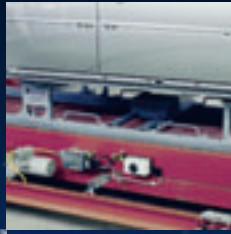
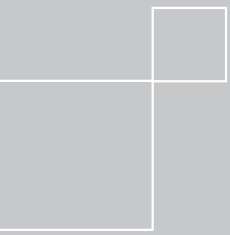


The complete **universe of Industrial Controls.**
You have it at your fingertips.



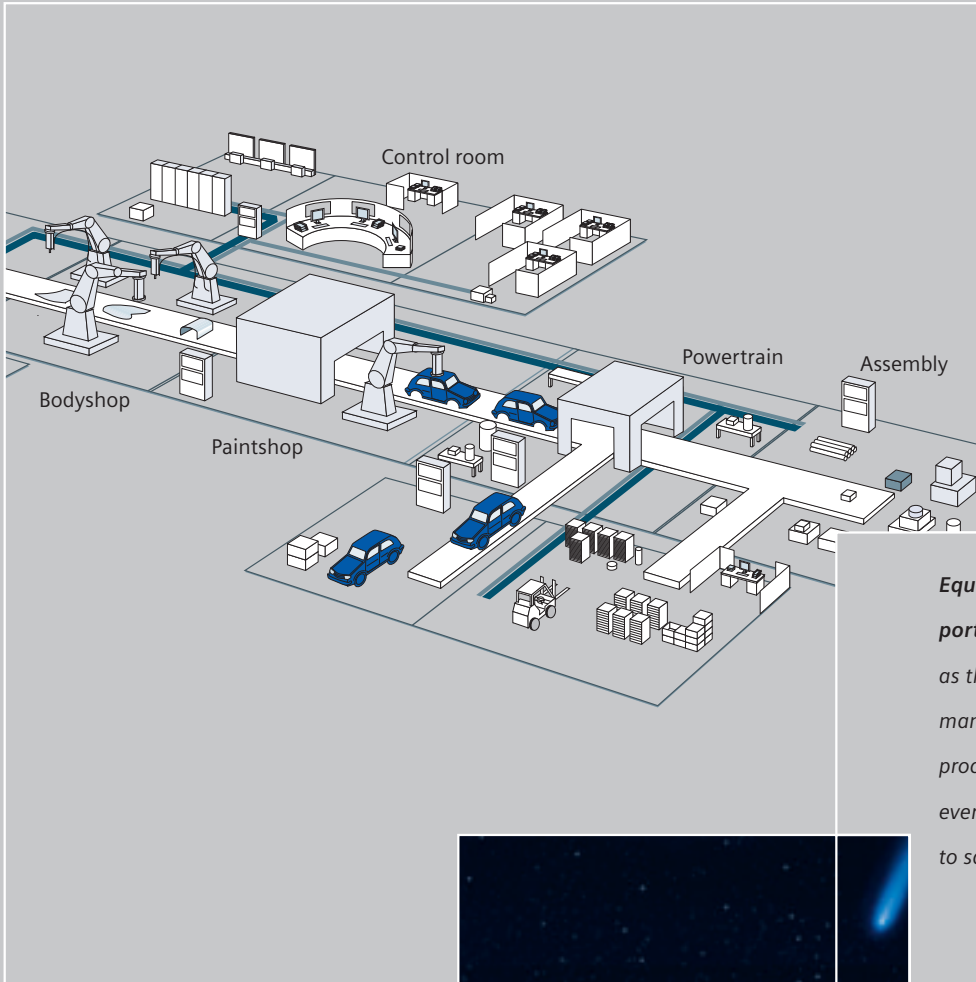
sirius

INDUSTRIAL CONTROLS



Everything. Easy. SIRIUS.

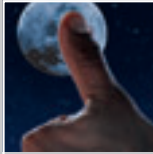
SIEMENS



Equipping, handling, transporting – basic functions such as these and similar occur in many automated production processes. And SIRIUS is everywhere. From starting up to safe detecting.



**You will simply find information on all
of the following subjects in this brochure:**



Simply on. Simply off. Day and night. **Switching with SIRIUS** **Page 8**



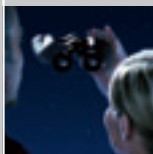
Simply in safe hands. **Protecting with SIRIUS** **Page 12**



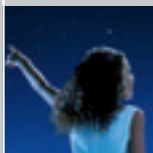
Simply set something big into motion. **Starting with SIRIUS** **Page 16**



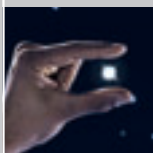
Simply everything in view. **Monitoring and controlling with SIRIUS** **Page 20**



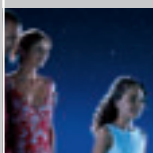
Simply always wide-awake. **Detecting with SIRIUS** **Page 22**



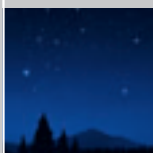
Simply always know what is happening. **Commanding and signaling with SIRIUS** .. **Page 24**



Simply everything that your plant needs. **Supplying with SIRIUS** **Page 26**



Arrive at the optimum solution relaxed. **Engineering with SIRIUS** **Page 28**



Simply with system. **SIRIUS and more** **Page 30**



SIRIUS SC solid-state switching devices



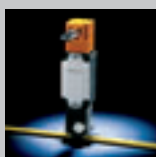
circuit-breakers (MSPs) 3RV



soft starters 3RW



safety relays 3TK28



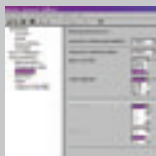
position switches 3SE



pushbuttons and indicator lights SB3



power supplies



Switch ES motor starter

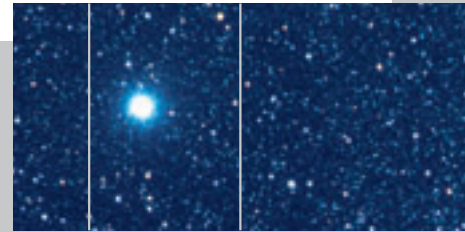


safety monitor for AS-Interface

**Functions and products
– examples from the
complete universe
of industrial controls
with SIRIUS.**

**If you unfold the table
of contents when
reading this brochure,
then you will always
have an overview.**

Everything. Easy. For all applications. Welcome to SIRIUS.



Does your world revolve around low-voltage industrial controls?

Then we can offer you a complete universe of innovative, reliable products in-line with those required in practice: The SIRIUS family.

Simpler than with SIRIUS – it's not possible. In this range you'll find everything you require for solutions that can be quickly configured and that reliably function – whether industrial controls for electrical cabinets or field devices – including motor starters, position switches and pushbuttons. Our higher-level, seamless concepts such as Totally Integrated Automation, Safety Integrated and ECOFAST ensure simple integration to create total, optimized systems.

Browse through the following pages. Get to know our innovative modules that you can use as a basis for practically everything – up to communications-capable systems or solutions with integrated safety technology.

Everything. Easy. SIRIUS.

For many years now, SIRIUS has stood for a unique modular system with harmonized products. Why are there some new "family members"? The answer is quite simple: Our goal is that you really find everything in our SIRIUS portfolio – whether for central or distributed solutions. We will always continue to promote innovation – with new developments from soft starters up to solid-state contactors. Take the opportunity and form your own opinion.





The SIRIUS family is growing.
**New products for central
and distributed solutions.**

The highlights:

- SIRIUS SC solid-state switching devices – with an extremely long lifetime even at extremely high operating frequencies (Page 10)
- SIRIUS Cage Clamp feeder system 3RV19 to supply and distribute power for a group of circuit-breakers/MSPs or load feeders (Page 18)
- SIRIUS soft starters – so that your motors start with the required power but with low stress (Page 18)
- SIRIUS motor starters for distributed I/O solutions are the optimum choice for every application: ET 200S, ET 200X, AS-Interface as well as ECOFAST motor starters (Page 18)
- SIMOCODE pro – the flexible motor management system that simply saves money (Page 21)
- New components associated with AS-Interface – from the ATEX module for use in hazardous zones through the integration of safety functions with ASIsafe up to the Extension Plug (Page 31)

Central or Distributed? Everything. Easy. SIRIUS.

Everything fits: The modular SIRIUS system for the electrical cabinet.

When it comes to configuring electrical cabinets everything must go quickly, simply and flexibly – and space must be saved. How can all of this be fulfilled?

With the unique, modular SIRIUS system that offers everything required for switching, protecting and starting motors and plants.

This is a modular range of standard components up to 250 kW/400 V (400 HP/480 V) where everything is optimally harmonized with one another. This means the components can be simply combined and the same accessories can be used. Industrial controls can be this simple!

Everything ready for immediate use: With pre-wired SIRIUS load feeders.

Load feeders start loads through a combination of protective and switching functions. This demands a wide range of various components in order to be able to implement any type of starter. Siemens offers pre-wired starter solutions so downtimes are kept as short as possible.

Our portfolio:

- Direct starters up to 22 kW (30 HP) – the right starter combination for every motor
- Reversing starters up to 7.5 kW (10 HP) – the matching combination for reversing operation
- Star-delta combinations up to 75 kW (100 HP) – the solution when motors are accelerated in stages
- Soft starters – if soft, smooth starting is always required.



This is what the modular SIRIUS system can offer you – an overview:

- Maximum openness – seamless, integrated communications, coupling to AS-i and PROFIBUS DP
- Extremely long lifetime – combined with service-friendliness, ruggedness and reliability
- Worldwide approvals – in conformance with all of the usual Standards
- Support at any time – global service and logistics network
- Ecological compatibility – environmentally-compatible production techniques and materials that can be recycled
- Higher level of cost-effectiveness – side-by-side component mounting and modular designs
- Simple planning and installation – thanks to the unified connection and installation accessories
- Faster and with a higher degree of safety – thanks to Cage Clamp terminals that are already available for most products



And these are our solutions extending beyond the “Standards”:

- Encapsulated motor starters 3RE for switching and the current-dependent protection of load feeders up to 22 kW at 400 V (30 HP/480 V) AC – e.g. for drilling, construction or industrial sewing machines as well as pumps
- Safety load feeders 3RA7 that combine electronic safety with the advantages of the modular SIRIUS system
- Communications-capable load feeders 3RA5 (up to 7.5 kW/10 HP) – with integrated AS-i module to couple to higher-level automation systems.

Everything distributed, everything transparent: Networked systems with SIRIUS.

Permanently lower planning and production times clearly speak for distributed plant topologies – and therefore for communications-capable systems. Siemens consequentially supports this trend, also for low-voltage industrial controls:

- Our ET 200S and ET 200X I/O stations are also used to start motors in a distributed fashion. Both have some common features: Costs for the main and control circuit wiring are minimized – and installation and commissioning time is significantly reduced.
- AS-Interface for the actuator/sensor level and PROFIBUS DP for the field level can be recommended when controlling loads spread over a wide area. Both permit a broad range of flexible solutions – from the distributed electrical cabinet to components mounted directly at the machine.
- Complete solutions without electrical cabinets have a name: ECOFAST connects all of the automation, drive and installation components to provide seamless, integrated and cost-effective solutions directly on the machine.



You define the application – with SIRIUS contactors the rest almost goes by itself.

First – you can easily find exactly what you require in this complete family – with only seven sizes for the power range up to 250 kW/400 V (400 HP/480 V).

And secondly – you can completely depend on SIRIUS contactors – and we mean completely. These benefits distinguish themselves due to the high operational reliability, long lifetime, always the best electrical contacts and a “rugged character” – even at high ambient temperatures. And it goes without saying that the contactors have everything that you expect anyway from the modular SIRIUS system: The ability to be flexibly combined and quickly installed and equipped thanks to the consequential modular design; this is complemented by simple, straightforward planning and installation using seamless, integrated connection terminals and mounting accessories.

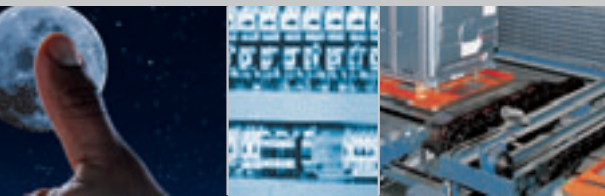
And if you have little space – then simply install our SIRIUS contactors side-by-side. **Easy.**



Conveyor system retrofit
The new development first presented by Siemens in 2003 – the SIRIUS Cage Clamp feeder system 3RV19 allows power to be fed in and distributed in a user-friendly fashion for a group of several circuit-breakers/MSPs or complete load feeders using Cage Clamp terminals. Bosch and Siemens Home Appliances GmbH in Traunreut were convinced of the advantages of this innovative system and used it for the first time when modernizing one of their conveyor systems.



Simply on. Simply off.
Day and night.
Switching with SIRIUS.



Switching with SIRIUS. An overview of the products.

**Whether air or vacuum:
Everything to control motors.**

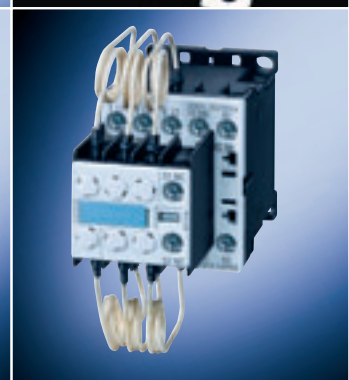
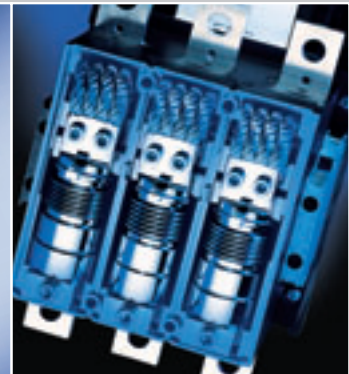
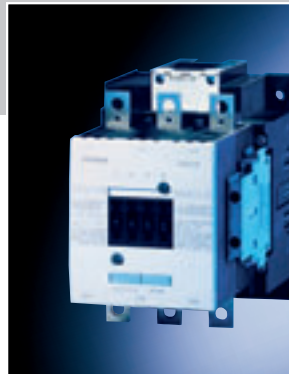
One of the most frequent applications for industrial controls is to control motors. The 3-pole contactors 3RT10 offer the ideal solution. With seven sizes they cover the complete range from 3 to 250 kW/400 V (400 HP/480 V) – with both AC as well as DC control voltages.

For applications where an especially high electrical life-time is demanded, our vacuum contactors 3RT12 are the right selection – even for heavy-duty starting or 1000 V applications.

*vacuum contactor 3RT12
(top)*

*capacitor contactor 3RT16
(below)*

3-pole contactor 3RT10



4-pole contactor 3RT15



auxiliary contactor 3RH11

The complete range: For motors, auxiliary circuits, power capacitors ...

SIRIUS coupling relays switch motors as well as auxiliary and main control circuits. They have been specifically designed for operation with electronic control systems.

In addition to the 4-pole contactors 3RT13 with four NO contacts to switch resistive loads, the SIRIUS range also includes contactors 3RT15 with 2 NO and 2 NC contacts.

*coupling relays 3TX
can be used for
electrical isolation,
multiplying contacts
or switching small
loads*

power relay 3TG10



SIRIUS SC solid-state switching device

These are used, for instance, to change over the poles of crane motors, as a braking contactor or to switch two loads independently of one another.

Our high-performance AC-1 contactors 3RT14 come into their own wherever only the rated current has to be switched and conducted. Applications include switching heating elements, as a generator or a bypass contactor.

Auxiliary contactors 3RH1 are switching devices for main control and auxiliary circuits and are used to control, among other things, output signals and interlock switching devices and systems.

Our capacitor contactors 3RT16 are used to switch power capacitors that are used for reactive power compensation.

The coupling elements 3TX701 ensure optimum adaptation between electronic controls and peripheral devices – e.g. position switches or contactors. Siemens has the complete range of switching relays so that you can reduce your number of suppliers – and in turn your administration costs.

Our low-noise power relays 3TG10 for basic controls are the optimum solution everywhere where “quiet switching without hum” and an optimum price-performance ratio are required. They are absolutely straightforward and suitable for any mounting position – even if there is little space.

■ **SIRIUS SC – the innovation highlights.**

Applications where high operating frequencies are demanded – i.e. 1000 and more operations per hour – are the perfect applications for the innovative SIRIUS SC solid-state switching devices. They are used, for instance, to switch resistive loads, to control electrical heating systems – for example in plastic machines – or when controlling motors and valves in conveyor systems.

In addition to their performance, our solid-state contactors distinguish themselves – just like our solid-state relays – by the fact that they can be simply expanded by function modules to address new requirements.

Even in the toughest of environments and for high mechanical loads, the fuseless, short-circuit proof SIRIUS SC solid-state contactors and relays switch, switch, switch ... with a practically unlimited lifetime. And because they are silent, they are well-suited for areas where noise must be kept to an absolute minimum – for example in the health-care sector.

SIEMENS
S
F
C
T
S



Simply in safe hands.
Protecting with SIRIUS.



Ultimate protection for extreme alternating loads
State-of-the-art automation systems distinguish themselves with operating cycles that are becoming increasingly faster. This means that electric drives are often subject to their maximum load. For such alternating loads, it is extremely important to select the correct protection for the complete range. The new SITOR semiconductor protection fuses protect downstream semiconductors within just a few milliseconds. Further, they are convincing due to their high alternating load factor.



Motor protection isn't just a purely technical issue. It is especially one of cost-effectiveness. This is because as soon as a motor overheats – e. g. due to overload in continuous duty – under “worst-case” condition, production lines grind to a stop. This means time and money that you can simply save.

This is why you should protect what is meant to operate continuously. Here, we can offer you every possibility: SIRIUS overload relays that are the right fit for every requirement and every budget.

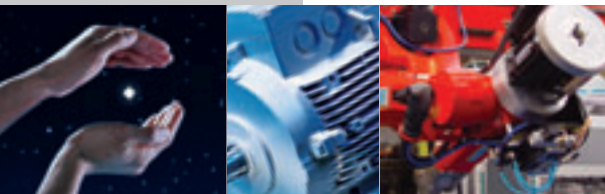
SIRIUS circuit-breakers up to 100 A for high plant and system availability and effective motor and plant protection. And, for sophisticated applications extending beyond 100 A, the high-performance SENTRON molded-case circuit-breakers 3VL.

This gives you the security to know that your motors – and your plant – are always in safe hands.

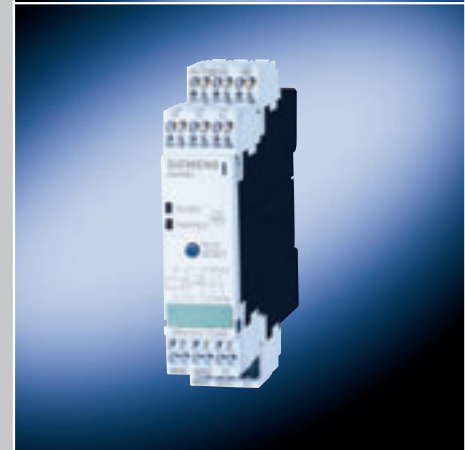
Protecting with SIRIUS.

A product overview.

For every application – from motor protection to fuse monitoring: In order to be able to fulfill all requirements, SIRIUS circuit-breakers (MSPs) 3RV are available in four sizes up to 100A.



electronic overload relay 3RB10



thermistor motor protection device 3RN

Overload protection. Temperature or current-dependent? What's important: It's SIRIUS.

Overload, phase imbalance or phase failure causes the motor current to increase above the rated motor current and the motor overheats. There are two ways of providing optimum protection against overheating: Current or temperature-dependent.

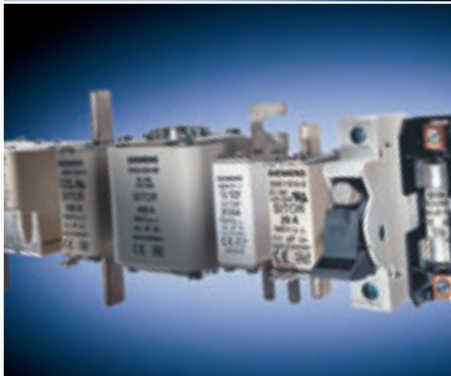
Current-dependent motor protection devices are based on the principle that with increasing motor current the temperature also increases – this means the temperature is indirectly measured. The following devices belong to this group:

- thermally-delayed overload releases as part of circuit-breakers:
- SIRIUS circuit-breakers (MSPs) 3RV

- thermally-delayed overload relays for cost-effective and safe protection: SIRIUS overload relays 3RU
 - electronic overload relays for higher demands placed on overload protection: SIRIUS overload relays 3RB.
- For the second group – the temperature-dependent protective devices – the temperature values are measured directly in the motor. These are also available in the SIRIUS range:

- thermistor motor protection devices 3RN
 - temperature monitoring relays 3RS
- The following products can be used for short-circuit protection:
- SIRIUS circuit-breakers (MSPs) 3RV up to 100 A
 - SENTRON molded-case circuit-breakers 3VL above 100 A
 - SITOR semiconductor protection fuses 3NE.

SENTRON 3VL from 16 A to 1600 A – when installed in distribution panels, this series of circuit-breakers is convincing thanks to its enormous versatility and, at the same time, its space-saving, compact design.



SITOR semiconductor protection fuses for DC link and heating circuits



switch disconnecter 3NP4

■ **Protecting plants – increasing the availability: SIRIUS circuit-breakers (MSPs) 3RV.**

Circuit-breakers (MSPs) 3RV are compact, current-limiting circuit-breakers/MSPs. They guarantee that loads are safely shut down when short-circuits occur and protect loads and plants against overload. SIRIUS 3RV is the only seamless, integrated product family in the marketplace that has circuit-breakers (MSPs) up to 100 A.

■ **Tripping when things get serious: SIRIUS overload relays.**

SIRIUS overload relays are available in thermal versions and, for increased demands, also in electronic versions. SIRIUS overload relays provide overload protection in the main circuit.

■ **Safe protection – fuseless design?**

One thing is certain – SENTRON molded-case circuit-breakers 3VL. This is our response to any challenge above 100 A: SENTRON 3VL – compact, space-saving, with a range of unified and standard accessories. Simply select the version you require: Plant protection, motor protection, starter combinations or switch disconnectors.

■ **Perfectly handle overloads and short-circuits – the combination: fuse switch disconnectors 3NP.**

Fuse switch disconnectors 3NP have a safe handle on everything – from electrical power distribution in commercial and industrial buildings up to flexible distribution stations. Not only this, but they are simple to mount, fit on all busbars and rails and have a range of accessories for every application.

■ **Don't give short-circuits a chance: SITOR semiconductor protection fuses.**

Our SITOR semiconductor protection fuses 3NE provide high-precision fuse protection: They interrupt especially quickly and offer perfect selectivity even for closely graded rated currents.

PROTECT

Simply set something big
into motion.

Starting with SIRIUS.



Liebherr Verzahntechnik is standardizing

Increasing cost pressure and growing flexibility requirements are providing new challenges. Liebherr Verzahntechnik GmbH in Kempten is accepting these challenges with a new control concept that is based on standardized and integrated components. The main element of the distributed architecture: PROFIBUS DP, supplemented by ET 200S and ET 200X I/O systems. And the next step, PROFIsafe, is already in the planning phase.



Motors represent approximately 90% of all loads in industrial plants and systems.

Today, the majority of these are three-phase motors – from small auxiliary motors up to 30 MW giants.

And the range of starting types is just as diverse as the requirements. With SIRIUS, you have the full range at your fingertips. Switching and protecting devices that are perfectly harmonized and coordinated with one another and an extensive range of accessories give you complete flexibility – from direct starters through star-delta combinations to soft starters.

The fact that you can combine the individual devices so flexibly is thanks to the **consequential modularity of the SIRIUS system**. It offers our customers the benefits they are looking for – fast mounting, simple wiring, straightforward planning and installation, and low space requirement. **Or put it another way: Starting has never been easier.**





Starting with SIRIUS. Product overview.

No matter what the requirements are – no matter for which motor power rating: With SIRIUS, you'll find everything you require for a perfect start – including fuseless combinations comprising switch and contactor and fused combinations comprising contactor and overload relay.

Our portfolio for central starting:

- direct starters
- reversing starters
- star-delta starters

When required, these load feeders are available as complete devices – pre-assembled and wired.

- soft starters for standard and high-feature applications
- safe load feeders 3RA71 – pre-assembled, wired and certified for the highest safety categories. Real stars that save a lot of time and avoid wiring mistakes!

■ Innovation highlight: SIRIUS soft starters.

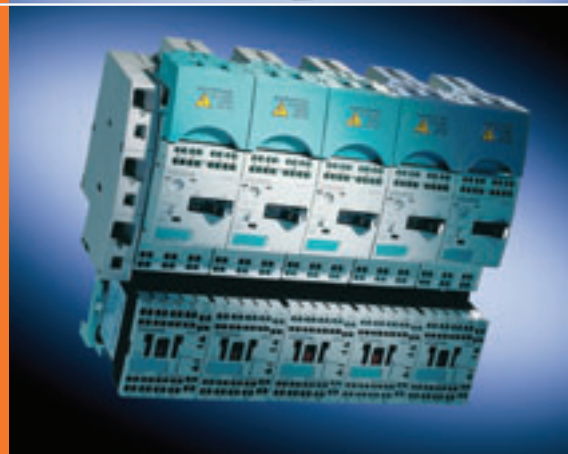
SIRIUS has a wide range of soft starters in its portfolio for smooth starting and stopping that can be flexibly adapted to the particular application. Soft starting not only results in a safe, reliable, jerk-free start. It also reduces the mechanical stress on the motor – and it protects the power supply against hazardous peak currents.

■ Innovation highlight: SIRIUS Cage Clamp feeder system 3RV19.

If several circuit-breakers are to be supplied as a group or complete load feeders, then everything points to the user-friendly SIRIUS feeder system with Cage Clamp terminals.

*SIRIUS soft starters
(top)*

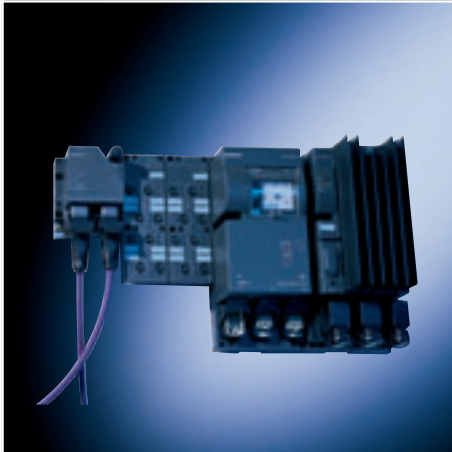
*SIRIUS Cage Clamp feeder system 3RV19
(below)*



safe load feeders 3RA71



*motor starter
for ET 200S
with PROFIsafe*



*motor starter
for ET 200X*



*compact starter
with AS-Interface
connection*



*motor starter
for ECOFAST*

You also want to make a perfect start with distributed solutions? With our communications-capable motor starters you'll find everything you need.

The compact Siemens motor starters have proven themselves in daily operation as extremely reliable and cost-effective. Mounting, commissioning and downtimes are drastically reduced thanks to their extensive diagnostic functionality and innovative design concept.

Our portfolio for distributed starting:

- PROFIsafe – the safety data transfer profile for PROFIBUS DP
- motor starter systems for SIMATIC ET 200S and ET 200X – the professional solutions for every distributed application
- compact starters with AS-Interface connection – also for drives and load feeders spread over wide areas
- motor starters for ECOFAST – the rugged starter solution with a high degree of protection, standardized connectors and the ability to connect to AS-Interface or PROFIBUS (also refer to Page 28).

But the best is yet to come – all of the motor starters for distributed starting are part of the "Totally Integrated Automation" automation platform from Siemens – this means you have the best prerequisites to reduce the time and costs associated with engineering and commissioning.

START



Simply everything in view.
**Monitoring and
controlling with SIRIUS.**



**Temperature monitoring
at its best**

Temperature is one of the most frequently monitored process quantities in industry. The new digital monitoring relays 3RS1040/3RS1042 from Siemens master this task cost-effectively and efficiently and they are internationally certified.



monitoring relays 3UG3

Motors and plants must run – smoothly and with a high degree of reliability. This means that the circuit from the motor feeder to the automation level must be reliably monitored.

We have developed our extensive range of SIRIUS relays and the intelligent and communications-capable SIMOCODE pro motor management system for precise tasks such as these. As the safety of people, machine and the environment is also crucial, our wide range of safety relays comes into its own.

Whether relay, motor management or safety relay – they all have one thing in common and that is simple handling – just like you have come to expect from the SIRIUS family.

safety relays 3TK28 – e.g. for monitoring protective doors



■ **Safety relays 3TK28: Everything. Safe.**

Our safety relays 3TK28 are the “safety first” solution when it comes to safely monitoring EMERGENCY STOP and protective door devices. You’ll find the following in our complete range:

- compact devices for basic safety applications as well as solutions to monitor several sensor inputs
- safety relays whose switching power ranges from a few amps up to the capacity to switch motors



time relay 7PV



temperature monitoring relays 3RS10/3RS11



SIMOCODE pro

■ **SIRIUS relays: A relay for every application.**

The SIRIUS range of relays fulfills every requirement. All of the relays are harmonized and coordinated with one another – they have an attractive price, are multifunctional and the optimum relay can be found for every application: Whether time relay, temperature monitoring relay or monitoring relay for mechanical and electrical quantities. They all have one thing in common and that is the simple, time-saving handling – when using this relay, everything is straightforward and simple.

■ **Innovation highlight – SIMOCODE pro: Controlling motors and protecting plants and systems.**

SIMOCODE pro – SIRIUS motor management and control devices – make constant-speed motors even safer and more reliable. Even if the bus or automation system fails, full motor protection is guaranteed. In conjunction with reliable diagnostics this ensures increasing process availability. The simple formula also applies here: SIMOCODE pro saves money. Your money. Whether it involves the extremely compact design, the straightforward and efficient service & maintenance or the range of graduated functions – you only purchase what you actually require. It goes without saying that compatibility to the former SIMOCODE-DP is guaranteed.



Simply always wide-awake. **Detecting with SIRIUS.**



Protection for man and machine
Position switches 3SE offer maximum protection against hazards for personnel, machinery and the environment – whether commanding or detecting, whether mechanical or contactless. When all is said and done, preventing failures and accidents eliminates unnecessary time and costs.

Devices that you can rely on.

Our sensing devices offer you an extensive range for almost every application. Our mechanical sensors detect every movement and transfer this in the form of an electrical signal – reliably and with the necessary precision. This ensures that the machine or plant is immediately shut down when a fault occurs. Our detection devices don't miss a false movement – not even under the toughest of operating conditions – whether as standard function or when used in safety circuits. And depending on the switch selected and how it is applied, you can of course fulfill every required category.

*standard
position
switch*

■ **Detecting par excellence: Simpler, safer, more cost-effective.**

One of the areas that SIRIUS detection devices focus on is to reduce the costs of your plant or system. This is achieved using standardized designs and functions to facilitate simpler planning, engineering, stocking, mounting & installation and maintenance. And the issue of standardization goes even further. The actuator versions for various requirements are based on standard packaging types.

They provide typical SIRIUS benefits even in day-to-day operation – for instance extremely low switching tolerances significantly reduce contact travel and hysteresis.

magnetically-operated switches



■ **A complete range of position switches.**

Position switches reliably and safely detect mechanical motion and convert this into electrical controls. Thanks to numerous actuators, in-line with those required in the field, they can be used to monitor protective devices or to detect potentially hazardous motion of parts of machines.

You can select from three groups of position switches: Standard position switches, position switches with separate actuator – also with tumbler mechanism – and special devices such as position switches with a short stroke. Depending on the particular version, the position switches can be especially simply and quickly connected through AS-Interface. The range is rounded off by hinge switches and magnetically-operated position switches.

position switch with AS-Interface connection



hinge-mounted switch





Simply always know what is happening.
Commanding and signaling with SIRIUS.



Control technology for SKF
In its Lüchow plant, the Swedish bearing manufacturer SKF has equipped several production lines with state-of-the-art control, switching, commanding and signaling technology from Siemens. For the first time, AS-Interface and PROFIBUS DP were combined there. Thanks to Totally Integrated Automation, now, all programming and diagnostic functions can be centrally executed.

So that you have everything under control:

When it involves the man-machine interface, then special attention is demanded – in every situation. We can offer you an extensive range of commanding and signaling devices to acoustically or visually signal possible disturbances. These range from push-buttons and indicator lights 3SB3 through signaling columns 8WD4 to the built-in signal lamps 8WD5. Thanks to the modular design, these devices can be flexibly used in almost any application. They are extremely simple to install and optimally and reliably respond in any situation. They have proven this over many years in the field and especially in rugged industrial environments. Our control and signaling devices can also communicate through an AS-i connection. Other command devices are available so your operating personnel can quickly and easily intervene – for instance: EMERGENCY STOP mushroom push-buttons, two-hand operating consoles for the highest level of safety at presses and punches, rugged foot switches with or without protective covers, and cable-operated switches for extremely effective monitoring as EMERGENCY STOP devices for especially long and potentially hazardous sections.

■ **Everything for the field: From simple mounting and installation up to improved readability.**

Using – as an example – our pushbuttons and indicator lights, it will become quite clear as to why you make the best choice when selecting SIRIUS. When mounting and installing using screw and Cage Clamp terminals, you quickly save 50% of the time that would be required for mounting techniques using ring nuts – without any special tools.

In the field, the devices provide you with everything involving safety and security. For instance, LEDs that guarantee a long lifetime without having to change lamps and with minimum current consumption.

The flat, ergonomic design – that can be simply combined with membrane keyboards and keypads – plays its role so that your operating personnel are always up-to-speed.

*two-hand
operating console*



*pushbuttons and
indicator lights 3SB3*



signaling column



cable-operated switches



*housing with AS-Interface
connection*



Simply everything that
your plant needs.
Supplying with SIRIUS.



Even the most innovative application only functions if the basis is there: In this case the basis is a secure power supply.

Electrical modules must be supplied with the right voltage – also for special requirements. This is why with SIRIUS you always make the optimum choice.

The range extends from standard devices up to specific customer solutions that allow you to flexibly respond to every requirement. You can also benefit from our technology and system competence when it comes to integrating these power supplies into total system solutions. And last but not least, you'll also benefit from sophisticated logistical solutions that will allow you to reduce your stock inventory – and, therefore, the amount of invested capital – while, at the same time, securing a high degree of availability.

Compact, with a low space requirement, but big when it comes to the issue of reliability – these are some of the typical distinguishing features of SIRIUS transformers and power supplies. And thanks to the extensive range of approvals, they can be used worldwide. Take a look for yourself.



■ **Voltage guaranteed: SIRIUS transformers.**

In plants, SIRIUS transformers are used to adapt and match voltages. In any situation. They are professionals in any application and operate reliably, safely and worldwide under the widest range of conditions. SIRIUS devices distinguish themselves as a result of the optimum protection due to the high permissible ambient temperature, the high short-time power rating and the fuseless design.



transformer 4AM



power supply 4AV

■ **Stability in the line supply: SIRIUS power supplies.**

SIRIUS power supplies are the ideal solution wherever electrical modules and equipment must be supplied with a constant voltage. Safe and rugged, they ensure a high degree of reliability – even when used in fuseless output circuits.

SIRIUS power supplies are especially user-friendly and can also be used to supply programmable logic controller systems. And that saves you a lot of money, time and irritation.



Arrive at the optimum
solution relaxed.
Engineering with SIRIUS.



Resa and Ford use ECOFAST
State-of-the-art technology when equipping machines and plants: A decisive competitive advantage for the Ford plant in Saarlouis and its system supplier, the Resa Company. This is the reason that both companies selected the new distributed ECOFAST system from Siemens for a plant expansion. The result: they saved an enormous amount of time and money even during the engineering and installation phases.

Engineering becomes a walk in the park.

With SIRIUS engineering software solutions, everything has become simpler than ever before – whether parameterization, commissioning, diagnostics or preventive maintenance of and with high-feature motor starters and soft starters from the ET 200S family or ECOFAST.

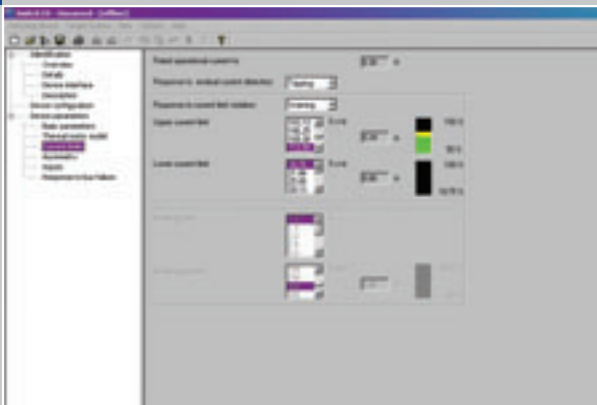
For instance, many parameters are transparently, quickly, reliably and graphically visualized – or set in plain text. This means that errors are avoided from the start. Extremely short commissioning times, flexible re-parameterization in operation, high performance visualization and clear menu structures are some of the typical features of SIRIUS engineering. You'll find three examples on this page.

■ **One tool for simply everything:
Switch ES motor starter.**

Whether parameterization, commissioning, diagnostics or preventive maintenance of or with high-feature motor starters and soft starters from the SIMATIC ET 200S family or ECOFAST – with our Switch ES motor starter software, everything functions simpler than ever before. Parameterization is simplified as many parameters are graphically visualized. And starters can even be tested and controlled using Switch ES motor starter without having to have a DP master.



Switch ES
motor starter

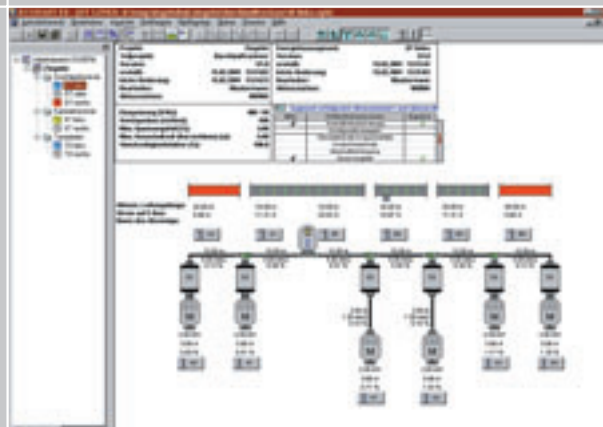


■ **The advantages at a glance:**

- user-friendly handling using high-performance visualization and a clear menu structure
- supplementary components are not required
- re-parameterization is possible in operation
- time-saving due to extremely short commissioning times
- preventive maintenance
- straightforward and fast diagnostics

■ **ECOFAST ES: Spot-on planning and engineering.**

Engineering times associated with the power bus represent a significant cost factor when building and retrofitting plants. If these can be decisively reduced, then costs can be optimized. ECOFAST ES is the tool to precisely do this: A significant amount of time can be saved, costly overdimensioning is avoided and, as a result of internal test routines, the engineering quality is also increased.

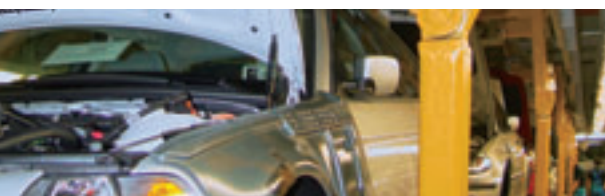


ECOFAST ES



motor starters
for ECOFAST

Simply with system. **SIRIUS and more.**



State-of-the-art Emergency Stop concept for BMW

A 3-series BMW leaves the assembly line every 68 seconds in the Munich plant. In order to be equipped for the future, BMW modernized its final assembly line in this plant which was completed in February 2004. BMW incurs high losses each time the assembly line grinds to a halt. This was the reason that the engineers used an innovative monitoring and Emergency Stop concept. Intelligent monitoring relays 3UG from Siemens play a central role and a fail-safe SIMATIC controller S716F from Siemens handles the control.

Applications in the industrial production environment are becoming increasingly more complex.

Does this also mean that solutions will become more complicated? With SIRIUS, our philosophy is quite the opposite: Simplicity and safety is the name of the game – providing cost-effective solutions for you.

With our full range of seamless, integrated industrial controls that are harmonized with one another, we ensure reliable and flexible planning, fast and fault-free commissioning, preventive maintenance, and the highest degree of availability, all with a high level of service-friendliness.

However, SIRIUS also opens up perspectives that go far beyond just industrial controls. State-of-the-art field and power bus technologies open up countless possibilities and cost-saving potential that have, up until now, been unknown. Get to know the ECOFAST and AS-Interface system solutions!



Total, local solutions are completely autonomous with integrated safety – and the engineering and life-cycle costs when automating plants and systems are also further reduced. This is what system competence from Siemens looks like in practice.

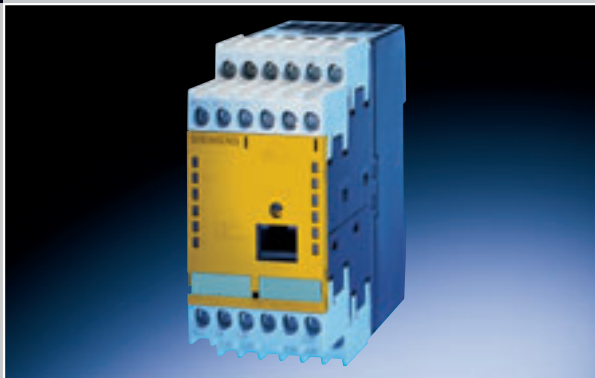
■ **AS-Interface: Simple, safe, fast in the field.**

AS-Interface has clearly established itself as the favorably-priced, rugged system everywhere at the field level where spatially distributed actuators and sensors are to be controlled – from temperature sensors to motor starters.

This bus system now opens up even more possibilities: For instance, the ATEX modules for use in hazardous zones (Zone 22 according to Classification II 3D); or the Extension Plug to double the cable length of each AS-i segment to 200 meters; and last but not least, the flexible I/O module S22,5F for ASIsafe.

■ **ECOFAST: Complete portfolio for distribution solutions.**

ECOFAST offers a complete system of hardware and software components that are fully harmonized and coordinated with one another for cabinetless, distributed total solutions: They can be flexibly combined for extremely simple planning, engineering, commissioning and diagnostics at the field level. And even more

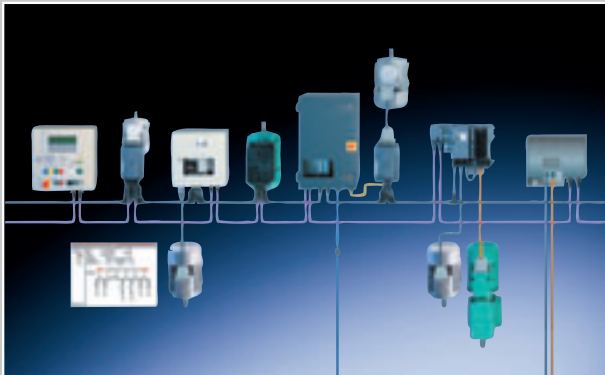


safety monitor for AS-Interface

We offer a seamless, integrated safety concept based on standard automation.

■ **Safety Integrated: The seamless, integrated portfolio to protect personnel, machine and environment.**

In every safety-critical application, top priority always has to be given to protecting personnel. It is also important to protect the plant and the environment. In order to guarantee maximum safety to counter the wide-ranging hazards that can occur in industrial applications, we are offering an innovative concept with our safety-related industrial controls as part of the "Safety Integrated" portfolio: Safety-related data is transferred via conventional solutions, AS-Interface or PROFIBUS DP. This means that signals are safely and directly integrated into the automation system and reliable, protective functions can be more simply implemented than ever before.



ECOFAST

possibilities are obtained, for instance, by interlocking ECOFAST with the safety technology of the SIMATIC ET 200S distributed I/O or ASIsafe.

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Signaling

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SUPPLYING



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Switch ES Motor Starter
The engineering tool for the
High Feature motor starters

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