SIEMENS

SIMATIC NET

Industrial Ethernet Security
SCALANCE S615

Operating Instructions

03/2015
C79000-G8976-C389-01

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

> **⚠ DANGER**
>
> indicates that death or severe personal injury **will** result if proper precautions are not taken.

> **⚠ WARNING**
>
> indicates that death or severe personal injury **may** result if proper precautions are not taken.

> **⚠ CAUTION**
>
> indicates that minor personal injury can result if proper precautions are not taken.

> **NOTICE**
>
> indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

> **⚠ WARNING**
>
> Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

Trademarks

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Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

Preface

Purpose of the Operating Instructions

These operating instructions contain information with which you will be able to install and connect up a device of the SCALANCE S product line. The configuration and the integration of the device in a network are not described in these instructions.

Validity of the manual

These operating instructions apply to the following device:

● SCALANCE S615

Further documentation

● System manual "Industrial Ethernet"

The system manual contains information on other SIMATIC NET products that you can operate along with the devices of this product line in an Industrial Ethernet network.

There, you will find among other things optical performance data of the communications partner that you require for the installation.

The "SIMATIC NET Industrial Ethernet" system manual can be found on the Internet pages of Siemens Industry Online Support under the following entry ID:27069465 (http://support.automation.siemens.com/WW/view/en/27069465)

● "Passive network components" system manual

This system manual contains installation instructions for several of the most common components and guidelines for setting up networked automation plants in buildings.

The "Passive Network Components" system manual can be found on the Internet pages of Siemens Industry Online Support under the following entry ID:84922825 (http://support.automation.siemens.com/WW/view/en/84922825)

SIMATIC NET manuals

You will find SIMATIC NET manuals on the Internet pages of Siemens Industry Online Support:

- using the search function:

  Link to Siemens Industry Online Support (http://support.automation.siemens.com/)

  Enter the entry ID of the relevant manual as the search item.

- In the navigation panel on the left hand side in the area "Industrial Communication":

  Link to the area "Industrial Communication"
  (http://support.automation.siemens.com/WW/view/en/10805878/133400)

  Go to the required product group and make the following settings:
  tab "Entry list", Entry type "Manuals"

You will find the documentation for the SIMATIC NET products relevant here on the data medium that ships with some products:

- Product CD / product DVD
- SIMATIC NET Manual Collection

You will find the article numbers for the Siemens products of relevance here in the following catalogs:

- SIMATIC NET Industrial Communication / Industrial Identification, catalog IK PI
- SIMATIC Products for Totally Integrated Automation and Micro Automation, catalog ST 70
- Industry Mall - catalog and ordering system for automation and drive technology, Online catalog (http://eb.automation.siemens.com/)

You can request the catalogs and additional information from your Siemens representative.

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SCALANCE

Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, solutions, machines, equipment and/or networks. They are important components in a holistic industrial security concept. With this in mind, Siemens' products and solutions undergo continuous development. Siemens recommends strongly that you regularly check for product updates.

For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action (e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit http://www.siemens.com/industrialsecurity.

To stay informed about product updates as they occur, sign up for a product-specific newsletter. For more information, visit http://support.automation.siemens.com.

License conditions

> **Note**
> **Open source software**
>
> Read the license conditions for open source software carefully before using the product.

You will find license conditions in the following documents on the supplied data medium:

- DC_LicenseSummaryScalanceS615_74.htm

SIMATIC NET glossary

Explanations of many of the specialist terms used in this documentation can be found in the SIMATIC NET glossary.

You will find the SIMATIC NET glossary here:

- SIMATIC NET Manual Collection or product DVD

  The DVD ships with certain SIMATIC NET products.

- On the Internet under the following entry ID:

  50305045 (http://support.automation.siemens.com/WW/view/en/50305045)

Table of contents

Description of the device

1.1 Product characteristics

Interfaces

Functionality	S615
Ethernet interface	5 x RJ-45 10 / 100 Mbps
Digital input/output	1/1

Scope of delivery

The following components ship with the product:

- One device
- 1 x 5-terminal block for the power supply
- 1 x 2-terminal block for the digital output
- 1 x 2-terminal block for the digital input
- Documentation CD

Note

Not included with the product

The following components do not ship with the product:

- C-PLUG / KEY-PLUG
  You will find more detailed information in "C-PLUG and KEY-PLUG (Page 16)".

Article numbers

Type	Description	Article number
SCALANCE S615	Security router	6GK5 615-0AA00-2AA2

1.2   Unpacking and checking

Unpacking and checking

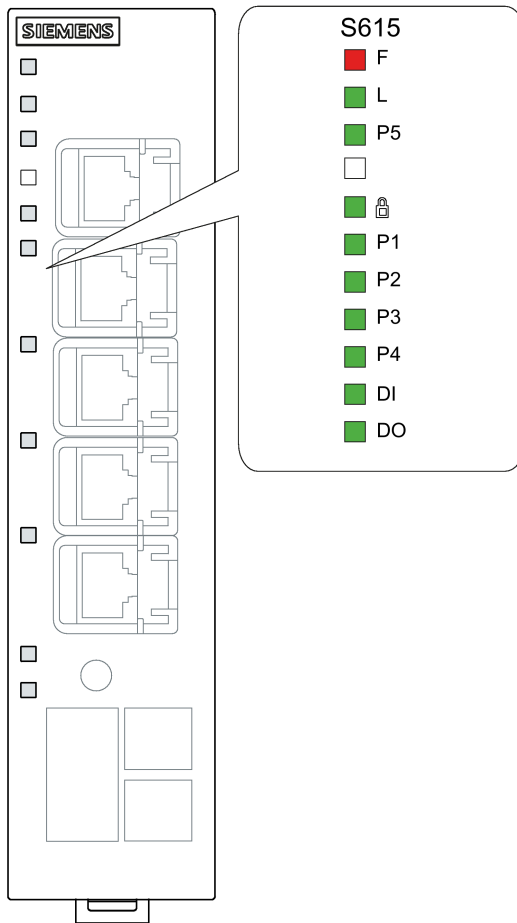| ⚠ WARNING |
|---|
| **Do not use any parts that show evidence of damage** |
| If you use damaged parts, there is no guarantee that the device will function according to the specification. |
| If you use damaged parts, this can lead to the following problems:
• Injury to persons
• Loss of the approvals
• Violation of the EMC regulations |
| Use only undamaged parts. |

1. Make sure that the package is complete.
2. Check all the parts for transport damage.

1.3 Accessories

You will find further information on the accessories program for the S615 in the Industry Mall (https://mall.industry.siemens.com/mall/en/WW/Catalog/Products/10034139?tree=CatalogTree#).

1.4 LED display

LED	Status	Meaning
F	OFF □	No fault/error.
	ON ■	The device is starting up or an error has occurred.
	Flashing ■	The bootloader waits in this state for new firmware file that you can download by TFTP.

LED	Status	Meaning
L	OFF ☐	Device turned off, no power supply.
	ON 🟩	Device turned on, power supply present.
🔒	OFF ☐	No VPN connection is established.
	ON 🟩	All configured VPN connections are established.
	Flashing 🔆	Only some of the configured VPN connections are established.
P1 P2 P3 P4 P5	OFF ☐	Ethernet connection to local computer or LAN not established
	ON 🟩	Ethernet connection to local computer or LAN established
	ON 🟨	Device receiving / sending data
DI	OFF ☐	Digital input inactive
	ON 🟩	Digital input active.
DO	OFF ☐	Digital output inactive
	ON 🟩	Digital output active.

1.5 SET button

With a SCALANCE S615, the SET button is on the front of the housing.
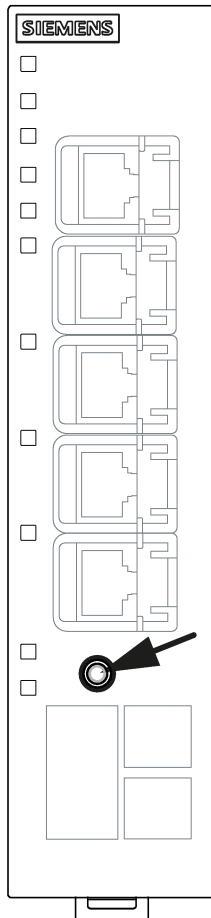
The SET button has the following functions:

- Restart

  Hold down the button for longer than 3 seconds to run a restart.

- Loading new firmware

  If the normal procedure with the "Load & Save" menu of Web Based Management does not work, the SET button can be used to load new firmware. This situation can occur if there is a power outage during the normal firmware update.

  - Hold down the button until the red fault LED (F) starts to flash after approximately 3 seconds.

  - Now release the button. The bootloader waits in this status for a new firmware file that you can download using TFTP.

  You will find more information in the section "Service and Maintenance" in the SCALANCE S615 Web Based Management configuration manual.

- Reset to factory defaults

  - Hold down the button until the red fault LED (F) stops flashing after approximately 10 seconds and is permanently lit.

  - Now release the button and wait until the fault LED (F) goes off again. The device then starts automatically with the factory settings and can be reached via the IP address 192.168.1.1.

  You will find more information in the section "Service and Maintenance" in the SCALANCE S615 Web Based Management configuration manual.

1.6 C-PLUG and KEY-PLUG

How it works

The C-PLUG or KEY-PLUG is used to transfer the configuration of the old device to the new device when a device is replaced.

NOTICE
Do not remove or insert a C-PLUG / KEY-PLUG during operation!
A PLUG may only be removed or inserted when the device is turned off. The device checks whether or not a PLUG is present at one second intervals. If it is detected that the PLUG was removed, there is a restart.
If a valid KEY-PLUG was inserted in the device, the device changes to a defined error state following the restart.

When the new device starts up with the PLUG, it then continues automatically with exactly the same configuration as the old device. One exception to this can be the IP configuration if it is set over DHCP and the DHCP server has not been reconfigured accordingly.

A reconfiguration is necessary if you use functions based on MAC addresses.
If an incorrect PLUG, for example from another product or a damaged PLUG is inserted, the device signals an error with the "F" LED.

You can either remove the PLUG again or select the option to reformat the PLUG.

In terms of the PLUG, devices work in two modes:

- Without PLUG

  The device stores the configuration in internal memory. This mode is active when no PLUG is inserted.

- With PLUG

  The configuration stored on the PLUG is displayed in WBM in "Information > PLUG". If changes are made to the configuration, the device stores the configuration directly on the PLUG and in the internal memory. This mode is active as soon as a PLUG is inserted. As soon as the device is started with a PLUG inserted, the device starts up with the configuration data on the PLUG.

KEY-PLUG

In addition to the configuration, a KEY-PLUG also contains a license that enables certain functions of your device.

Article numbers

Type	Article number	Description
C-PLUG	6GK1900-0AB00	Exchangeable storage medium (32 MB) for the configuration data
KEY-PLUG M800 SRS	6GK5908-0PA00	Exchangeable storage medium (256 MB) to enable Siemens Remote Services and receiving the configuration data.
KEY-PLUG SINEMA RC	6GK5908-0PB00	Exchangeable storage medium (256 MB) to enable the connection functionality to SINEMA Remote Connect and for accepting configuration data.

Installation 2

2.1 Safety notices for installation

Safety notices

When installing the device, keep to the safety notices listed below.

> ⚠ **WARNING**
>
> If a device is operated in an ambient temperature of more than 50 °C, the temperature of the device housing may be higher than 70 °C. The device must therefore be installed so that it is only accessible to service personnel or users that are aware of the reason for restricted access and the required safety measures at an ambient temperature higher than 50 °C.

Safety notices on use in hazardous areas

General safety notices relating to protection against explosion

> ⚠ **WARNING**
>
> The device may only be operated in an environment with pollution degree 1 or 2 (see IEC 60664-1).

> ⚠ **WARNING**
>
> When used in hazardous environments corresponding to Class I, Division 2 or Class I, Zone 2, the device must be installed in a cabinet or a suitable enclosure.

> ⚠ **WARNING**
>
> **EXPLOSION HAZARD**
>
> SUBSTITUTION OF COMPONENTS MAY IMPAIR SUITABILITY FOR CLASS I, DIVISION 2 OR ZONE 2.

General notes on use according to ATEX and IECEx

⚠ WARNING
To comply with EC Directive 94/9 (ATEX95) or the conditions of IECEx, this enclosure or cabinet must meet the requirements of at least IP54 in compliance with EN 60529.

2.2 Securing the housing

Types of installation

For the device, you have the following options:

- Wall mounting (no ceiling mounting)
- Installation on a DIN rail
- Installing on the S7-300 standard rail
- Installing on the S7-1500 standard rail

Strain relief for the cables

Regardless of the type of installation, make sure that there is suitable strain relief for the connecting cable.

Shielding of cables

If cables are installed permanently, it is advisable to remove the insulation of the shielded cable and to establish contact on the shield/PE conductor bar.

Permitted installation direction

- Vertical installation (ventilation openings at top and bottom) for ambient temperatures up to 70 °C.
- Horizontal installation for ambient temperatures up 40 °C

For more detailed information, refer to the section Technical specifications (Page 39)

Clearances

Keep to the minimum clearances to other components or to walls of a housing so that the convection ventilation of the device is not blocked.

- Below at least 10 cm
- Above at least 10 cm

2.3 Wall mounting

Note

The wall mounting must be capable of supporting four times the weight of the device, but at least 50 N. For information on the weight, refer to the section "Technical specifications (Page 39)".

Installation

1. Prepare the drill holes for wall mounting. For the precise dimensions, refer to the section "Dimension drawing (Page 37)".

2. Secure the device to the wall with two screws. When mounting on a wall, use mounting fittings suitable for the type of wall.
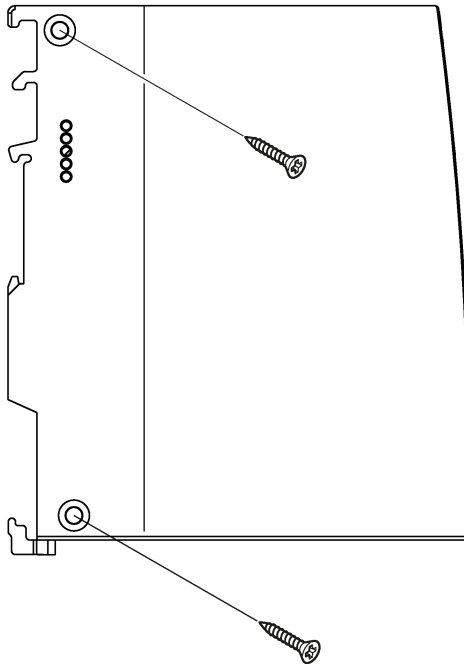
3. Connect the power supply, refer to the section "Power supply (Page 29)".

4. Fit the connectors for the digital input and digital output, refer to the section "Digital input/output (Page 32)".

5. Connect the device to the local network, refer to the section "Ethernet port (Page 34)".

6. Connect the terminal with as short a cable as possible ≤ 150 mm and a large cross-sectional area ≥ 2.5 mm² to the functional ground of the system, see section "Grounding (Page 31)""

2.4 Installing on the DIN rail

Installation

1. Place the third housing guide of the device on the top edge of the DIN rail ①.

2. Press the device down against the DIN rail until the spring catch locks in place ②.
3. Connect the power supply, refer to the section "Power supply (Page 29)".
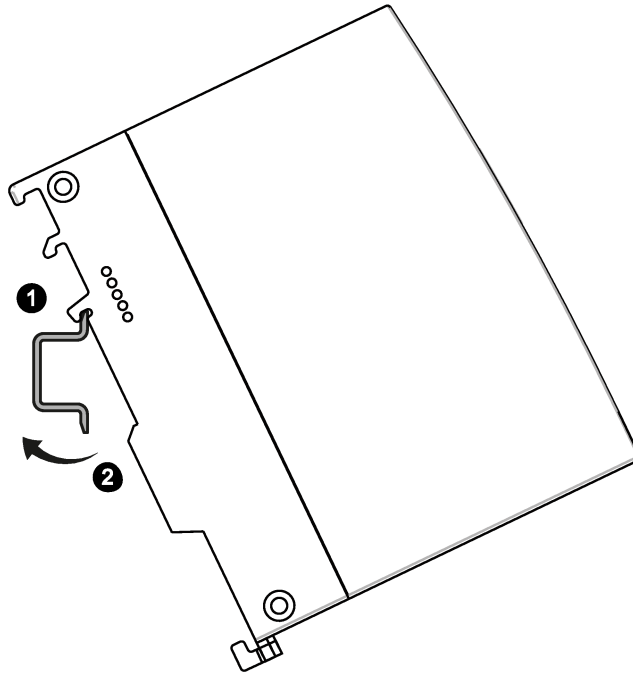4. Fit the connectors for the digital input and digital output, refer to the section "Digital input/output (Page 32)".
5. Connect the device to the local network, refer to the section "Ethernet port (Page 34)".
6. Connect the terminal with as short a cable as possible ≤ 150 mm and a large cross-sectional area ≥ 2.5 mm² to the functional ground of the system, see section "Grounding (Page 31).
7. Also connect the DIN rails of a system with functional ground.

Dismantling

1. Disconnect all connected cables.
2. Using a screwdriver, pull down the catch on the rear of the device.
3. Pull lower part of the device away from the DIN rail.

2.5　　Installing on the S7-300 standard rail

Installation

1. Place the second housing guide of the device on the top edge of the standard rail ①.

2. Press the device down against the standard rail until the spring catch locks in place ②.

3. Connect the power supply, refer to the section "Power supply (Page 29)".

4. Connect the connectors for the digital input to the digital output, see section "Digital input/output (Page 32)".

5. Connect the device to the local network, refer to the section "Ethernet port (Page 34)".

6. Connect the terminal with as short a cable as possible ≤ 150 mm and a large cross-sectional area ≥ 2.5 mm² to the functional ground of the system, see section "Grounding (Page 31)"

Dismantling

1. Disconnect all connected cables.

2. Using a screwdriver, pull down the catch on the rear of the device.

3. Remove the device from the standard rail.

2.6 Installing on the S7-1500 standard rail

Installation

1. Place the first housing guide of the device on the top edge of the standard rail ①.
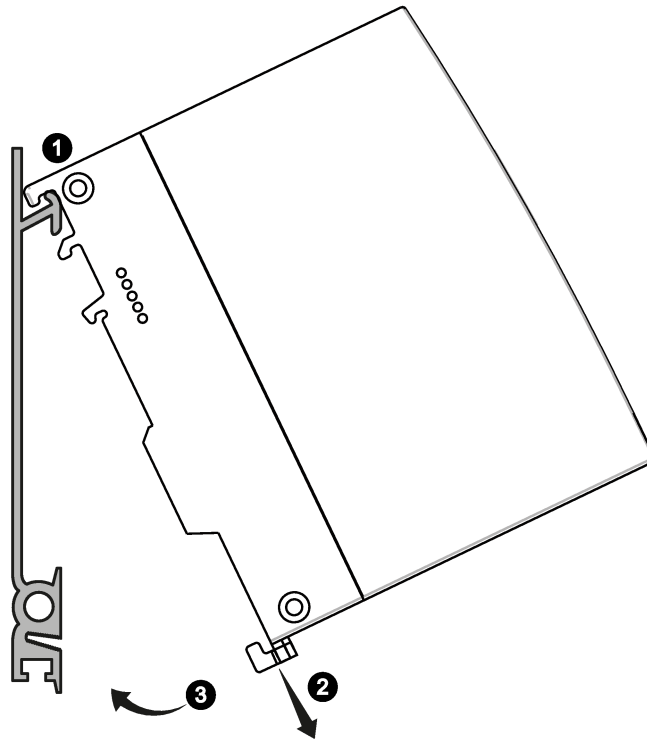
2. Using a screwdriver, pull down the catch ② on the rear of the device.

3. Swing the device down while pulling down the catch ③. After it is released, the spring catch locks in place.

4. Connect the power supply, refer to the section "Power supply (Page 29)".

5. Fit the connectors for the digital input and digital output, refer to the section "Digital input/output (Page 32)".

6. Connect the device to the local network, refer to the section "Ethernet port (Page 34)".

7. Connect the terminal with as short a cable as possible ≤ 150 mm and a large cross-sectional area ≥ 2.5 mm² to the functional ground of the system, see section "Grounding (Page 31)"
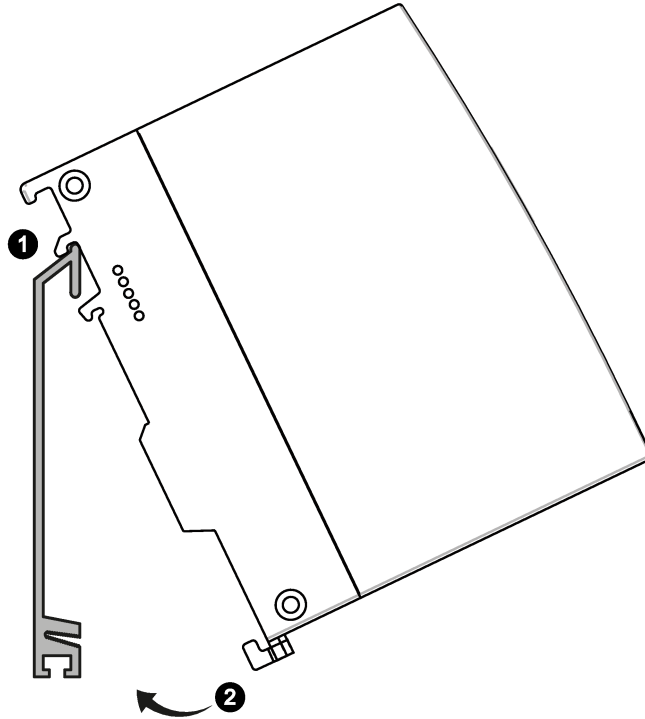
Dismantling

1. Disconnect all connected cables.

2. Using a screwdriver, pull down the catch on the rear of the device.

3. Remove the device from the standard rail.

Connecting up

<div align="right">3</div>

3.1 Safety when connecting up

Safety notices

When connecting up the device, keep to the safety notices listed below.

> **⚠ WARNING**
>
> The equipment is designed for operation with Safety Extra-Low Voltage (SELV) by a Limited Power Source (LPS).
>
> This means that only SELV / LPS complying with IEC 60950-1 / EN 60950-1 / VDE 0805-1 must be connected to the power supply terminals. The power supply unit for the equipment power supply must comply with NEC Class 2, as described by the National Electrical Code (r) (ANSI / NFPA 70).
>
> If the equipment is connected to a redundant power supply (two separate power supplies), both must meet these requirements.

Safety notices on use in hazardous areas

General safety notices relating to protection against explosion

> **⚠ WARNING**
>
> **EXPLOSION HAZARD**
>
> DO NOT CONNECT OR DISCONNECT EQUIPMENT WHEN A FLAMMABLE OR COMBUSTIBLE ATMOSPHERE IS PRESENT.

> **⚠ WARNING**
>
> **EXPLOSION HAZARD**
>
> DO NOT OPEN WHEN ENERGIZED.

Safety notices for use according to ATEX and IECEx

If you use the device under ATEX or IECEx conditions you must also keep to the following safety notices in addition to the general safety notices for protection against explosion:

⚠️ **WARNING**

Take measures to prevent transient voltage surges of more than 40% of the rated voltage. This is the case if you only operate devices with SELV (safety extra-low voltage).

Safety notices when using the device according to Hazardous Locations (HazLoc)

If you use the device under HazLoc conditions you must also keep to the following safety notices in addition to the general safety notices for protection against explosion:

This equipment is suitable for use in Class I, Division 2, Groups A, B, C and D or non-hazardous locations only.

This equipment is suitable for use in Class I, Zone 2, Group IIC or non-hazardous locations only.

⚠️ **WARNING**

EXPLOSION HAZARD

DO NOT DISCONNECT WHILE CIRCUIT IS LIVE UNLESS AREA IS KNOWN TO BE NON-HAZARDOUS.

3.2 Power supply

The power supply is connected using a 5-pin terminal block. The power supply is non-floating.
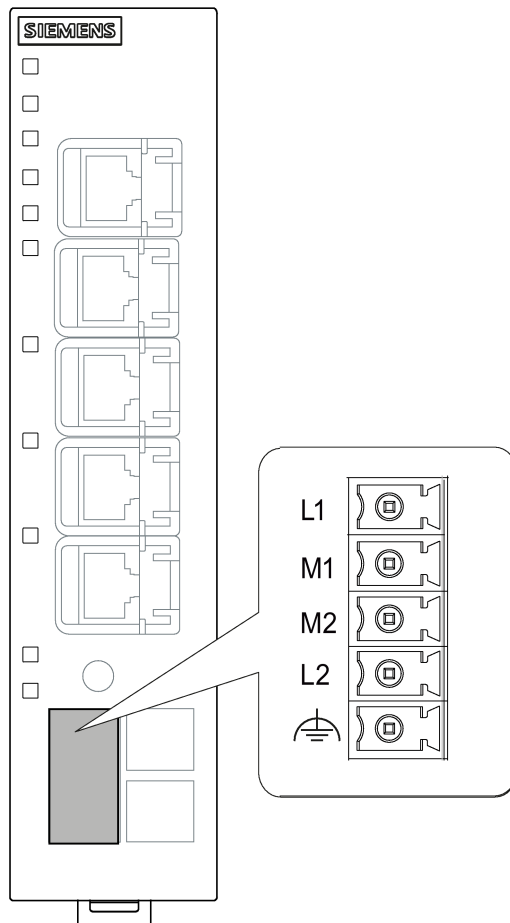
PIN	Signal	Description
1	L1+	24 VDC
2	M1	Ground
3	M2	Ground
4	L2+	24 VDC
5	⏚	Functional ground, refer to the section Grounding (Page 31)"

External power supply

> **Note**
>
> **Permitted external power supplies**
>
> The power supply unit to supply the SCALANCE S615 must comply with the requirements for a limited power source according to IEC/EN 60950-1, section 2.5.
>
> The external power supply for the SCALANCE S615 must meet the requirements for NEC class 2 circuits as specified in the National Electrical Code ® (ANSI/NFPA 70).

Refer to the section Connecting up (*** NO TRANSLATION IN THIS VERSION! ***) (Page 27) and the installation instructions and instructions for use of the manufacturer of the power supply, the battery or the accumulator.

3.3 Grounding

EMC disturbances are diverted to ground via the functional ground. This increases the immunity of the data transmission.

It is crucial for the correct operation of functional ground that the connection to the reference potential surface always has low impedance. Such a connection of the functional ground of the device does not go first through the cable channel and then to the mounting plate or DIN rail terminal, but goes directly to the mounting plate or DIN rail terminal.

The SCALANCE S615 has a terminal for functional ground, refer to the section "Power supply (Page 29)".

The terminal is identified by the following symbol for the functional ground.

⏚

1. Connect the terminal of the SCALANCE S615 with as short a cable as possible ≤ 150 mm and a large cross-sectional area ≥ 2.5 mm² to the functional ground of the system. In many cases, the entire metallic construction of the system serves as functional ground.

2. Also connect the standard rails of a system with functional ground.

Protective earth/functional ground

The connection of the reference potential surface with the protective earth system is normally in the cabinet close to the power feed-in. This earth conducts fault currents to ground safely and according to DIN/VDE 0100 is a protective earth to protect people, animals and property from too high contact voltages.

Apart from the protective earth, there is functional grounding in the cabinet. According to EN60204-1 (DIN/VDE 0113 T1) electrical circuits must be grounded. The chassis (0 V) is grounded at one defined point. Here, once again the grounding is implemented with the lowest leakage resistance to ground in the vicinity of the power feed-in.

With automation components, functional ground also ensures interference-free operation of a controller. Via the functional ground, interference currents coupled in via the connecting cables are discharged to ground.

In terms of the large-area and low impedance implementation, a functional ground set up for this purpose generally also meets the requirements of protective earth. On the other hand, protective earth does not always meet the requirements of functional ground. In general while the connection for protective earth is always low resistance, it is not necessarily low impedance.

The resistance of a connection for protective earth must always be as small as possible to divert fault currents safely to ground. The length of a protective earth cable can therefore be several meters (m) long, without seriously impairing this effect. For a functional ground for diverting HF disturbances, this cable does however have impedance and is therefore not suitable.

3.4   Digital input/output

The digital input/output is a floating optical switch with which error/fault states can be signaled by breaking the contact.

> ⚠ **CAUTION**
>
> **Damage due to voltage being too high or too low**
>
> The voltage at the digital input/output must not exceed 30 VDC and not fall below -30 VDC, otherwise the digital input/output will be destroyed.

Digital input

The 2-pin terminal block has the following assignment:
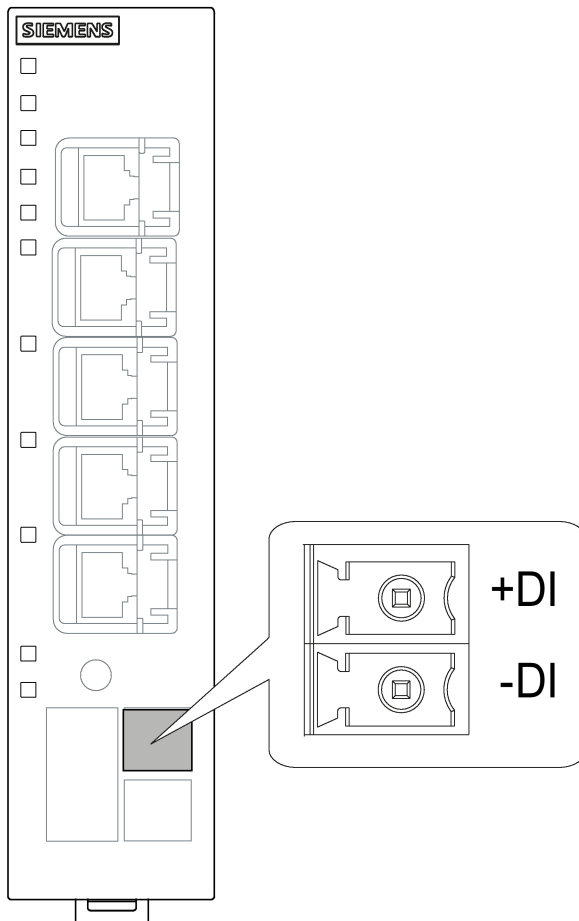
DI+	24 VDC
DI- (input ground)	-

If there is an adequate switching voltage at the digital input, the digital input is active and the "DI" LED is lit.

Digital output

The 2-pin terminal block has the following assignment:
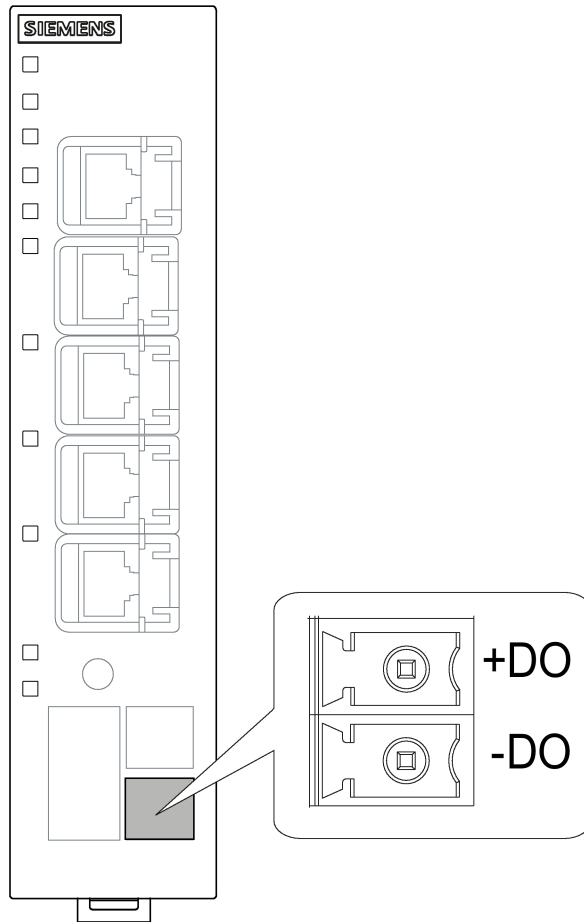
DO+	Relay 24 VDC / 1 A
DO-	Relay 24 VDC / 1 A

3.5   Ethernet port

The device has a certain number of ports to which the network nodes can be connected, e.g. a DSL router, a programmable controller, a machine with an Ethernet interface for remote monitoring or a PC.

For the connection, use a path cable with an RJ-45 plug. You will find the properties of the Ethernet interface in the technical specifications.

3.6 Replacing the PLUG

NOTICE
Do not remove or insert a C-PLUG / KEY-PLUG during operation!
A PLUG may only be removed or inserted when the device is turned off. The device checks whether or not a PLUG is present at one second intervals. If it is detected that the PLUG was removed, there is a restart. If a valid KEY-PLUG was inserted in the device, the device changes to a defined error state following the restart.

Inserting the PLUG

1. Turn off the power to the device.

2. Insert the PLUG correctly oriented into the slot.

   To ensure this, the housing of the PLUG has a protruding ridge on the long side. The slot has a groove at this position.
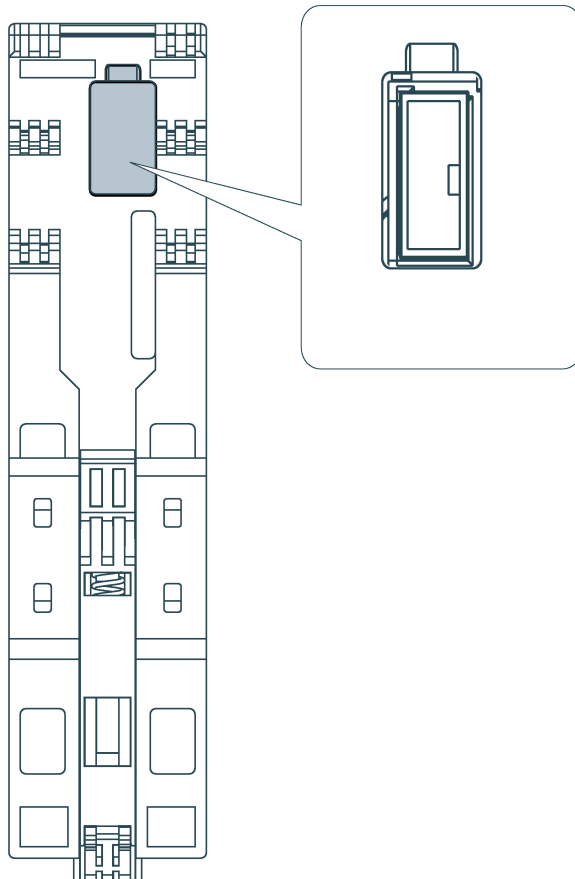
Removing the PLUG

1. Turn off the power to the device.

2. Insert a screwdriver between the front edge of the PLUG and the slot and release the PLUG.

3. Remove the PLUG.

Dimension drawing

<div style="text-align: right;">4</div>

Dimensions are specified in mm.

Figure 4-1   Front view

Figure 4-2   Side view

Technical specifications 5

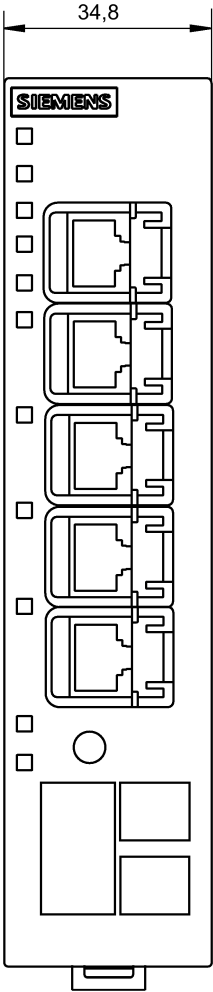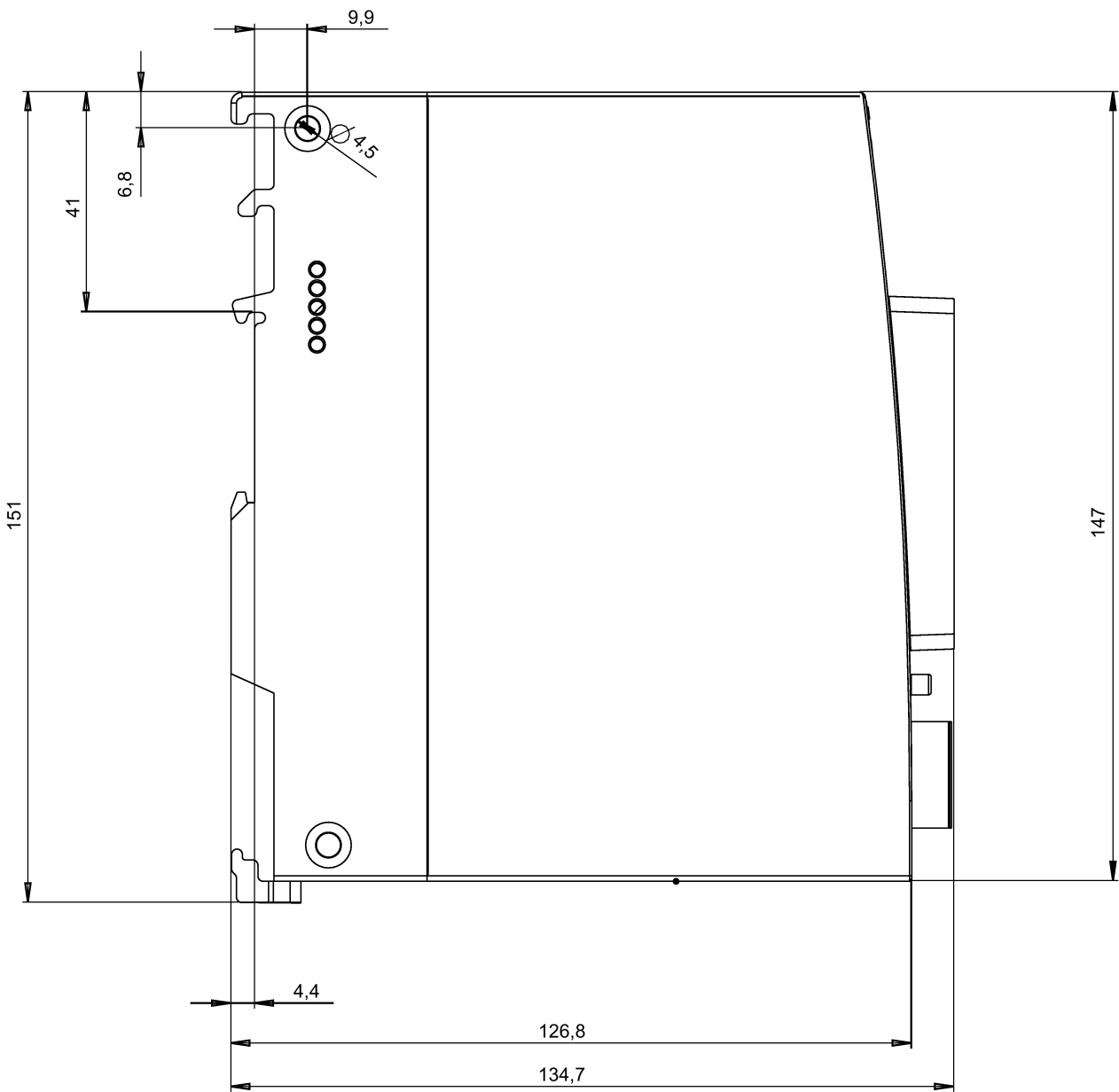|		SCALANCE S615
Article number		6GK5 615-0AA00-2AA2
Ethernet interface		
Attachment to Industrial Ethernet	Quantity	5
	Design	RJ-45 jack Characteristics: • 10/100BASE-T • Ethernet IEEE 802 • 10/100 Mbps
Electrical data		
Power supply	Input voltage	12 ... 24 VDC min. 10.8 VDC, max. 28.8 V
	Maximum power consumption	3 W
Digital input	Quantity	1
	Design	Terminal block, 2 terminals
	Characteristics:	Rated voltage 24 VDC Safe Extra Low Voltage (SELV)
		For state "1": 13 to 30 VDC For state "0": -30 to 3 VDC Maximum input current 8 mA Maximum cable length < 3 m Inputs isolated from electronics.
Digital output	Quantity	1
	Design	Terminal block, 2 terminals
	Properties	Rated voltage 24 VDC Safe Extra Low Voltage (SELV)
		internally not current limited Maximum current carrying capacity 1 A Maximum cable length < 3 m Output isolated from electronics
Permitted ambient conditions		
Ambient temperature	During operation	-40 °C ... +70 °C (vertical installation) Installed horizontally, the device can be used for ambient temperatures up to 40 °C.
	During storage	-40 °C to +80 °C
	During transportation	-40 °C to +80 °C
Relative humidity	During operation	≤ 95% at 25 °C, no condensation

	SCALANCE S615
Design, dimensions and weight	
Module format	Compact module S7-1500
Degree of protection	IP20
Weight	400 g
Dimensions (W x H x D)	34.8 x 151 x 134.7 mm
Installation options	• Wall mounting • Mounting on a DIN rail • Mounting on an S7-300 standard rail • Mounting on an S7-1500 standard rail
Installation direction	Vertical (ventilation openings at the top and bottom) Horizontal, see permitted environmental conditions.
Product functions	
Firewall and security	• Stateful inspection • Packet filter • IPsec VPN for up to 20 connections • SINEMA RC client • Password protection
Router functions	• NAPT (port forwarding) • NAT (IP masquerading) • NAT traversal • NETMAP • Dynamic DNS client • DNS cache • NTP • Remote logging • Connection monitoring
Configuration / management	• Web-based administration user interface (WBM) • Command Line Interface (CLI) • Remote access with HTTPS • SNMP and SNMP traps

Approvals

<div style="text-align: right; font-size: 3em;">A</div>

Approvals issued

Note

Issued approvals on the type plate of the device

The specified approvals apply only when the corresponding mark is printed on the product. You can check which of the following approvals have been granted for your product by the markings on the type plate.

⚠ **WARNING**

Personal injury and property damage can occur

The installation of expansions that are not approved for SIMATIC NET products or their target systems may violate the requirements and regulations for safety and electromagnetic compatibility.

Only use expansions that are approved for the system.

- **Keep to the installation guidelines**
  The devices meet the requirements if you adhere to the installation and safety instructions contained in this documentation and in the following documentation when installing and operating the devices.

- **You can always find the latest documentation on the Internet**
  The current descriptions of the currently available products can always be found on the Internet under the specified entry IDs/Internet pages:

  – "Industrial Ethernet / PROFINET Industrial Ethernet" System Manual

  – "Industrial Ethernet / PROFINET - Passive network components" System Manual

    You will find information on the system manuals in the section "ID = 27069465 (http://support.automation.siemens.com/WW/view/en/27069465)", in "Further documentation".

  – "EMC Installation Guidelines" configuration manual

    ID = 60612658 (http://support.automation.siemens.com/WW/view/en/60612658)

- **Working on the device**
  To protect the device from electrostatic discharge, personnel must first discharge any electrostatic charge from their body before touching the device.

Note

The test was performed with a device and a connected communications partner that also meets the requirements of the standards listed above.

When operating the device with a communications partner that does not comply with these standards, adherence to the corresponding values cannot be guaranteed.

Current approvals on the Internet

SIMATIC NET products are regularly submitted to the relevant authorities and approval centers for approvals relating to specific markets and applications.

You will also find the current approvals for the product on the Internet pages of Siemens Automation Customer Support under:

https://support.industry.siemens.com/cs/ww/en/ps/15247

→ "Entry list" tab, entry type "Certificates"

A.1 EU declaration of conformity

$\mathsf{C}\,\mathsf{E}$

The EC Declaration of Conformity is available for all responsible authorities at:

Siemens Aktiengesellschaft
Process Industries and Drives,
Process Automation
DE-76181 Karlsruhe
Germany

You will find the EC declaration of conformity for these products on the Internet under the following Internet page specified here:

https://support.industry.siemens.com/cs/ww/en/ps/15247

● Entry list

● Entry type "Certificates"

● Type of certificate "Declaration of Conformity"

● Search item(s): <name of the module>

The SIMATIC NET products described in these Operating Instructions meet the requirements of the following EC directives:

● 94/9/EC (ATEX)

   ATEX - Directive of the European Parliament and the Council of 23 March 1994 on the approximation of the laws of the Member States concerning equipment and protective systems intended for use in potentially explosive atmospheres.

● 2004/108/EC (EMC)

   EMC directive of the European Parliament and of the Council of December 15, 2004 on the approximation of the laws of the member states relating to electromagnetic compatibility.

● 2011/65/EU (RoHS)

   RoHS directive of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

Which of the described standards apply to the product can be found in Products (Page 45).

The current versions of the standards can be seen in the EC Declaration of Conformity.

A.1.1 ATEX

ATEX directive (correct usage in potentially explosive atmospheres)

The SIMATIC NET product meets the requirements of the EC directive:94/9/EC "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres" according to the standards listed in the section Products (Page 45):

Applied standard:

1 EN 60079-0

Hazardous areas - Part 0: Equipment - General requirements

2 EN 60079-15

Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

A.1.2 EMC

EMC directive (electromagnetic compatibility)

The SIMATIC NET products described in these operating instructions meet the requirements of EC directive 2004/108/EC "Electromagnetic Compatibility" for the following areas of application according to the standards listed in the section Products (Page 45):

3 EN 61000-6-1

Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments

4 EN 61000-6-2
Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments.

5 EN 61000-6-3

Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments.

6 EN 61000-6-4

Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standard for industrial environments.

A.1.3 RoHS

RoHS directive (restriction of the use of certain hazardous substances)

The SIMATIC NET products described in these operating instructions meet the requirements of the EC directive 2011/65/EC for the restriction of the use of certain hazardous substances in electrical and electronic equipment:

Applied standard:

7　EN 50581

Technical documentation for the assessment electrical and electronic products with respect to restriction of hazardous substances

A.1.4 Products

Product designation and standards

The standards that apply to the product are described in EMC (Page 44) and RoHS (Page 45).

Product name	Standards
SCALANCE S615	4,6,7

A.2 ATEX

Explosion protection directive (ATEX)

The SIMATIC NET product meets the requirements of the EC directive:94/9/EC "Equipment and Protective Devices for Use in Potentially Explosive Atmospheres".

> ⚠ **WARNING**
>
> When using (installing) SIMATIC NET products in hazardous area zone 2, make absolutely sure that the associated conditions are adhered to:
>
> You will find these conditions in the document (dc_atex-hinweise_99.pdf) "Approval of SIMATIC/ SIMATIC NET Products for Direct Installation in Ex-Zone 2"
>
> You will find the document on the accompanying product CD and in the SIMATIC NET Manual Collection.

ATEX code:

II 3 G Ex nA IIC T4 Gc

Name, address of the notified center:

DEKRA
CERTIFICATION B.V.,
Utrechtseweg
310, 6812 AR Arnhem,
P.O. Box 5185, 6802 ED
Arnhem,

The Netherlands

Test type certificate

KEMA 07 ATEX 0145X

The product meets the requirements of the standards

- EN 60079-0: Explosive atmospheres - Part 0: Equipment - General requirements
- EN 60079-15: Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

The current versions of the standards can be seen in the current version of the type examination certificate KEMA 07 ATEX 0145 X.

A.3 IECEx

IECEx

The SIMATIC NET products meet the requirements of explosion protection according to IECEx.

IECEx classification:

Ex nA IIC T4 Gc

DEK 14.0025X

The products meet the requirements of the following standards:

● IEC 60079-0 : Explosive atmospheres - Part 0: Equipment - General requirements

● IEC 60079-15 : Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

The current versions of the standards can be seen in the current version of the IECEx certificate DEK 14.0025X.

A.4 RCM / C-TICK

The products meet the requirements of the AS/NZS CISPR11 : 2011 standard (Industrial, scientific and medical equipment - Radio- frequency disturbance characteristics - Limits and methods of measurement).

A.5 FM certification

Approved for use in
Cl. 1, Div. 2, GP. A, B, C, D, T4
Cl. 1, Zone 2, GP. IIC T4

For temperature information "T.." or the maximum ambient temperature "Ta:..", refer to the type plate.

For the use of the product in hazardous areas, the following requirements are met:

● Factory Mutual Approval Standard Class Number 3611

● FM Hazardous (Classified) Location Electrical Equipment:
  Non Incendive / Class I / Division 2 / Groups A,B,C,D / T4 and
  Non Incendive / Class I / Zone 2 / Group IIC / T4

A.6 UL certification (product safety)

Applied standards

- UL 60950-1 (Information Technology Equipment)
- UL 508 (Industrial Control Equipment)
- CSA C22.2 No.60950-1 (Information Technology Equipment)

A.7   UL HAZ. LOC certification (explosion protection)

I.T.E. for HAZ.LOC.

CL.I, DIV.2, GP A,B,C,D T4

CL.1, Zone2, GP IIC, T4

Applied standards

- UL 60950-1 (Information Technology Equipment)
- CSA C22.2 No.60950-1 (Information Technology Equipment)
- ANSI/ISA 12.12.01-2007
- CSA C22.2 No. 213-M1987

A.8   EAC

Marking for the customs union

EAC (Eurasian Conformity)

Customs union of Russia, Belarus and Kazakhstan

Declaration of the conformity according to the technical regulations of the customs union (TR CU)

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