

SIEMENS

Industrial Controls Product Catalog

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3

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General Purpose Control

Manual Starters & Switches; NEMA Contactors & Starters;
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Things you should know about the Industrial Catalog

This Catalog contains all selection and order-relevant data.

More information can be found on the on-line version of this catalog at usa.siemens.com/iccatalog

Navigation

All page references are linked. Click on the page number to navigate to that page.

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Delivery time (DT) or Standard delivery time (SD)

► Preferred type	Normal quantities of the products are usually delivered within the specified time following receipt of an order.	The delivery times specified here represent the state as of 10/2020. For up-to-the-minute information, please visit our Industry Mall website at www.usa.siemens.com/industrymall
A 9 to 10 working days		
B 11 to 13 working days		
C 14 to 23 working days		
D 24 to 38 working days		
X On request	In exceptional cases, the actual delivery time may differ from that specified.	Note: Delivery times do not appear on all selection pages due to space constraints or coil voltage variations.

Price units (PU)

The price unit defines the number of units, sets or lengths to which the price and weight apply.

Packaging sizes (PS)

The packaging size defines the number of units, sets or length, for outer packaging. Only the quantity defined by the packaging size or a multiple thereof can be ordered.

Symbols

On many selection pages in this catalog, you will find these symbols to aid in the quick identification of critical product features.

Connections

Combicon connection



Insulation piercing method



Fast Connect



Spring-type terminals



Flat connectors



Solder pin connections



Ring terminal lug connections



Screw terminals



Types of coordination

Type of coordination "1"



Type of coordination "2"



Distinguishing between units

Complete units



Modular system



Support function

Configurator available in the Industry Mall



IEC Motor Starter Protectors

Section 1

SIRIUS 3RV Motor Starter Protectors (MSPs) are built for a wide range of applications and meet the requirements of control users worldwide. Each MSP features a manual ON/OFF switch, a Class 10 adjustable bimetallic overload relay (Class 20 available in the two largest frame sizes), and magnetic trip elements for short circuit protection.

3RV20 MSPs can be used in a variety of applications:

- * Manual Motor Starter
- * Manual Self-Protected Combination Motor Controller, Type E
- * Combination Motor Controller Type F when combined with a 3RT contactor
- * IEC Circuit Breaker for export applications

3RV21 MSPs with overload relay function (automatic RESET)

3RV27 are UL listed as a Circuit Breaker for branch circuit protection of both motor and non-motor loads

3RV28 is UL listed as a Circuit Breaker for transformer protection

3RV29 is an infeed system for quick installation of MSP and contactor assemblies



IEC Contactors

Section 2

High contact reliability, a narrow design, long life time, and the ability to operate under extreme conditions (up to 60° C), ensure that SIRIUS 3RT Contactors are suited for almost any application. A large array of easily installed, standard accessories may be used to customize the contactors for different applications.

3RT*0 – 3 Pole Standard

3RT12 – 3 Pole Vacuum

3RT*3 – 4 Pole with 4 normally open poles for switching Resistive loads (AC-1)

3RT*4 – 3 Pole for switching Resistive loads (AC-1)

3RT25 – 4 Pole with 2 normally open & 2 normally closed poles

3RT26 – 3 Pole for switching capacitors

3RA*9 – Contactor Accessories

3RA23 – Reversing contactor assemblies

3RH2 – Coupling Relays

3TC – 2 Pole for switching DC loads

3TF6 – 3 Pole Vacuum, 630 & 700A



IEC Overload Relays

Section 3

Complete motor protection can be achieved through the SIRIUS family of overload relays (OLR's).

3RU21 – Thermal OLR's, up to 100 A, are ambient compensated bimetallic in Trip Class 10

3RB30 / 20 – Solid State OLR's, up to 630 A, with an internal power supply and 4:1 FLA adjustment range in Trip Class 10 or 20

3RB31 / 21 – Features of the 3RB30 / 20 plus adjustable Trip Class 5 to 30, ground fault detection, and remote reset

3RB22 / 23 – Features of the 3RB31 / 21 plus status LED's and external power supply

3RB24 – Features of the 3RB23 plus communication via IO-Link

3UF7 – SIMOCODE pro intelligent motor protection is more than just a programmable overload relay. By linking the motor and automated control circuits, SIMOCODE allows for predictive and conditional maintenance on critical systems.



Section 4

IEC Starters



The SIRIUS 3RA1/2 Combination Starters consist of a pre-wired and mechanically connected 3RV MSP and 3RT contactor, allowing for quick installation of a complete branch circuit. The Non-Reversing or Reversing assemblies come on a Fast Bus mounting shoe or as a Panel Mount version.

The SIRIUS 3RA6 Compact Starters provide the functionality of an MSP, Contactor and Electronic Overload Relay in one easy to install housing, saving wiring and installation time. The SIRIUS 3RA6 Infeed system further saves line side wiring in multiple motor panels.

The 3RE4 enclosed IEC family includes contactors and starters in NEMA 1, 3/3R/4/12 or 4X enclosures.

- 3RA2** – Combination Starters
- 3RA6** – Compact Non-Reversing & Reversing Combination Starters
- 3RE4** – Enclosed HP Rated Starters & Contactors

Section 5

Fast Bus Power Distribution System



The UL508A Fast Bus Multi-Motor Control System is a 3 phase insulated busbar system used to reduce wire connections and hole drilling when building control panels. Quickly mount Sirius 3RA combination starters and/or Siemens circuit breaker assemblies.

The Siemens Fast Bus system uses standard off-the-shelf components, with both domestic and international approvals, to allow for economical installation, compact panel designs, touch safe equipment, that allow for easy expansion and maintenance.

- FB** – Installation kits for quick ordering & installation
- FBCB** – Circuit breakers pre-assembled on Fast Bus adapter shoes
- 3RA** – Combination starters for Fast Bus mounting (see section 4)
- 8US** – Fast Bus components for Field assembly

Section 6

Hybrid Motor Starters



Hybrid technology provides reduced size, lower heat losses and longer service life in motor starter applications by combining relay contacts, power semiconductors and a solid-state overload relay.

The SIRIUS 3RM motor starters are compact, 22.5mm wide devices for mounting in the control cabinet. The failsafe versions eliminate the need for redundant controllers in safety applications. The ET 200SP motor starters are an integral part of the ET 200SP I/O system and mount directly to the rack.

The ET 200pro and SIRIUS M200D are enclosed controllers that connect to a variety of communication protocols.

- 3RM** – Non-reversing starters
- 3RK1308** – ET 200SP motor starters
- 3RK1304** – ET 200pro enclosed motor starters
- 3RK13*5** – SIRIUS M200D enclosed motor starters

Solid State Soft Starters & Variable Frequency Drives

Section 7

SIRIUS Soft Starters and SINAMICS Drives are designed to ramp up your efficiency at every turn. Easy to specify, integrate, operate, and maintain, our controls fulfill your need for more thoughtful system-wide solutions.

- 3RW30** – Basic performance Soft Starters up to 75HP with built-in bypass contacts.
- 3RW40** – Basic performance Soft Starters up to 75HP with overload protection and device self protection
- 3RW50** – Basic performance Soft Starters from 100 to 400 HP with soft torque and communication options
- 3RW52** – General performance Soft starters from 100 to 400 HP with options for plug-in HMI and communication modules
- 3RW55** – High performance Soft starters from 7.5 to 1000 HP with HMI, autotuning and plug-in communication modules
- 3RE47** – Enclosed soft starters
- 6SL32** – SINAMICS G120X Variable Frequency Drives



Solid State Switching Devices

Section 8

Designed for high operating switching frequency the Sirius Solid State Relays and Contactors feature a long lifespan of rugged reliability in adverse conditions, quiet operation, compact size, and snap on function modules for convenient flexible use.

- 3RF20** – 1-Phase Relays in a 45mm wide “hockey-puck” design
- 3RF21** – 1-Phase Relays in a 22.5mm narrow width design
- 3RF22** – 3-Phase Relays in a 45mm wide design
- 3RF23** – 1-Phase Contactors, a 22.5mm wide relay mounted to a heat sink
- 3RF24** – 3-Phase Contactors, a 45mm wide relay mounted to a heat sink
- 3RF29** – Function Modules, such as, converters, load monitors and power controllers
- 3RF34** – 3-Phase non-reversing and reversing Contactors for switching



General Purpose Control

Section 9

Siemens NEMA controls are built rugged to withstand the most severe and demanding industrial and continuous duty commercial applications. Siemens offers the most complete and diverse product line in the world of NEMA. This includes standard full NEMA sizes and motor matched half sizes exclusive to Siemens. All are available as open or enclosed devices with a wide selection of accessories and spare parts.

- Manual Starters & Switches
- Non-Reversing & Reversing Starters & Contactors
- Combination Starters
- Duplex and Multi-Speed
- Pump Controllers
- Solid State Overload Relays
- Current Sensitive Relays
- Definite Purpose Contactors
- Lighting Contactors
- Control Power Transformers



Section 10

Pilot Devices



Siemens offers an extensive array of Pilot Devices and Signal Columns for a wide variety of applications.

3SB2 – 16mm SIRIUS Pilot Devices for applications where panel space is a premium

3SU1 – 22mm SIRIUS ACT Pilot Devices offer maximum flexibility, industry best time install savings and environmental ratings in round-metal and round-plastic versions

Class 52 – 30mm is the classic pushbutton design for the NEMA markets offering both standard die cast metal and the ultra rugged BLACK MAX for corrosion resistant applications

8WD – Signal Columns offer twist and connect technology in both 50mm and 70mm diameter styles. Single element signal beacons add additional options for OEMs and panel builders

Section 11

Function Relays



The SIRIUS family of compact, DIN rail mountable function relays offers complete solutions for monitoring, switching, interfacing and timing applications.

3RN – Thermistor Motor Protection

3RP / 7PV – Solid State Timing with single or multiple timing functions

3RS1 / 2 – Temperature Monitoring in solid, liquid and gaseous media

3RQ – Coupling Relays and Interfaces

3RS18 – Relay Interfaces

3RS70 – Interface Converters

3TG10 – Compact Power Relays/Contactors

3TX71 & LZS – Plug-in Relays & Timers

3UG4 – Line Monitoring of voltage and insulation or load monitoring of Current & Cos Phi, Level Monitoring of conductive liquids, and under speed monitoring

Section 12

Industrial Surge Protection Devices (ISPD)



Siemens Industrial Surge Protective Devices (ISPDs) offer a reliable DIN-Rail mountable solution for increasing NEC requirements to safeguard your critical equipment and safety circuits. Our complete portfolio protects your AC power, DC power, and signal line communications, covering all industrial applications.

AC Power Protection

DC Power Protection — 24VDC and PV Solar

Signal Line Protection

Safety Systems

Section 13

Siemens Switches and Machine Safety devices provide the means for protecting workers and equipment where hazardous conditions exist. Compliance with NEMA, OSHA and international standards (IEC) are a critical requirement for machine OEMs and end users. Siemens has provided safety relay and contactor products to the international community for almost 50 years.

- 3SB38** – Two-Hand Control Stations
- 3SE03** – North American (NEMA) Limit Switches
- 3SE5** – International (IEC) Limit Switches
- 3SE5 / 3SE2** – Interlock Switches & Hinge Switches
- 3SE6** – RFID Non-Contact Safety Switches & Magnetic Monitoring Systems
- 3SE7** – Cable-Operated Switches
- 3SK** – Modular Safety Relays
- 3TK28** – Safety Relays with special functions.
- 3RK3** – Modular Safety System (MSS)



AS-Interface & IO-Link Systems

Section 14

Actuator-Sensor Interface is the simple and effective networking system for the field level. It is extremely rugged even under the toughest of conditions. With compatible safety components, AS-Interface offers safety applications according to Safety Category 4. AS-Interface is easily linked to higher-level networks for a complete automation solution — simple, safe and fast in the field.

IO-Link is an open communication standard based on point-to-point connection between a Master and up to 4 devices. For an OEM wiring multiple motor starters, IO-Link technology can greatly reduce control cabinet wiring for motor starters while increasing diagnostics. For End Users, IO-Link provides a cost effective way in to monitor common analog values such as motor current, power consumption, temperature and voltage without adding an additional network.



Programmable Relays & Power Supplies

Section 15

The LOGO! Programmable Relay is a compact, easy to use and low cost solution for simple control tasks. Functions can be changed at the touch of a button through the integrated operator panel or remote display.

SITOP offers a broad offering of compact single- and 3-phase switched mode power supplies and 24VDC power security components, which provide reliable solutions for the most common power interruptions, helping to minimize downtimes and increase the efficiency of production.

SCALENCE Managed and Unmanaged Industrial Ethernet Switches with up to eight RJ45 ports.

- 6ED1** – LOGO! Programmable Relays
- 6EP1** – SITOP Power Supplies and Power Security Components
- 6GK5** – SCALENCE Industrial Ethernet Switches



Section 16

Control Circuit Protection



Siemens UL 489 miniature circuit breakers and accessories are designed to provide branch circuit and feeder protection.

Siemens UL 1077 Supplementary Protectors are designed to provide additional protection where branch circuit protection is already provided or, not required at all. Since Siemens Supplementary protectors are made to trip faster than other components, they are able to provide additional protection for more sensitive devices inside a panel.

5SJ4 – Miniature Circuit Breakers up to 480Y / 277 VAC, 63A

5SY – High feature Supplementary Protectors from 0.3 to 63A

5SP – High amperage Supplementary Protectors from 80 to 125A

3NW7 – Cylindrical Fuse Holders meeting UL 512 and IEC 60269-1, -2, -3

Section 17

Circuit Breakers



Siemens offers a full line of interchangeable and non-interchangeable thermal-magnetic trip circuit breakers with a wide variety of interrupting ratings from 10KAIC to 200KAIC. These circuit breakers are available with multi-functional internal accessories, which are field installable on most breakers, and a full line of external accessories. Electronic trip circuit breakers are available for 150A through 1600A breakers.

Molded Case Circuit Breakers

3VA – 600VAC Breakers

BQ and QR – 240VAC Breakers

CQD – 480VAC Breakers

GG, Sentron, and VL – 600VAC Breakers

Section 18

Switches



Siemens offers a complete line of both enclosed and open style switches to meet a wide range of applications.

HF & HNF – Heavy Duty Safety Switches with Side Mounted Operating Handle

3LD2 – UL508 Open & Enclosed Rotary Switches (16-250A)

3LD3 – UL508 Compact Open Rotary Switches (16-63A)

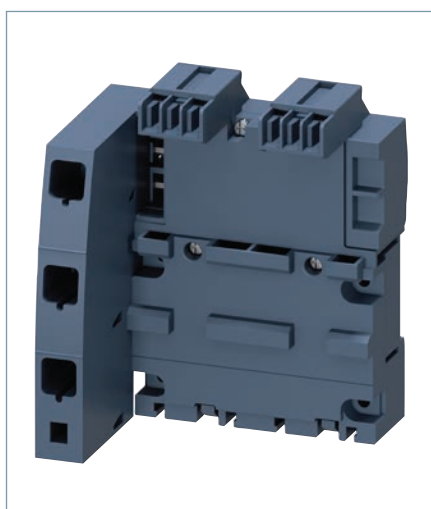
3LD5 – UL489 Compact Open Rotary Switches (30-150A)

VBF & VBNF – Open Switches with Flange Mounted Operating Handle

MCS – Open Switches with Flange or Rotary Operating Handle

CFS – Open Compact Fusible Switches with Rotary Operating Handle

CNFS – Open Compact Non-fusible Switches with Rotary Operating Handle



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SIRIUS 3RV motor starter protectors up to 100 A



Size S00, S0



**For motor protection
CLASS 10**

Selection and ordering data

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S3	up to 100 A	1/5



**For motor protection
CLASS 20**

Selection and ordering data

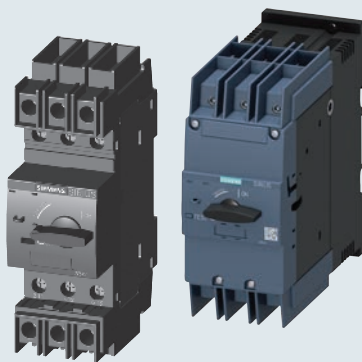
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**General data for SIRIUS
motor starter protectors**

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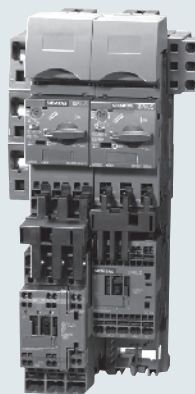
Circuit Breakers 3RV27, 3RV28



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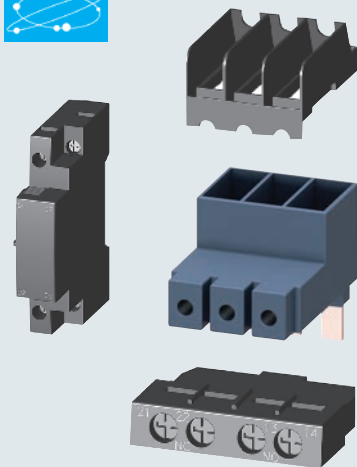
SIRIUS 3RV29 infeed system



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3RV MSP auxiliaries and accessories

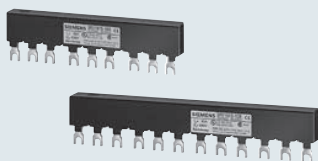


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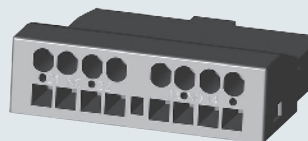
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3RV busbar and accessories



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Accessories for motor starter protectors with Spring-Type terminals



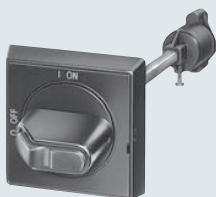
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