, or films: Peel off as much as possible. Apply warm water to the item and rub with a soft cloth. If the adhesive persists, dry and gently rub with alcohol or organic solvent. But be careful: never scrape the stainless steel surface with blades, spatulas, or coarse abrasives.

Rust stains: Using a cotton swab soaked in a 10% nitric acid solution, make topical applications, keeping the area moist for 20 to 30 minutes, repeating the process if necessary.

More pronounced stains will require vigorous rubbing of the surface

Stained with a paste made of fine household abrasive (Sapolios), water, and 10% nitric acid, using a polishing pad. The acid treatment should always be followed by rinsing in a solution of ammonia or baking soda and routine cleaning.

Moderate dirt/light stains: When routine cleaning is not sufficient, apply a mixture made with plaster or baking soda, dissolved with household alcohol, until it forms a paste. Use a soft cloth or a nylon sponge to apply this mixture to the stainless steel surface. If preferred, you can also use a soft-bristle brush, taking care not to scrub vigorously. Do it as gently as possible, using long and even strokes in the direction of the polished finish, if present. Avoid circular scrubbing motions. Then, rinse thoroughly with plenty of water, preferably warm, and dry with a soft cloth. Sujeira Intensa/ Manchas Acentuadas:

Apply warm or hot detergent, or a solution of ammonia-based remover (home remedies) and water. If this is not sufficient to soften burnt food or carbonized deposits, resort to more aggressive products such as caustic soda-based removers used in household cleaning.

10.2 Maintenance and conservation of polycarbonate (doors):

Routine cleaning:

- Choose a dry day, preferably with low humidity, as it will make it easier to remove any soot deposited on the door.
- If possible, remove the polycarbonate item (door) for easier cleaning.
- Wet the polycarbonate doors with water. Wet them until you notice that excess dirt has loosened. The insistence on using a significant amount of water is because if you use a cloth on the grit of the soot, you might end up sanding the polycarbonate instead of cleaning it. The result would be a foggy and dull (matte) door.
- Prepare a 100% cotton cloth and a well-known neutral detergent. Do not use conventional brooms as they can scratch the polycarbonate.
- Mix the neutral detergent with water in a bucket until a good amount of foam is generated, and gently apply the solution with the cloth in a single direction, following the water's flow. Never use circular motions. Rinse thoroughly and repeat the process until the result is satisfactory.

Do not let the sun dry the solution on the polycarbonate. Stains may appear.

Paint Splatters on Polycarbonate: It's common to have latex paint splatters on polycarbonate panels when painting walls. Do not use solvents like thinner, gasoline, benzene, or acetone. Isopropyl alcohol or kerosene can help solve the problem. Try to clean it before the paint dries, and then wash the area with a solution of water and neutral detergent.

Frequency of Polycarbonate Cleaning: There is no specific period for cleaning. The amount of soot in the air, generated by dirt roads, factories, and construction in the area, can necessitate more frequent cleaning.

Start with a monthly cleaning and assess the situation. Then, adjust the cleaning schedule to one that's more convenient. Clean without scratching.

 **ATTENTION!** - Even in the case of tougher stains, try starting with the gentlest cleaning method. Be patient and repeat the operation a reasonable number of times before resorting to harsher cleaning methods.

11. Warranty and Technical Assistance

Digicon takes responsibility for the design, quality of craftsmanship, and materials used in the manufacture of its products, ensuring that the equipment and all its parts are free from defects or flaws in material and workmanship. Digicon commits to replace or repair any part or equipment that shows manufacturing defects, at no cost to the buyer, under the conditions stipulated below:

The warranty period is counted from the issuance of the sales invoice and includes: 12 (twelve) months for equipment, accessories, parts, and components, including the legal warranty period of 90 (ninety) days.

Legal Warranty:

The consumer has a period of 90 (ninety) days, counted from the date of issuance of the purchase invoice, to complain about apparent irregularities (defects) that are easy and immediately observable in the product, such as items that constitute the external part and any other accessible to the user, as well as parts with visible appearance and general accessories.”

Warranty will be provided to the buyer only upon presentation of the original or a copy of the purchase invoice. Service is provided by opening a ticket through the following email addresses:

- **Access Control and Point Area:** sac.vca@digicon.com.br
- **Urban Mobility Area:** sac.mobilidadeurbana@digicon.com.br
- **Information required to open a ticket:**

Company Name:
CNPJ:
Complete address:
Name of the person responsible:
Contact phone:
Defective Equipment Model(s):
Serial Number(s) of Defective Equipment(s):
Defect(s) Presented:

Notes:

Matriz/RS

Développement, Factory, Technical Assistance, and Sales
Address: Rua Nissin Castiel, 640 - Industrial District.
Gravataí/RS ZIP Code 94045-420
Email: vendas.acesso@digicon.com.br

www.digicon.com.br