

XPass

# INSTALLATION GUIDE

Version 2.20  
English

EN 101.00.XPS2 V2.20A

# Contents

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|                                                           |           |
|-----------------------------------------------------------|-----------|
| <b>Safety Instructions .....</b>                          | <b>3</b>  |
| <b>Getting Started .....</b>                              | <b>5</b>  |
| Components .....                                          | 5         |
| Features .....                                            | 6         |
| Part names and features .....                             | 6         |
| Cables and connectors .....                               | 7         |
| <b>Installation .....</b>                                 | <b>8</b>  |
| Mounting the Bracket and Product .....                    | 8         |
| Installing the bracket.....                               | 8         |
| Connecting to Power.....                                  | 9         |
| Connecting to a Network .....                             | 10        |
| TCP/IP .....                                              | 10        |
| Connecting to an Door button/Door sensor .....            | 11        |
| Digital input connection (Door button, Door sensor) ..... | 11        |
| Digital input connection (Alarm, Emergency switch).....   | 11        |
| Connecting to a Relay .....                               | 12        |
| Fail Safe Lock .....                                      | 12        |
| Fail Secure Lock.....                                     | 12        |
| Connecting to an Automatic door.....                      | 13        |
| Connecting as a standalone.....                           | 13        |
| Connecting to Secure I/O 2 .....                          | 14        |
| Connecting as a Wiegand device.....                       | 14        |
| External Power Output.....                                | 15        |
| Resetting Network Settings.....                           | 15        |
| Restoring the Factory Defaults.....                       | 15        |
| <b>Product Specifications.....</b>                        | <b>16</b> |
| Dimensions.....                                           | 17        |
| <b>FCC Compliance Information .....</b>                   | <b>18</b> |
| <b>Appendix.....</b>                                      | <b>19</b> |
| Disclaimers .....                                         | 19        |
| Copyright Notice .....                                    | 19        |

# Safety Instructions

Please read the following instructions carefully before using the product. This information is important for ensuring the safety of the user and for preventing damage to the user's property.

## Warning

Violation of the instructions may cause serious injury or death.

### Installation Instructions

**Do not install the product in direct sunlight or in a location that is damp or dusty.**

- This can cause a fire or electric shock.

**Install the product in a dry place.**

- Moisture can cause product damage or electric shock.

**Do not install the product near any heat source such as electric heaters.**

- This can cause a fire from overheat or electric shock.

**Install the product in a place where there is no electromagnetic interference.**

- This can cause product damage or electric shock.

**Have qualified service professionals install or repair the product.**

- Otherwise, it can cause a fire, electric shock, or injury.
- If the product is damaged due to a user's unauthorized installation or dismantling of the product, a service fee will be charged for repair.

### Operating Instructions

**Be careful not to spill any liquid such as water, drinks, or chemicals inside the product.**

- This can cause fire, electric shock, or product damage.

## Caution

Ignoring these instructions may result in minor injuries or damage to the product.

### Installation Instructions

**Protect the power cord from being walked on or pinched.**

- This can cause product damage or injury.

**Keep the product away from strong magnetic objects such as magnets, TVs, monitors (especially CRT monitors), or speakers.**

- This can cause a product failure.

**If installing the product outside where the product is completely exposed, it is recommended to install the product together with the enclosure.**

**Use a separate power supply for Secure I/O 2, electric lock and XPass respectively.**

- If connecting and using the power supply to these devices together, the devices may malfunction.

## Operating Instructions

**Do not drop the product or subject it to shock or impact during use.**

- This can cause a product failure.

**Do not press the buttons on the product with excessive force or with a sharp tool.**

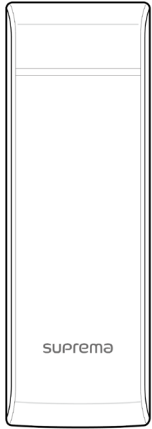
- This can cause a failure.

**Clean the product with a soft, dry cloth. Do not use alcohol, benzene, or water.**

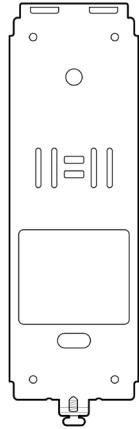
- This can cause a product failure.

# Getting Started

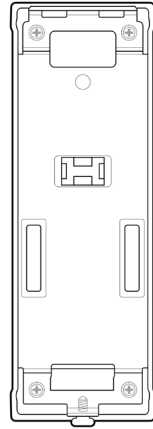
## Components



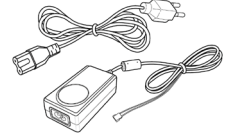
XPass



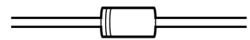
Main bracket



Extension bracket



Adapter



Diode



TCP/IP  
extension cable



Mounting screws for bracket  
(2 pcs)



PVC anchors  
(2 pcs)



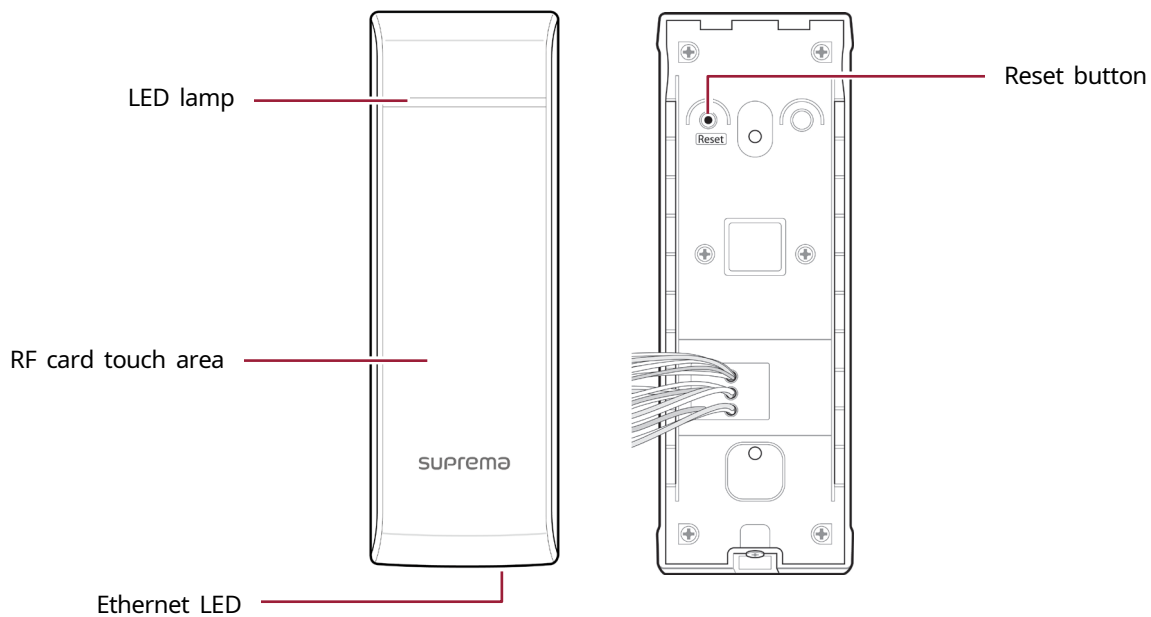
Heat shrink  
tubes

### NOTE

- Components may vary according to the installation environment.

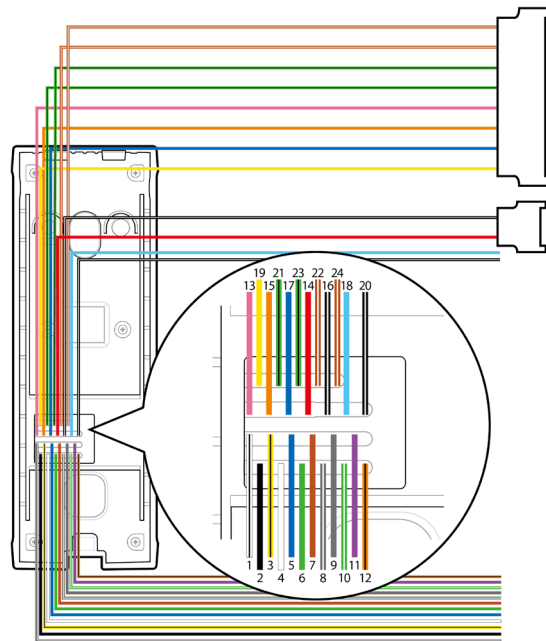
## Features

### Part names and features



| Name                      | Feature                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LED lamp</b>           | <ul style="list-style-type: none"> <li>• Green: Authentication success</li> <li>• Red: Authentication failure</li> <li>• Pink: Processing</li> <li>• Blue and sky-blue alternate flashing every 2 seconds: Normal operation</li> <li>• Red and pink alternate flashing every 2 seconds: The device is locked.</li> <li>• Blue and red alternate flashing every 2 seconds: The clock has been reset. The clock needs to be reconfigured.</li> <li>• Blue and yellow alternate flashing every 2 seconds: An IP address has not been received when DHCP is set to USE.</li> <li>• Red flashes every 2 seconds on first use: Failure to reset. Contact the manufacturer.</li> <li>• Red flashes every 2 seconds in a normal operation: The device is secured.</li> <li>• Yellow flashes: Waiting for an input.</li> </ul> |
| <b>RF card touch area</b> | Reads RF card for entering and exiting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Reset button</b>       | <ul style="list-style-type: none"> <li>• Resets the network configurations when the device does not work properly. For details, refer to the <b>Resetting Network Setting</b>.</li> <li>• Deletes all data and certificate on the device and reset the settings. For details, refer to the <b>Restoring the Factory Defaults</b>.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Cables and connectors



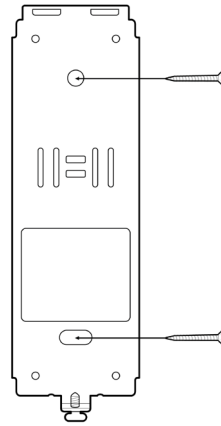
| Pin | Pin name | Color                 |
|-----|----------|-----------------------|
| 1   | 485 GND  | White (Black stripe)  |
| 2   | WG GND   | Black                 |
| 3   | 485 TRXN | Yellow (Black stripe) |
| 4   | WG D1    | White                 |
| 5   | 485 TRXP | Blue (White stripe)   |
| 6   | WG D0    | Green                 |
| 7   | TTL IN1  | Brown                 |
| 8   | RLY NO   | Gray (White stripe)   |
| 9   | TTL GND  | Gray                  |
| 10  | RLY COM  | Green (White stripe)  |
| 11  | TTL IN0  | Purple                |
| 12  | RLY NC   | Orange (Black stripe) |
| 13  | ENET TXP | Pink                  |
| 14  | PWR +VDC | Red                   |
| 15  | ENET TXN | Orange                |
| 16  | PWR GND  | Black (White stripe)  |
| 17  | ENET RXP | Blue                  |
| 18  | PWR OUT  | Sky-blue              |
| 19  | ENET RXN | Yellow                |
| 20  | PWR GND  | Black (White stripe)  |
| 21  | VB1      | Green (Black stripe)  |
| 22  | VB2      | Brown (White stripe)  |
| 23  | VB1      | Green (Black stripe)  |
| 24  | VB2      | Brown (White stripe)  |

# Installation

## Mounting the Bracket and Product

### Installing the bracket

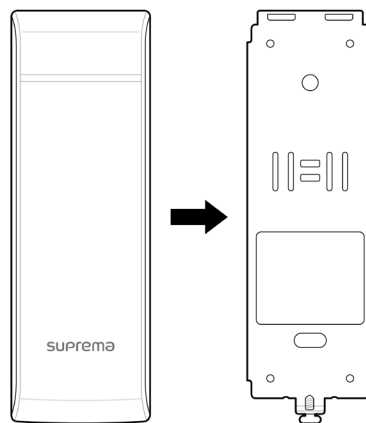
- 1 With the mounting screws for the bracket, mount the bracket firmly onto the surface where XPass is to be installed.



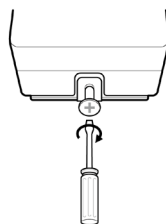
#### NOTE

- If XPass should be installed onto a concrete wall, make a hole with a drill, and then insert a PVC anchor into the hole before screwing the mounting screw.

- 2 Attach XPass onto the mounted bracket.

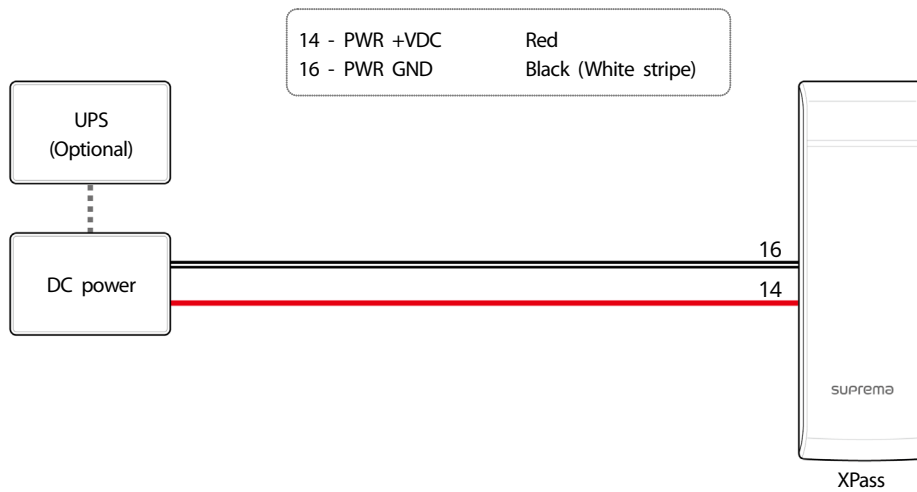


- 3 Assemble XPass with the bracket by screwing the mounting screws on the bottom of XPass.





## Connecting to Power



### NOTE

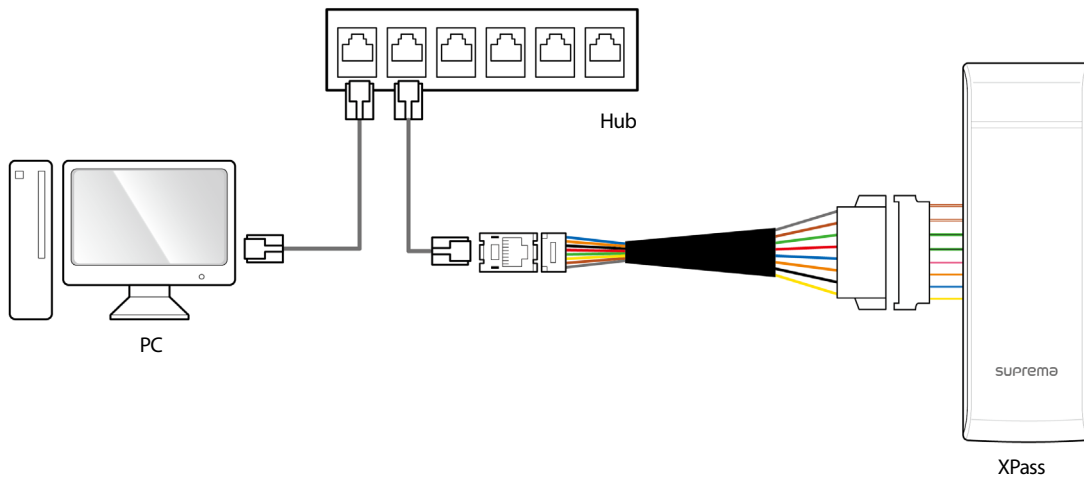
- Use a power adapter that has a DC 12 V ( $\pm 10\%$ ) specification of with the minimum current of 1,500 mA and has IEC/EN 60950-1 certification. If the power adapter is shared by other devices, the power adapter should provide a current more than the sum of the power consumption from this device (1,500 mA) and other devices.
- Use a separate power supply for Secure I/O 2, electric lock and XPass respectively. If connecting and using the power supply to these devices together, the devices may malfunction.

## Connecting to a Network

### TCP/IP

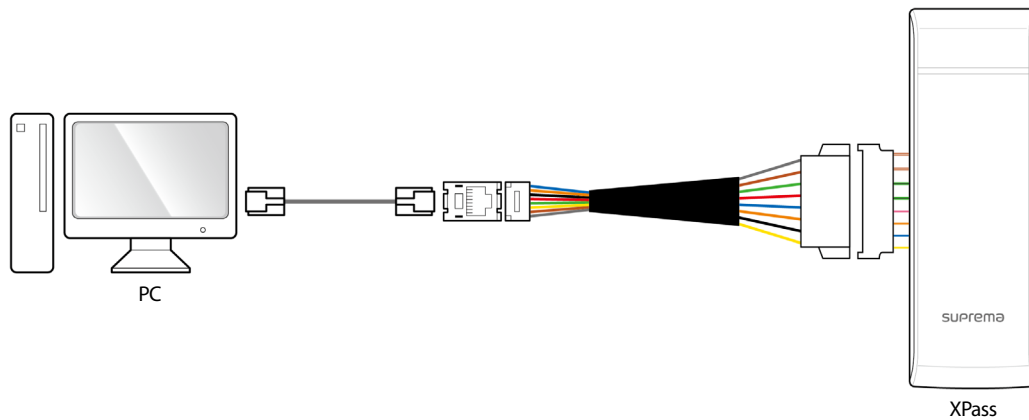
#### LAN connection (connecting to a hub)

A normal CAT-5 cable can be used to connect to a hub.



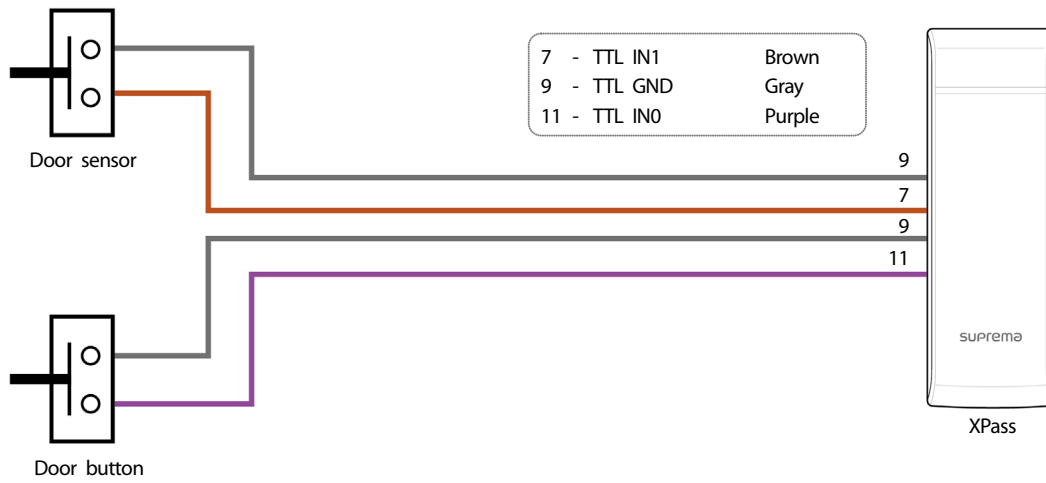
#### LAN connection (connecting directly to a PC)

XPass can be connected directly to a PC by using a normal type CAT-5 cable because it supports an automatic MDI/MDIX function.

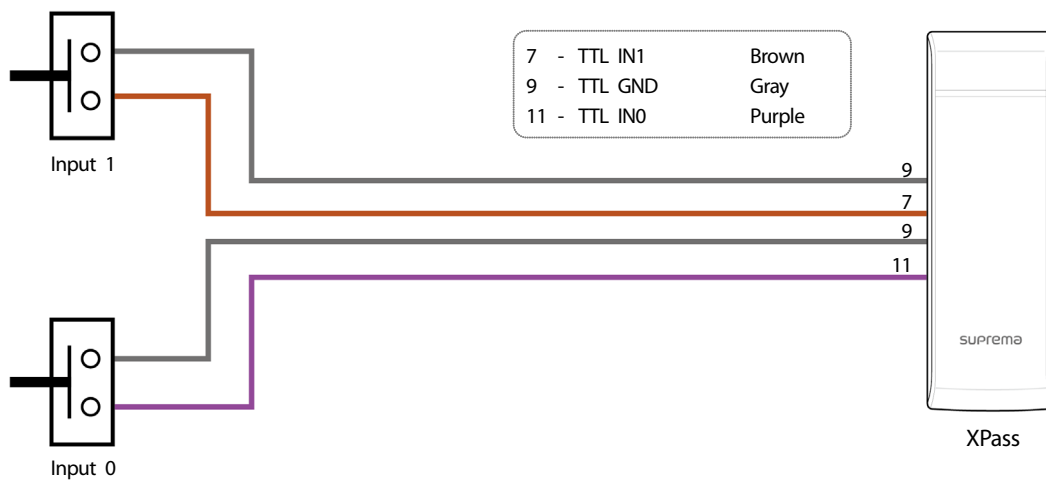


## Connecting to an Door button/Door sensor

### Digital input connection (Door button, Door sensor)



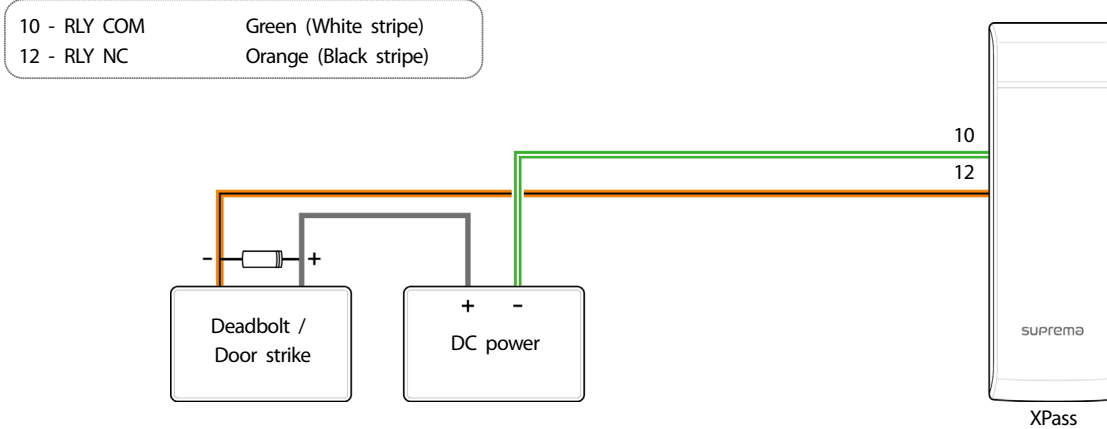
### Digital input connection (Alarm, Emergency switch)



## Connecting to a Relay

### Fail Safe Lock

To use fail safe lock, connect N/C terminal as shown below. Normally, there is a current flowing through the relay and the door is opened when the relay is activated by blocking current flows. The door is opened when there is a blackout or power failure caused by external conditions.

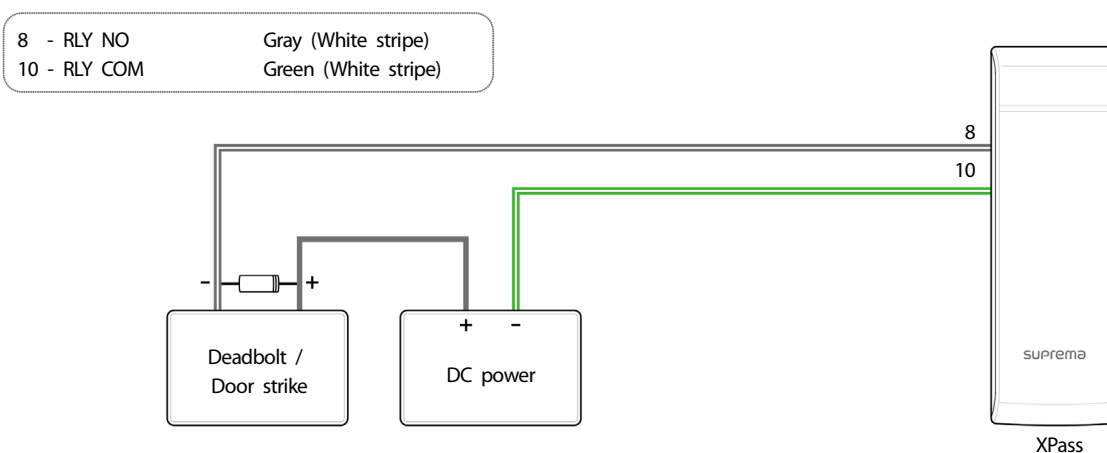


#### NOTE

- Install the diode at both ends of the wire for the door lock device as shown in the figure to protect the relay from being damaged by the reverse current induced when the door lock device operates.
- Make sure that the direction of the installed diode is correct.
- Install the diode close to the door lock device.
- Use a separate power source for XPass from the door lock device.

### Fail Secure Lock

To use fail secure lock, connect N/O terminal as shown below. Normally, there is no current flowing through the relay and the door is opened when the relay is activated by a current flows. The door is locked when there is a blackout or power failure caused by external conditions.

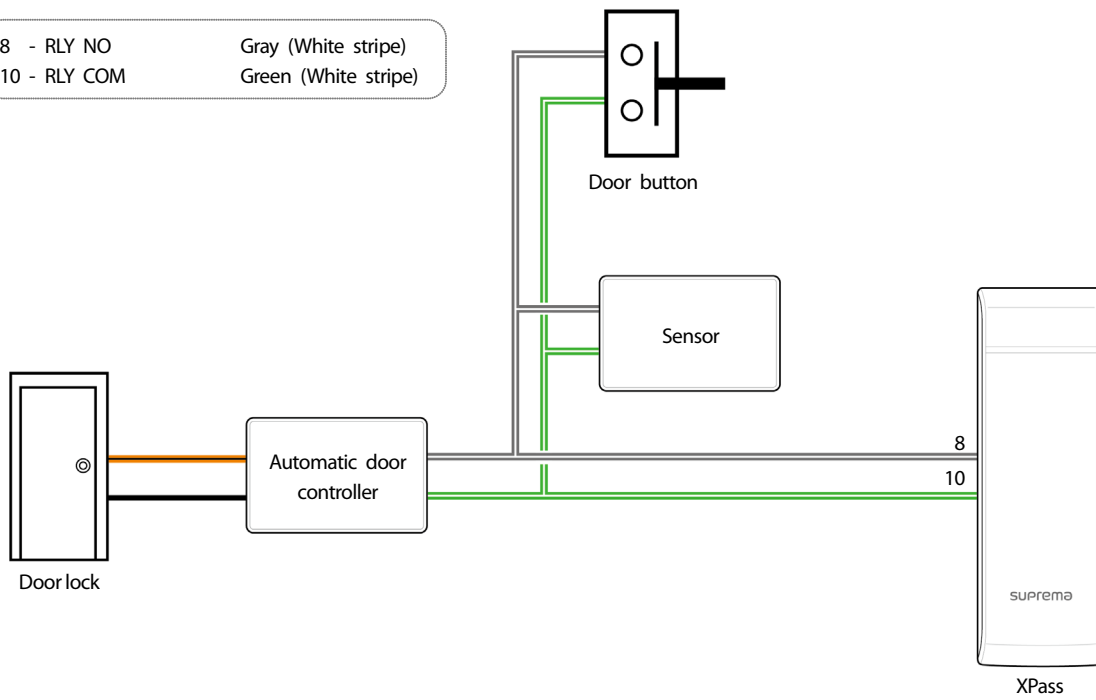


#### NOTE

- Install the diode at both ends of the wire for the door lock device as shown in the figure to protect the relay from being damaged by the reverse current induced when the door lock device operates.
- Make sure that the direction of the installed diode is correct.
- Install the diode close to the door lock device.
- Use a separate power source for XPass from the door lock device.

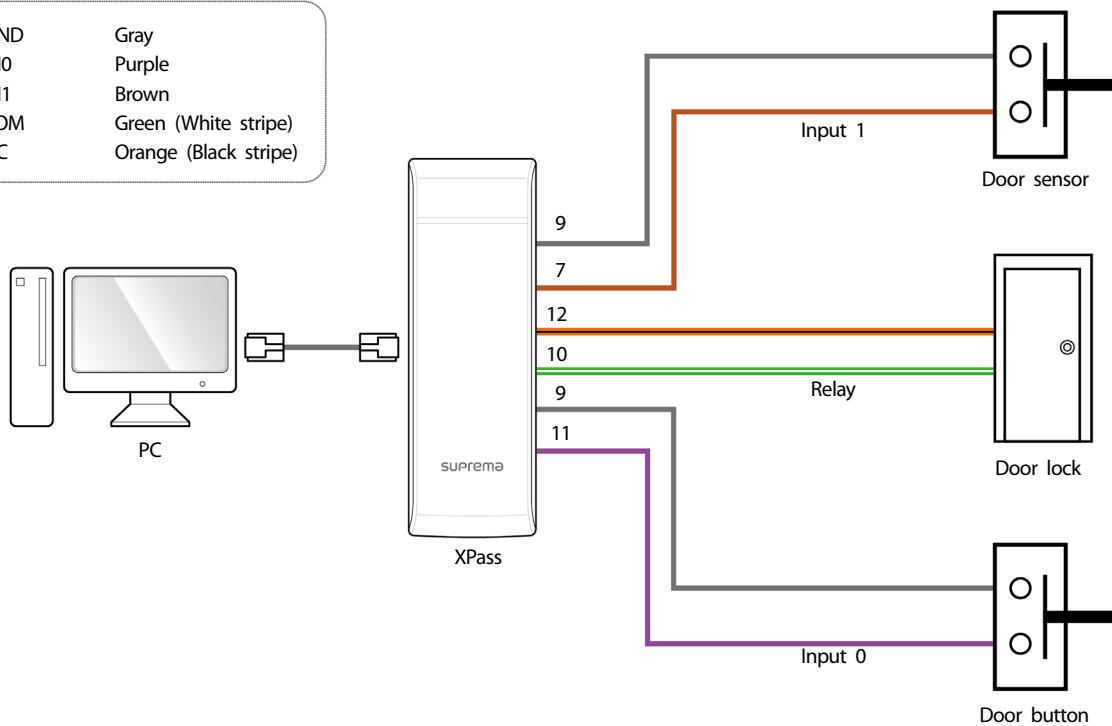
### Connecting to an Automatic door

- |              |                      |
|--------------|----------------------|
| 8 - RLY NO   | Gray (White stripe)  |
| 10 - RLY COM | Green (White stripe) |



### Connecting as a standalone

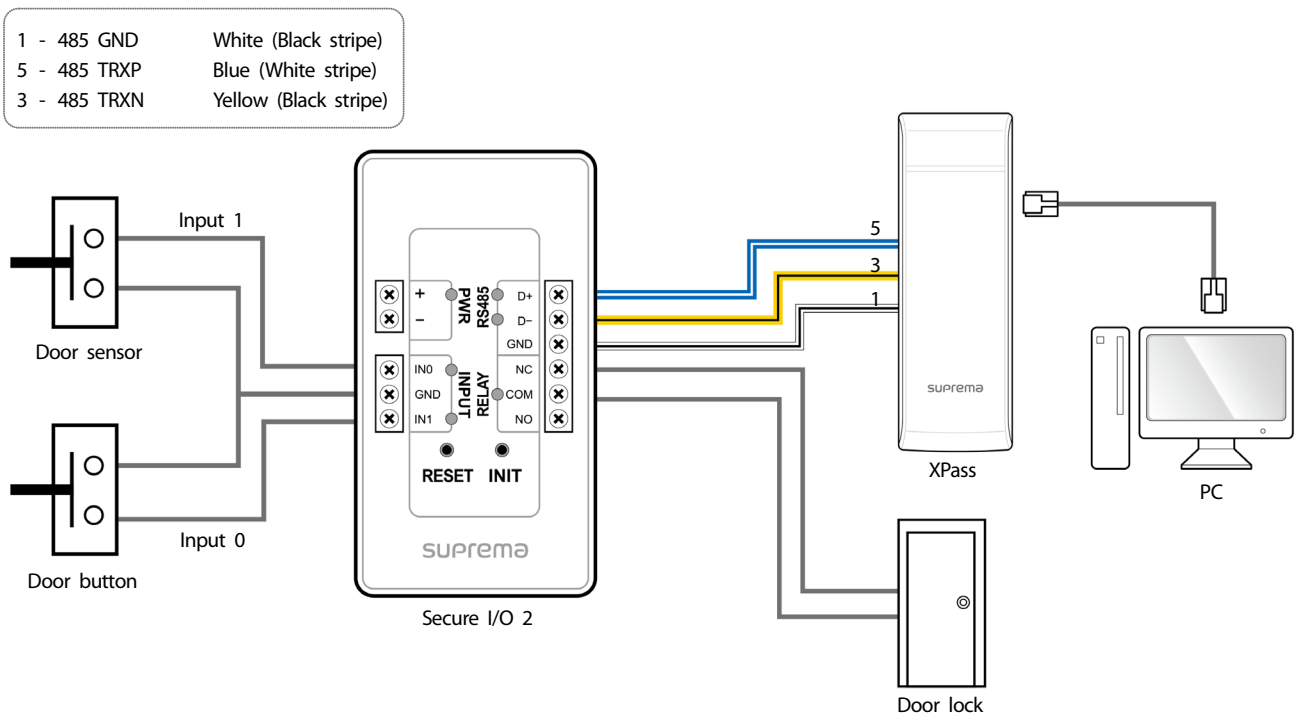
- |              |                       |
|--------------|-----------------------|
| 9 - TTL GND  | Gray                  |
| 11 - TTL IN0 | Purple                |
| 7 - TTL IN1  | Brown                 |
| 10 - RLY COM | Green (White stripe)  |
| 12 - RLY NC  | Orange (Black stripe) |



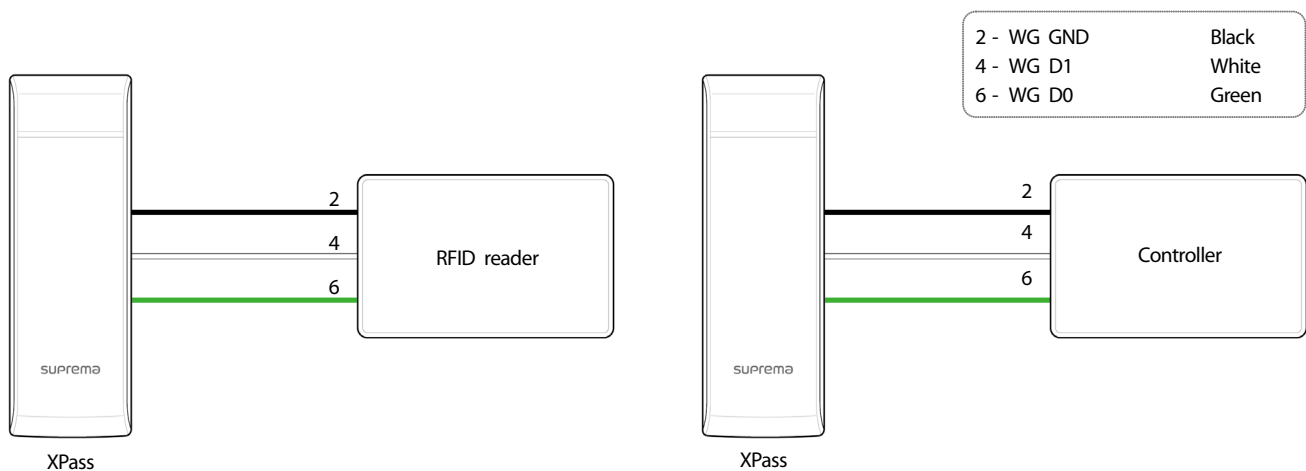
## Connecting to Secure I/O 2

Refer to the following figure for connecting.

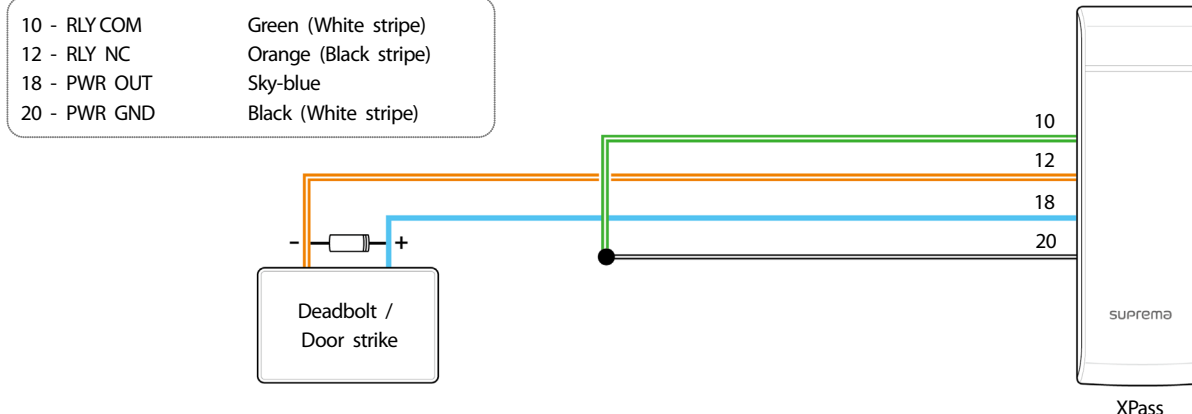
- RS-485 should be AWG24, twisted pair, and maximum length is 1.2 km.
- Connect a termination resistor (120Ω) to both ends of a RS-485 daisy chain connection. It should be installed at both ends of the daisy chain. If it is installed in the middle of the chain, the performance in communicating will deteriorate because it reduces the signal level.
- Up to 32 devices can be connected via daisy chain (1 master device and 31 other devices).



## Connecting as a Wiegand device



## External Power Output



### NOTE

- The external output provides a maximum current of 620 mA.
- XPass connected to PoE supports the external power output.
- Be careful not to disconnect the power supply to XPass when the external power output is connected to a door lock. Disconnecting the power supply to XPass may cause security problems.
- The maximum switching current of the door lock should not exceed 620 mA. For more information on the maximum switching current of the door lock, contact the manufacturer.

## Resetting Network Settings

- 1 Turn the power on.
- 2 Press and hold the reset button until you hear the buzzer.
- 3 Connect the device with default values.
  - TCP/IP address: DHCP address assignment (If DHCP address assignment is failed, 169.254.0.1 will be set.)
  - Server mode: Disabled
  - RS-485: PC connection, 115200 bps
- 4 Change the TCP/IP address or RS-485 information.
- 5 Turn the power off later on and then check the network setting is properly.

## Restoring the Factory Defaults

This will delete all data and root certificate on the device and reset the settings.

- 1 Turn the power on.
- 2 Press the reset button three times quickly.
- 3 When the yellow LED is blinking, press the reset button again.

### NOTE

- If there is no root certificate on the device, you cannot restore the factory defaults.

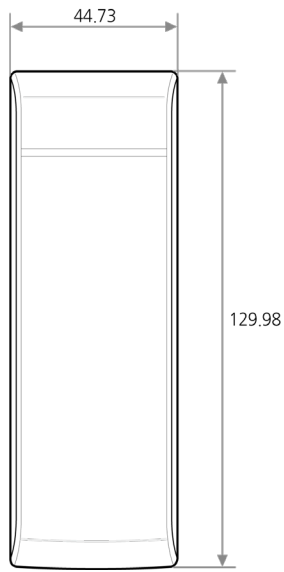
# Product Specifications

| Category      | Feature                    | Specification                                                                                                                                               |
|---------------|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main          | IP Rating                  | IP65                                                                                                                                                        |
|               | RF Card                    | <ul style="list-style-type: none"> <li>XPE-PoE: 125kHz EM</li> <li>XPM-PoE: 13.56MHz MIFARE, DESFire/EV1 (CSN)</li> <li>XPH-PoE: 125kHz HID Prox</li> </ul> |
|               | Multi-Controller           | Yes (RF)                                                                                                                                                    |
| Capacity      | Max. User (1:1)            | 40,000                                                                                                                                                      |
|               | Max. User (1:N)            | 40,000                                                                                                                                                      |
|               | Max. Text Log              | 50,000                                                                                                                                                      |
| Interface     | TCP/IP                     | Yes                                                                                                                                                         |
|               | RS-485                     | 1ch                                                                                                                                                         |
|               | Wiegand                    | 1ch In or Out (Selectable)                                                                                                                                  |
|               | TTL Input                  | 2 Inputs                                                                                                                                                    |
|               | Relay                      | 1 Relay                                                                                                                                                     |
| Relay         | Voltage                    | Max. 24VDC                                                                                                                                                  |
|               | Current                    | Typ. 0.5A, Max. 1.0A                                                                                                                                        |
| Hardware      | CPU                        | 533MHz DSP                                                                                                                                                  |
|               | Memory                     | 16MB RAM + 8MB Flash                                                                                                                                        |
|               | LED                        | Multi-Color                                                                                                                                                 |
|               | Sound                      | 16-bit Hi-Fi                                                                                                                                                |
|               | Operating Temp.            | -20°C ~ 50°C                                                                                                                                                |
|               | Tamper                     | Yes                                                                                                                                                         |
|               | Power                      | 12VDC                                                                                                                                                       |
|               | PoE                        | Optional                                                                                                                                                    |
|               | Dimensions (W x H x D m m) | 45 x 130 x 27                                                                                                                                               |
| Certification | CE, FCC, KC, RoHS          |                                                                                                                                                             |

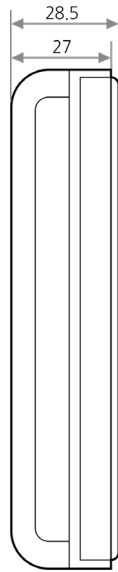


## Dimensions

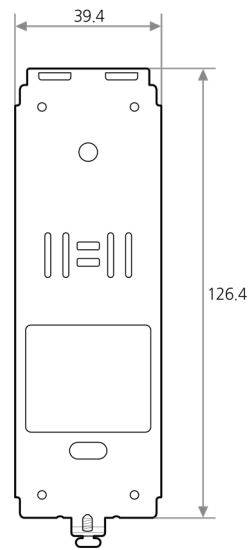
(Unit: mm)



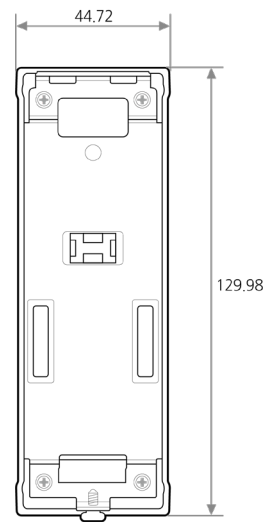
Front view



Side view



Main bracket



Extension bracket

## FCC Compliance Information

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, and
- (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, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment under FCC rules.

# Appendix

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