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SIEMENS

Siemens Controls. Rugged, reliable, flexible.

Smart Infrastructure – Control Products delivers highly-evolved control components and circuit protection for the construction market. With Siemens initiatives for increased availability and energy efficient products, our customers receive their product in a time-efficient manner and increase energy savings. Siemens keeps your mind share focused towards productivity.

Our components are built rugged to withstand the most severe and demanding industrial and commercial applications with easy installation. Our portfolio includes standard full NEMA sizes and motor matched half sizes exclusive to Siemens. This contributes to the overarching emphasis on configuration and cost effectiveness when using Siemens controls.

We provide solutions suitable for any construction application while maintaining modularity and offering consumers the flexibility of design.

Industrial Controls – Power Circuit Components

NEMA Overload Relays

ESP200 Solid-State Overload Relay

- Rugged design for industrial/commercial applications
- Self-powered
- Market-leading trip accuracy, greater than 99%
- Trip class selectable (5, 10, 20, 30)
- Class 958 version for sealed compressors and artificially cooled motors
- Class 958L version for oil and pumping applications
- Conformally coated circuit board for resistance against environmental conditions



NEMA DP Contactor

Class 45

1 pole or 2 pole

Power Terminations:

- Quad Quick Connects
- 30A: Screws
- ≥40A: Box Lugs

Compact Size



Class 42

2 pole or 3 pole

Power Terminations:

- Dual Quick Connects
- 30A: Screws
- ≥40A: (2pole 30amp) Box Lugs

Standard Size



NEMA Motor Starters

Siemens NEMA rated Class 14 Motor Starter

- Available NEMA size 00 to 8
- AC and DC coil options
- Includes ESP200 solid-state overload relay on common mounting plate
- Open and enclosed options
- Up to 900 HP at 480 V
- Accessories and field kits available



NEMA Motor Starters (cont'd)

Siemens NEMA rated Class 22 Reversing Starter

- Same features as Class 14, but with dual contactors



NEMA Enclosed Motor Starters

Class 17, 18, 25, 26 and 32 Combination Starters

- Non-reversing, reversing and two-speed NEMA starters
- Fusible, non-fusible and circuit breaker
- Solid-state overload relay
- NEMA 1, 3R/4/12, 4X FG and 4X SS enclosures



NEMA Manual Starters

Class SMF Fractional HP Starters

- Continuous current rating of 16 amperes
- Overload trip assembly
- Two speed starters



Class MMS and MRS Switches

- Operate single- or three-phase AC or DC motors
- Two speed – Class MRS
- Reversing – Class MRS



Class 11 – 3RV MMS

- Provide control for single and poly-phase motors up to 20 HP @ 575V
- Bimetallic, heater elements to provide over-current protection
- Built-in differential trip bar causes the starter to trip faster to reduce motor damage



Industrial Controls – Power Circuit Components

DC Contactors

SIRIUS 3TC VDC Power Contactor

- Ideal applications include, battery chargers / testing, solar, rail, heaters, lamps, cranes, plating etc.
- 1 and 2-pole
- Up to 330A at 600VDC
- AC and DC coil options
- Available in frame sizes 2, 4, 8 and 12
- 2 NO and 2 NC mirror Aux contacts



NEMA Pump Control Panels

Pump Control Panels

- 3RE48 NEMA Rated for agriculture and oil & gas
- Class 82 Slim Line for the agriculture industry
- Class 83 and 84 duplex controllers
- Class 87 for agriculture and oil & gas
- Class 88 reduced voltage



Lighting Contactors

- Provide reliable and efficient means of local or remote switching of lighting
- Rated 20 - 400 amps at 600 volts
- Electrically-held and mechanically-held open, NEMA 1, 3R/4/12 and 4X SS enclosures



SIRIUS Motor Starter Protectors

SIRIUS 3RV20 Motor Starter Protectors

- UL approved as Self Protected Combination Motor Controllers (Type E)
- Manual motor controller - Disconnect, Sht Ckt & OL protection
- 3RV201 & 2 – Size S00, S0, Trip Class 10 up to 40A
- 3RV203 – Size 2, Trip Class 10 or 20 up to 65A
- 3RV204 – Size 3, Trip Class 10 or 20 up to 100A
- Screw or spring clamp connections



SIRIUS 3RV27 and 28 Circuit Breakers

- UL489 rated
- Size S00 to S3
- For motor and transformer protection
- Range 0.16 A to 70 A
- S3 delta rating 10 A to 30 A at 480 VAC
- Screw or spring clamp connections



SIRIUS 3RV29 Infeed System

- Infeed system for group installation
- Use with size 00 & 0, 3RV20 MSP and 3RT contactors
- Expandable up to 63 A
- Design results in reduced wiring



SIRIUS Overload Relays

SIRIUS 3RU Thermal Overload Relays

- Size 00 to S3
- Up to 100 A, Trip Class 10
- 1 NO + 1 NC Aux contacts
- Manual / automatic reset
- Switching position indication



SIRIUS 3RB2 and 3RB3 Solid-State Overload Relays

- Size 00 to S12
- Up to 630 A, Trip Class 5, 10, 20, or 30
- 1 NO + 1 NC Aux contacts
- Manual / automatic reset
- Self evaluating, and indication



Industrial Controls – Power Circuit Components

Contactors

SIRIUS 3RT2 Contactor

- Designed for IE3/4 motors
- Energy-efficient coil and contacts reduces energy costs, and heat generation during operation
- Available in sizes S00 to S3 (75HP)
- Available extended temperature and rail certified
- Resistive load rated up to 110A with 3RT23 series
- Screw or spring-loaded terminals
- Safety rated to IEC 60947-4
- 3RT1 sizes S6-S12, up to 400 HP available



Motor Starters (cont'd)

SIRIUS 3RA22 Combination Starter

- Integrated 3RV2 MSP and 3RT contactor offers circuit, O.L protection and contactor in one unit
- Mounting rail or Fast Bus busbar system mounting
- Designed for premium efficient motor control (IE3/4 ready)
- Energy efficient coil and contacts reduces energy costs, and heat generation during operation
- Available in sizes S00 to S3 100A
- Screw or spring-loaded terminals



Reversing Contactors

SIRIUS 3RA2 Reversing Contactors

- Designed for IE3/4 motors
- Energy efficient coil and contacts reduces energy costs, and heat generation during operation
- Completely assembled out of the box from 3RT2 contactors
- Touch safe connection system
- Available in sizes S00 to S3 (75HP)
- Screw or spring-loaded terminals
- Safety rated to IEC 60947-4
- S6-12 up to 400 HP available



SIRIUS 3RA22 Reversing Combination Starter

- Integrated 3RV2 MSP and 3RT contactor offers circuit, O.L protection and dual contactors in one unit
- Mounting rail or Fast Bus busbar system mounting
- Designed for premium efficient motor control (IE3/4 ready)
- Energy efficient coil and contacts reduces energy costs, and heat generation during operation
- Available in sizes S00 to S3 100A
- Screw or spring-loaded terminals



Motor Starters

SIRIUS 3RM1 Hybrid Motor Starter

- Up to 3 HP at 480V
- Slim design, only 22.5mm width
- Non-reversing, reversing, O.L protection, and available safety integrated
- Hybrid start uses solid-state switching on start-up and relay on run
- Optional control bus and comb system reduces wiring for installation with 3SK safety relays



3RE4 Enclosed IEC Controllers

- Industrial and commercial applications
- Non-combination type starters and contactors
- UL motor horsepower rated
- From fractional up to 60 HP at 575 V
- Thermal and solid-state overload relays
- NEMA Type enclosures 1, 3R/4/12 and 4X 304 stainless steel



SIRIUS 3RA6 Compact Motor Starter

- Up to 20 HP at 480V
- Modular motor control system with plug-in design for non-reversing and reversing motor starters
- 3RA68 power bus offers snap-in design for adding starters up to 63 / 100A
- AS-Interface and IO-Link available
- Spring or screw connections (removable)
- Motor modules consist of circuit breaker disconnect, contactor, and overload protection



Industrial Controls – Power Circuit Components

Open Soft Starters

SIRIUS 3RW Soft Starters

- Reduces current peaks on motor starts with configurable ramp-up times, integrated by-pass contactor after ramp reduces heat and provides increased energy efficiency
- Available in (3) series depending on the motor size and needs of the application
- 3RW30 – standard applications, 2 phase controller for 1.5 HP to 75 HP 200-480V
- 3RW40 – standard applications, 2 phase controller for 7.5 HP to 75 HP 200-600V, overload protection, current limiting
- 3RW50 - for basic performance, 2 phase control. 100 HP to 600 HP, 200-600V
- 3RW52 - for general performance, 3 phase control, 7.5 HP to 400 HP, 200-600V
- 3RW55 Fail-safe - for high performance safety applications, 7.5 HP to 400 HP, 200-600V
- 3RW55 - for high performance applications, 7.5 HP to 1000 HP, 200-600V



Enclosed Soft Starters

Class 73 non-combination starters include:

- NEMA rated enclosure
- 3RW40 and 3RW44 Sirius soft starter with built-in overload relay and bypass
- Control circuit transformer
- Line side power terminal block
- Reset button
- Isolation contactor
- Class 74 offering includes all of the features of the Class 73 in a combination style design
- Class 74 standard options are either a circuit breaker or fusible disconnect providing short circuit protection and soft starting in one package



SIMOCODE pro Motor Management System

- Control, monitor and protect motors, integrated or independent of the automation system
- Detailed real-time operational, service and diagnostics data
- Fail-safe protection of motors, valves, processes
- Scalable, flexible solutions for any plant configuration
- Versatile, open communication via Profibus, Profinet, EtherNet/IP, Modbus RTU and OPC
- Integration in process control systems such as SIMATIC PCS 7



Industrial Controls – Control Circuit Components

Pilot Devices

SIRIUS 3SU1 Pilot Devices

- 22 mm pilot devices includes indicator lights, pushbuttons, illuminated pushbuttons, emergency-stop pushbuttons, selector switches and stations
- Quick and easy installation, mounting is 50% faster with single screw installation
- High-degree of protection: IP69K standard
- Available in plastic, metal options
- Options for 30mm mounting
- Innovative 4-position RFID selector switch available
- Networkable via IO-Link, AS-Interface, and PROFINET, including PROFI-safe
- Corrosion-resistant in harsh environments



IO-Link

AS-INTERFACE

PROFINET



SIRIUS 3SU1 Two-Hand Control Station

- Cost effective and configurable operator control stations for two-hand machine cycling
- Integrated E-stop
- Capacitive or operator actuator buttons



Industrial Controls – Control Circuit Components

Signaling Columns and Beacons

SIRIUS 8WD4 Signaling Columns

- Two series available, 8WD42 50 mm, IP54 and 8WD44 70 mm, IP65
- Flexible and modular design for visual and acoustic warning
- Shock and vibration resistant
- Available with AS-Interface or IO-Link interface



SIRIUS 8WD53 Beacons

- 70 mm, IP65 protection
- 24V to 230V AC/DC operating voltage
- LED and Incandescent lamp options
- 360 degree continuous or flash indication
- Easy mounting base with screw and nut



Function Relays

SIRIUS 3RS Temperature Monitoring Relays

- Accepts RTDs and Thermocouples
- Safety to SIL 1 / PL c, suitable for ovens and burners
- Hazardous location to Class I Div 2
- IO-Link option



IO-Link

SIRIUS 3RN2 Thermistor Motor Protection Relay

- Overheating protection for motors
- Bimetallic and PTC sensor inputs for low cost and high feature protection options
- Plug and play installation, no configuration required
- Hazardous location to Class I Div 2



SIRIUS 3UG4 Monitoring Relays

- Monitor electrical and mechanical variables
- Phase sequence, asymmetry, failure, neutral failure
- Voltage, current and power factor overshoot/undershoot
- DC Load
- Residual current
- Insulation resistance
- Speed
- Liquid levels
- IO-Link options



IO-Link

SIRIUS 3RR2 Monitoring Relays

- Monitor motors or other loads for
- Current overshoot and undershoot
- Broken conductors
- No-load / load shedding
- High-impedance faults to ground
- IO-Link options



IO-Link

Function Relays (cont'd)

SIRIUS 3RQ3 Coupling Relays

- Couple discrete signals to/from controller
- With or without plug-in relay
- Semiconductor output option
- Built-in arc suppression



SIRIUS 3RS70 Interface Converters

- Convert analog signals to/from controller
- Voltage, mA, frequency
- 3-way isolation



Control Relays

SIRIUS 3RH2 Control Relays

- (4) pole control circuit relays
- 10 A current rating
- AC or DC coil options
- Surge suppressor options
- Spring or screw connections



SIRIUS Timing Relays

- **7PV15** for HVAC and compressor applications
- **3RP25** for general use in control systems
- **3RP20** for general use in control systems, low-profile, "contactor-style"



SIRIUS 3RA28 Timing and Electrical Interlocking

Functions for 3RT2 Contactors

- Direct mount to 3RT2 contactors
- Timing, IO-Link, and AS-interface
- Local configuration
- Load and auxiliary functions



Power and Control Relays

- Open and enclosed power relays
- Plug-in style, up to 4 contacts
- Screw or push in terminals
- 12VDC to 240VAC
- Hermetically sealed options
- Open and enclosed power relays



Terminal Blocks

- Single and multi-tier
- Compact design
- Accessories available



Industrial Controls – Control Circuit Components

Limit Switches

- Modular, flexible configuration
- Plastic and metal versions
- Positive opening available for safety applications
- Heavy duty options, up to NEMA 6P submersible
- Plug-in, pin connect and pre-wired options



Safety Limit Switches

- Safety monitoring and locking of doors, gates, covers
- Coded actuators to prevent tampering
- Up to 580 lbs locking force
- Integrated AS-interface option
- Contact-less magnetic and RFID options



Safety Relays

SIRIUS 3SK Safety Relays

- Simple to advanced safety functions
- Modular, flexible, expandable
- Safety to SIL 3 / PL e / Cat 4
- 3SK1, DIP switch configurable
- 3SK2, software configurable
- Easy integration with 3RM1 starters



Control Power Transformers

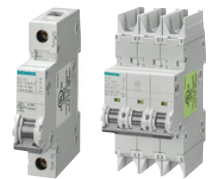
- Rugged and reliable design for industrial/commercial applications
- Class MT for domestic only, Class MTG for domestic and global
- 50VA through 5000VA
- NEMA ICS2, UL-506 listed, CSA certified, MTG class also meets IEC and EN requirements
- Class KT kit available for mounting and wiring



Circuit Protection

Siemens 5S Branch Circuit and Supplementary Protectors

- 1-Pole to 4-Pole circuit protection
- UL 489 or UL 1077 rated
- AC or DC voltage options
- Up to 63A (5SP4 up to 125A)
- DIN rail mountable
- Accessories available



Siemens 3VA Molded Case Circuit Breakers

- 3VA available from 15A to 600A, and up to 150kAIC
- VL-150-1600A frame, global ratings and up to 100Kaic interrupt ratings
- G Frame -125A and less and interrupt ratings to 65Kaic
- Supplementary protection
- UL489- 5SJ- power circuit protection
- UL 1066- 5SY-control circuit protection



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