

## AXIS A4011-E Reader

ENGLISH

**Installation Guide (English) – for other languages see  
[www.axis.com](http://www.axis.com)**

## Liability

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## Intellectual property rights

Axis AB has intellectual property rights relating to technology embodied in the product described in this document. In particular, and without limitation, these intellectual property rights may include one or more of the patents listed at [axis.com/patent](http://axis.com/patent) and one or more additional patents or pending patent applications in the US and other countries.

## Equipment modifications

This equipment must be installed and used in strict accordance with the instructions given in the user documentation. This equipment contains no user-serviceable components. Unauthorized equipment changes or modifications will invalidate all applicable regulatory certifications and approvals.

## Trademark acknowledgements

AXIS COMMUNICATIONS, AXIS and VAPIX are registered trademarks or trademark applications of Axis AB in various jurisdictions. All other company names and products are trademarks or registered trademarks of their respective companies.

## Regulatory information

### Europe



This product complies with the applicable CE marking directives and harmonized standards:

- Electromagnetic Compatibility (EMC) Directive 2014/30/EU. See *Electromagnetic compatibility (EMC) on page 2*.
- Radio Equipment Directive (RED) 2014/53/EU. See *Radio transmission on page 2*.
- Low Voltage (LVD) Directive 2014/35/EU. See *Safety on page 3*.
- Restrictions of Hazardous Substances (RoHS) Directive 2011/65/EU. See *Disposal and recycling on page 3*.

A copy of the original declaration of conformity may be obtained from Axis Communications AB. See *Contact information on page 3*.

## Electromagnetic compatibility (EMC)

This equipment has been designed and tested to fulfill applicable standards for:

- Radio frequency emission when installed according to the instructions and used in its intended environment.
- Immunity to electrical and electromagnetic phenomena when installed according to the instructions and used in its intended environment.

### Europe

## Radio transmission

This equipment may generate or use radio frequency energy. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

### USA

This product complies with FCC radiation exposure limits for an uncontrolled environment. This equipment shall be installed and operated with a minimum distance of 20 cm (7.9 in) between the user and the device.

### Canada

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

This product complies with IC radiation exposure limits for an uncontrolled environment. This equipment shall be installed and operated with a minimum distance of 20 cm (7.9 in) between the user and the device. This device for operation in the frequency band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Ce produit est conforme aux limites d'exposition aux radiations IC pour un environnement non contrôlé. L'équipement doit être installé et fonctionné à une distance minimum de 20 cm (7,9 po) entre l'utilisateur et le dispositif. Dans la bande de fréquences de 5 150 à 5 250 MHz, cet appareil doit uniquement être utilisé à l'intérieur afin de réduire le risque de brouillage préjudiciable de systèmes de service mobile par satellite si le trouvant dans le même canal.

### Europe

Hereby, Axis Communications AB declares that this product is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EC.

### FR

Par la présente Axis Communications AB déclare que l'appareil ce produit est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2014/53/CE.

### DE

Hiermit erklärt Axis Communications AB, dass sich dieses Produkt in Übereinstimmung mit den grundlegenden Anforderungen und den anderen relevanten Vorschriften der Richtlinie 2014/53/EG befindet.

### IT

Con la presente Axis Communications AB dichiara che questo prodotto è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2014/53/CE.

### ES

Por medio de la presente Axis Communications AB declara que el este producto cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2014/53/CE.

### FI

Axis Communications AB vakuuttaa täten että tämä tuote tyyppinen laite on direktiivin 2014/53/EY oleellisten

vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

## NL

Hierbij verklaart Axis Communications AB dat het toestel in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2014/53/EG.

## SV

Härmed intygar Axis Communications AB att denna produkt står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2014/53/EG.

## DA

Undertegnede Axis Communications AB erklærer herved, at følgende udstyr overholder de væsentlige krav og øvrige relevante krav i direktiv 2014/53/EF.

## PT

Axis Communications AB declara que este produto está conforme com os requisitos essenciais e outras disposições da Directiva 2014/53/CE.

## EL

ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Axis Communications AB ΔΗΛΩΝΕΙ ΟΤΙ αυτό το προϊόν ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2014/53/ΕΚ.

This equipment can be used in the following countries:

AT, BE, BG, CH, CY, CZ, DE, DK, EE, EL, ES, FI, FR, HR, HU, IE, IS, IT, LI, LT, LU, LV, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, UK

## Safety

This product complies with IEC/EN 60950-1 and IEC/EN 60950-22, Safety of Information Technology Equipment. The product shall be grounded either through a shielded network cable (STP) or other appropriate method.

## Disposal and recycling

When this product has reached the end of its useful life, dispose of it according to local laws and regulations. For information about your nearest designated collection point, contact your local authority responsible for waste disposal. In accordance with local legislation, penalties may be applicable for incorrect disposal of this waste.

## Europe



■ This symbol means that the product shall not be disposed of together with household or commercial waste. Directive 2012/19/EU on waste electrical and electronic equipment (WEEE) is applicable in the European Union member states. To prevent potential harm to human health and the environment, the product must be disposed of in an approved and environmentally safe recycling process. For information about your nearest designated collection point, contact your local authority responsible for waste disposal. Businesses should contact the product supplier for information about how to dispose of this product correctly.

This product complies with the requirements of Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS).

## China



This product complies with the requirements of SJ/T 11364-2014, Marking for the restriction of hazardous substances in electrical and electronic products.

## 有毒有害物质或元素

部件名称	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴苯 (PB-B)	多溴二苯醚 (PB-DE)
电气实装部分	X	0	0	0	0	0

0: 表示该有毒有害物质在该部件所有均质材料中的含量均在GB/T 26572标准规定的限量要求以下。  
X: 表示该有毒有害物质至少在该部件的某一均质材料中的含量超出GB/T 26572标准规定的限量要求。

## Contact information

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[axis.com](http://axis.com)

## Support

Should you require any technical assistance, please contact your Axis reseller. If your questions cannot be answered immediately, your reseller will forward your queries through the appropriate channels to ensure a rapid response. If you are connected to the Internet, you can:

- find answers to resolved problems in the FAQ database, search by product, category, or phrase
- report problems to Axis support staff by logging in to your private support area
- chat with Axis support staff
- visit Axis Support at [axis.com/support](http://axis.com/support)

## Learn more!

Visit Axis learning center [axis.com/academy](http://axis.com/academy) for useful trainings, webinars, tutorials and guides.

## Safety information

### Hazard levels

#### ▲DANGER

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

#### ▲WARNING

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

#### ▲CAUTION

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

## **NOTICE**

Indicates a situation which, if not avoided, could result in damage to property.

## **Other message levels**

### **Important**

Indicates significant information which is essential for the product to function correctly.

### **Note**

Indicates useful information which helps in getting the most out of the product.

## **Safety instructions**

### **⚠WARNING**

The Axis product shall be installed by a trained professional, and in compliance with local laws and regulations.

## **NOTICE**

- The Axis product shall be used in compliance with local laws and regulations.
- Store the Axis product in a dry and ventilated environment.
- Avoid exposing the Axis product to shocks or heavy pressure.
- Do not install the product on unstable poles, brackets, surfaces or walls.
- Use only applicable tools when installing the Axis product. Using excessive force with power tools could cause damage to the product.
- Do not use chemicals, caustic agents, or aerosol cleaners.
- Use a clean cloth dampened with pure water for cleaning.
- Use only accessories that comply with the technical specification of your product. These can be provided by Axis or a third party. Axis recommends using Axis power source equipment compatible with your product.
- Use only spare parts provided by or recommended by Axis.
- Do not attempt to repair the product yourself. Contact Axis support or your Axis reseller for service matters.
- The power supply shall be plugged in to a socket outlet installed near the product and shall be easily accessible.

## **Transportation**

### **NOTICE**

- When transporting the Axis product, use the original packaging or equivalent to prevent damage to the product.

## Requirements for Compliance with UL294 6th Edition

This section contains information and instructions required for UL compliance. To make sure the installation is UL compliant, follow the instructions below in addition to the general information and instructions provided throughout this document. In cases where pieces of information contradict each other, the requirements for UL compliance always replace general information and instructions.

For use with the UL294 listed, Axis Communications model A1001 Network Door Controller.

### *Safety instructions on page 4*

- Locations and wiring methods shall be in accordance with the National Electrical Code, ANSI/NFPA 70. and in accordance with the Local Authority Holding Jurisdiction.
- Recommended test method: Verify that the card reader reads cards and provides access. Make sure that the keypad sound is enabled and verify the keypad by pushing each keypad button.  
Test frequency: once a year.
- There are no replacement parts available for this product.

### *Power & Data Connector on page 10*

- For UL294 compliant installations the AXIS A4011-E Reader should be powered by either an AXIS A1001 Network Door Controller or a UL294 listed power supply.
- DC input evaluated for UL294: 12V DC – 24V DC

### *Specifications*

- Operating Conditions: Use of protective shield or heating pad not evaluated by UL.

### *Impaired Operation*

The following conditions could result in impaired operation of the reader:

The reader can have difficulties reading cards at very low temperatures. The access cards are normally specified to – 35 deg C (-31 F) and should be warmed up if it is installed in cold surroundings. The reader can only read one card at a time. Sheet metal behind the access card can result in impaired antenna function and prevent the reader from reading the card. Too low voltage, will impair the function of the reader.

### Performance Levels for Access Control

This section contains performance level information required for UL 294 compliance.

Feature	Level
Destructive Attack Test	I
Line Security	I
Endurance	IV
Standby Power	I

## Installation Guide

This Installation Guide provides instructions for connecting AXIS A4011-E Reader to a network door controller. AXIS A4011-E Reader is an OSDP reader that is designed to communicate with Axis network door controllers.

## Installation Steps

1. Make sure the package contents, tools and other materials necessary for the installation are in order. See *page 7*.
2. Study the hardware overview. See *page 7*.
3. Study the specifications. See *page 9*.
4. Install the hardware. See *page 13*.

## Package contents

- AXIS A4011-E Reader
- Installation Guide (this document)

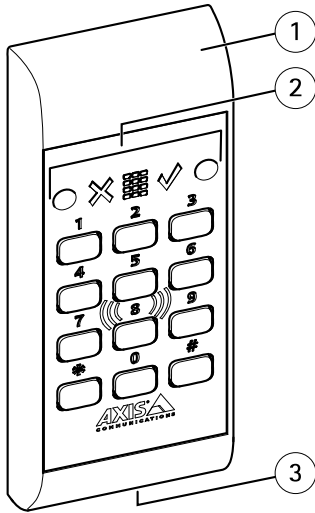
## Recommended Tools

- Drill for drilling the mounting holes.
- Torx screwdriver T20 for the frontplate screw.
- Diagonal pliers for stripping the wires.

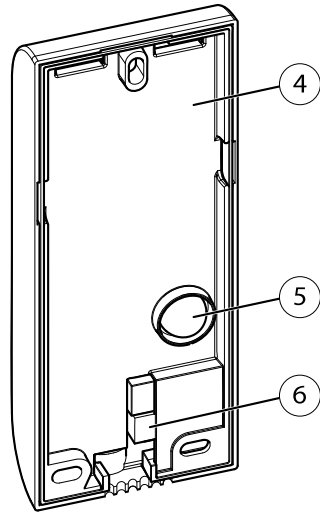
## Hardware overview

For specifications of the hardware components, see .

# AXIS A4011-E Reader



- Front (left)**
- 1 Frontplate
  - 2 Reader feedback LED indicators
  - 3 Frontplate screw (T20)



- Back (right)**
- 4 Backplate
  - 5 Tampering alarm switch
  - 6 Power & Data connector

## Reader Feedback

The table shows the feedback signals that are preconfigured in the reader when connected to an Axis network door controller.

Event/state	LED indicator	Beeper pattern
Door locked	✘ Steady red	Silent
Door unlocked	✓ Steady green	Silent
PIN required	✘ Steady red/Steady amber	Two short beeps
Entering PIN	✘ Steady red/Steady amber	Silent
Access granted	✓ Steady green	One short beep
Access denied	✘ Steady red	One long beep



Pre-alarm warning	<input type="radio"/> Steady red	Short beeps until entering new state
Door open too long	<input type="radio"/> Flashing red	Constant beep

## Specifications

Identification types	See <i>page 10</i> .
Power consumption	12–24 V DC, max 2.1 W
Connectors	Power & Data connector. See <i>page 10</i> . Tampering alarm switch. See <i>page 11</i> . DIP switches. See <i>DIP Switches on page 11</i> .
Wire area	See <i>page 11</i> .
Operating conditions	This product is intended for outdoor use. To protect the card reader from possible effects of weather, use a protective shield.
	Operating temperature: -35 °C to 70 °C (-31 °F to 158 °F) To operate in temperatures below -35 °C (-31 °F), the card reader must be mounted on a heating pad.
	Humidity: 95% RH (non-condensing)
Storage and transport conditions	Temperature: -50 °C to 70 °C (-58 °F to 158 °F)
Approvals	EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6 EN 61000-6-2, EN 61000-6-3 ETSI EN 300 330-2, ETSI EN 301 489-1, ETSI EN 301 489-3 CISPR 16-2-1, CISPR 16-2-3 FCC Part 15 Subpart C IC RSS-GEN, IC RSS-210 AS/NZS 4268 IEC/EN 60950-1, IEC/EN 60950-2 EN 50581 (RoHS) IEC/EN 60529 IP54 UL294, 6th Edition
Dimensions (HxWxD)	157 x 62 x 22 mm (6.18 x 2.4 x 0.87 in)
Weight	270 g (0.6 lb)
Warranty	Axis 3-year warranty and AXIS Extended Warranty option, see <a href="http://www.axis.com/warranty">www.axis.com/warranty</a>

# AXIS A4011-E Reader

## Identification Types

Identification types are portable credential storage devices, pieces of memorized information, or various combinations of the two that determine how users will be granted access to the door. Common identification types include tokens such as cards or key fobs, personal identification numbers (PINs), and request to exit (REX) devices.

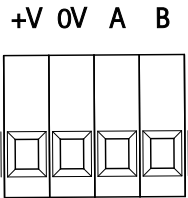
The reader supports the following formats:

- MIFARE® DESFire®
- MIFARE® Classic
- iClass®
- SEOS®

To program the reader for MIFARE®Classic sector reading, a customer-specific setup card is needed. For more information, contact Axis Support at [www.axis.com/techsup](http://www.axis.com/techsup).

## Power & Data Connector

4-pin terminal block for DC power input and data. Supports RS485 and OSDP protocols for communication with the door controller.



### NOTICE

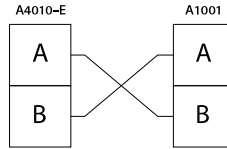
Use a Safety Extra Low Voltage (SELV) compliant limited power source (LPS) with a rated output current limited to  $\leq 2$  A. For example, AXIS A1001 Network Door Controller fulfills these requirements when powered by Power over Ethernet (PoE) or a SELV-compliant LPS.

Function	Pin	Notes	Specifications
DC input	+V	Power input from controller or external power supply.	Min 12 V DC (-10%) Max 24 V DC (+15%)
0 V DC (-)	0V		
RS485	A	For half duplex RS485 (RX/TX)	A
	B		B

## Important

- The recommended maximum cable length is 30 m (98.4 ft).

## Connection with AXIS A1001



To use the reader with AXIS A1001, connect the RS485 wires from A to B and from B to A.

For more information about Axis network door controller connections, see the hardware pin chart, generated through the door controller's hardware configuration, and the AXIS A1001 User Manual, available at [www.axis.com](http://www.axis.com)

For long wire length it is recommended to use twisted pair for the RS485 A and B wires.

## Wire Area

### NOTICE

Each wire shall have an conductor cross-sectional area that corresponds to an conductor gauge range of AWG 28–16 (CSA) or AWG 22–14 (cUL/UL). Select cables in compliance with your local regulations.

AWG	Diameter mm (in)	Area mm <sup>2</sup>
28–16	0.321–1.29 (0.0126–0.0508)	0.0810–1.31
22–14	0.644–1.63 (0.0253–0.0641)	0.326–2.08

## Tampering Alarm

The tampering alarm switch and tampering alarm sensor can toggle between an open and closed circuit. When the reader is removed from the surface it is attached to, or when the frontplate is removed, an alarm event is sent to the door controller. In the door controller, the alarm event can be used to trigger an action. For information, see the door controller's User Manual.

## DIP Switches

The reader can be configured through eight DIP switches that are located on the right side of the circuit board. To change the configuration, remove the frontplate, and then flip the DIP switches

# AXIS A4011-E Reader

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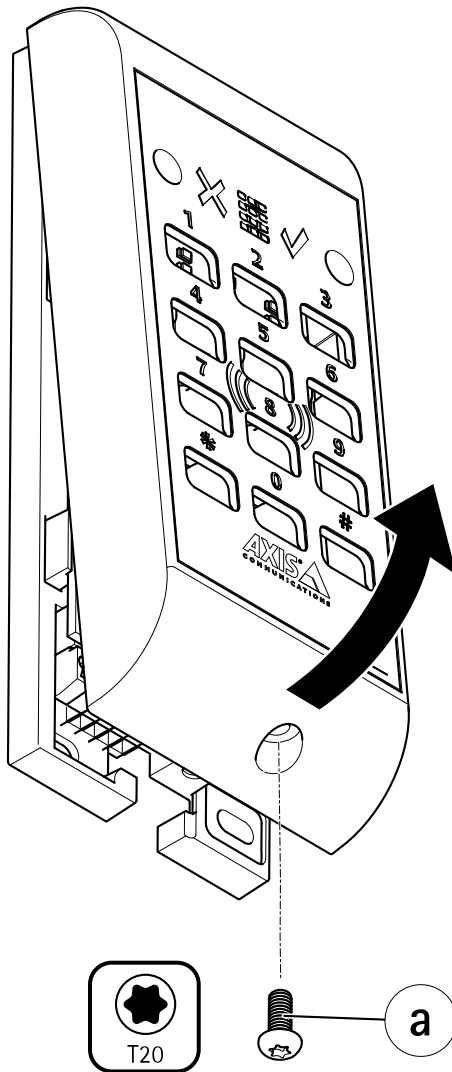
as required. For information about card formats and reader feedback, see the door controller's User Manual.

DIP	Default setting	Function
1	OFF	Address value 1
2	OFF	Address value 2
3	OFF	Address value 4
4	OFF	Key beep: beep at keystrokes and major/minor signal at invalid/valid card
5	OFF	Card beep: beep at card read
6	OFF	n/a
7	OFF	Light on: keypad always lit
8	OFF	Light code: keypad lights when the indication for PIN code is activated

## RS485 Termination

The reader communicates with a controller using a RS485 serial communications interface. This interface port on the reader has a user adjustable termination resistance, controlled via a DIP switch. When used with an Axis A1001 Network Door Controller termination should be enabled by setting the DIP switch to ON.

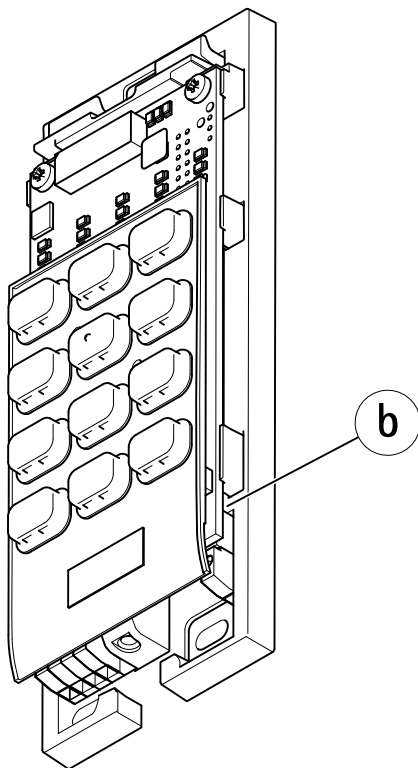
Install the hardware



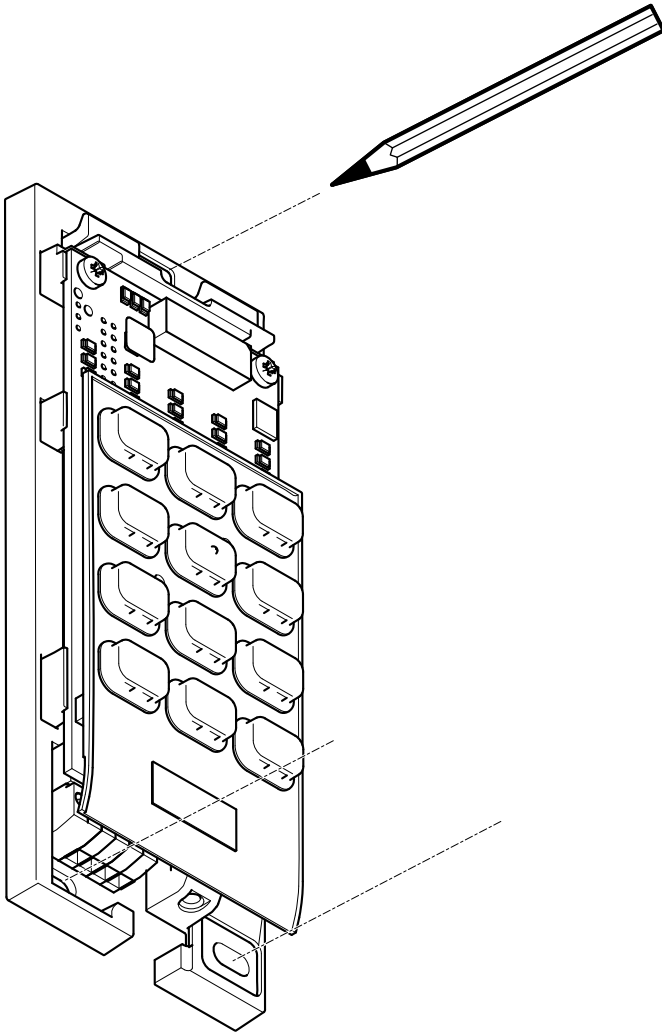
1. Remove the frontplate screw (a) and remove the frontplate from the reader backplate.

## AXIS A4011-E Reader

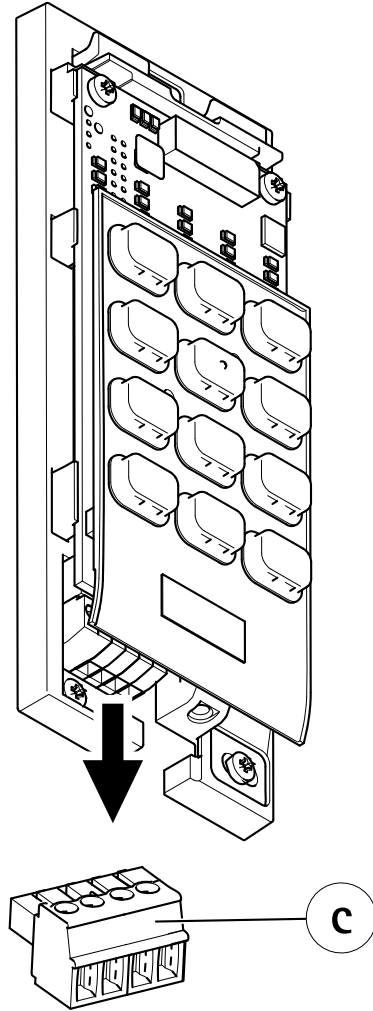
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2. Check that the RS485 termination switch (b) is switched to ON.

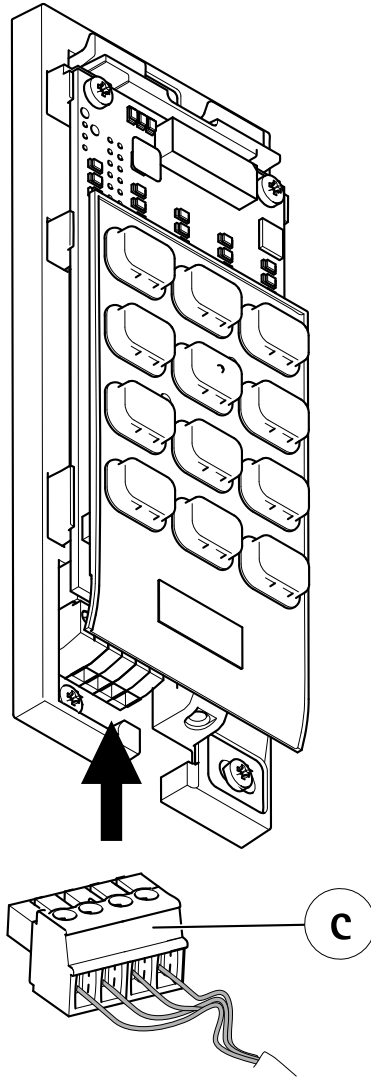


3. Hold the backplate against the wall and mark your holes with a pencil.
4. Drill your holes in the wall and mount the backplate to the wall. Use drill bits, screws and plugs that are appropriate for the material.

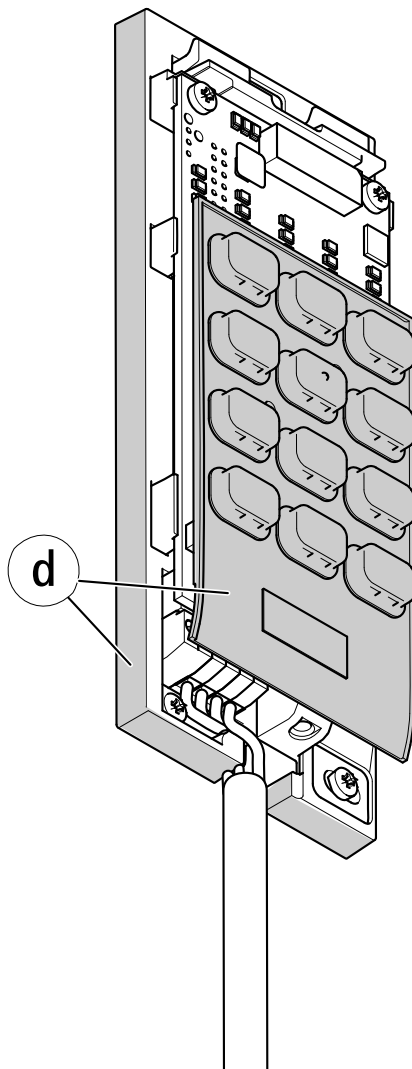


5. Remove the connector head (c) and connect the wires. For connector specifications, see *Power & Data Connector* on page 10.

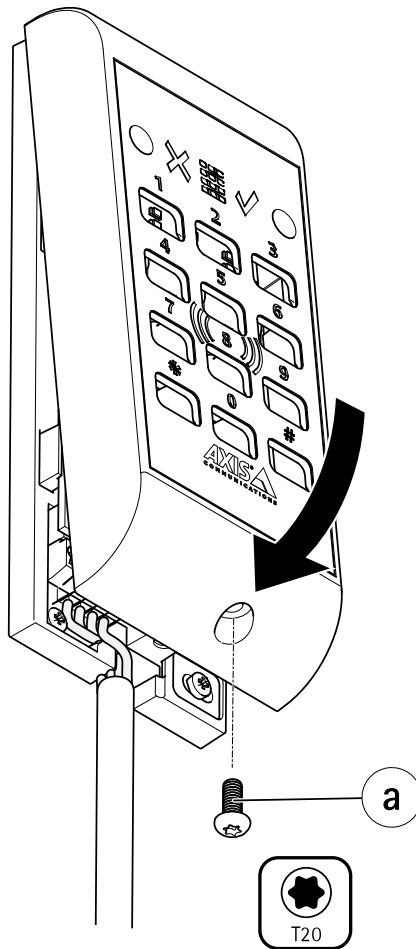




6. Reattach the connector head (c).



7. Check that the silicone gaskets (d) fit tightly to the backplate sides and over the keys.



8. Hook the frontplate onto the upper tabs on the backplate, push the frontplate into place and tighten the screw (a).

## Further information

- For the latest version of this document, see [axis.com](http://axis.com)
- For useful online trainings and webinars, see [axis.com/academy](http://axis.com/academy)

### **Warranty information**

For information about Axis' product warranty and thereto related information, go to [axis.com/warranty](http://axis.com/warranty)



