

# AXIS A1001 Network Door Controller

## Installation Guide – Full Reference

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## 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 Acknowledgments

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## 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:


- download user documentation and software updates
- 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 [www.axis.com/techsup/](http://www.axis.com/techsup/)

## Learn More!

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

## Regulatory Information

### Europe

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

- Electromagnetic Compatibility (EMC) Directive 2004/108/EC. See *Electromagnetic Compatibility (EMC) on page 2*.
- Low Voltage (LVD) Directive 2006/95/EC. 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.

### USA

This equipment has been tested using a shielded network cable (STP) 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.

The product shall be connected using a shielded network cable (STP) that is properly grounded.

### Canada

This digital apparatus complies with CAN ICES-3 (Class B). The product shall be connected using a shielded network cable (STP) that is properly grounded.

Cet appareil numérique est conforme à la norme

CAN NMB-3 (classe B). Le produit doit être connecté à l'aide d'un câble réseau blindé (STP) qui est correctement mis à la terre.

## Europe

This digital equipment fulfills the requirements for RF emission according to the Class B limit of EN 55022. The product shall be connected using a shielded network cable (STP) that is properly grounded.

This product fulfills the requirements for immunity according to EN 61000-6-1 residential, commercial and light-industrial environments.

This product fulfills the requirements for immunity according to EN 61000-6-2 industrial environments.

This product fulfills the requirements for immunity according to EN 55024 office and commercial environments

This product fulfills the requirements for immunity according to EN 50130-4 residential, commercial, light-industrial and industrial environments.

## Australia/New Zealand

This digital equipment fulfills the requirements for RF emission according to the Class B limit of AS/NZS CISPR 22. The product shall be connected using a shielded network cable (STP) that is properly grounded.

## Japan

この装置は、クラスB情報技術装置です。この装置は、家庭環境で使用することを目的としていますが、この装置がラジオやテレビジョン受信機に近接して使用されると、受信障害を引き起こすことがあります。取扱説明書に従って正しい取り扱いをして下さい。本製品は、シールドネットワークケーブル(STP)を使用して接続してください。また適切に接地してください。

## Safety

This product complies with IEC/EN 60950-1, Safety of Information Technology Equipment. If its connecting cables are routed outdoors, the product shall be grounded either through a shielded network cable (STP) or other appropriate method.

The power supply used with this product shall fulfill the requirements for Safety Extra Low Voltage (SELV) and Limited Power Source (LPS) according to IEC/EN/UL 60950-1.

## 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 the legislative act Administration on the Control of Pollution Caused by Electronic Information Products (ACPEIP).

## Contact Information

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Sweden

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Fax: +46 46 13 61 30

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

## Supported Readers

This list of supported readers is subject to change without notice. Contact your Axis reseller for information about supported readers.

This product is compatible with UL Listed Wiegand access control readers

This product is compatible with the following RS485 access control readers:

### AXIS A4011-E Reader

HID iCLASS® RW100: 6101CG40000, 6101CGM0000, 6101CK40000, 6101CK40002, 6101CK40100, 6101CK40300, 6101CKM0000, 6101CKM0002, 6101CKM0203; RW300: 6111CG40000, 6111CG40000, 6111CGM0000, 6111CK40000, 6111CK4000Z, 6111CKM0000; RW400: 6121CG40000, 6121CGM0000, 6121CK40000, 6121CK40003, 6121CK4000D-G3.0, 6121CKM0000; R40: 6122CKP00P0, 6122CKP05P0, 6122CKP06P0; RWK400: 6131CG4020000, 6131CK4000000, 6131CK4000014, 6131CK4000300, 6131CK4020000, 6131CKM0000000, 6131CKM000214; RK40: 6132BKP00Q709-G3.0, 6132CKM000009, 6132CKP000011, 6132CKP000700-G3.0, 6132CKP000709-G3.0, 6132CKP001009, 6132CKP001011, 6132CKP00P000, 6132CKP00P009, 6132CKP00P709-G3.0, 6132CKP00Q709-G3.0, 6132CKP030014, 6132CKP060514, 6132CKP06P009, 6132CKP06P609, 6132CKP070209; RW150: 6141CG40000, 6141CGM0000, 6141CK40000, 6141CKM0000; R15: 6142CKP000Z, 6142CKP00P0, 6142CKP0100; RWKL550: 6171BK4000000, 6171BK4000009, 6171BK4000014, 6171BK4000214, 6171BK4000500, 6171BK4040Z14, 6171BK4060000, 6171BK4060209, 6171BK4060Z09, 6171BK4061000, 6171BKM000000, 6171BKM000200, 6171BKM000300, 6171BKM040400; RWKLBS75: 6181BK4000000, 6181BK4000009, 6181BK4000014, 6181BK4000022, 6181BK4060C09;

HID Smartid®: 8031DSAP

HID pivClass® R10-H: 900LHRNAK00000, 900LHRTAK00000, 900NHRNAK00000, 900NHRTAK00000, 900PHRNAK00000, 900PHRTAK00000, 910LHRNAK00000, 910LHRTAK00000, 910NHRNAK00000, 910NHRTAK00000, 910PHRNAK00000, 910PHRTAK00000, 920LHRNAK00000, 920LHRTAK00000, 920NHRNAK00000, 920NHRTAK00000, 920PHRNAK00000, 920PHRTAK00000, 921LHRNAK00000, 921LHRTAK00000, 921NHRNAK00000, 921NHRTAK00000, 921PHRNAK00000, 921PHRTAK00000; RPKCL40-P: 923LPRNAK00000, 923LPRTAK00000, 923NPRNAK00000, 923PPRNAK00000, 923PPRTAK00000

Aptiq™: M11, MTK15, MTMSK15, MT15, MTMS15

For information about which compatible RS485 access control readers have been verified by UL, see *Requirements for Compliance with UL294 6th Edition on page 5*.

## 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.

### *Supported Readers*

- Compatibility with the following RS485 readers has been verified by UL: HID iClass RK40, HID SmartID 8031 DSHM, and AptiqQ MTMSK15.

### *Safety Instructions*

- The Axis product shall be installed and serviced by a factory trained professional.
- The Axis product shall be installed within the protected premises (secured area).
- The Axis product shall be mounted indoors. Outdoor use has not been evaluated or approved by UL.
- All interconnecting devices shall be UL Listed and Class 2 low-voltage power limited.
- All wiring methods shall be performed in accordance with NFPA70, local codes and authorities having jurisdiction.
- When the Axis product has reached the end of its useful life, dispose of it according to local laws and regulations. The product should not be disposed of together with household or commercial waste. See *Disposal and Recycling on page 3*.
- *Battery*
  - The 3.0 V lithium battery used by the Axis product is a UL Recognized component. (Type: BR2032, diameter: 20 mm (0.78 in), manufacturers: Rayovac, Panasonic). The following battery type is also a UL Recognized component: Type CR2032, manufacturers: Fuji, Maxell, Renata, Varta, Panasonic, JHIH
  - Users shall not replace the battery. If the battery needs replacing, a factory trained service professional shall contact Axis support at [www.axis.com/techsup](http://www.axis.com/techsup) for assistance.
  - Used batteries shall be disposed of according to local laws and regulations, which may vary from state to state. Waste BR/CR lithium cells are neither listed nor exempted from the USEPA hazardous waste regulations. Waste lithium batteries can be considered reactive hazardous waste if there is a significant amount of unreacted, or unconsumed lithium remaining. For information about how to dispose of used lithium batteries, contact your local authority for waste disposal.

### *Specifications*

- *Operating Conditions*
  - Temperatures 0 °C to 50°C (32 °F to 122 °F).

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- *Wire Area*
  - UL Listed or R/C AWM wires that have an conductor gauge range of AWG 22–14 shall be used.
  - The minimum conductor gauge for connection between the power sourcing equipment (PSE) or power injector and the powered device (PD) is 26 AWG.
- *Connectors*
  - This product is not intended for outside wiring as covered by Article 800 in the National Electrical Code, NFPA 70.
  - *Power Connector* – For UL security applications, the product shall be powered by a UL 294 Listed or UL 603 Listed Class 2 low-voltage power limited power supply that is capable of 4 hours of standby power.
  - *Network Connector* – Power over Ethernet (PoE) shall be supplied by a UL 294 Listed Class 2 power limited injector that provides 44–57 V DC, 15.4 W and 4 hours of standby power. Compliance with IEEE 802.3 (at or af) specifications has not been verified as part of UL 294/B.
  - *Tampering Alarm Pin Header* – To comply with UL 294/7.2.1 (Enclosure), the tampering alarm shall be connected to a sound alarm.
- *System Considerations*
  - The Axis product, whether it is a standalone door controller or a system of door controllers, shall not impair the intended operation of the panic hardware used in conjunction with it.
- *Wall and Ceiling Mount*
  - If using a junction box to mount the Axis product, the junction box shall be UL Listed.
- *Assign an IP Address*
  - The functionality of AXIS Camera Management, see *page 36*, has not been evaluated by UL.
- *Maintenance Instructions*
  - For maintenance instructions (some steps require access to the product's webpages), see *page 42*. For information about how to configure the Axis product using the product's webpages (AXIS Entry Manager), see the User Manual.
- *Further Information*
  - Firmware version: Door Controller, Model A1001 – 1.20.2

## Safety Information

Read through this Installation Guide carefully before installing the product. Keep the Installation Guide for future reference.

### 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.

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## Safety Instructions

### **▲WARNING**

- The Axis product shall be installed by a trained professional.

### **NOTICE**

- The Axis product shall be used in compliance with local laws and regulations.
- To use the Axis product outdoors, or in similar environments, it shall be installed in an approved outdoor housing.
- 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 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 technical specification of the product. These can be provided by Axis or a third party.
- Use only spare parts provided by or recommended by Axis.
- Do not attempt to repair the product by yourself. Contact Axis support or your Axis reseller for service matters.

## Transportation

### **NOTICE**

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

## Battery

The Axis product uses a 3.0 V BR/CR2032 lithium battery as the power supply for its internal real-time clock (RTC). Under normal conditions this battery will last for a minimum of five years.

Low battery power affects the operation of the RTC, causing it to reset at every power-up. When the battery needs replacing, a log message will appear in the product's server report. For more information about the server report, see the product's setup pages or contact Axis support.

The battery should not be replaced unless required, but if the battery does need replacing, contact Axis support at [www.axis.com/techsup](http://www.axis.com/techsup) for assistance.



## **⚠WARNING**

- Risk of explosion if the battery is incorrectly replaced.
- Replace only with an identical battery or a battery which is recommended by Axis.
- Dispose of used batteries according to local regulations or the battery manufacturer's instructions.



## Installation Guide - Full Reference

This full reference installation guide provides instructions for how to install AXIS A1001 Network Door Controller on your network.

- For a quick reference guide, see the printed **AXIS A1001 Installation Guide – Quick Reference** that is included in the package contents. The quick reference guide is also available on [www.axis.com](http://www.axis.com)
- For other aspects of using the product, see the **AXIS A1001 User Manual** available on [www.axis.com](http://www.axis.com)

## Installation Steps

1. Make sure the package contents, tools and other materials necessary for the installation are in order. See *page 11*.
2. Study the hardware overview. See *page 13*.
3. Study the specifications. See *page 18*.
4. Install the hardware. See *page 27*.
5. Access the product. See *page 34*.

## Package Contents

- AXIS A1001 Network Door Controller
- Cable tie (4x)
- Cover screw
- 6-pin plug connector (5x) (plugged into terminal connectors)
  - Reader I/O (blue)
  - Reader I/O (red)
  - Reader data (white)
  - Reader data (yellow)
  - Power & Relay (orange)
- 4-pin plug connector (5x) (plugged into terminal connectors)
  - Audio (white)
  - Auxiliary (yellow)
  - Door in (blue)
  - Door in (red)
  - Power lock (orange)
- 2-pin plug connector (plugged into terminal connector)
  - Power (black)

# AXIS A1001 Network Door Controller

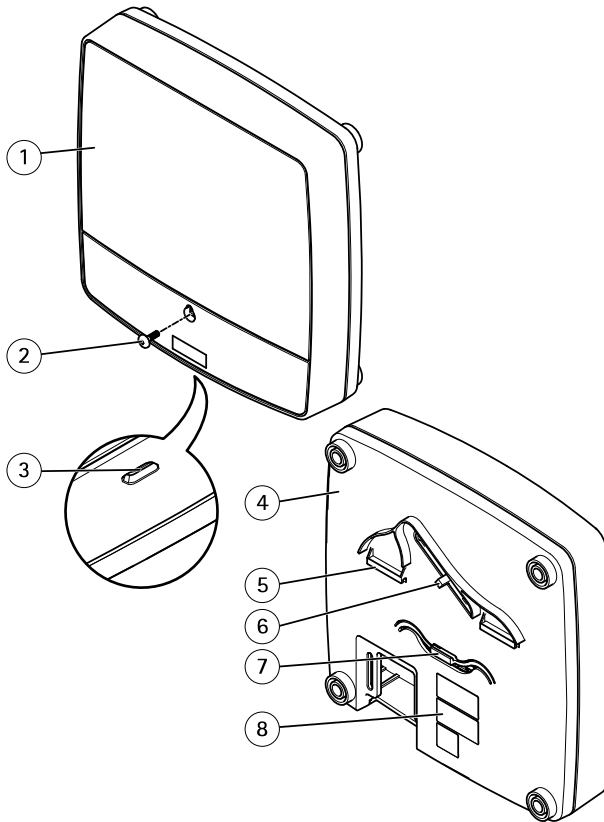
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- Printed materials
  - AXIS A1001 Installation Guide – Quick Reference
  - Extra serial number label (2x)
  - AVHS Authentication key

## Recommended Tools

- Drill – if mounting on wall or ceiling
- Screwdriver – if mounting on wall or ceiling
- Slotted screwdriver – for opening the cover
- Torx screwdriver (T10) – for tightening the cover screw
- Wire stripping tool

## Hardware Overview

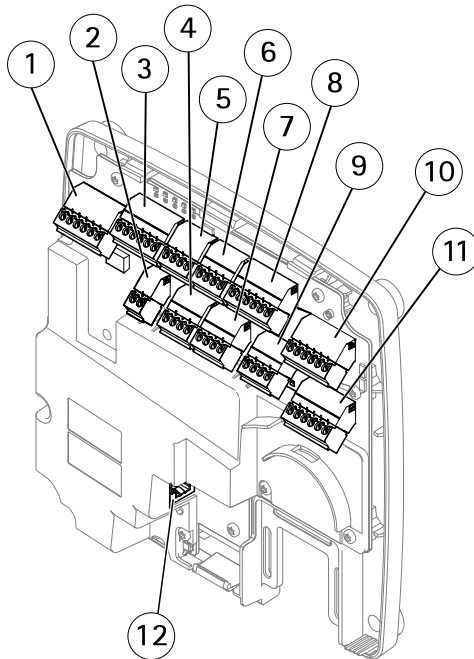


### Front and back:

- 1 Cover
- 2 Cover screw
- 3 Cover removal slot
- 4 Base
- 5 DIN clip – upper
- 6 Tampering alarm switch – back
- 7 DIN clip – lower
- 8 Part number (P/N) & Serial number (S/N)

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## I/O interface:

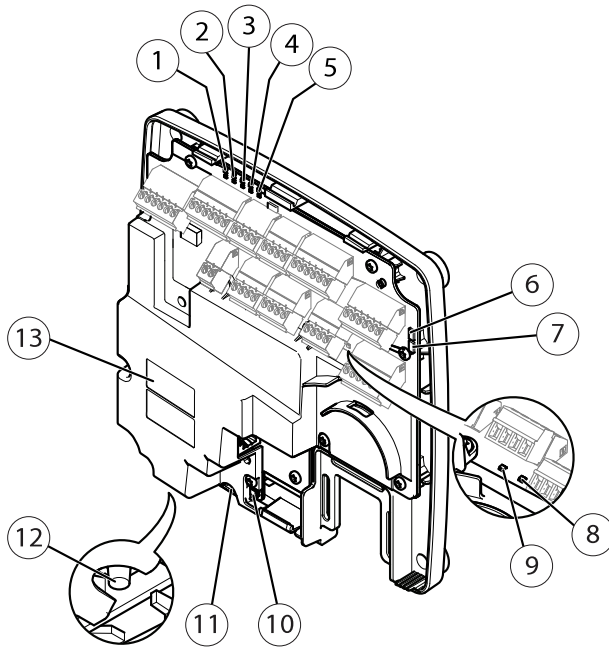
- 1 Reader data connector (READER DATA 1)
- 10 Reader data connector (READER DATA 2)
- 3 Reader I/O connector (READER I/O 1)
- 8 Reader I/O connector (READER I/O 2)
- 4 Door connector (DOOR IN 1)
- 7 Door connector (DOOR IN 2)
- 6 Auxiliary connector (AUX)
- 5 Audio connector (AUDIO) (not used)

## External power inputs:

- 2 Power connector (DC IN)
- 12 Network connector (PoE)

## Power outputs:

- 9 Power lock connector (LOCK)
- 11 Power & Relay connector (PWR, RELAY)



**LED indicators, buttons and other hardware:**

- 1 Power LED indicator
- 2 Status LED indicator
- 3 Network LED indicator
- 4 Reader 2 LED indicator (not used)
- 5 Reader 1 LED indicator (not used)
- 6 Tampering alarm pin header – front (TF)
- 7 Tampering alarm pin header – back (TB)
- 8 Lock LED indicator
- 9 Lock LED indicator
- 10 Tampering alarm sensor – front
- 11 SD card slot (microSDHC) (not used)
- 12 Control button
- 13 Part number (P/N) & Serial number (S/N)

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## LED Indicators

LED	Color	Indication
Network	Green	Steady for connection to a 100 MBit/s network. Flashes for network activity.
	Amber	Steady for connection to a 10 MBit/s network. Flashes for network activity.
	Unlit	No network connection.
Status	Green	Steady green for normal operation.
	Amber	Steady during startup and when restoring settings.
	Red	Slow flash for failed upgrade.
Power	Green	Normal operation.
	Amber	Flashes green/amber during firmware upgrade.
Lock	Green	Steady when not energized.
	Red	Steady when energized.
	Unlit	Floating.

### Note

- The Status LED can be configured to flash while an event is active.
- The Status LED can be configured to flash for identifying the unit. Go to **Setup > Additional Controller Configuration > System Options > Maintenance** .

## Connectors and Buttons

For specifications and operating conditions, see *page 18*.

### I/O Interface

#### Reader Data Connectors

Two 6-pin terminal blocks supporting RS485 and Wiegand protocols for communication with the reader. For specifications, see *page 20*.

#### Reader I/O Connectors

Two 6-pin terminal blocks for reader input and output. In addition to the 0 V DC reference point and power (DC output), the reader I/O connector provides the interface to:

- Digital input – For connecting, for example, reader tampering alarms.



- Digital output – For connecting, for example, reader beepers and reader LEDs.

For specifications, see *page 21*.

## Door Connectors

Two 4-pin terminal blocks for connecting door monitoring devices and request to exit (REX) devices. For specifications, see *page 22*.

## Auxiliary Connector

4-pin configurable I/O terminal block. Use with external devices, in combination with, for example tampering alarms, event triggering and alarm notifications. In addition to the 0 V DC reference point and power (DC output), the auxiliary connector provides the interface to:

- Digital input – An alarm input for connecting devices that can toggle between an open and closed circuit, for example PIR sensors or glass break detectors.
- Digital output – For connecting external devices such as burglar alarms, sirens or lights. Connected devices can be activated by the VAPIX® application programming interface or by an action rule.

For specifications, see *page 22*.

## External Power Inputs

### **NOTICE**

The product shall be connected using a shielded network cable (STP). All cables connecting the product to the network shall be intended for their specific use. Make sure that the network devices are installed in accordance with the manufacturer's instructions. For information about regulatory requirements, see *Electromagnetic Compatibility (EMC) on page 2*.

## Power Connector

2-pin terminal block for DC power input. Use a Safety Extra Low Voltage (SELV) compliant limited power source (LPS) with either a rated output power limited to  $\leq 100$  W or a rated output current limited to  $\leq 5$  A. For specifications, see *page 23*.

## Network Connector

RJ45 Ethernet connector. Supports Power over Ethernet (PoE). For specifications, see *page 23*.

## Power Outputs

### Power Lock Connector

4-pin terminal block for connecting one or two locks. The lock connector can also be used to power external devices. For specifications, see *page 24*.

### Power & Relay Connector

6-pin terminal block for connecting power and the door controller's relay to external devices such as locks and sensors. For specifications, see *page 24*.

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## Buttons and Other Hardware

### Tampering Alarm Pin Header

Two 2-pin headers for disconnecting the front and back tampering alarms. For specifications, see *page 25*.

### Control Button

The control button is used for:

- Resetting the product to factory default settings. See *page 41*.
- Connecting to an AXIS Video Hosting System service or AXIS Internet Dynamic DNS Service. For more information about these services, see the User Manual.

## Specifications

### Operating Conditions

The Axis product is intended for indoor use.

Classification	Temperature	Humidity
IEC 60721-4-3 Class 3K3, 3M3	0 °C to 50 °C (32 °F to 122 °F)	20–85% RH (non-condensing)

### Power Consumption

#### **NOTICE**

Use a Safety Extra Low Voltage (SELV) compliant limited power source (LPS) with either a rated output power limited to  $\leq 100$  W or a rated output current limited to  $\leq 5$  A.

Power supply	Maximum load on outputs
Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 3, 44–57 V DC	7.5 W
10–30 V DC, max 26 W	14 W

### Power Output Conversion (W to A)

If the device connecting to the Axis product only has an ampere (A) rating, the following method can be used for conversion to watts (W).

The total maximum output load of the Axis product depends on the power source:

Power source	Total maximum load on outputs
Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 3	7.5 W
10–30 V DC	14 W

The voltage on the Axis product's power outputs is 12 V DC (except for the Auxiliary Connector which has a voltage of 3.3 V DC). If your connecting device has a maximum ampere rating of for example 0.3 A, the following conversion gives the power in watts (W):

$$\text{Power (W)} = \text{Voltage (V)} \times \text{Current (I)}$$

$$\text{Power} = 12 \times 0.3 = 3.6 \text{ W}$$

The following table shows the available power after connection of the 0.3 A device in the example.

Power source	Available power
Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 3	$7.5 - 3.6 = 3.9 \text{ W}$
10–30 V DC	$14 - 3.6 = 10.4 \text{ W}$

The DC output on the following connectors are considered as power outputs: '

- Power Lock Connector
- Power & Relay Connector
- Reader I/O Connector
- Auxiliary Connector

**NOTICE**

The power output of the auxiliary connector has a 3.3 V DC voltage rating.

For connector specifications, see *Power Connector on page 23* and *Network Connector on page 23*.

## 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

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Endurance	IV
Standby Power	I

## Wire Area

### NOTICE

Each wire shall have an 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

## Connectors

For information about the connectors' positions, see *Hardware Overview on page 13*.

For connection diagrams and information about the hardware pin chart generated through the hardware configuration, see *Connection Diagrams on page 25* and *Configure the Hardware on page 39*.

The following section describes the connectors' technical specifications.

### Reader Data Connector

6-pin terminal block supporting RS485 and Wiegand protocols for communication with the reader.



The RS485 ports support:

- Two-wire RS485 half duplex
- Four-wire RS485 full duplex

The Wiegand ports support:

- Two-wire Wiegand

Function		Pin	Notes
RS485	A-	1	For full duplex RS485 For half duplex RS485
	B+	2	

RS485	A-	3	For full duplex RS485 For half duplex RS485
	B+	4	
Wiegand	D0 (Data 0)	5	For Wiegand
	D1 (Data 1)	6	

**Important**

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

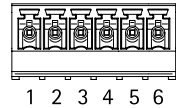
**Important**

The output circuits in this section are Class 2 power limited.

**Reader I/O Connector**

6-pin terminal block for:

- Auxiliary power (DC output)
- Digital Input
- Digital Output
- 0 V DC (-)



Pin 3 on the reader I/O connectors can be supervised. If the connection is interrupted, an event is activated. To use supervised inputs, install end of line resistors. Use the connection diagram for supervised inputs. See page 27.

Function	Pin	Notes	Specifications
0 V DC (-)	1		0 V DC
DC output	2	For powering auxiliary equipment. Note: This pin can only be used as power out.	12 V DC Max load = 300 mA
Configurable (Input or Output)	3-6	Digital input – Connect to pin 1 to activate, or leave floating (unconnected) to deactivate.	0 to max 40 V DC
		Digital output – Connect to pin 1 to activate, or leave floating (unconnected) to deactivate. If used with an inductive load, e.g. a relay, a diode must be connected in parallel with the load, for protection against voltage transients.	0 to max 40 V DC, open drain, 100 mA

ENGLISH

# AXIS A1001 Network Door Controller

## Important

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

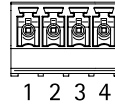
## Important

The output circuits in this section are Class 2 power limited.

### Door Connector

Two 4-pin terminal blocks for door monitoring devices (digital input).

All door input pins can be supervised. If the connection is interrupted, an alarm is triggered. To use supervised inputs, install end of line resistors. Use the connection diagram for supervised inputs. See *page 27*.



Function	Pin	Notes	Specifications
0 V DC (-)	1, 3		0 V DC
Input	2, 4	For communicating with door monitor. Digital input – Connect to pin 1 or 3 respectively to activate, or leave floating (unconnected) to deactivate. Note: This pin can only be used for input.	0 to max 40 V DC

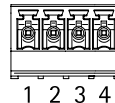
## Important

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

### Auxiliary Connector

4-pin configurable I/O terminal block for:

- Auxiliary power (DC output)
- Digital Input
- Digital Output
- 0 V DC (-)



For an example connection diagram, see *Connection Diagrams on page 25*.

Function	Pin	Notes	Specifications
0 V DC (-)	1		0 V DC

DC output	2	For powering auxiliary equipment. Note: This pin can only be used as power out.	3.3 V DC Max load = 100 mA
Configurable (Input or Output)	3-4	Digital input – Connect to pin 1 to activate, or leave floating (unconnected) to deactivate.	0 to max 40 V DC
		Digital output – Connect to pin 1 to activate, or leave floating (unconnected) to deactivate. If used with an inductive load, e.g. a relay, a diode must be connected in parallel with the load, for protection against voltage transients.	0 to max 40 V DC, open drain, 100 mA

**Important**

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

**Important**

The output circuits in this section are Class 2 power limited.

**Power Connector**

2-pin terminal block for DC power input. Use a Safety Extra Low Voltage (SELV) compliant limited power source (LPS) with either a rated output power limited to  $\leq 100$  W or a rated output current limited to  $\leq 5$  A.



Function	Pin	Notes	Specifications
0 V DC (-)	1		0 V DC
DC input	2	For powering controller when not using Power over Ethernet. Note: This pin can only be used as power in.	10-30 V DC, max 26 W Max load on outputs = 14 W

**Network Connector**

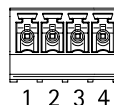
RJ45 Ethernet connector. Supports Power over Ethernet (PoE). Use Category 5e cables or higher.

# AXIS A1001 Network Door Controller

Function	Specifications
Power and Ethernet	Power over Ethernet IEEE 802.3af/802.3at Type 1 Class 3, 44–57 V DC Max load on outputs = 7.5 W

## Power Lock Connector

4-pin terminal block for powering one or two locks (DC output). The lock connector can also be used to power external devices.



Connect locks and loads to the pins according to the hardware pin chart generated through the hardware configuration.

Function	Pin	Notes	Specifications
0 V DC (-)	1, 3		0 V DC
0 V DC, floating, or 12 V DC	2, 4	For controlling up to two 12 V locks. Use the hardware pin chart. See <i>Configure the Hardware on page 39</i> .	12 V DC Max total load = 500 mA

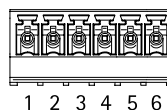
### Important

The output circuits in this section are Class 2 power limited.

## Power & Relay Connector

6-pin terminal block with built-in relay for:

- External devices
- Auxiliary power (DC output)
- 0 V DC (-)



Connect locks and loads to the pins according to the hardware pin chart generated through the hardware configuration.

Function	Pin	Notes	Specifications
0 V DC (-)	1, 4		0 V DC
Relay	2–3	For connecting relay devices. Use the hardware pin chart. See <i>Configure the Hardware on page 39</i> . The two relay pins are galvanically separated from the rest of the circuitry.	Max current = 700 mA Max voltage = +30 V DC



12 V DC	5	For powering auxiliary equipment. Note: This pin can only be used as power out.	Max voltage = +12 V DC Max load = 500 mA
24 V DC	6	Not used	

## Important

The output circuits in this section are Class 2 power limited.

## Tampering Alarm Pin Header

Two 2-pin headers for bypassing:



- Back tampering alarm (TB)
- Front tampering alarm (TF)

Function	Pin	Notes
Back tampering alarm	1–2	To bypass the front and back tampering alarm simultaneously, connect jumpers between TB 1, TB 2 and TF 1, TF 2 respectively. Bypassing the tampering alarms means that the system will not identify any tampering attempts.
Front tampering alarm	1–2	

## Note

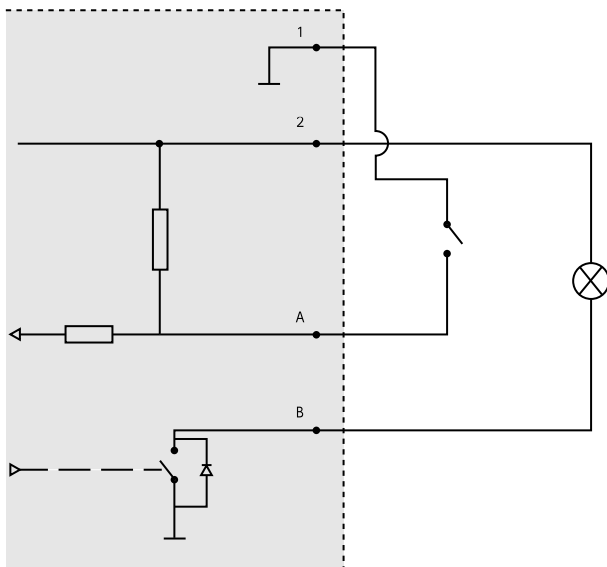
Both the front and back tampering alarms are connected by default. The casing open trigger can be configured to perform an action if the door controller is opened or if the door controller is removed from the wall or ceiling. For information about how to configure alarms and events, see the User Manual.

## Connection Diagrams

Connect devices according to the hardware pin chart generated through the hardware configuration. For more information about hardware configuration and the hardware pin chart, see *Configure the Hardware on page 39*.

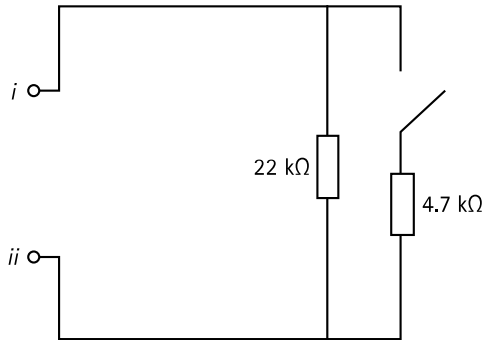
# AXIS A1001 Network Door Controller

## Auxiliary Connector



- 1 0 VDC (-)
- 2 DC output: 3.3 V, max 100 mA
- A I/O configured as input
- B I/O configured as output

## Supervised Inputs



To use supervised inputs, install end of line resistors. This applies to all supervised inputs. For information about limitations and updates, see the product's release notes.

- i* Input
- ii* 0 V DC (-)

## Install the Hardware

### **CAUTION**

Never mount the Axis product while power is applied to the product. Always apply power at the end of the installation.

### **NOTICE**

To protect the circuits against electrostatic discharge (ESD), use ESD protection when handling the product while the components and contacts are exposed.

Read all the instructions before installing the product.

- To configure the hardware, see *page 39*.
- To install the product on a wall (preferred) or ceiling, see *page 28*.
- To install the product on a DIN rail, see *page 29*.
- To connect the cables, see *page 30*.

## System Considerations

The Axis product shall be installed within the secured area.

# AXIS A1001 Network Door Controller

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The Axis product, whether it is installed as a single door controller or in a system of door controllers, shall not limit or weaken the intended use of the devices connected to it.

The Axis product should be installed on a wall (preferred) or a ceiling, with or without a junction box. It can also be installed on a DIN rail.

## System size

The Axis product can be connected to other Axis Network Door Controllers in a controller cluster that can handle up to 66 doors or wireless devices (within the cluster). Each Axis product can connect to up to 2 wired doors or 1 wired door and 1 Assa Aperiio communication hub (through RS485). Through the Assa Aperiio communication hub, the Axis product can access up to 8 wireless devices (Aperiio online).

### Note

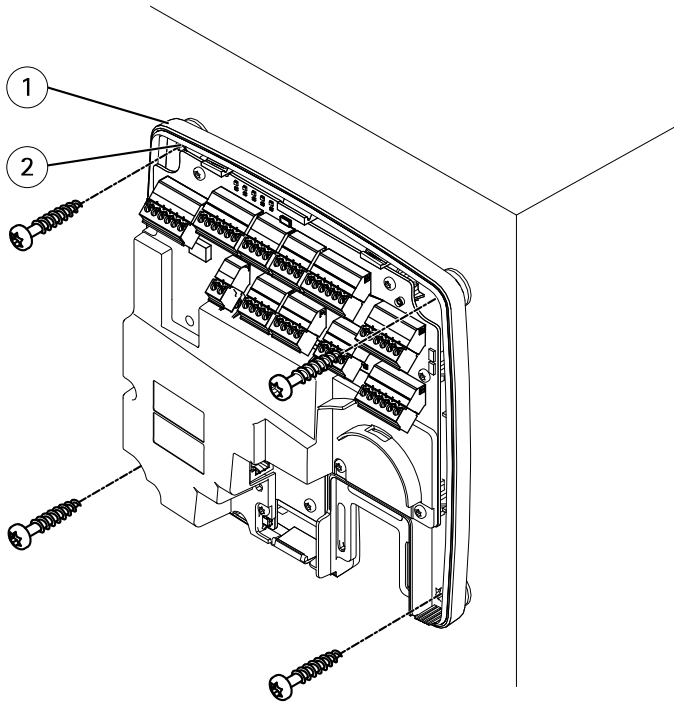
- Assa Aperiio products are not sold and distributed by Axis Communications. For support and training related to Assa Aperiio wireless systems, contact your Assa Abloy reseller.
- The Axis product is considered standalone, and does not require constant connection to a computer for proper operation. The use of a connected computer is for local programming, downloading, and supplemental monitoring purposes only.

## Wall and Ceiling Mount

### NOTICE

If installing the door controller on a wall, make sure the cut-out for the cables is facing downward.

1. If using a junction box, install the junction box before installing the network door controller. For UL compliance, the junction box shall be UL Listed.
2. If required, remove the cover screw, insert a slotted screwdriver into the cover removal slot and remove the cover. See *Hardware Overview on page 13*.
3. Make marks for the screw holes in the ceiling/wall, using the base as a template.
4. If required, drill holes for the screws.
5. Mount the base on the wall or ceiling. Make sure that the screws and plugs are appropriate for the material (e.g. wood, metal, sheet rock, stone).



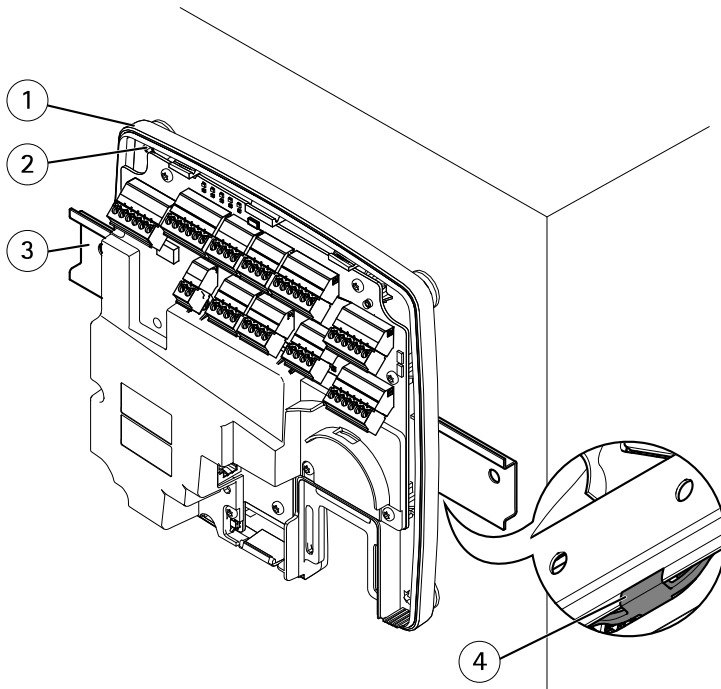
- 1 Base
- 2 Screw hole (4x)

6. Connect the cables. See *page 30*.

## DIN Rail Mount

1. If required, install a DIN rail (not included).
2. If required, remove the cover screw, insert a slotted screwdriver into the cover removal slot and remove the cover. See *Hardware Overview on page 13*.
3. Hook the lower DIN clip, which is flexible, onto the bottom of the DIN rail, tilting the base slightly forwards.
4. Lift the base so that the lower DIN clip reaches its bottommost position.
5. Tilt the base backwards so that it is parallel to the wall/ceiling.
6. Hook the upper DIN clip onto the top of the DIN rail by lowering the base.

# AXIS A1001 Network Door Controller



- 1 Base
- 2 Screw hole (4x)
- 3 DIN rail
- 4 Lower Din clip

- 7. Secure the base using four screws. Make sure that the screws and plugs are appropriate for the material (e.g. wood, metal, sheet rock, stone). See *Wall and Ceiling Mount* on page 28.

### Note

To prevent bending of the base, be careful not to tighten the screws too tight. Leave approximately 2.5 mm (0.1 in). If the base is bent, the cover will not close.

- 8. Connect the cables. See page 30.

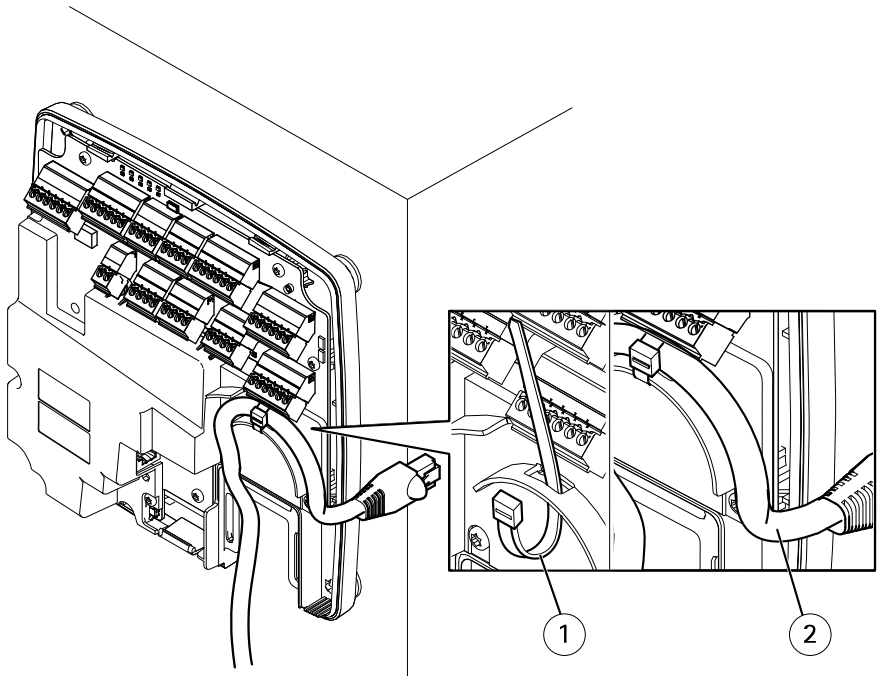
## Connect the Cables

### ▲CAUTION

Disconnect power before connecting any wires to the Axis product. Never make connections while power is applied to the product.

## NOTICE

- The product shall be connected using a shielded network cable (STP). All cables connecting the product to the network shall be intended for their specific use. Make sure that the network devices are installed in accordance with the manufacturer's instructions. For information about regulatory requirements, see *Regulatory Information on page 2*.
  - If using Power over Ethernet, wait with connecting the network cable to the network until the all the other wires have been connected.
  - To allow for future maintenance, to avoid excessive strain on wires and connectors, and to avoid damage to conductor insulation, leave a service loop and make sure all cables and wires are properly supported and secured. Use the supplied cable ties.
  - To protect the circuits against electrostatic discharge (ESD), use ESD protection when connecting wires to the product.
1. Loop the network cable around the cable guide and connect the network cable to the network connector.
  2. Secure the network cable to the cable guide using one of the supplied cable ties.



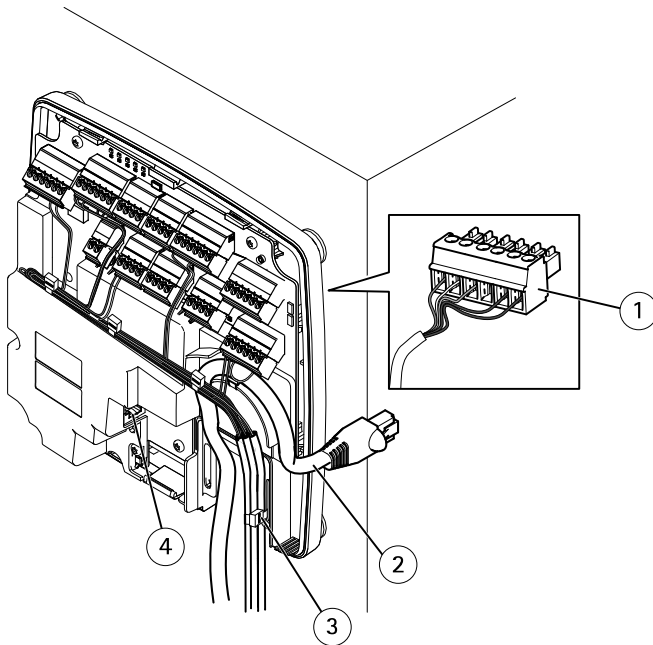
- 1 Cable tie
- 2 Network cable

# AXIS A1001 Network Door Controller

3. Strip the cables and wires as required using a crimp tool.
4. Connect the wires between the door controller and the locks, doors and other devices. For more information about the connectors and their specifications, see *page 16* and *page 20*.

**NOTICE**

- Make sure all the wires are connected correctly. Incorrect wiring could cause damage to the product.
- Make sure to use wires that meet the requirements. For more information, see *Wire Area on page 20* and, for UL compliance, *Requirements for Compliance with UL294 6th Edition on page 5*.



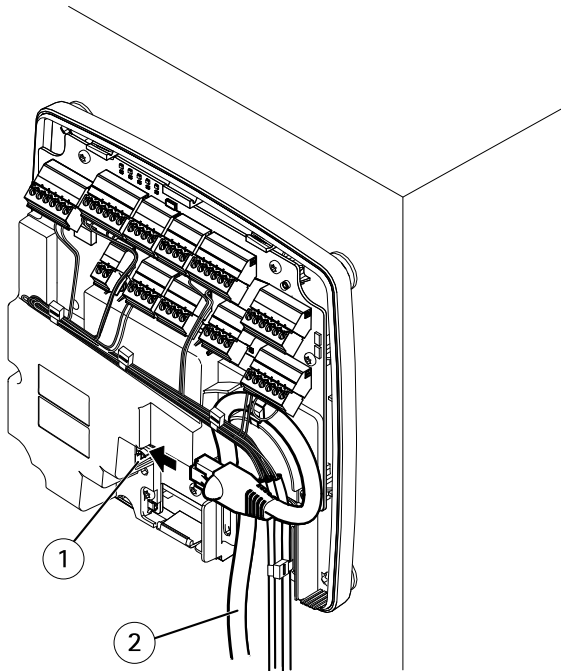
### Cable connection example

- 1 6-pin plug connector
- 2 Network cable
- 3 Cable tie (4x)
- 4 Network connector



## Note

- For devices that have been configured in the product's hardware configuration pages, use the hardware pin chart as a guide on how to connect the pins. For more information about hardware configuration and the hardware pin chart, see *Configure the Hardware on page 39*.
  - For information about how to connect other wires, such as power wires to locks, readers and other devices, see the manufacturers' instructions.
5. Collect all the wires neatly and secure them using the supplied cable ties.
  6. Label the cables for future reference.
  7. If using Power over Ethernet, connect the network cable to the network.
  8. If using Ethernet and external power (10–30 V DC), connect the network cable to the network and connect power. Use a SELV compliant limited power source (LPS). For more information, see *Power Connector on page 23*.



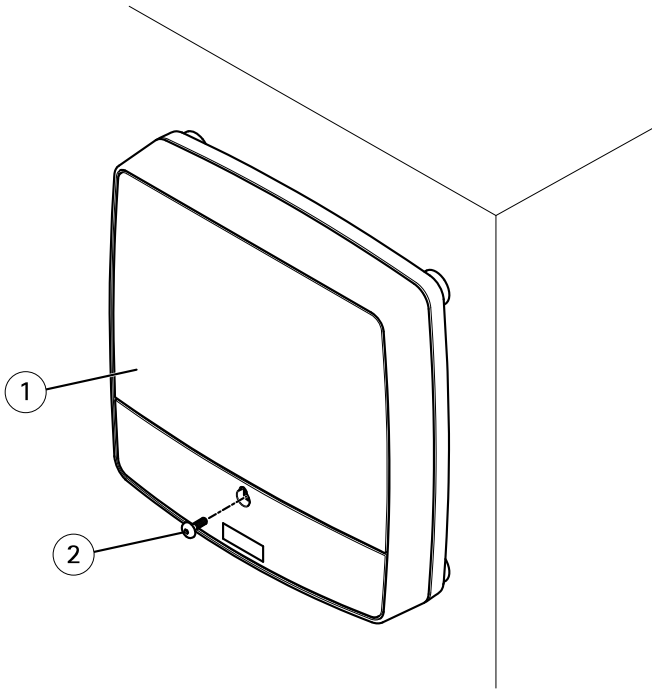
### Cable connection example

- 1 Network connector
- 2 Network cable

# AXIS A1001 Network Door Controller

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9. Make sure that the LEDs indicate the correct conditions. See *LED Indicators* on page 16.
10. Attach the cover to the base and tighten the cover screw.



- 1 Cover
- 2 Cover screw (T10)

## Access the Product

The product can be used with most operating systems and browsers. The recommended browsers are Internet Explorer with Windows, Safari with Macintosh and Firefox with other operating systems.

When you access the product for the first time, you must assign an IP address and set the password for the default administrator user *root*.

- To assign an IP address, see *page 35*.
- To set the root password, see *page 39*.

## Access from a Browser

1. Start a web browser.
2. Enter the IP address or host name of the Axis product in the browser's Location/Address field.

To access the product from a Mac computer (OS X), go to Safari, click on Bonjour and select the product from the drop-down list.

If you do not know the IP address, use AXIS IP Utility to locate the product on the network. For information about how to discover and assign an IP address, see *Assign an IP Address*. This information is also available from the support pages at [www.axis.com/techsup](http://www.axis.com/techsup)

### Note

To show Bonjour as a browser bookmark, go to **Safari > Preferences**.

3. Enter your user name and password. If this is the first time the product is accessed, the root password must first be configured. For instructions, see *Set the Root Password on page 39*.
4. AXIS Entry Manager opens in your browser. The start page is called the Overview page.

## Access from the Internet

Once connected, the Axis product is accessible on your local network (LAN). To access the product from the Internet you must configure your network router to allow incoming data traffic to the product. To do this, enable the NAT-traversal feature, which will attempt to automatically configure the router to allow access to the product. This is enabled from **Setup > Additional Controller Configuration > System Options > Network > TCP/IP > Advanced**.

For more information about NAT traversal for IPv4, see the product's User Manual. See also AXIS Internet Dynamic DNS Service at [www.axiscam.net](http://www.axiscam.net)

For Technical notes on this and other topics, visit the Axis Support web at [www.axis.com/techsup](http://www.axis.com/techsup)

## Assign an IP Address

### Default IP Address

The Axis product is designed for use on an Ethernet network and requires an IP address for access. Most networks have a DHCP server that automatically assigns IP addresses to connected devices. If your network does not have a DHCP server the Axis product will use 192 . 168 . 0 . 90–95 as the default IP address.

# AXIS A1001 Network Door Controller

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## Recommended Methods in Windows®

AXIS IP Utility and AXIS Camera Management are recommended methods for finding Axis products on the network and assigning them IP addresses in Windows®. Both applications are free and can be downloaded from [www.axis.com/techsup](http://www.axis.com/techsup)

## AXIS IP Utility – Small Installations


AXIS IP Utility automatically discovers and displays Axis products on your network. The application can also be used to manually assign a static IP address.

Note that the computer running AXIS IP Utility must be on the same network segment (physical subnet) as the Axis product.

### Automatic Discovery

1. Check that the Axis product is connected to the network and has powered up.
2. Start AXIS IP Utility.
3. When the Axis product appears in the window, double-click to open its web pages.
4. For information about how to set the password, see *page 39*.

### Assign the IP Address Manually (optional)

1. Acquire an available IP address on the same network segment as your computer.
2. Select the Axis product in the list.
3. Click **Assign new IP address to selected device**  and enter the IP address.
4. Click **Assign** and continue according to the instructions.
5. When the Axis product appears in the window, double-click to open its web pages.
6. For information about how to set the password, see *page 39*.

## AXIS Camera Management – Large Installations

AXIS Camera Management is a powerful installation and management tool for Axis network products. The tool can automatically search the network for devices, assign IP addresses, set passwords, show connection status, manage firmware upgrades and configure product parameters. It can perform batch operations on multiple products at once.

### Automatic Discovery

1. Check that the Axis product is connected to the network and has powered up.
2. Start AXIS Camera Management.
3. Connect to a server.


To connect to a server on the network, select **Remote server** and select a server from the drop-down list or enter the IP or DNS address in the field.

To connect to a server running locally on your computer, select **This computer**.

4. Click **Log On** to log on as the current computer user, or de-select **Log on as current user** and enter the user name and password to log on with.
5. The first time AXIS Camera Management runs it automatically searches for Axis products on the network. To manually search for products, select **Configuration > Add Devices**. The software displays a list of the products found.  
Select the products to add and click **Next** and then click **Finish**.
6. In the list of devices, click on the address to open the product's web pages.
7. For information about how to set the password, see *page 39*.

## Assign IP Addresses in Multiple Devices

AXIS Camera Management speeds up the process of assigning IP addresses to multiple devices by suggesting IP addresses from a specified range.

1. Select the devices you wish to configure (different models can be selected) and click **Assign IP address to selected devices** .
2. Click **Yes** in the **Device Maintenance** dialog.
3. Select **Assign the following IP address range** and enter the IP address range, subnet mask and default router the devices will use. Click **Next**.
4. Suggested IP addresses are listed under **New IP Addresses** and can be edited by selecting a device and clicking **Edit IP**.
5. Click **Finish**.

## Other Operating Systems and Methods

The list below shows the other methods available for assigning or discovering the IP address. All methods are enabled by default, and all can be disabled.

- **AVHS Service Connection** (all operating systems). To connect to an AVHS service, refer to the service provider's Installation guide. For information and help in finding a local AVHS Service Provider, go to [www.axis.com/hosting](http://www.axis.com/hosting)
- **UPnP™** (Windows®). When enabled on your computer, the Axis network product is automatically detected and added to Network/My Network Places.
- **Bonjour** (Mac OS X® 10.4 or later). Applicable to browsers with support for Bonjour. Navigate to the Bonjour bookmark in your browser (for example Safari) and click on the link to access the web pages.
- **AXIS Dynamic DNS Service** (all operating systems). A free service from Axis that allows you to quickly and simply install your Axis network product. Requires an Internet connection without an HTTP proxy. For more information, see [www.axiscam.net](http://www.axiscam.net)

# AXIS A1001 Network Door Controller

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- **ARP/Ping** (all operating systems). See *Assign IP Address Using ARP/Ping*. The command must be issued within 2 minutes of connecting power.
- **DHCP server** (all operating systems). To view the admin pages for the network DHCP server, see the server's user documentation.

## Assign IP Address Using ARP/Ping

The product's IP address can be assigned using ARP/Ping. The command must be issued within 2 minutes of connecting power.

1. Acquire a free static IP address on the same network segment as the computer.
2. Locate the serial number (S/N) on the product label.
3. Open a command prompt and enter the following commands:

### Linux/Unix syntax

```
arp -s <IP address> <serial number> temp  
ping -s 408 <IP address>
```

### Linux/Unix example

```
arp -s 192.168.0.125 00:40:8c:18:10:00 temp  
ping -s 408 192.168.0.125
```

**Windows syntax** (this may require that you run the command prompt as an administrator)

```
arp -s <IP address> <serial number>  
ping -l 408 -t <IP address>
```

**Windows example** (this may require that you run the command prompt as an administrator)

```
arp -s 192.168.0.125 00-40-8c-18-10-00  
ping -l 408 -t 192.168.0.125
```

4. Check that the network cable is connected and then restart the product by disconnecting and reconnecting power.
5. Close the command prompt when the product responds with `Reply from 192.168.0.125:...` or similar.
6. Open a browser and type `http://<IP address>` in the Location/Address field.

### Note

- To open a command prompt in Windows, open the **Start menu** and type `cmd` in the **Run/Search** field.
- To use the ARP command in Windows 8/Windows 7/Windows Vista, right-click the command prompt icon and select **Run as administrator**.
- To open a command prompt in Mac OS X, open the **Terminal** utility from **Application > Utilities**.

## Set the Root Password

To access the Axis product, you must set the password for the default administrator user **root**. This is done in the **Configure Root Password** dialog, which opens when the product is accessed for the first time.

To prevent network eavesdropping, the root password can be set via an encrypted HTTPS connection, which requires an HTTPS certificate. HTTPS (Hypertext Transfer Protocol over SSL) is a protocol used to encrypt traffic between web browsers and servers. The HTTPS certificate ensures encrypted exchange of information.

The default administrator user name **root** is permanent and cannot be deleted. If the password for **root** is lost, the product must be reset to the factory default settings. For information about how to reset the product to factory default, see the product's User Manual.

To set the password via a standard HTTP connection, enter it directly in the dialog.

To set the password via an encrypted HTTPS connection, follow these steps:

1. Click **Use HTTPS**.  
A temporary certificate (valid for one year) is created, enabling encryption of all traffic to and from the product, and the password can now be set securely.
2. Enter a password and then re-enter it to confirm the spelling.
3. Click **OK**. The password has now been configured.

## Configure the Hardware

Configure the hardware in the **Hardware Configuration** pages before installing the product.

Doors, locks and other devices can be connected to the Axis product before completing the hardware configuration. However, the connection of devices will be easier if you complete the hardware configuration first. This is because the hardware pin chart will be available when the configuration is complete. The hardware pin chart is a guide on how to connect the pins and can be used as a reference sheet for maintenance. For maintenance instructions, see *page 42*.

To configure the hardware, select one of the following methods:

- Import a hardware configuration file. See *page 39*.
- Create a new hardware configuration. See *page 40*.

## Import a Hardware Configuration File

The hardware configuration of the Axis product can be completed faster by importing a hardware configuration file.

For information about exporting hardware configuration files, see the User Manual.

# AXIS A1001 Network Door Controller

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To import a hardware configuration file:

1. Go to **Setup > Hardware Configuration**.
2. Click **Import hardware configuration** or, if there a hardware configuration already exists, **Reset and import hardware configuration**.
3. In the file browser dialog that appears, locate and select the hardware configuration file (\*.json) on your computer.
4. Click **OK**.

## Connect the Hardware

To connect the hardware:

1. If required, remove the cover screw, insert a slotted screwdriver into the cover removal slot and remove the cover.
2. Connect the Axis product to the network and wait until the network connection has been established and the product has powered up. If the product is not powered through Power over Ethernet but will use Ethernet and external power instead, also connect the product to a SELV compliant limited power source (LPS). For more information about the power connector (DC input), see *Specifications on page 18*.

## Create a New Hardware Configuration

To create a new hardware configuration from the beginning:

1. Access the product. See *page 34*.
2. Go to **Setup > Hardware Configuration** and click **Start new hardware configuration**.  
If the product's hardware has not been configured before or has been deleted, **Hardware Configuration** will be available in the notification panel in the Overview page.
3. Enter a descriptive name for each door. It is recommended to provide the doors with unique descriptive names so that they easily can be identified by anyone who will administrate the system.  
You can also edit the name of the Axis product. The default name includes the serial number for easy identification.
4. Select **Aperio** if the system includes an Assa Aperio communication hub.  
If the system includes an Aperio hub only, click **Finish**. Wireless doors/devices are configured after Hardware Configuration is completed. See *Add Wireless Doors and Devices on page 41*. Otherwise continue with the next step.
5. Select a door option depending on the number of doors, one (1) or two (2), that will be connected to the Axis product and click **Next**

### Note

Only one door is available if **Aperio** was checked in the previous step.



6. Select the door monitor and lock options that match the requirements and the type of lock connections that will be used and click **Next**. For more information about available options, see the User Manual.
7. Select the types of readers that will be used and click **Finish**. For more information about available options, see the User Manual.
8. In the dialog that appears after completing the configuration, click **OK** or click the link to view the hardware pin chart.  
To print the hardware pin chart, click **Print Hardware Pin Chart** on the Hardware Pin Chart page.
9. Disconnect the product from the network. If not powering the product through Power over Ethernet, also disconnect the product from its power source.

To cancel the hardware configuration, click **Cancel**. This can be done in any of the hardware configuration pages.

## Add Wireless Doors and Devices

Before adding a wireless door to the system it needs to be paired with the connected Assa AperiO communication hub, using AperiO PAP (AperiO programming application tool).

To add a wireless door:

1. Go to **Setup > Hardware Reconfiguration**.
2. Under **Wireless Doors and Devices** click **Add door**.
3. In the **Door name** field: Enter a descriptive name.
4. In the **ID** field under **Lock**: Enter the six-character-long address of the device that you want to add. The device address is printed on the product label.
5. Click **Add**.

## Reset to Factory Default Settings

### Important

Reset to factory default should be used with caution. A reset to factory default will reset all settings, including the IP address, to the factory default values.

### Note

The installation and management software tools are available from the support pages on [www.axis.com/techsup](http://www.axis.com/techsup)

To reset the product to the factory default settings:

1. Disconnect power from the product.

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2. Press and hold the control button and reconnect power. See *Hardware Overview on page 13*.
3. Keep the control button pressed for 25 seconds until the status LED indicator turns amber for the second time.
4. Release the control button. The process is complete when the status LED indicator turns green. The product has been reset to the factory default settings. If no DHCP server is available on the network, the default IP address is 192.168.0.90
5. Using the installation and management software tools, assign an IP address, set the password, and access the product.

It is also possible to reset parameters to factory default via the web interface. Go to **Setup > Additional Controller Configuration > Setup > System Options > Maintenance**.

## Maintenance Instructions

To keep the access control system running smoothly, Axis recommends regular maintenance of the access control system, including door controllers and connected devices.

Do maintenance at least once a year. The suggested maintenance procedure includes, but is not limited to, the following steps:

- Make sure all the connections between the door controller and the external devices are secure.
- Verify all the hardware connections. This requires access to the product's webpages. For more information, see the User Manual.
- Verify that the system, including the connected external devices, functions correctly.
  - Swipe a card and test the readers, doors, and locks.
  - If the system includes REX devices, sensors or other devices, test them as well.
  - If activated, test the tampering alarms.

If the results from any of the steps above indicate faults or unexpected behavior:

- Test the signals of the wires using appropriate equipment and check if the wires or cables are damaged in any way.
- Replace all damaged or faulty cables and wires.
- Once the cables and wires have been replaced, verify all the hardware connections again. This requires access to the product's webpages. For more information, see the User Manual.
- Make sure all access schedules, doors, groups, and users are up to date. This requires access to the product's webpages. For more information, see the User Manual.
- If the door controller is not behaving as expected, see the User manual for information about troubleshooting and the product's built-in maintenance functions.

For information about maintenance of the battery, see *Requirements for Compliance with UL294 6th Edition on page 5* and *Battery on page 8*.

## Further Information

The User Manual is available at [www.axis.com](http://www.axis.com)

Visit [www.axis.com/techsup](http://www.axis.com/techsup) to check if there is updated firmware available for your network product. To see the currently installed firmware version, go to **Setup > About**.

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

## Warranty Information

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

