

SIEMENS

Catalog
Extract
LV 10

Edition
04/2022

SENTRON • SIVACON • ALPHA

Low-Voltage Power Distribution and Electrical Installation Technology

Busbar Trunking Systems

[siemens.com/lowvoltage](https://www.siemens.com/lowvoltage)

Innovative solutions for industrial controls and power distribution

In ensuring smooth operation of digital production environments and in the construction and operation of industrial or commercial buildings, the underlying power distribution and industrial controls are decisive:

SIRIUS, SENTRON, SIVACON and ALPHA provide a broad portfolio of systems and components for this purpose that can be used for standard-compliant, requirement-based electrification.

Efficient engineering tools and cloud-based solutions are part of the portfolio, which you can flexibly adapt to your specific requirements over the entire value-added process.

We are there when you need us

Your personal contact can be found at
www.siemens.de/lowvoltage/kontakt

Catalog LV 10 · 04/2022

You will find the latest edition and all future editions in the Siemens Industry Online Support at
www.siemens.com/lowvoltage/catalogs

Refer to the Industry Mall for current prices
www.siemens.de/lowvoltage/mall



The products and systems described in this catalog are manufactured/distributed under application of a certified quality management system in accordance with EN ISO 9001 (for the Certified Registration Nos., see www.siemens.com/system-certificates/ep). The certificate is recognized by all IQNet countries.

Technical specifications

The technical specifications are for general information purposes only. Always heed the operating instructions and notices on individual products during assembly, operation and maintenance.

All illustrations are not binding.

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Low-Voltage Power Distribution and Electrical Installation Technology

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A

Power distribution in the age of digitalization

Take advantage of the benefits of digitalization at every step of the project with the SIVACON 8PS busbar trunking systems – from planning to installation on up to operation.

SIMARIS software tools provide efficient support for your planning: among other advantages, you can configure the SIVACON 8PS busbars with SIMARIS busbarplan. A digital twin of the busbar runs is created from the BIM data. The BusbarCheck app assists you during installation.

Energy data and power with plug-and-work: Our innovative powerline technology makes this possible for SIVACON 8PS busbar trunking systems – efficient and reliable. Energy data is simply transferred to the automation and energy management systems, as well as to cloud-based systems (IoT). Data and electricity travel the same path via the conductor circuits and phases of the BD2, LD, LData and LI busbar trunking systems.



Busbar Trunking Systems



All the information you need 16/2

Quick selection guide 16/4

SIVACON 8PS busbar trunking systems 16/4

Planning and installation tools 16/6

A multitude of additional information ...

Information + ordering

All the important things at a glance

For information about busbar trunking systems, please visit our website www.siemens.com/sivacon-8PS

Your product in detail

The Siemens Industry Online Support (SIOS) provides comprehensive information
www.siemens.com/lowvoltage/product-support

- Brochure
 - Energy and data successfully put on track (109747761)
- Catalog
 - LV 70 · 2019 – SIVACON 8PS busbar trunking systems – BD01, BD2 up to 1250 A (109744546)

The relevant tender specifications can be found at
www.siemens.com/lowvoltage/tenderspecifications

Use our conversion tool for quick and easy conversion to Siemens products www.siemens.com/conversion-tool

Siemens YouTube channel

- SIVACON power distribution (general)
bit.ly/2m4oSLI

Everything you need for your order

Refer to the Industry Mall for an overview of your products

- SIVACON 8PS sie.ag/2IXpCT1
- SIMARIS planning tools sie.ag/2m3oFbS

Direct forwarding to the individual products in the Industry Mall by clicking on the article number in the catalog or by entering this web address incl. article number www.siemens.com/product?Article No.

Order support for SIVACON 8PS – BD01 and BD2
www.siemens.com/LV70

Configurators

Configure your SIVACON 8PS BD01 or BD2 busbar trunking system in the [Industry Mall](#)

The fast track to the experts

Contact persons in your region

We offer a comprehensive portfolio of services. You can find your local contacts at
www.siemens.com/sivacon8PS-contact

You can find further information on services at
www.siemens.com/service-catalog

Competent expert advice on technical questions with a wide range of demand-optimized services for all our products and systems.

Assistance with technical queries is provided at
www.siemens.com/support-request

... can be found in our online services

Commissioning + operation

SIMARIS planning tools

The SIMARIS planning tools effectively assist you in your planning process. Project-specific IFC data (Building Information Modeling) for cross-package planning is also possible.

www.siemens.com/simaris

Manuals

Manuals are available for downloading in Siemens Industry Online Support (SIOS) at

www.siemens.com/lowvoltage/manuals

- Planning manual
 - Planning with SIVACON 8PS (109478425)

Your product in detail

The Siemens Industry Online Support (SIOS) provides detailed technical information

www.siemens.com/lowvoltage/product-support

- Operating instructions
- Certificates

Comprehensive mobile support via the Siemens Industry Online Support app available for download from the [App Store](#) and [Play Store](#)

You will find further information under:

www.siemens.com/support-app

Engineering data for CAD or CAE systems are available in the CAx Download Manager at

www.siemens.com/cax

Face-to-face or online training

Our training courses can be found at

www.power-academy.siemens.com

Technical overview – Busbar trunking systems



The fast way to get you to our online services

This page provides you with comprehensive information and links on busbar trunking systems

www.siemens.com/lowvoltage/product-support (109769090)

SIVACON 8PS busbar trunking systems



Busbar trunking systems

BD01

BD2

Basic data

System description	Flexible power supply in workshops and production plants for skilled trades and businesses and commercial enterprises	The universal solution for high power levels in a small space, especially in offices and in industrial transfer lines
Typical applications	<ul style="list-style-type: none"> • Workshops and production plants • Supermarkets • Data centers • High-rise buildings • Trade fair buildings • Automotive industry • Marine applications • eMobility 	<ul style="list-style-type: none"> • Workshops and production plants • Production industry • Do-it-yourself centers • Data centers • High-rise buildings • Foodstuffs industry • Trade fair buildings • Hospitals • Automotive industry • Marine applications • eMobility

Basic data

Rated insulation voltage U_i	400 V AC	690 V AC
Rated operational voltage U_e	400 V AC	690 V AC
Degree of protection	IP54, IP55	IP52, IP55
Rated current I_{nA}	40 ... 160 A	160 ... 1250 A
Rated peak withstand current I_{pk}	Up to 15.3 kA	Up to 90 kA
Rated short-time withstand current I_{cw} (1 s)	Up to 2.5 kA	Up to 34 kA
Number of conductors	4 (PE = enclosure)	5
Connection technology	Connecting flange with built-in expansion compensation	With built-in expansion compensation, bolt-type terminal

Outgoing feeders and junctions

Tap-off point	On one side every 0.5 or 1 m	On one side every 0.5 m, on two sides offset every 0.25 m
Tap-off unit	Up to 63 A	Up to 530 A

Material

Conductors	Aluminum/Copper	Aluminum or copper
Enclosures (trunking unit, feeder unit)	Sheet steel zinc-plated and painted	Sheet steel zinc-plated and painted

Communication

Data transmission	data line	powerline, data line
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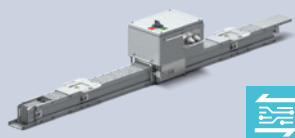
Approvals/Certificates

Approvals	EAC	EAC
Certificates	<ul style="list-style-type: none"> • DNV GL • Environmental Product Declaration (EPD) 	<ul style="list-style-type: none"> • DNV GL • Environmental Product Declaration (EPD)

¹⁾ IP66 for pure energy transfer runs without outgoing feeders.



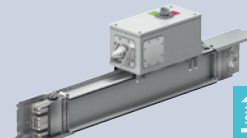
Data transfer with powerline technology



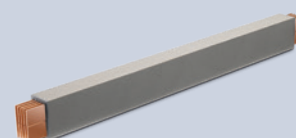
LD



LData



LI



LR

The proven high-current busbar for industry and special applications

- Automotive industry
- Production industry
- Foodstuffs industry
- Trade fair buildings
- Wind power plants
- Semiconductor production
- Marine applications
- eMobility

Efficient and reliable power supply for today and tomorrow's data centers

- Data centers

An integrated solution for safe and efficient infrastructure power supply – for example in multi-story buildings and industrial applications

- Data centers
- High-rise buildings
- Production industry
- Chemicals industry
- Airports
- Trade fair buildings
- Hospitals
- Do-it-yourself centers
- Shopping malls
- Supermarkets
- eMobility

The reliable busbar for a high degree of protection in harsh environments, for example for networking of building sections outdoors or for power supply in tunnels

- Chemicals industry
- Oil and gas
- Tunnels and subways
- Outdoor applications

1000 V AC

600 V AC

1000 V AC

1000 V AC

1000 V AC

600 V AC

1000 V AC

1000 V AC

IP34, IP54

Trunking units: IP21
Tap-off units: IP21, IP41IP55, IP66¹⁾

IP68

1100 ... 5000 A

1000 ... 2500 A

800 ... 6300 A

400 ... 6300 A

Up to 286 kA

Min. 84 kA

Up to 330 kA

Up to 275 kA

Up to 116 kA

Min. 40 kA

Up to 150 kA

Up to 125 kA

4, 5

5

4 ... 6 conductors (incl. 200% N or add. clean earth)

3 and PEN or 3, N and PE

Bolt-type terminal connection with hook and bolt connection

Direct hook and bolt connection (LD technology)

Hook and bolt connection with shear nut

Bolt terminal block

On one side every 1 m

Can be plugged in anywhere along the system

Up to 3 for every 3 m (per side)

On one side every 1 m

Up to 1250 A

Up to 250 A

Up to 1250 A

On request

Aluminum or copper

Aluminum, nickel and tin-coated

Aluminum or copper

Aluminum or copper

Sheet steel zinc-plated and painted

Sheet steel, tin-coated and powder-coated, black (RAL9017)

Aluminum painted

Epoxy resin

powerline, data line

powerline, data line

powerline, data line

–

EAC

–

EAC

EAC

- DNV GL
- Environmental Product Declaration (EPD)

–

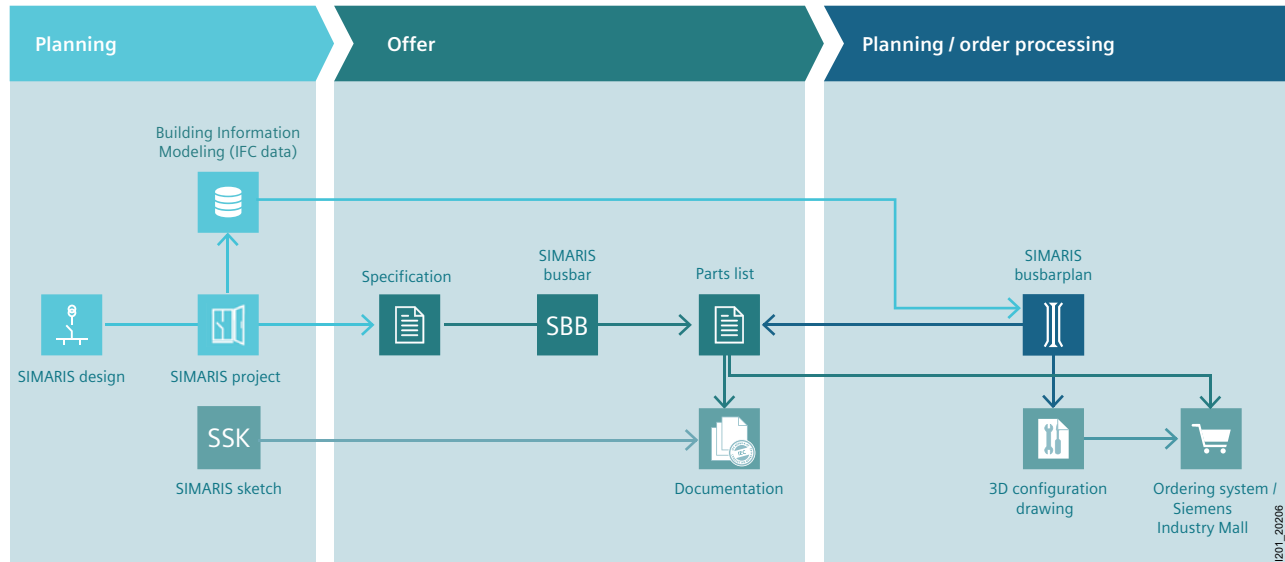
- Environmental Product Declaration (EPD)

- DNV GL
- SEISMIC Qualification Certificate (earthquake test)
- ATEX
- Product Environmental Profile (PEP)

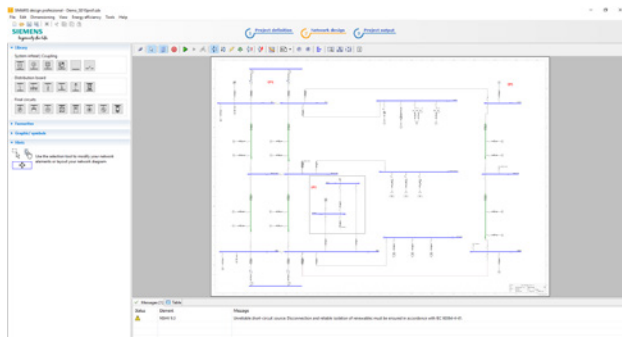
Planning and installation tools

For planning, visualization and installation of busbar trunking systems

From planning to commissioning



SIMARIS design



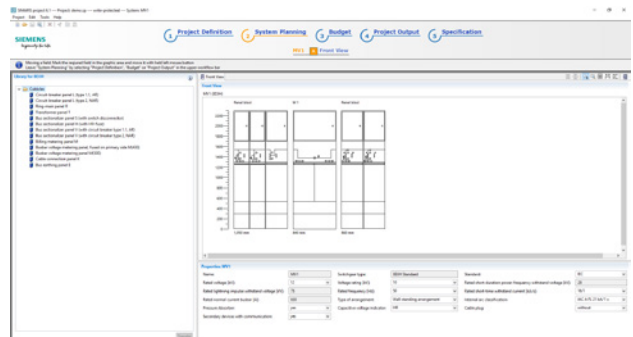
SIMARIS design is a planning tool for fast and efficient grid calculation and dimensioning of electrical power distribution for special-purpose and industrial buildings.

- Dimensioning of electrical networks on the basis of real products according to acknowledged rules of technology and the applicable standards (VDE, IEC)
- Automatic selection of the appropriate components from the stored product database

SIMARIS design forms part of SIMARIS Suite.

Free download of the SIMARIS Suite and further information at: www.siemens.com/simarisdg

SIMARIS project



SIMARIS project is a planning tool used to quickly determine the necessary space requirements and the budget for electrical energy distribution for special-purpose and industrial buildings and for automatic generation of specifications.

- Import into projects created with SIMARIS design
- Export of 3D data in IFC 4.x format for BIM (Building Information Modeling)

SIMARIS project forms part of SIMARIS Suite.

Free download of the SIMARIS Suite and further information at: www.siemens.com/simarispj

SIMARIS Toolbox (online)



The SIMARIS Toolbox is a platform for provision of online tools for assisting electrical installation planners. It includes, for example:

- EMC Busbar (tool for calculating magnetic field strength in the vicinity of SIVACON 8PS busbar trunking systems)

SIMARIS Toolbox forms part of SIMARIS Suite.

Free download of the SIMARIS Suite and further information at: www.siemens.com/simaristoolbox

SIMARIS busbarplan



The new SIMARIS busbarplan planning tool supports BIM-compliant 3D configuration of SIVACON 8PS busbar trunking systems.

- Plugin based on the BIM Autodesk REVIT software (Export in IFC format possible)
- Version for planners and for Siemens project engineers

SIMARIS busbarplan forms part of SIMARIS Suite.

Free download of the SIMARIS Suite and further information at: www.siemens.com/simaribusbarplan

Planning and installation tools

For planning, visualization and installation of busbar trunking systems

BusbarCheck app



BusbarCheck is an installation app to use for easy and high-quality installation and documentation.

- Detailed explanation of all steps
- Written record and proper documentation for better and easier evaluation of the installation
- Can be used by all installation companies and SIVACON 8PS busbar trunking installations in Germany and in other selected countries

Free download from:
[App Store](#) and [Play Store](#)

SIMARIS sketch



SIMARIS sketch is a software tool for quick and easy planning and visualization of busbar trunking systems.

- Representation of complex building structures
- Presentation of complete projects directly in 3D
- Export of parts lists as Excel files and graphics for preparation of orders

Free download and further information available at:
www.siemens.com/simarissketch

IFC data



BIM simplifies the planning process. While the simple exchange of relevant building data between the planners and the facility manager ensures high quality and reduces costs, the digital twin for power distribution fits in seamlessly with the overall structure – for efficient planning, performance and maintenance.

www.siemens.com/bim-eplanning



Appendix



Conditions of sale and delivery _____ A/2

Link directory _____ A/4

Conditions of sale and delivery

1. General Provisions

By using this catalog you can purchase products (hardware, software and services) described therein from Siemens Aktiengesellschaft subject to the following Terms and Conditions of Sale and Delivery (hereinafter referred to as „T&C“). Please note that the scope, the quality and the conditions for supplies and services, including software products, by any Siemens entity having a registered office outside Germany, shall be subject exclusively to the General Terms and Conditions of the respective Siemens entity. The following T&C apply exclusively for orders placed with Siemens Aktiengesellschaft, Germany.

1.1 For customers with a seat or registered office in European Union

For customers with a seat or registered office in European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for stand-alone software products and software products forming a part of a product or project, the „General License Conditions for Software Products for Automation and Drives for Customers with a Seat or registered Office in Germany“¹⁾ and/or
- for consulting services the „Allgemeine Geschäftsbedingungen für Beratungsleistungen der Division DF – Deutschland“ (available only in German) and/or
- for other services, the „Supplementary Terms and Conditions for Services (‘BL’)¹⁾ and/or
- for other supplies the „General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry“¹⁾.

In case such supplies should contain Open Source Software, the conditions of which shall prevail over the „General Conditions for the Supply of Products and Services of the Electrical and Electronics Industry“¹⁾, a notice will be contained in the scope of delivery in which the applicable conditions for Open Source Software are specified. This shall apply mutatis mutandis for notices referring to other third party software components.

1.2 For customers with a seat or registered office outside European Union

For customers with a seat or registered office outside European Union, the following terms and conditions apply subordinate to T&C:

- for products, which include specific terms and conditions in the description text, these specific terms and conditions shall apply and subordinate thereto,
- for consulting services the „Standard Terms and Conditions for Consulting Services of the Division DF for Customers with a Seat or Registered Office Outside of Germany“¹⁾ and/or
- for other services the „International Terms & Conditions for Services“¹⁾ supplemented by „Software Licensing Conditions“¹⁾ and/or
- for other supplies of hard- and software the „International Terms & Conditions for Products“¹⁾ supplemented by „Software Licensing Conditions“¹⁾

1.3 For customers with master or framework agreement

To the extent our supplies and/or services offered are covered by an existing master or framework agreement, the terms and conditions of that agreement shall apply instead of T&C.

2. Additional Terms and Conditions

The dimensions are in mm. In Germany, according to the German law on units in measuring technology, data in inches apply only to devices for export.

Illustrations are not binding.

Insofar as there are no remarks on the individual pages of this catalog – especially with regard to data, dimensions and weights given – these are subject to change without prior notice.

¹⁾ The text of the Terms and Conditions of Siemens AG can be downloaded at https://mall.industry.siemens.com/legal/ww/en/terms_of_trade_en.pdf

3. Export Regulations

We shall not be obligated to fulfill any agreement if such fulfillment is prevented by any impediments arising out of national or international foreign trade or customs requirements or any embargoes and/or other sanctions.

Export may be subject to license. We shall indicate in the delivery details whether licenses are required under German, European and US export lists.

Our products are controlled by the U.S. Government (when labeled with „ECCN“ unequal „N“) and authorized for export only to the country of ultimate destination for use by the ultimate consignee or end-user(s) herein identified. They may not be resold, transferred, or otherwise disposed of, to any other country or to any person other than the authorized ultimate consignee or end-user(s), either in their original form or after being incorporated into other items, without first obtaining approval from the U.S. Government or as otherwise authorized by U.S. law and regulations. Products labeled with „AL“ unequal „N“ are subject to European/national export authorization.

The export indications can be viewed in advance in the description of the respective goods on the Industry Mall, our online catalog system. Only the export labels „AL“ and „ECCN“ indicated on order confirmations, delivery notes and invoices are authoritative.

Products without label, with label „AL:N“/„ECCN:N“, or label „AL:9X9999“/„ECCN: 9X9999“ may require authorization from responsible authorities depending on the final end-use, or the destination.

If you transfer goods (hardware and/or software and/or technology as well as corresponding documentation, regardless of the mode of provision) delivered by us or works and services (including all kinds of technical support) performed by us to a third party worldwide, you shall comply with all applicable national and international (re-)export control regulations. In any event of such transfer of goods, works and services you shall comply with the (re-) export control regulations of the Federal Republic of Germany, of the European Union and of the United States of America.

Prior to any transfer of goods, works and services provided by us to a third party you shall in particular check and guarantee by appropriate measures that

- there will be no infringement of an embargo imposed by the European Union, by the United States of America and/or by the United Nations by such transfer, by brokering of contracts concerning those goods, works and services or by provision of other economic resources in connection with those goods, works and services, also considering the limitations of domestic business and prohibitions of by-passing those embargos;
- such goods, works and services are not intended for use in connection with armaments, nuclear technology or weapons, if and to the extent such use is subject to prohibition or authorization, unless required authorization is provided;
- the regulations of all applicable Sanctioned Party Lists of the European Union and the United States of America concerning the trading with entities, persons and organizations listed therein are considered.

If required to enable authorities or us to conduct export control checks, you, upon request by us, shall promptly provide us with all information pertaining to the particular end customer, the particular destination and the particular intended use of goods, works and services provided by us, as well as any export control restrictions existing.

You acknowledge that under the EU embargo regulations against Iran, Syria and Russia respectively the sale of certain listed goods and related services is subject to authorization by the competent export control authorities of the European Union. If (1) the goods or services ordered by you are destined for Iran, Syria or Russia, and (2) the contract for our supplies and/or services is subject to prior authorization of the competent export control authorities of the European Union, the contract between you and us shall come into force in this respect only upon granting of such authorization.

The products listed in this catalog may be subject to European/ German and/or US export regulations. Any export requiring approval is therefore subject to authorization by the relevant authorities. Errors excepted and subject to change without prior notice.

Link directory

Catalog LV 10

General information

Information on low-voltage power distribution and electrical installation technology	www.siemens.com/lowvoltage
Tender specifications	www.siemens.com/lowvoltage/tenderspecifications
Conversion tool	www.siemens.com/conversion-tool
Image database	www.siemens.com/lowvoltage/picturedb
CAX download manager	www.siemens.com/cax
Newsletter system	www.siemens.com/lowvoltage/newsletter
Siemens YouTube channel	www.youtube.com/Siemens
Catalogue LV 10	www.siemens.com/lv10
Catalogue LV 18	www.siemens.com/lv18
Brochures/catalogs	www.siemens.com/lowvoltage/catalogs
Operating instructions/manuals	www.siemens.com/lowvoltage/manuals
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Configurators	www.siemens.com/lowvoltage/configurators
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Direct forwarding to the Industry Mall	www.siemens.com/product?Article No.
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Information on services	www.siemens.com/service-catalog
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SITOP power supplies	www.siemens.com/sitop
Power distribution with Totally Integrated Power	www.siemens.com/tip

Catalogs and further information



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SENTRON • SIVACON • ALPHA

Protection, Switching, Measuring and
Monitoring Devices, Switchboards and
Distribution Systems

PDF (E86060-K8280-A101-B5-7600)



ET D1 Switches and Socket Outlets

DELTA

PDF



LV 18 Air Circuit Breakers and Molded Case Circuit Breakers with UL Certification

SENTRON

PDF (E86060-K8280-E347-A9-7600)



Industry Mall

Information and Ordering Platform
on the Internet:

www.siemens.com/industrymall



IC 10 Industrial Controls

SIRIUS

PDF (E86060-K1010-A101-B3-7600)



SITRAIN

Digital Industry Academy

www.siemens.com/sitrain



Siemens TIA Selection Tool

for the selection, configuration and
ordering of TIA products and devices

www.siemens.com/tst

The catalogs listed above and additional catalogs are
available in PDF format at Siemens Industry Online Support
www.siemens.com/lowvoltage/catalogs

Further information on low-voltage power distribution
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Internet at www.siemens.com/lowvoltage

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Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens' products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the Internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit <https://www.siemens.com/industrialsecurity>.

Siemens' products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer's exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under <https://www.siemens.com/cert>.

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