

SIEMENS

SIRIUS

Industrial Controls

siemens.com/sirius

Catalog
IC 10

Edition
2025

SIEMENS



Related catalogs

Industrial Controls SIRIUS

IC 10

PDF (E86060-K1010-A101-B7-7600)



Low-Voltage Power Distribution and Electrical Installation Technology SENTRON • SIVACON • ALPHA

LV 10

PDF (E86060-K8280-A101-B9-7600)



SIMATIC

Products for
Totally Integrated Automation

ST 70

PDF (E86060-K4670-A101-C1-7600)



Motion Control Drives

SINAMICS Converters for Single-Axis Drives
Distributed Converters

D 31.2

PDF (E86060-K5531-A121-A4-7600)



SIMATIC Ident

Industrial Identification Systems

ID 10

E86060-K8310-A101-B1-7600



SITOP

SITOP
Power Supply

KT 10.1

PDF (E86060-D4001-A510-E1)



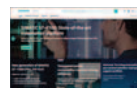
SITRAIN

Digital Industry Academy

www.siemens.com/sitrain

Miscellaneous

SiePortal

Information and Ordering Platform
on the Internetsieportal.siemens.com

Siemens TIA Selection Tool

for the selection, configuration and ordering of
TIA products and deviceswww.siemens.com/tst

Contact

Your personal contact can be found in our
Contacts Database at:www.siemens.com/automation-contact

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Further information about industrial controls:
www.siemens.com/sirius

Technical Support

Expert technical support
for Industrial controls:

Support Request:

www.siemens.com/support-request

Industrial Controls

SIRIUS



Catalog IC 10 · 2025

Edition without prices

Supersedes:
Catalog IC 10 · 2024

Refer to SiePortal for regular updates of this catalog:
www.siemens.com/sirius-sieportal

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The catalog PDF contains click-on article numbers, graphics and videos.



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/cp). The certificate is recognized by all IQNet countries.

1 Introduction

2 Industrial communication



3 Switching devices – Contactors and contactor assemblies – for switching motors



4 Switching devices – Contactors and contactor assemblies – Special applications



5 Switching devices – Contactors and contactor assemblies – Contactor relays and relays



6 Switching devices – Soft starters and solid-state switching devices



7 Protection equipment



8 Load feeders and motor starters for use in the control cabinet



9 Motor starters for use in the field, high degree of protection



10 Monitoring and control devices



11 Safety technology



12 Position and safety switches



13 Commanding and signaling devices



14 Parameterization, configuration and visualization with SIRIUS



15 Power supply



16 Appendix

Ordering notes

Catalog IC 10 contains all selection and order-relevant data.



Ordering notes

Ordering special versions

For ordering products that differ from the versions listed in the catalog, the article number specified in the catalog must be supplemented with "-Z"; the required features must be specified by means of the alphanumeric order codes or in plain text.

Small orders

When small orders are placed, the costs associated with order processing are greater than the order value. We recommend therefore that you combine several small orders. Where this is not possible, we unfortunately have to charge a processing supplement of 20.00 € to cover our costs for order processing and invoicing for all orders with a net goods value of less than 250.00 €.

Price units (PU)

The price unit defines the number of units, sets or meters to which the specified price applies.

Price groups (PG)

Each product is assigned to a price group.

Dimensions

All dimensions in mm.

Standard delivery time (SD)

The standard delivery time can be found in SiePortal under the respective article number, see www.siemens.com/sirius-sieportal.

Packaging sizes (PS)

The packaging size defines the number, e.g. of units, sets or meters, contained in an outer packaging. Only the quantity defined by the packaging size or a multiple thereof can be ordered. For multi-unit packing and reusable packaging, see page 16/5 onwards.

Example

3RA2110-0FA15-1AP0

PG: 41D

Order quantity 1 unit or a multiple thereof

3RA1921-1D

PG: 41B

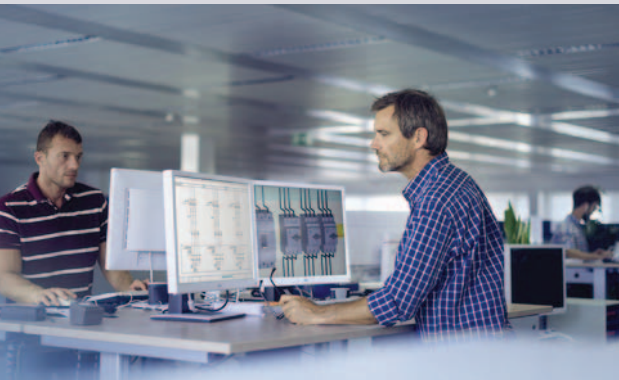
Order quantity 10 units or a multiple thereof

3SU1900-0AB71-0AB0

PG: 41J

Order quantity 10 units or a multiple thereof

| Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---------------------------|--------------|-------------------|----------|-----|
| 3RA2110-0FA15-1AP0 | | 1 | 1 unit | 41D |
| 3RA1921-1D | | 1 | 10 units | 41B |
| 3SU1900-0AB71-0AB0 | | 100 | 10 units | 41J |



SIRIUS in the World Wide Web

The most important online services at a glance.



SiePortal

- Information and ordering platform
www.siemens.com/sirius-sieportal
- Configurators
www.siemens.com/sirius-configurators
- Product Support
www.siemens.com/online-support
- Online Support App
www.siemens.com/support-app



Industrial controls

Homepage
www.siemens.com/sirius



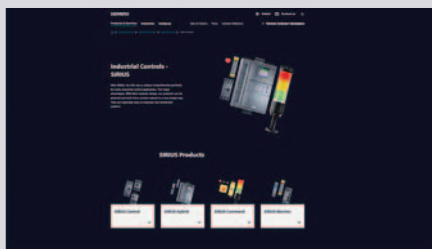
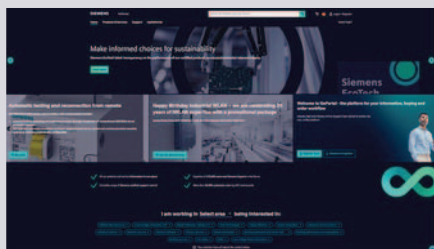
Device selection and configuration

TIA Selection Tool
www.siemens.com/tst



Siemens Knowledge Hub - YouTube

YouTube channel with how-to videos, tutorials, etc.
www.youtube.com/@SiemensKnowledgeHub



SIRIUS 3RW soft starters

As diverse as your tasks.

The strong, harmonized portfolio of soft starters is suited to a wide range of standard – and also Failsafe and ATEX – applications thanks to comprehensive and specific functions. Benefit from intelligent functions such as condition monitoring, automatic parameterization, pump cleaning and integrated braking functions, regardless of the industry you are in.



Strong portfolio

Comprehensive, coordinated soft starter portfolio for simple to demanding starting: Basic, General, High Performance

Efficient switching

Energy-efficient switching and mechanical protection of the drive train thanks to soft starter with hybrid switching technology

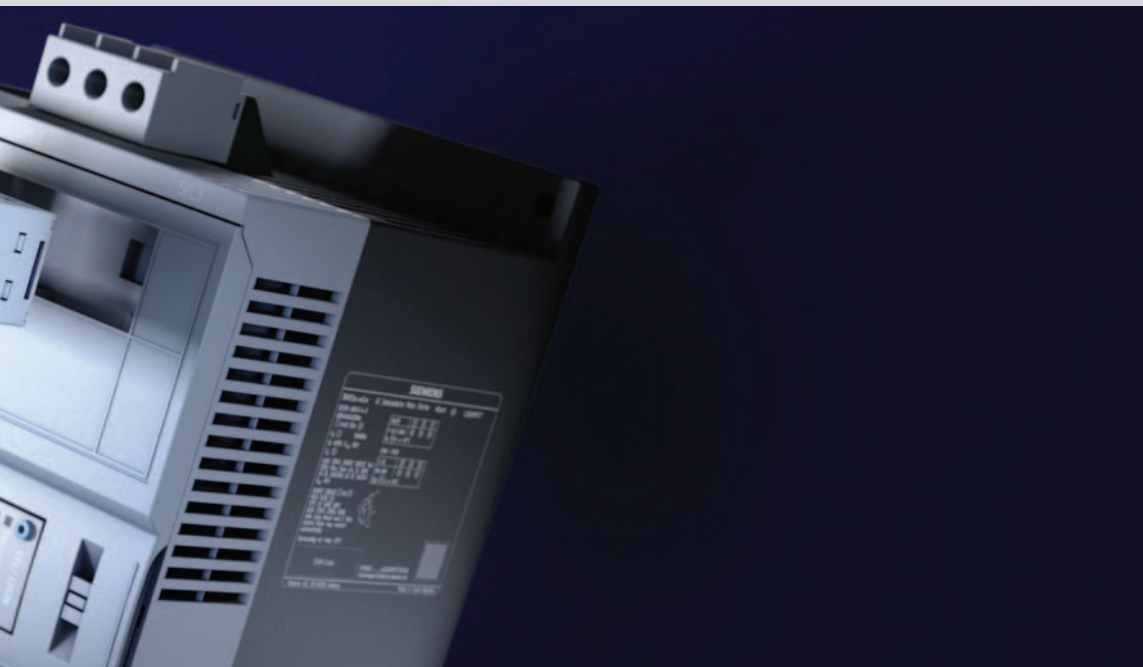
Intelligent use

Concentrated, application-specific functionality thanks to intelligent features such as automatic parameterization, pump cleaning and condition monitoring

Ready for the digital future

Support for digital engineering processes with tools and data. Data provision for local visualization or cloud-based analysis





SIRIUS 3RW

Strong, comprehensive portfolio with a wide range of possibilities thanks to a flexible design.

For more information, see www.siemens.com/softstarters

Digitalization

The 3RW soft starters help you to realize the full potential of digitalization. This is particularly beneficial when it comes to economic efficiency.

Your application in focus



IC01_00555

Pump cleaning and pump stopping mode

The pump cleaning function prevents pumps from blocking and therefore increases your productivity and system availability. The pump stopping mode avoids mechanical stress in the piping system and extends the endurance of the equipment.



IC01_00556

Electrical ruggedness

Due to the wide control voltage range from 110 to 250 V AC, soft starters have a high degree of electrical ruggedness. This guarantees reliable operation even in the event of falling voltages.



IC01_00557

Condition monitoring

The condition monitoring function supports optimal planning of maintenance work on bearings or seals, thereby maximizing availability.



IC01_00558

Automatic parameterization

Automatic parameterization simplifies the commissioning and operation of critical applications considerably, even in the case of highly dynamic load characteristics.



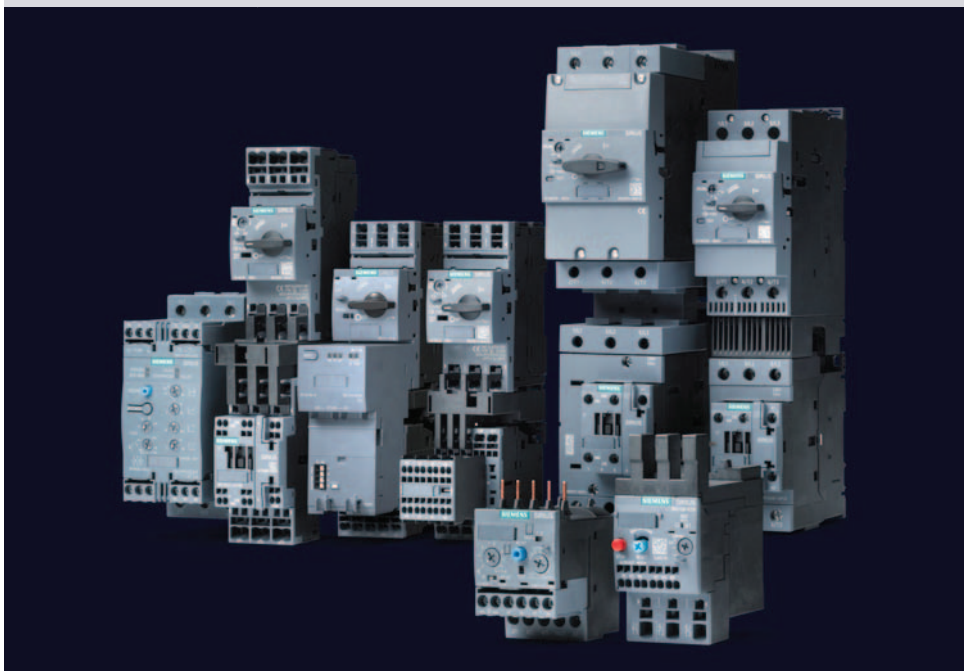
IC01_00559

Integrated braking functions

Intelligent functions such as soft starter braking ensure a fast and reliable stop without engineering and configuration work.

SIRIUS modular system

Efficiently combined. Fully integrated in TIA.
Digitalization all the way to the field.



SIRIUS modular system

Offers the largest portfolio of industrial controls available on the market with many advantages:

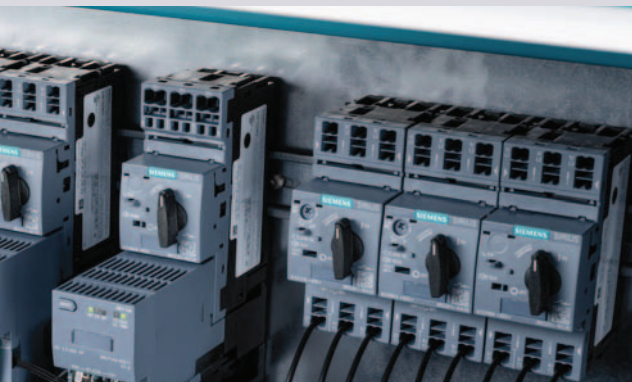
- Modular design
- Compact and space-saving
- Can be ordered pre-assembled
- Fully integrated in TIA with SIRIUS 3RC7
- Efficient wiring
- Efficient configuration
- Complies with global standards

SIRIUS 3RC7 intelligent link modules

They now enable full integration of the load feeder in Totally Integrated Automation (TIA), easy installation and commissioning, communication (e.g. via PROFINET), as well as a new level of transparency and additional options for digitalization.

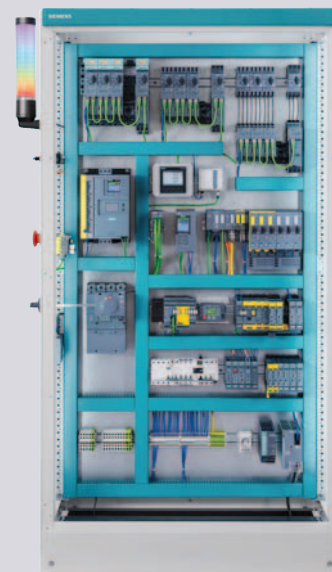
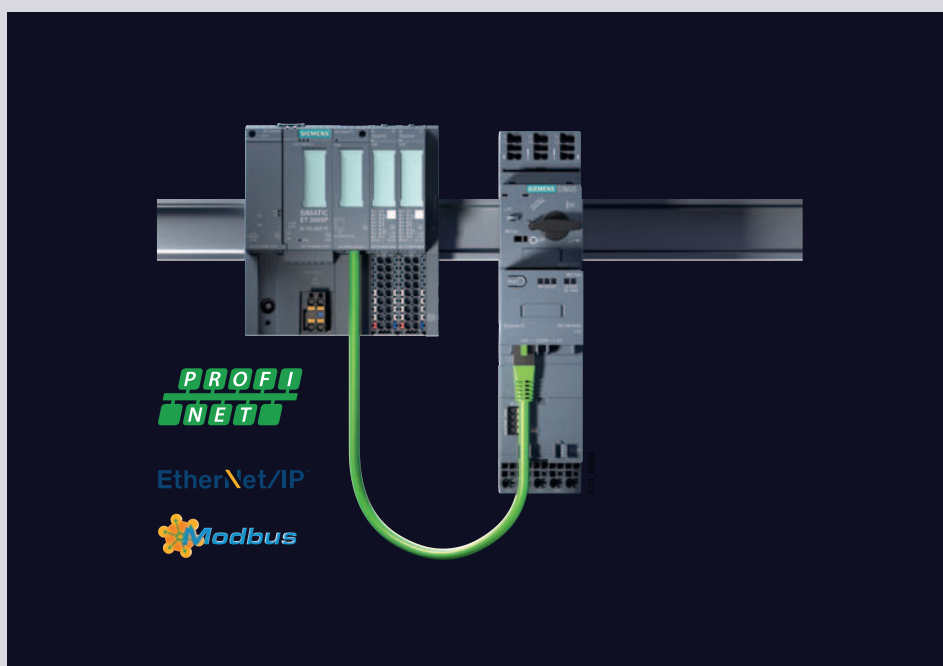
Your advantage:

- TIA integration
- Transparency down to the field level
- Proactive protection
- Minimal effort



For more information, see www.siemens.com/sirius-ilm

For more information, see www.siemens.com/sirius-modular-system



Consistent TIA integration combined with SIMATIC ET 200SP – Digitalization all the way to the field

SIRIUS 3RC7 electrically and mechanically connects SIRIUS 3RV2 motor starter protectors/circuit breakers and SIRIUS 3RT2 contactors in sizes S00 and S0 with spring-loaded terminals.

The intelligent load feeder forms a system with SIMATIC via ET connection to SIMATIC ET 200SP. In this way, the SIRIUS feeder, combined with 3RC7, is fully integrated into the automation system.

Compact and communication-capable in industrial control panels

Mounting types for load feeders with intelligent link modules:

- 1-row or 2-row mounting on TH 35-15 DIN rail
- Mounting on 8US busbars
- Screw fixing with push-in lug
- Configuration with SIRIUS 3RV29 infeed system

Smart Control Panel Design

This is how easy electrical engineering for the control cabinet is in the TIA Selection Tool.

Are you an electrical engineer looking for a software solution to relieve you of time-consuming routine tasks?

With Control Panel Design in the TIA Selection Tool, the electrical equipment of a machine can be designed and dimensioned in compliance with standards - from the suitable switchgear to the correctly dimensioned cables.

Complex calculations are no longer necessary. This significantly reduces the workload for all electrical engineers.

Electrical engineering in ONE tool. This makes configuring more enjoyable!

1.

Digital expertise on standards
Standard conformity with no worries

2.

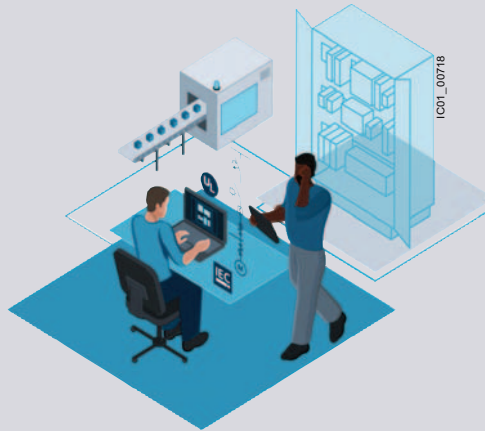
Easy dimensioning
A new dimension of dimensioning

3.

Consistent workflow
Electrical engineering with unlimited creativity

4.

Supported portfolio
Intelligent devices for versatile solutions



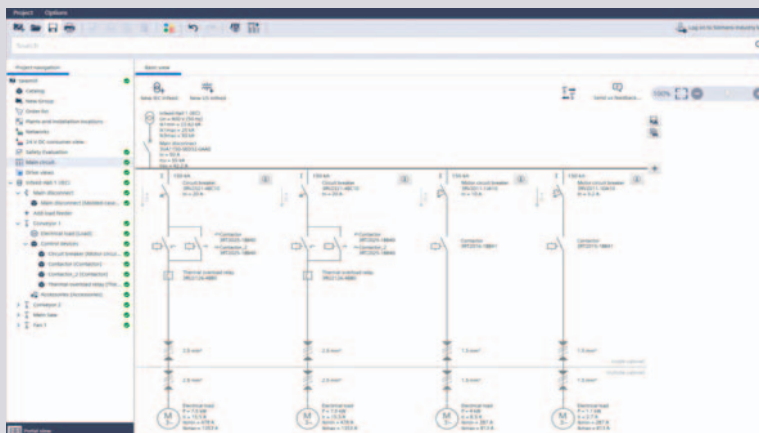
Highlights

- Automatic [short-circuit calculation and cable dimensioning](#)
- Automatic dimensioning of fuseless and fused load feeders up to 250 hp according to UL 508A or up to 250 kW according to IEC 60204-1
- Selection of the [appropriate switching and protection devices](#) for the motor
- [Visual planning of the main circuit](#) in the single-line diagram
- Simple [accessory selection](#)
- [Complete PDF documentation](#) of technical specifications and calculation results (e.g. for the short-circuit verification)
- Simple main switch dimensioning for IEC and UL infeeds

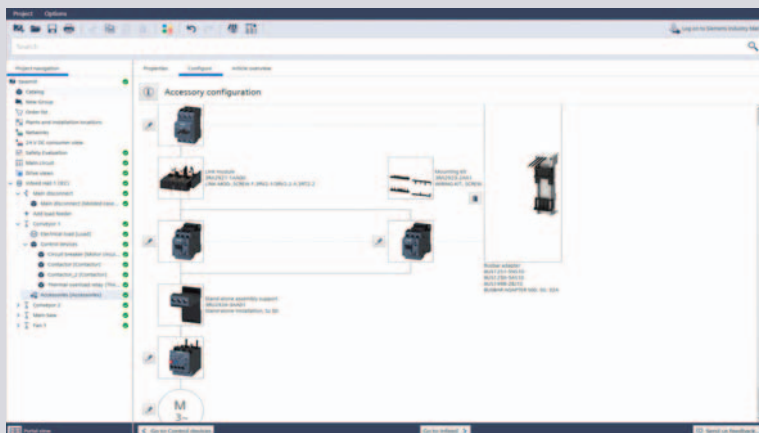


For more information, tool download and videos, see www.siemens.com/cpd

Are you looking for a clear and easy way to dimension your circuits?



Or do you need suitable accessories for your switching devices?



The main circuit view with single-line display and the automatic display of accessories are two of the many functions in the TIA Selection Tool.

Integrated Control Panels

With Integrated Control Panels from Siemens, it is easy to optimize all aspects of control panel building: from planning and engineering, through to service and commissioning. Our support for you includes technical know-how, application knowledge and tools for basic engineering.



Working together for simple and stress-free control panel design

Comprehensive support for all control panel applications

Want to save time and costs? With Integrated Control Panels, it's easy to optimize all aspects of control panel building for your machines and industrial plants. From preparation and dimensioning, design and construction, through to service and support – for greater competitiveness and long-term success.

Expert know-how

The faster route to the ideal control panel with practice-oriented expertise

We support you with exactly the right know-how to give you a competitive edge – both now and in the future. This includes applying standards and guidelines in day-to-day operations (e.g. UL 508A, IEC 60204-1) as well as efficient engineering and configuration.

- Webinars, online trainings and individual consulting on product and application topics
- Literature with practical tips and tricks, including: guidelines, product manuals, white papers



For more information, see www.siemens.com/panelbuilding

Tools & data for digitalization in engineering

Maximum efficiency for control panel design

With a range of tools and data-based services, we support you with the digitalization of your business and enable the leverage of all the advantages this offers for control panel design: greater efficiency, flexibility and quality – in every process phase!

- Intelligent selection, dimensioning and design
www.siemens.com/cpd
- Control panel engineering
www.siemens.com/controlpanel/engineering

Harmonized product and system portfolio

Effective savings in control cabinet design

Harmonized product and system portfolio saves construction time. With our coordinated, integrated portfolio of products that includes automation technology, drive train components, industrial controls and matching control panel enclosures, we can reduce your engineering overhead and ensure the harmonious interaction of all devices. These are extensively tested, and are all certified and available for use worldwide – enabling you to remain flexible within the global business environment.

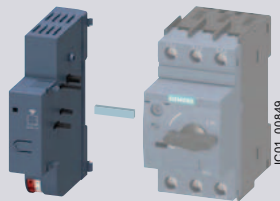
Benefit also from our expert tips concerning control panels.
www.siemens.com/controlpanel/tips

Product highlights



**3RV2 motor starter protectors/
circuit breakers**
for system protection

Type: 3RV20.1-...A.0-0DA0
Page 7/43



**3RV2 COM wireless auxiliary
and signaling switches**
For 3RV2 motor starter protectors/
circuit breakers

Type: 3RV2921-5M
Page 7/47 onwards



SIRIUS 3RA8 intelligent load feeders

Type: 3RA84, 3RA85
Page 8/84 onwards



SIRIUS 3RC7 intelligent link modules

Type: 3RC7140, 3RC7141
Page 8/90 onwards



**SIMOCODE M 3UF8 motor
management and control devices**

Type: 3UF8
Page 10/5 onwards



**SIRIUS 3UG5 monitoring relays
for stand-alone installation
for various functions**

Type: 3UG5
Page 10/72 onwards

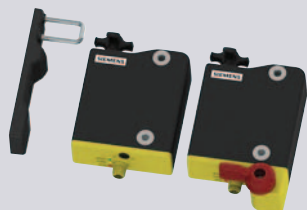


**SIRIUS 3SK1 safety relays with
protective coating on printed circuit
board according to IPC-A-610**

Type: 3SK1111-2AB30-0AX0
Page 11/23



For more
information, see
[www.siemens.com/
sirius](http://www.siemens.com/sirius)



3SE64 RFID safety switches with tumbler

Type: 3SE6415-1...
Page 12/132 onwards



SIRIUS ACT pushbuttons and indicator lights Selector switches

Type: 3SU1052-2GL10-0AA0
Page 13/65



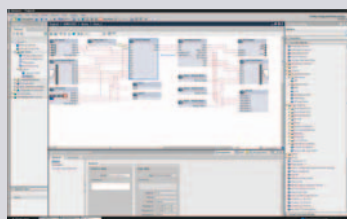
SIRIUS ACT pushbuttons and indicator lights ID key-operated switches

Type: 3SU1050-4WS10-0AA0
Page 13/69



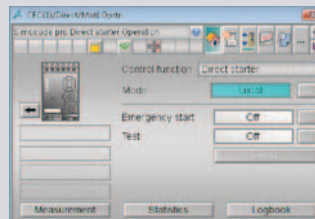
Electronically configurable 8WD46 signaling columns

Type: 8WD4613, 8WD4615
Page 13/166 onwards



Software for TIA Portal

Type: 3ZS1320, 3ZS1322, 3ZS1326
Pages 14/5, 14/13, 14/24 onwards



Block libraries for SIMATIC PCS 7

Type: 3ZS1632, 3ZS1633, 3ZS1635
Pages 14/8, 14/18, 14/23

Sustainability @Siemens

Transforming the everyday to
create a better tomorrow.



For more
information, see
www.siemens.com/sustainability
figures



As a company, Siemens considers environmental, social and governance (ESG) criteria from all angles with its DEGREE framework (decarbonization, ethics, governance, resource efficiency, equity and employability). We are not only committed to reducing the carbon footprint in our own operations to net zero by 2030, but also helping our customers achieve their decarbonization and sustainability goals.

Mission & strategy

As a focused technology company, Siemens is committed to addressing the world's most profound challenges by leveraging the synergies between digitalization and sustainability.

Technology with aim and purpose

We develop technologies that connect the real and digital worlds and enable our customers to positively transform the industries that form the backbone of our economy: industry, infrastructure, transportation and healthcare.

Our contribution

Siemens makes an impact every day by providing innovative solutions in response to challenges relating to environmental protection, decarbonization, health and safety. Innovative solutions that have a clear goal: to make the world more sustainable, more integrative and a better place to live.

Sustainability facts

For almost 175 years, Siemens has been driven by the desire to improve the lives of people around the world with our technologies.



Siemens EcoTech is an environmental product performance label designed to drive the sustainable transformation of industry and infrastructure. The label gives you transparency on the performance of our certified products across environmental relevant criteria, enabling you to make informed choices to support your sustainability goals, see www.siemens.com/SiemensEcoTech.



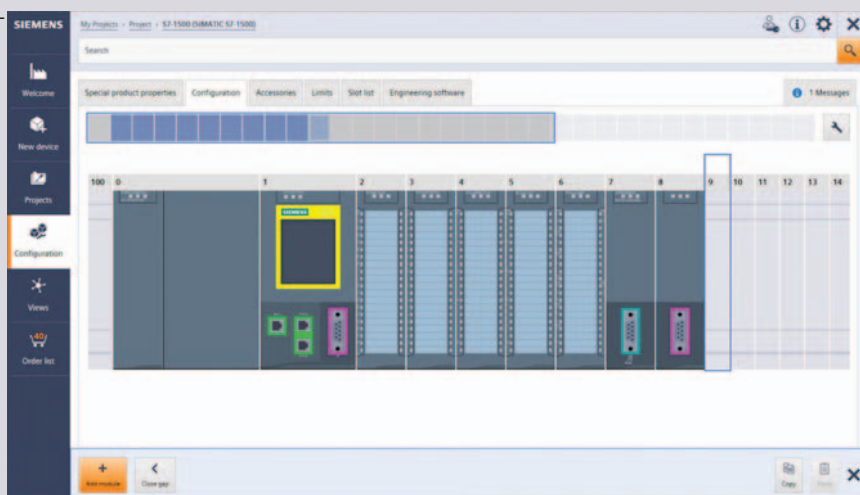
TIA Selection Tool

quick, easy, smart configuration

For you to get the most out of our portfolio quickly and easily.

Do you always need the optimum configuration for planning your project?

For your application we offer the TIA Selection Tool to support all project planners, beginners and experts alike. No detailed portfolio knowledge is necessary. TIA Selection Tool is available for download as a free desktop version or a cloud variant.



Quick

- Configure a complete project with just a few entries – without a manual, without special knowledge
- Import and export of hardware configuration to TIA Portal or other systems
- Ideal visualization of the projects to be configured

Easy

- Tool download either as desktop version or web-based cloud version
- Technically always up-to-date about product portfolio and innovative approaches
- Highly flexible, secure, cross-team work in the cloud
- Direct ordering in SiePortal

Smart

- Smart selection wizard for error-free configuration and ordering
- Configuration options can be tested and simulated in advance
- Library for archiving sample configurations

The TIA Selection Tool is a completely paperless solution.

Download it now:
www.siemens.com/tst

For more information, scan the QR code



Technical Support

One click – and you have all the information you need.



Product Support – get fast and up-to-date information online

www.siemens.com/online-support

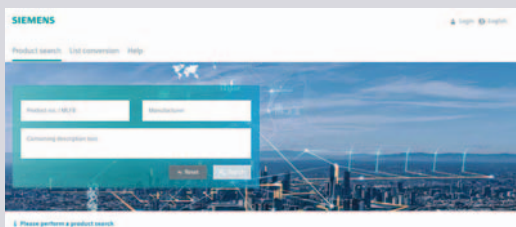
In SiePortal Product Support you will find FAQs, manuals, certificates, applications & tools, and much more



Support Request – the fast track to the experts

www.siemens.com/support-request

Using the Support Request form in SiePortal Product Support, you can send your query directly to Technical Support.



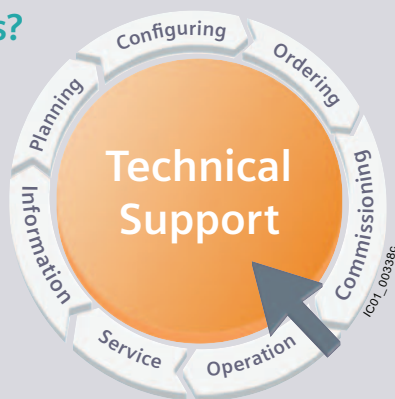
Conversion tool – the easy and efficient way to find successor products

www.siemens.com/conversion-tool

Any more questions?

Our experts are there to help you with competent technical advice.

Support Request:
www.siemens.com/support-request



Competent and fast technical advice regarding:

- Product selection
- Conversion from old to new
- Competitor conversion
- Special versions
- Particular requirements
- Commissioning
- Maintenance

Further input channel for other topics:

- Returned goods
- Field Service assignments
- Corrective maintenance needs
- Quality cases

Introduction



| | |
|-----|--|
| 1/2 | Energy-efficient controls SIRIUS brings down energy costs |
| 1/3 | Energy management with SIRIUS Integration into energy management software |
| 1/4 | Systematic industrial safety technology SIRIUS Safety Integrated |
| 1/8 | IE3/IE4 ready SIRIUS controls for reliable switching and protection of highly efficient IE3 and IE4 motors |
| 1/9 | Innovative technology for saving energy Electronic starting with hybrid switching technology |

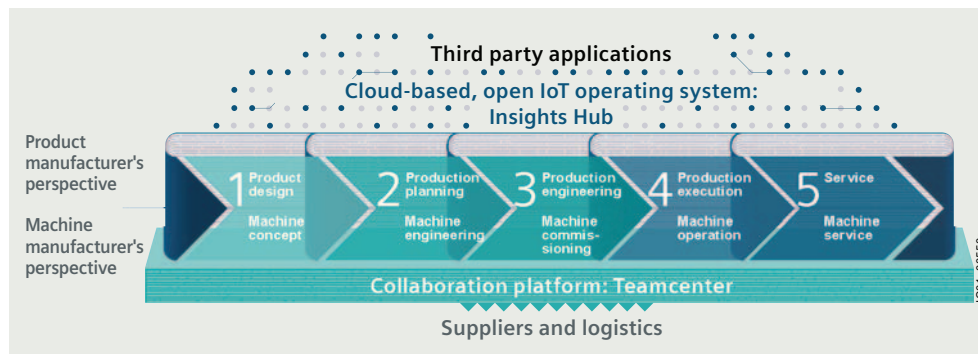
Introduction

Energy-efficient controls

SIRIUS brings down energy costs

Overview

Energy management in industry



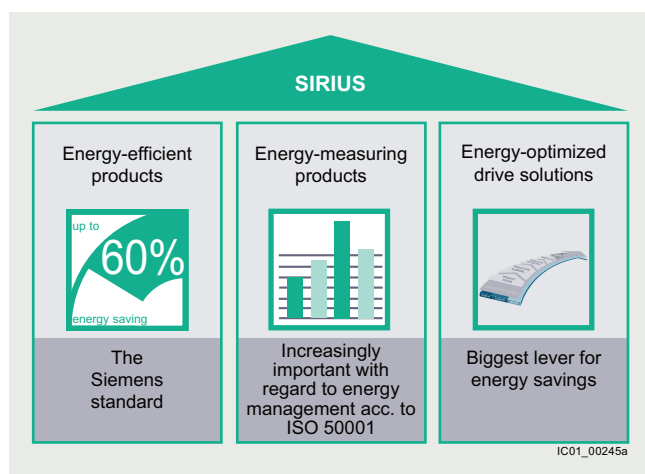
Product development and production process

Energy-efficient production as a success factor

In order to harness energy potential, with our vast portfolio, we always maintain a clear view of the overall product development and production process. Because maximum energy efficiency in production can only be achieved through perfect interaction of all components.

That is why it is important to first create an awareness for existing energy-saving potential, recognize (identify) and assess (evaluate) opportunities for optimization through precise analysis. Finally, appropriate measures must be implemented (realized).

With our full-range portfolio of energy-efficient drive solutions, automation and services, you too will reach maximum energy efficiency, higher productivity and lasting competitiveness in your company.



Three columns of energy efficiency with products from the SIRIUS modular system

Energy-efficient products – SIRIUS reduces power loss

SIRIUS controls (3RM1 motor starters, 3RR2 monitoring relays, 3RB3 overload relays, 3RT2 contactors, 3RW soft starters, and 3RV2 motor starter protectors/circuit breakers) as well as the ET 200SP motor starters are characterized by extremely low intrinsic power loss. This not only lowers energy costs, but also reduces the amount of waste heat in the control cabinet. This then translates to a higher packing density and a reduction in the required cooling capacity.

Energy-measuring products

Energy management can be instrumental in increasing plant productivity to bring about a significant improvement to the competitive ability of a company – in all industries.

Whether you are a plant operator, planner or machine manufacturer: Energy-efficient production is a challenge and an opportunity in equal measure.

Energy data acquisition represents an important component of the overall energy data management process here. Through transparency right down to the loads, it is possible to identify and utilize potential energy savings.

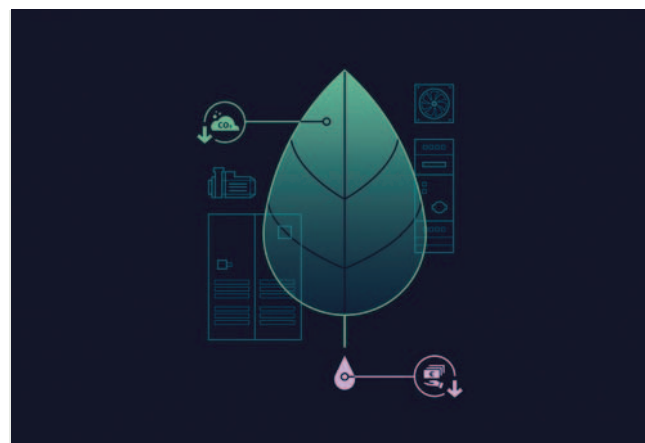
With communication-capable SIRIUS switching devices you can acquire energy data from the drive train without any additional effort.

In addition to SIRIUS controls, SENTRON measuring devices help you make energy flows visible.

Best drive solutions in terms of energy

In order to design processes for optimal energy efficiency, it is not enough to simply measure the energy flow and deploy energy-efficient products. The greatest lever for saving energy can be derived from closely examining the application.

SinaSave energy efficiency tool



Amortization calculator for energy-efficient drive systems

The SinaSave energy efficiency tool determines energy saving potential and amortization times based on your individual conditions of use and therefore offers practical assistance in making decisions about investments in energy-efficient technologies.

In SinaSave, the drive systems to be compared and the relevant drive component parameters are displayed graphically. The various control types and comprehensive product combinations for drive solutions for pump and fan applications can be adapted in your application.

The product portfolio comprises not just SIRIUS controls, but also motors and SINAMICS converters, thus offering a comprehensive range of comparison possibilities – according to your individual requirements.

SinaSave, the free amortization calculator for energy-efficient drives, see www.siemens.com/sinasave.

Overview

SIMATIC Energy Suite

High energy consumption and automated production processes are typical for many industries.

If you want to keep your energy costs under control in the long term and you are already focusing on the digital future, it's a good idea to equip your plant with integrated energy measuring technology, thus anchoring energy management into the automation of your production processes – which is where most energy is consumed.

SIMATIC Energy Suite as an integrated option for the TIA Portal efficiently links energy management with automation, thus creating energy transparency in the production system.

The considerably simplified configuration of energy measuring components from the product families SIMATIC, SENTRON, SINAMICS, SIRIUS and SIMOCODE significantly reduces the configuration costs.

Thanks to the end-to-end connection to SIMATIC Energy Manager PRO (innovative successor to SIMATIC B.Data) or cloud-based Service Energy Analytics, you can seamlessly expand the recorded energy data to create a cross-site energy management system.

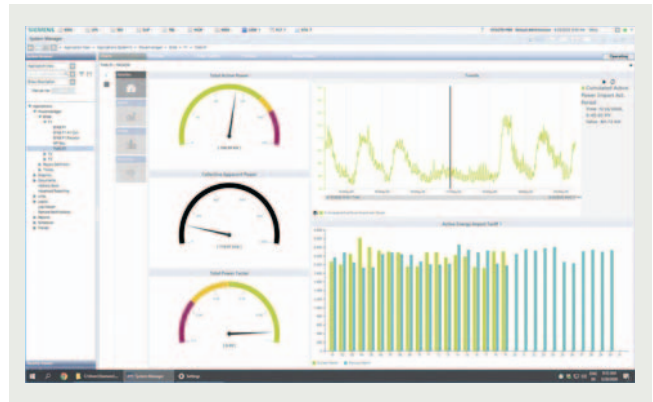
This also enables companies to fulfill all economic and energy management requirements – from purchasing of energy through planning to energy controlling.

The advantages at a glance:

- Simple and intuitive configuration instead of programming
- Automatic generation of the PLC energy program
- Convenient integration of measuring components from the Siemens portfolio and from the portfolios of other manufacturers
- Integrated in the TIA Portal and automation
- Archiving on WinCC Professional or PLC
- Seamless connection to Energy Manager PRO and Energy Analytics

For more information on SIMATIC Energy Suite, see www.siemens.com/energysuite.

SENTRON Powermanager



SENTRON Powermanager

The SENTRON Powermanager energy monitoring software displays important characteristic quantities for individual devices and the entire system on a clearly organized dashboard and thus analyzes the energy consumption.

The advantages at a glance:

- Analyzing energy flows: Cost-saving measures can be derived directly and faults can be localized rapidly – for greater awareness regarding energy consumption and lower costs.
- Easy to get started: Can be added to existing hardware and available infrastructure.
- Fast savings: Analyzes power curve and detects load peaks.
- High plant availability: Continuous monitoring of power distribution ensures that critical system states are detected at an early stage.

The SIRIUS 3RW55 soft starter is integrated into SENTRON Powermanager by simple installation of an XML file, see <https://support.industry.siemens.com/cs/ww/en/view/109798105>.

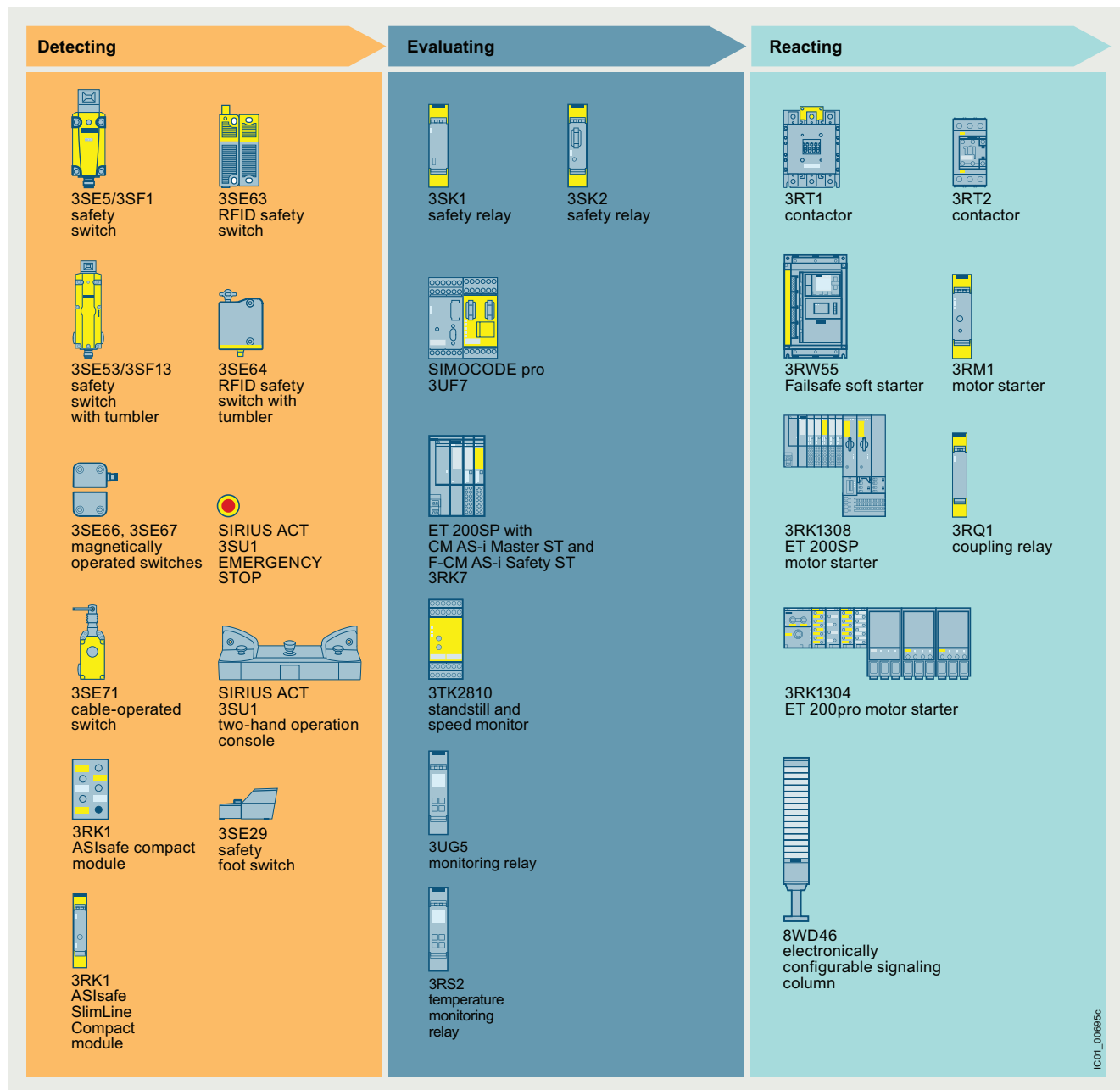
For more information on SENTRON Powermanager, see www.siemens.com/powermanager.

Introduction

Systematic industrial safety technology

SIRIUS Safety Integrated

Overview



SIRIUS Safety Integrated

Manufacturers and operators of machines must fulfill numerous requirements: reducing costs, improving productivity, and ensuring the safety of machines. The industrial safety technology from Siemens offers innovative, economical solutions for the functional safety of machinery.

Machine safety – compliance with legal requirements

Before any machines or plants can be supplied or operated, they must comply with the legal requirements. The Machinery Directive applies in the EU. Similar requirements apply in many other countries and markets.

To guarantee conformity with these requirements, it is recommended that the correspondingly harmonized standards IEC 62061 or ISO 13849-1 are applied. This gives manufacturers and operators legal certainty regarding compliance with both national regulations and directives, which are confirmed by the manufacturer of a machine.

The aim of safety technology is therefore to protect people, machines and the environment and to enable statutory safety requirements to be satisfied.

The quick and easy way to safe machinery

In addition to the statutory regulations governing the protection of people there are also economic reasons for avoiding personal injury and the resulting downtimes, and for protecting both machinery and equipment from damage.

Safety Integrated benefits machine manufacturers and plant operators in many ways:

- Lower costs for hardware, assembly and engineering
- Higher availability thanks to faster diagnostics and fewer downtimes

At the same time, using modular safety concepts allows them to modernize their plants more easily and at lower cost.

Smart controls ensure the functional safety of machinery

Our SIRIUS Safety Integrated controls are a central element of the overall Siemens Safety Integrated concept, based on Totally Integrated Automation.

SIRIUS Safety Integrated, see www.siemens.com/safety-integrated.

Whether for reliable detecting, evaluating and reacting, our SIRIUS Safety Integrated controls ([page 1/6 onwards](#)) provide cost-effective solutions for the safety of your machine or plant. Take the SIRIUS 3SK safety relays for example: They are modularly expandable, and can integrate compact motor starters such as the fail-safe SIRIUS 3RM1 very simply via the device connector (parameterization is performed easily with a screwdriver on the DIP switches or by drag and drop in the engineering software).

The SIMOCODE pro modular motor management system combines all required protection, monitoring, safety and control functions for motor feeders. It can be connected to fail-safe controllers via PROFIBUS or PROFINET and shut down motors in emergency situations.

SIRIUS Safety Integrated uses fail-safe communication via standard fieldbus systems, such as ASIsafe via AS-Interface and PROFIsafe via PROFIBUS and PROFINET, to solve even networked safety tasks of greater complexity. This opens the door to flexible safety solutions for compact machines or large-scale plants – naturally compliant with current standards up to SIL 3/PL e.

The first integrated ASIsafe connection to the distributed I/O system ensures even more consistency. With the SIMATIC AS-i F-Links, AS-i networks can be connected quite simply to safety controls via PROFIsafe via the SIMATIC ET 200SP.

Particular highlights are the 3RT contactors of sizes S2 to S12 with fail-safe control input, the SIRIUS ACT 3SU1 EMERGENCY STOP with PROFINET or PROFIsafe interface, and the fail-safe motor starters for ET 200SP ([page 8/98 onwards](#)) and the 3RW55 fail-safe soft starters ([page 6/39 onwards](#)). With these products, seamless integration into fail-safe control systems is possible.

The Application Manual SIRIUS Safety Integrated (SIAM Safety Integrated Application Manual) provides users with comprehensive application examples for SIRIUS Safety Integrated products, see <https://support.industry.siemens.com/cs/ww/en/view/81366718>.

Your partner for machine and plant safety

With Safety Integrated, Siemens has provided the smart answer to constantly increasing requirements for the functional safety of a machine and for its cost-effectiveness and flexibility. Our comprehensive portfolio of safe controls, control technology and drive technology provides scalable solutions for precisely tailored safety concepts for protecting people, machines and the environment. Our products meet the current safety standards in the industry, including IEC, ISO, NFPA and UL.

As a partner for machine and plant safety, Siemens also supports users with examples of functions and up-to-date know-how concerning international standards and directives.

The Safety Selector (www.siemens.com/safety-selector) thus guides the user to the appropriate application example based on selection criteria to be assigned.

The free safety evaluation for evaluating safety functions in accordance with IEC 62061 and ISO 13849-1 is integrated in the TIA Selection Tool, see www.siemens.com/safety-evaluation-tool.













Thus, the selection of components and their safety-related assessment are implemented in a coherent workflow.











Requirements-based training on CE marking, functional safety, risk assessment, and on our Safety Integrated products rounds off our portfolio, see www.siemens.com/sitrain.

Introduction

Systematic industrial safety technology

SIRIUS Safety Integrated

| Devices with safety functions | | | | | |
|--|----------------------------|---|-------|---|-------|
| Detecting | | Evaluating | | Reacting | |
| Product | Page | Product | Page | Product | Page |
| 3SE position and safety switches  <p>Flexible thanks to modular design, suitable for offshore applications</p> | 12/2 | SIMOCODE pro 3UF7  <p>Fail-safe expansion modules DM-F Local and DM-F PROFIsafe, safe shutdown of motors up to SIL 3/PL e</p> | 10/15 | 3RQ1 coupling relays  <p>SIRIUS 3RQ1 force-guided coupling relays, fail-safe up to SIL 3/PL e</p> | 5/21 |
| 3SE6 non-contact safety switches  <p>Magnetically operated switches (degree of protection IP67) and RFID safety switches (degree of protection IP69)</p> | 12/4 | 3SK safety relays  <p>Key modules of a consistent and cost-effective safety chain. Flexible thanks to input and output expansion units</p> | 11/13 | 3RW55 Failsafe soft starters  <p>3RW55 Failsafe High Performance soft starters with STO</p> | 6/39 |
| 3SU11 EMERGENCY-STOP mushroom pushbuttons, 3SU18 two-hand operation console  <ul style="list-style-type: none"> • High level of flexibility due to direct integration of the SIRIUS ACT EMERGENCY STOP via standardized, fail-safe communication protocols (PROFIsafe, ASIsafe) • SIRIUS ACT two-hand operation console with user-friendly capacitive sensor keys | 13/28, 13/51, 13/108 | 3TK2810 safety relays  <p>Further modules of a consistent and cost-effective safety chain for fail-safe detection of standstill or speed</p> | 11/34 | SIRIUS 3RM1 motor starters  <p>Compact, narrow and fail-safe hybrid motor starters with degree of protection IP20 Easy configuration and low outlay for storage thanks to wide setting range of the overload release</p> | 8/107 |
| 3SE71 cable-operated switches, 3SE29 safety foot switches  <ul style="list-style-type: none"> • Cable-operated switches with latching and positive-opening NC contacts, in degree of protection IP65 or IP67 • Foot switches with cover, metal enclosure with degree of protection IP65 | 13/158, 13/164 | 3UG5 monitoring relays  <p>Relays for fail-safe monitoring of supply system, current, active current, voltage, power factor, power, level or speed</p> | 10/72 | ET 200SP fail-safe motor starters  <p>Compact, fail-safe hybrid motor starters for the ET 200SP system</p> | 8/98 |

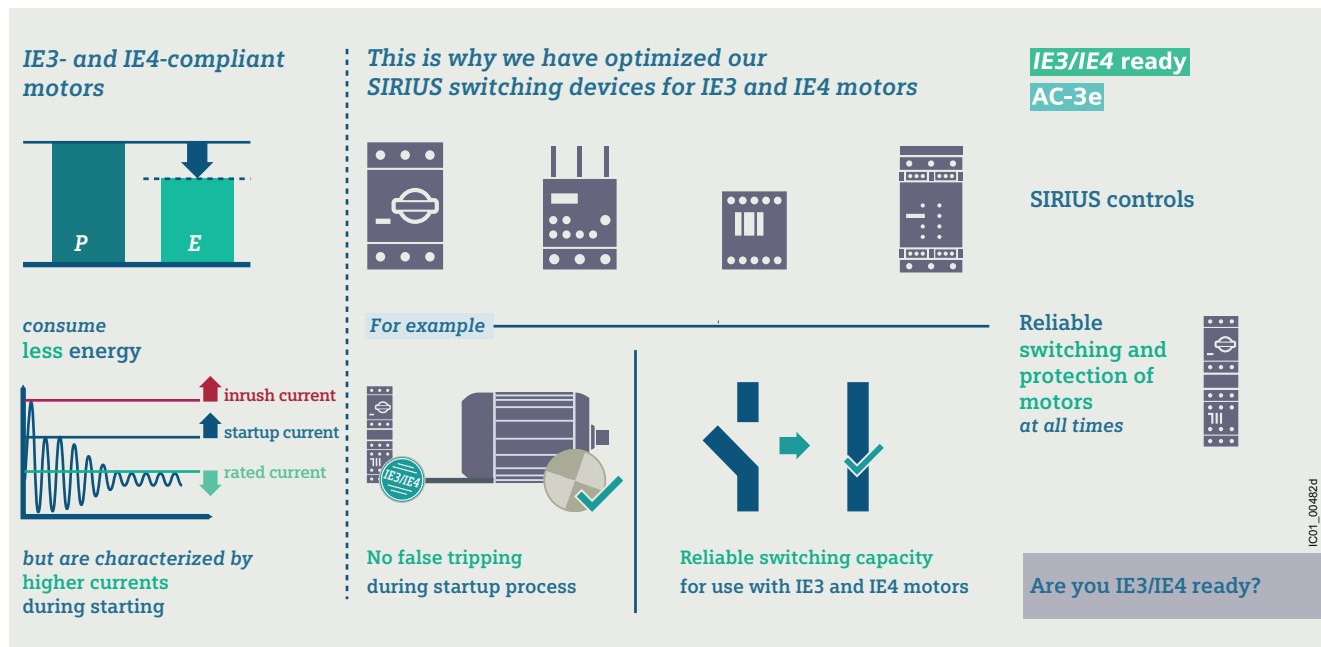
| Devices with safety functions for AS-Interface | | | | | |
|---|------------------|---|------------|---|------------------------|
| Detecting | | Evaluating | | Reacting | |
| Product | Page | Product | Page | Product | Page |
| Safety modules/EMERGENCY-STOP mushroom pushbuttons <ul style="list-style-type: none"> K45F and K20F compact safety modules for use in the field  | 2/26 | 3RS2 temperature monitoring relays  | 10/121 | ET 200pro Safety motor starters Solution PROFIsafe  | 9/3 |
| <ul style="list-style-type: none"> SC17.5F SlimLine Compact safety modules for use in the control cabinet  | 2/26 | CM AS-i Master ST, F-CM AS-i Safety ST for SIMATIC ET 200SP  | 2/29, 2/34 | 3RT contactors from 18.5 kW (F-PLC input)  | |
| <ul style="list-style-type: none"> 3SU1 EMERGENCY-STOP mushroom pushbuttons in the enclosure for AS-Interface  <p>Detection of safety-related signals via safe input slaves on the AS-Interface bus (field modules with degree of protection IP67, control cabinet modules with degree of protection IP20, EMERGENCY-STOP mushroom pushbuttons in the enclosure with integrated ASIsafe slave with degree of protection IP69)</p> | 13/102 | <p>Evaluation and processing of signals via a fail-safe SIMATIC or SINUMERIK control. Simple combination of the CM AS-i Master ST and F-CM AS-i Safety ST modules in one ET 200SP station results in a powerful, safety-oriented gateway between PROFINET (or PROFIBUS) and AS-Interface.</p> | | <p>Optimum connection to the fail-safe controller as actuator in the safety chain. Considerable simplification of the application in large power ranges thanks to F-PLC input on the following contactors:</p> <p>3RT203 and 3RT204, 3RT105 to 3RT107, 3RT145 to 3RT147</p> | 3/63, 3/64, 4/18 |
| 3SF1 mechanical safety switches for AS-Interface  <p>Flexible thanks to modular design, degree of protection up to IP69, suitable for offshore applications</p> <ul style="list-style-type: none"> With tumbler  <p>More safety through high locking forces, various release mechanisms</p> | 12/101 12/115 | | | Electronically configurable 8WD46 signaling columns  <p>Flexible and versatile thanks to modular design</p> | 13/166 |

Introduction

IE3/IE4 ready

SIRIUS controls for reliable switching and protection of highly efficient IE3 and IE4 motors

Overview



IE3/IE4 ready with SIRIUS controls

We are IE3/IE4 ready and have AC-3e values

On July 1, 2021, the EU Regulation (EU) 2019/1781 on electric motors and speed controls came into force. This regulation requires:

- Compliance with the legally required minimum efficiency levels IE3 for outputs from 0.75 to 1000 kW

In the next stage as of July 1, 2023:

- Compliance with the legally required minimum efficiency levels IE4 for outputs between 75 and 200 kW.

From an electrical viewpoint, IE3 and IE4 motors behave differently than less energy-efficient models – they are characterized by higher startup currents and modified dynamic behavior. This entails certain challenges for our controls.

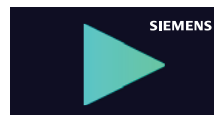
The SIRIUS switching and protection devices are ideally suited for use with Premium High Efficiency motors (IE3) or Super Premium Efficiency motors (IE4). This is further underlined by the new utilization category AC-3e for contactors, circuit breakers, motor starters and other devices.

They avoid false tripping due to higher inrush currents of IE3 and IE4 motors, offer optimized setting ranges for rated currents, and ensure reliable switching and protection in any situation – the best prerequisites for the use of modern IE3 and IE4 motors.

Highlights

- Comprehensive range of IE3 and IE4 motors for every application
- Siemens offers expertise through extensive analysis of IE3 and IE4 motors
- Optimized SIRIUS controls for use with IE3 and IE4 motors
- Easy selection thanks to consistently identical rated values of utilization categories AC-3 and AC-3e

Introduction of utilization category AC-3e



Video: What is the purpose of the utilization category AC-3e?

More information

All IE3/IE4 ready products are marked in the catalog with the symbol **IE3/IE4 ready**.

All products with the utilization category AC-3e are marked in the catalog with the symbol **AC-3e**.

Overview

SIRIUS 3RV29 infeed system with 3RA2 load feeder and 3RM1 motor starterSimple

Minimum wiring in the main and control circuits thanks to assembly option

Long service life

Hybrid switching technology uses benefits of relay and semiconductor technology

Compact

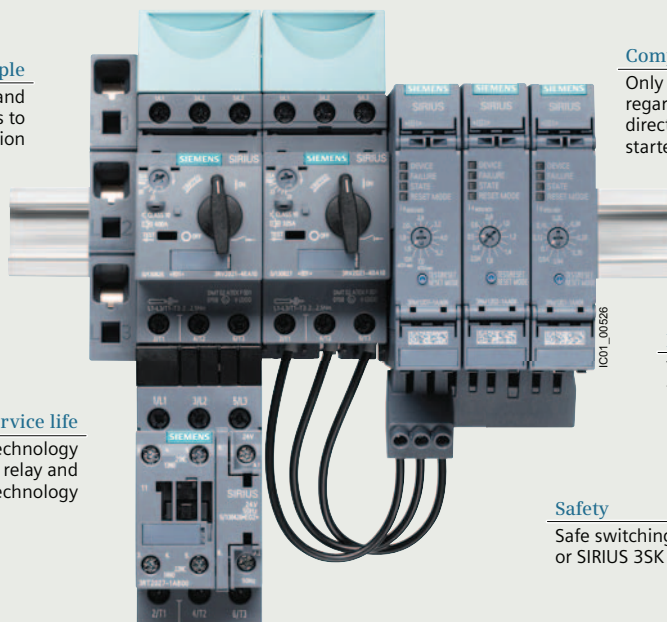
Only 22.5 mm wide, regardless of whether direct-on-line or reversing starter function

Economical

Thanks to low device variance due to wide setting range

Safety

Safe switching possible with F-CPU or SIRIUS 3SK safety relays



The hybrid switching technology uses low-wear semiconductor technology for switching the motor on and off, and in the operating phase it relies on energy-saving relay technology.

This ensures durability, especially with high switching frequency, and thus significantly reduces maintenance costs and extends the endurance of the motor starters.

In addition, due to the hybrid switching technology, motor starters have lower electromagnetic interference emissions, enabling you to increase your plant availability.

Further energy savings are provided by the integrated electronic overload protection.

This causes a lower intrinsic power loss than comparable motor feeders with thermal overload protection.

In this way, you benefit from reduced heat generation and therefore lower cooling power. And that saves energy.

SIRIUS soft starters 3RW30, 3RW40, 3RW50, 3RW52, 3RW55 and 3RW55 FailsafeLong service life

Reduced mechanical and electrical load

Safe

SIL 1/STO without additional safety relay or contactor

Energy saving

Reduced temperature rise in the control cabinet thanks to bypass contacts

Simple

Fast and easy commissioning



Introduction

Innovative technology for saving energy

Electronic starting with hybrid switching technology



+ Easy to wire

Thanks to push-in technology

+ Option handling

Increased flexibility and efficient savings through single configuration of complex automation projects

+ Reduced space requirements

50% slimmer than other distributed I/O systems

+ Hybrid switching technology

Durable and energy saving, since relay contacts are not subject to loading when switched

+ Power bus

Supply with power only once, then automatic setup with side-by-side mounting of multiple modules

+ Quick stop and end position disconnection

Load switch off even at high speed – independent of central controller

+ Quick installation

Hook in, slide into place and engage

Once it is installed and wired, you simply connect the ET 200SP motor starter to the controller in the TIA Portal ready for parameterization.

Highlights

Use of hybrid switching technology for:

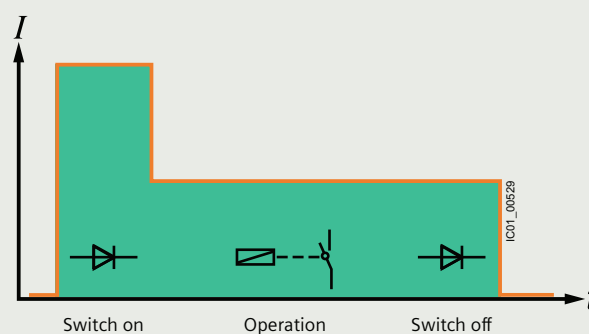
- SIRIUS 3RM1 motor starters
- ET 200SP motor starters
- SIRIUS soft starters

Failsafe functionality for SIRIUS 3RW55 soft starters, SIRIUS 3RM1 motor starters and ET 200SP:

- Maximum safety:
Safety function up to SIL 3/PL e

Additional benefits for SIRIUS 3RM1 motor starters:

- Using device connectors safety-related group shutdown with reduced wiring is possible
- Direct connection to the 3SK safety relay, without additional wiring



- 👍 Endurance
- 👍 Plant availability
- 👍 Energy saving