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Welcome to Automation and Drives

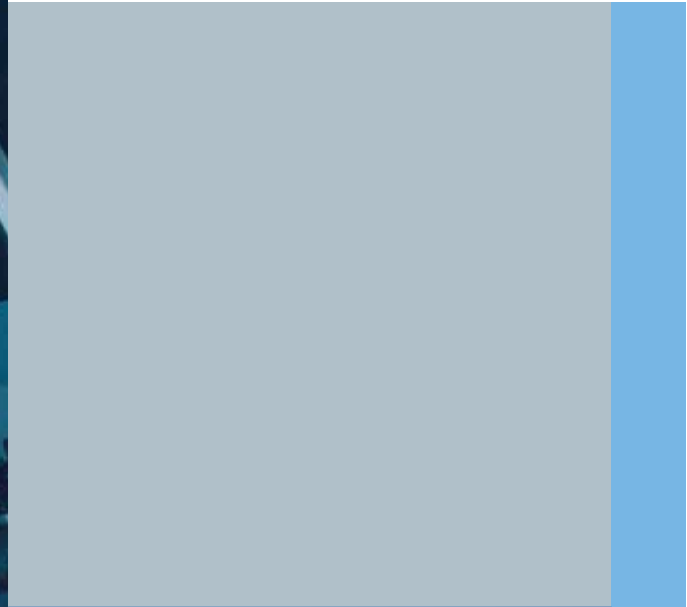
We would like to welcome you to Automation and Drives and our comprehensive range of products, systems, solutions and services for production and process automation and building technology worldwide.

With integrated automation blocks, powerful engineering tools and innovative concepts such as Totally Integrated Automation and Totally Integrated Power, we deliver solution platforms based on standards that offer you a considerable savings potential.

Discover the world of our technology now. If you need more detailed information, please contact one of your regional Siemens partners.

They will be glad to assist you.





Totally Integrated Automation – innovations for more productivity

With the launch of Totally Integrated Automation in 1996, we were the first ones on the market to consistently implement the trend from equipment to an integrated automation solution, and have continuously improved the system ever since.

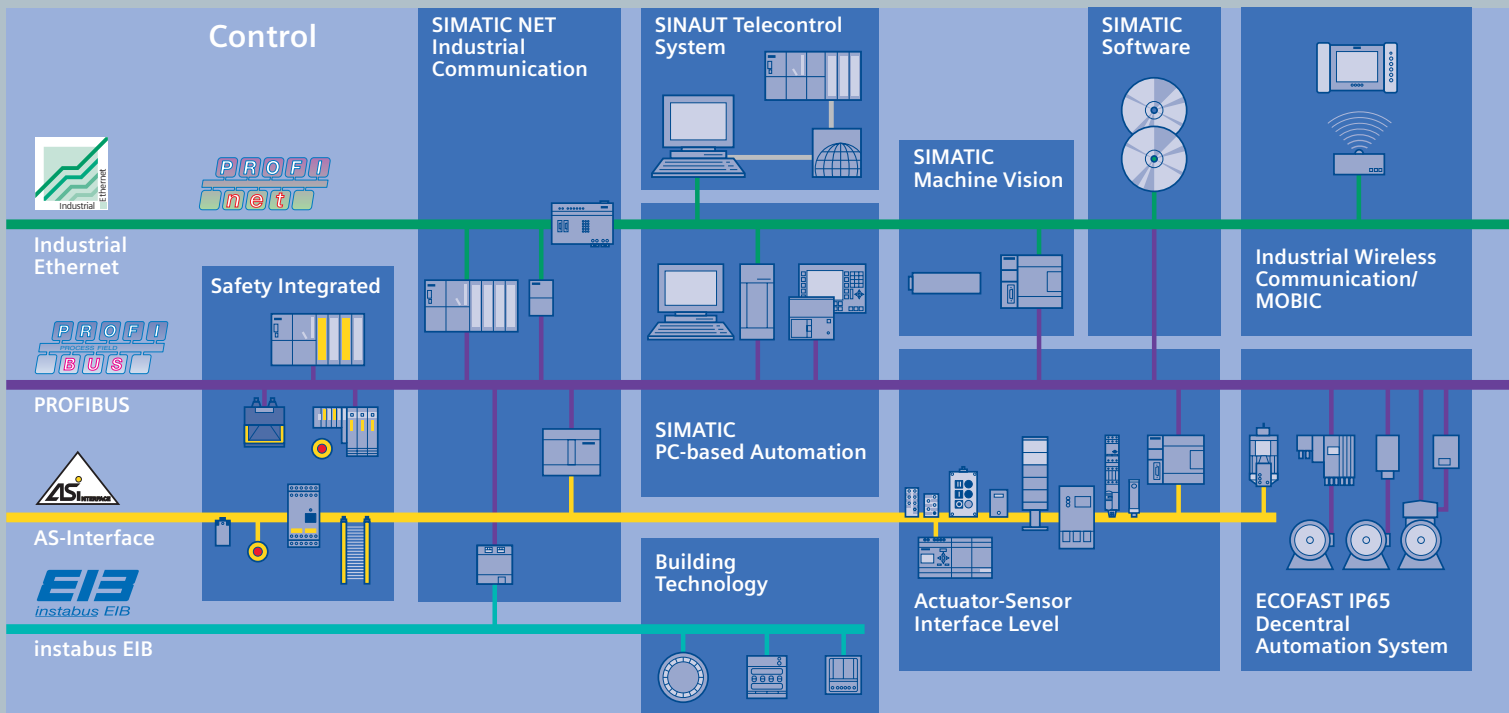
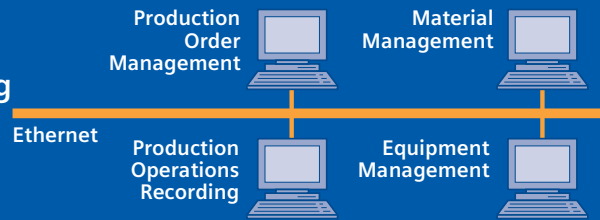
Whether your industry is process- and production-oriented or a hybrid, Totally Integrated Automation is a unique "common solution" platform that covers all the sectors.

Totally Integrated Automation is an integrated platform for the

ERP
Enterprise
Resource
Planning

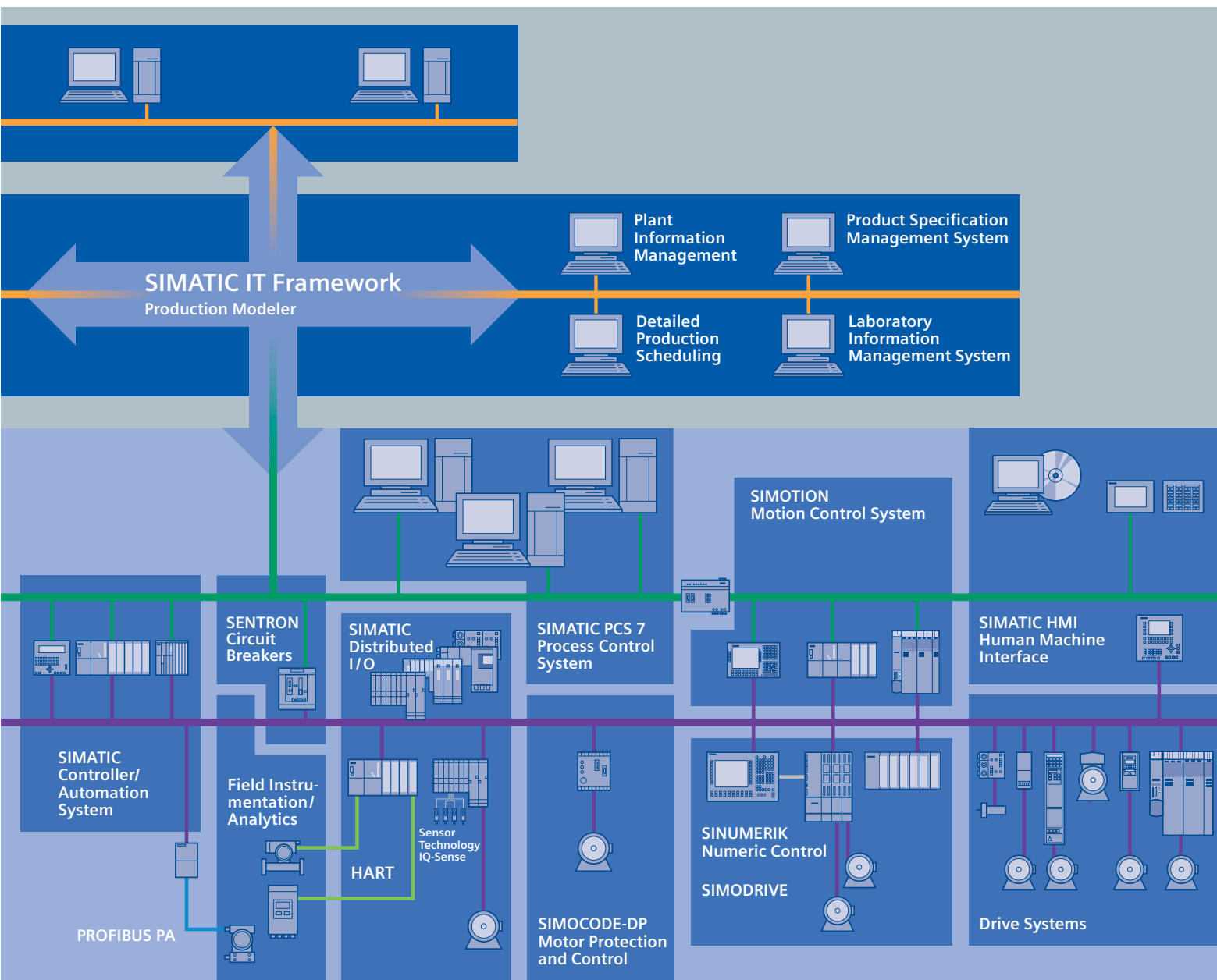


MES
Manufacturing
Execution
Systems



entire production line - from receiving to technical processing and production areas to shipping. Thanks to the system-oriented engineering environment, integrated, open communications as well as intelligent diagnostics options, your plant now benefits in every phase of the life cycle.

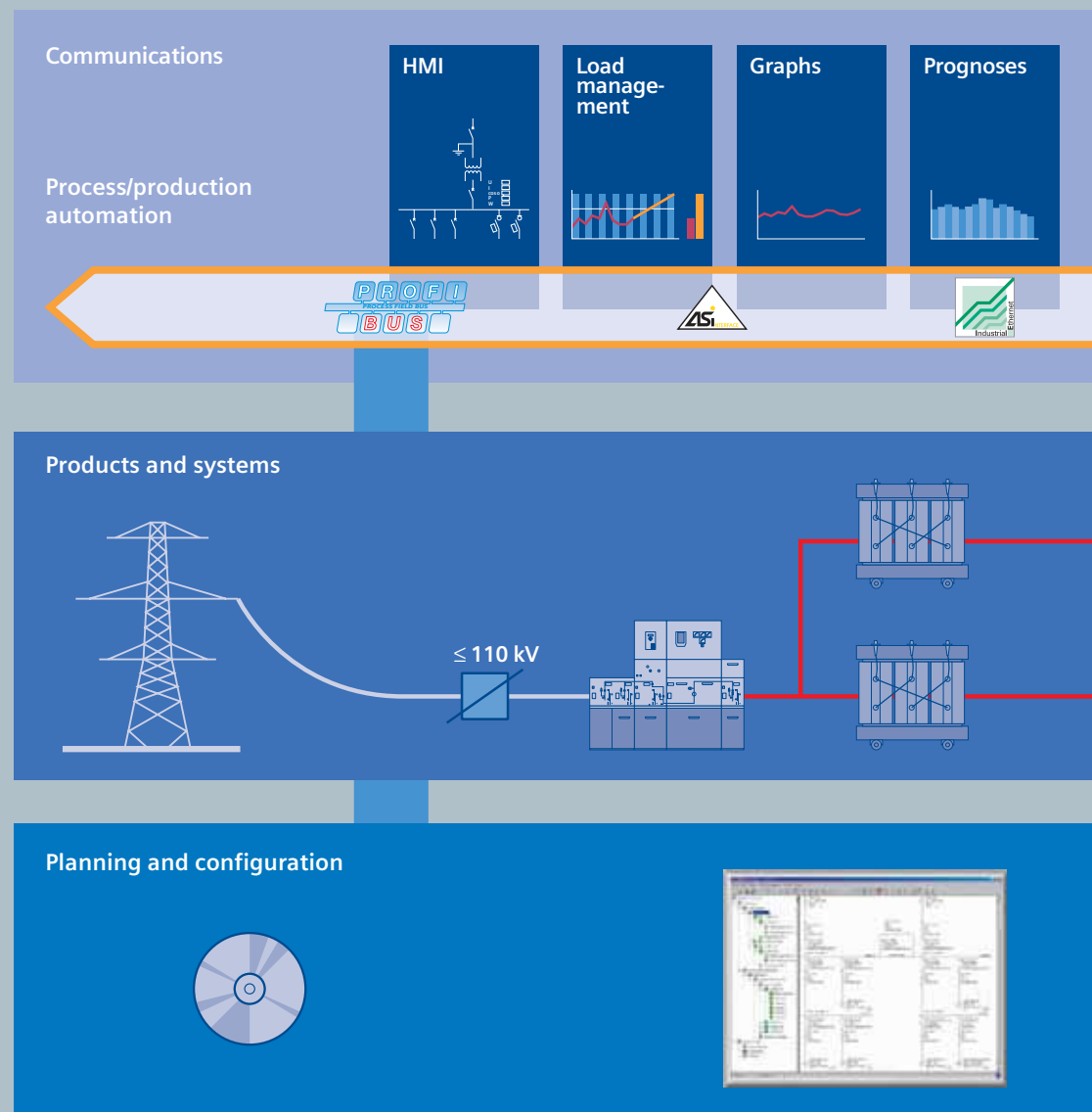
In fact, to this day we are the only company worldwide that can offer a control system based on an integrated platform for both the production and process industry.



Totally Integrated Power – energy distribution and management from one source

Totally Integrated Power™ by Siemens offers integrated solutions for energy distribution in functional and industrial buildings covering everything from medium-high voltage to power outlets.

Totally Integrated Power™ is based on integration in planning and configuration as well as coordinated products and systems. In addition, it features communications and software modules for connecting power distribution systems to industrial automation and building automation, thereby offering a substantial savings potential.



Maintenance

- Substation
- Distribution
- Maintenance task

Hall 1 Air conditioning system
checkup
Distribution 3 Replacing circuit
breaker contacts
Infeed II Replacing meters

Message/ error management



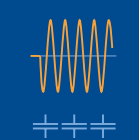
Selective protection



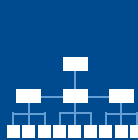
Protocols

Protocol	Device	Address	Group	Object
KNX	Actuator	1/1	1/1	1/1
		1/2	1/2	1/2
		1/3	1/3	1/3
		1/4	1/4	1/4
KNX	Switch	2/1	2/1	2/1
		2/2	2/2	2/2
		2/3	2/3	2/3
		2/4	2/4	2/4
KNX	Relay	3/1	3/1	3/1
		3/2	3/2	3/2
		3/3	3/3	3/3
		3/4	3/4	3/4
KNX	Dimmer	4/1	4/1	4/1
		4/2	4/2	4/2
		4/3	4/3	4/3
		4/4	4/4	4/4

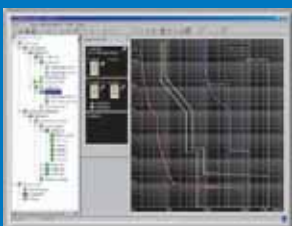
Power quality



Cost center



Building
automation



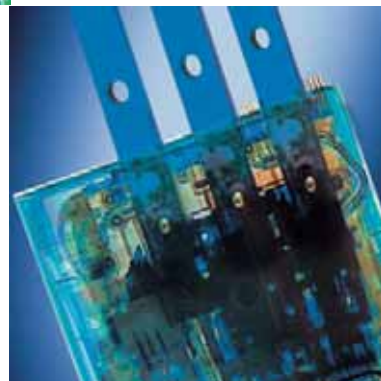
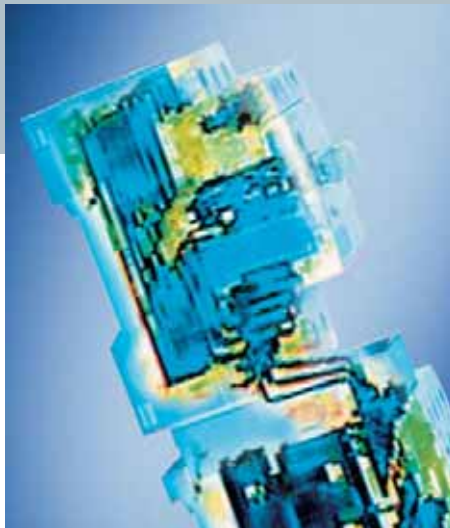
Low-voltage switchgear and controlgear – The basis for progressive solutions

Everyday life would be unimaginable without electric power. Competence and innovations in switching and electrical installation technology are prerequisites so that power can be used without danger and user-friendly in industrial facilities and buildings. We have been providing you with these prerequisites for more than 110 years and are permanently developing new features – innovations which permit you to use power more safely and economically.

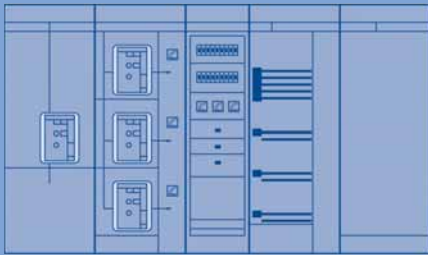
Low-voltage controlgear, switchgear and systems from Siemens offer a comprehensive and innovative range of products covering switching devices for load feeders or the distribution of power, control and signaling devices as well as complete cabinet systems. Multi-functional, uniform concepts such as Totally Integrated Power, Safety Integrated or ECOFAST additionally permit our product portfolio to be combined into optimized systems.

All in all, we can provide you with innovative components for switching and electrical installation technology which utilize state-of-the-art features such as integration and communication as the basis for advanced and uniform solutions which provide you with many benefits:

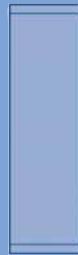
See what's behind.



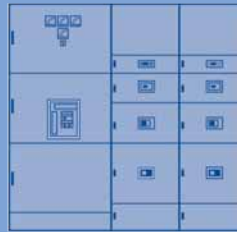
Distribution



SIVACON low-voltage switchgear



SICUBE



Distribution cabinets/systems

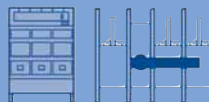
Protection



SENTRON circuit-breakers



SENTRIC switch-disconnectors



SENTRIC in-line switch disconnectors



SENTRIC main/EMERGENCY-STOP switches



LV HRC fuses



SITOR fuses

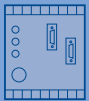


BETA protect



SIDAC transformers, power supplies

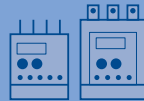
Protection



SIMOCODE-DP

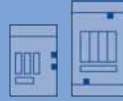


SIRIUS circuit-breakers



SIRIUS overload relays

Switching



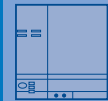
SIRIUS contactors



SIRIUS SC semiconductor contactors



LOGO! logic modules



SITOP power supplies

Starting

Communication-capable starting and switching



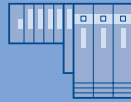
SIRIUS soft starters



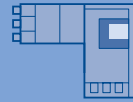
SIRIUS load feeders



Communication-capable load feeders



ET 200 S motor starters



ET 200 X motor starters



ECOFAST motor starters



AS-Interface compact starters

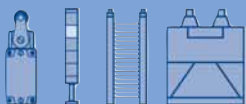


AS-Interface

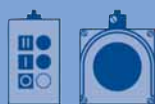


ALPHA FIX terminal blocks

Monitoring



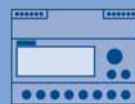
SIGUARD safety systems



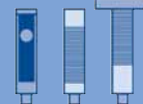
SIGNUM control and signaling devices



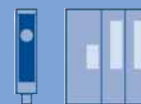
SIMIREL relays



BETA control



BERO sensors



IQ-Sense

1000 V

to

1 V

Switching, protecting, starting, monitoring Everything around the control cabinet

It is the task of modern low-voltage controlgear, switch-gear and systems to offer cost-effective systems with communications and integration capability. As your competent partner for centralized and distributed automation, Siemens Automation & Drives has a portfolio of products and solutions at hand that fully equips you for your present requirements and with which you can easily meet future demands.

See for yourself.



We offer a complete range for switching, protection, starting and monitoring tasks. The SIRIUS modular system, to give one example, in which you can find everything that you need for switching, protecting and starting motors and industrial systems. Or SIRIUS NET, the communication-capable motor starters that integrate low-voltage controlgear into automation engineering. And then there is ECOFAST, the distributed system solution with a standardized connection system that transmits data and energy combined in a single system. Then, of course, there is our uniform safety system Safety Integrated that is integrated into the standard automation, as well as control and signaling devices, terminal blocks, cost-effective transformers and DC power supplies, and practical and multifunctional relays.

Thanks to the standardization, modularization and integration of Siemens products, integration into multifunctional concepts such as Totally Integrated Automation, Totally Integrated Power or Safety Integrated is possible at any time without any problems. This is one of the benefits that you enjoy with a partner like Siemens, who supplies everything that industry requires worldwide from a single source. Another benefit is that you get from us integrated innovative modules for space-saving and time-saving solutions that simply pay off.



Powerful devices with a small footprint: SIRIUS contactors

Narrow overall widths and high availability under even the harshest conditions – the wide range of SIRIUS contactors meets every possible requirement in practical applications. With only 7 sizes, they cover the complete performance range up to 250 kW/400 V – for compact control cabinets with a high packing density.



The possible applications of the SIRIUS device family are limitless. Standard components that can be combined with each other solve every special problem extremely well.

Starting problems are a thing of the past: with SIRIUS starters

Regardless how you want to start your motors, the SIRIUS system always offers the perfect solution. A simple starter assembly comprising a circuit-breaker and a contactor reliably assures direct starting. Two standard contactors offer the perfect reversing combination for operating the motor in both directions of rotation.

The perfect star/delta start can be achieved with the combination of three standard contactors and one time relay. And for soft startup and running down, a wide range of soft starters is available that, thanks to their flexibility and excellent capacity for adapting to local conditions, ensure decisive advantages during operation.

The ability to adjust the startup and running down of the motor uncovers further advantages. Soft starting protects the connected electrical motors. The starting torque is reduced and the power supply is reliably protected against dangerous current peaks thanks to the lower current input on starting. The ability to combine with circuit-breakers and overload relays is typical for the SIRIUS modular system. SIRIUS gives you starting par excellence.

Communication-capable motor starters with power: SIRIUS Net

Preventative maintenance, maximum availability and the avoidance of downtimes with simultaneous service friendliness are becoming more and more important. A clear-cut case for our communication-capable SIRIUS NET motor starters for

AS-Interface and PROFIBUS. They safeguard your success thanks to a really dramatic reduction in the outlay for installation, commissioning and cabling and also stand for

- easy installation,
- reliability in switching and protection and for
- fast communication at all levels.

The comprehensive range of SIRIUS NET motor starters to the IP20 or IP65 degree of protection cover every conceivable application – for communication-capable solutions in the switching and protection of motors that are power-packed.



Much more than On/Off: the SIRIUS 3RV circuit-breakers

Those who place emphasis on high system availability and effective motor and system protection cannot afford to ignore our SIRIUS 3RV circuit-breakers. They ensure reliable shutdown in the short-circuit case and protect loads and the system from overloads. They are just as suitable for normal switching duty with loads that have a small number of switching operations as they are for reliable isolation of the equipment from the supply system for maintenance work or modifications.

Optimal protection of loads: with SIRIUS overload relays

SIRIUS overload relays are available in a thermal design or in a solid-state design for stringent requirements, such as full motor protection. They are responsible in the main circuit for current-dependent overload protection of loads as well as additional switching and protection devices in the respective load feeder. As part of the SIRIUS modular system, and therefore electrically, mechanically and in design optimally matched with the other SIRIUS devices, SIRIUS overload relays can be used to implement compact load feeders easily and with minimum space requirements.



Protection, control, evaluation and communication: solid-state motor protection and control devices SIMOCODE-DP

Those who expect more than full motor protection are well-served with SIMOCODE-DP.

Because these solid-state motor protection and control devices have full communications capability over PROFIBUS DP and offer, in addition, comprehensive diagnostics and control functions.

A comprehensive range of accessories perfectly complements the exceptional performance.

Quick as lightning and ultra-safe: SITOR semiconductor protecting fuses

For decades now, SITOR semiconductor protecting fuses have provided reliable protection for converters, rectifiers, UPS systems and a great deal more against short-circuits, as well as for cables against overloads. Available in various designs, they are suited to a wide range of different applications.

SITOR semiconductor protecting fuses impress customers in particular due to their extremely fast response time, minimized costs, as well as minimized space requirements and installation costs.

Relays for all occasions:

The SIMIREL relay family

Whether it is a time-delay relay, monitoring relay, coupling relay, all-or-nothing relay or a converter that you want – with SIMIREL you will find everything. Because SIMIREL is probably the most comprehensive range of relays on the market worldwide. And that is not all. All SIMIREL relays can be operated with astounding ease, they are multifunctional and therefore highly flexible and



they are, of course, available in practical graduations – for tailor-made performance. We have the right relay for you.

Safe through and through: SIGNUM control and signaling devices



With SIGNUM, we offer you a complete range of pushbuttons and indicator lamps for worldwide use – alternatively made of plastic or metal and naturally in the most up-to-date industrial design, that is: an extremely flat type of construction. The high IP67 degree of protection and NEMA 4 are met by the SIGNUM metallic control device series.

Innovative in technology and design, revolutionary with regard to installation: in just a few steps, pushbuttons, holders and contact elements are securely fixed.

This means that you can achieve a time-saving of approximately 55 % against conventional ring nut fixing techniques. That is the big advantage of SIGNUM!

SIGUARD safety systems: maximum safety with Safety Integrated

Since the very beginning, Siemens has placed the protection of people and machinery at the forefront.

To ensure maximum safety considering all the different risks that arise in industrial applications, we offer you a comprehensive concept with "Safety Integrated" that contains different product groups for the general field of safety systems: SIGUARD, for example, with components such as the SIGUARD position switches that can be directly connected to AS-Interface through an adapter module. SIGUARD light curtains and light arrays of Category 4 according to EN 954-1 which offer active protection for personnel at machines and which are optionally also available for AS-Interface. Or SIGUARD laser scanners, the optical area sensors for securing dangerous areas up to Category 3 to EN 954-1, also with safe AS-Interface and PROFIBUS connections.

