

# Industry Automation Control Components

## SIRIUS 3RV2 Motor Starter Protectors



**SIRIUS 3RV21 Motor Starter Protectors can be easily and flexibly combined with other SIRIUS devices to reduce space requirements and wiring costs. The 3RV21 Motor Starter Protectors ensure short-circuit and overload protection, switching, and offer particularly efficient operation and are suitable for multiple applications areas where automatic reset is needed.**

# Basic Versions – Motor Starter Protectors

## Product Description

SIEMENS

### Motor Starter Protectors (MSP)

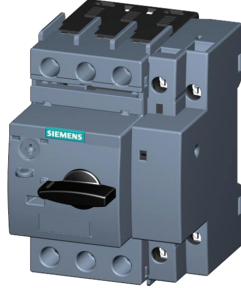
SIRIUS 3RV20



Motor Starter Protector

- The standard solution for motor protection

SIRIUS 3RV21



MSP with overload relay function

- Short-circuit protection and auto reset (in case of overload) in a single device

SIRIUS 3RV23



MSP for starter combinations

- Large setting ranges and remote reset (in combination with electronic overload relay)

SIRIUS 3RV24



MSP for transformer protection

- The standard solution for transformers

SIRIUS 3RV27/28



Circuit breaker

- For UL 489 applications

For Export Applications

## Functions and Applications – Motor Starter Protectors

### Product Description

#### SIRIUS 3RV2 Motor Starter Protectors (MSP)

##### Functions

- **Short-circuit protection:**

The short-circuit release disconnects the faulty feeder circuit from the mains within a few milliseconds in the event of a short circuit (current >13X rated current). This ensures the prevention of major damage (risk of fire!).

- **Overload protection:**

The overload release disconnects the load from the mains if it is loaded with an overcurrent over a specific period. Release is effected in accordance with a specific current time characteristic curve. This ensures the prevention of damage to the load and system. The overload release also trips in case of phase failure or extreme phase asymmetry.

- **Switching:**

The MSP is equipped with a lockable operating mechanism for manual switch-on / switch off (e.g. for repair purposes).

# SIRIUS 3RV2 Motor Starter Protector (MSP)

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## Advantages Compared to Legacy 3RV1

- Performance increase (S00 up to 16 A, **S0 up to 40 A -30HP**) ★
- All MSP now with rotary operating mechanism
- 10 – 20% reduced power loss compared to 3RV1, resulting in lower surface temperature
- **Spring-loaded and ring terminal connection systems up to 32 A** ★
- **Plug-in link modules with spring-loaded connection system** ★
- **Easy assembly of motor starters, thanks to plug-in main circuit wiring (for devices with spring-loaded connection)** ★
- Comprehensive and uniform accessories for S00 and S0:

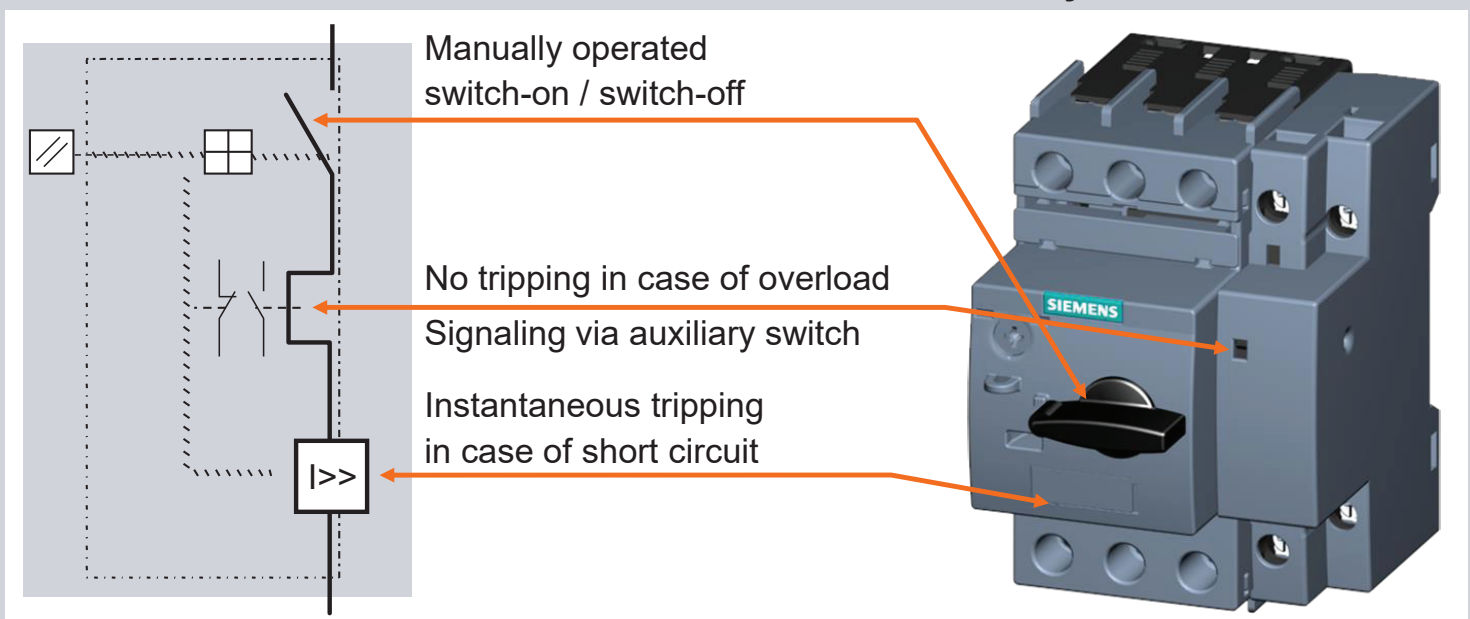
**NEW** - Disconnecting module for size S00

**NEW** - Signaling switch, shunt release, undervoltage release with / without leading auxiliary contacts with spring-loaded and ring cable lug connection

## Functional Principle – SIRIUS 3RV21 MSP

### Product Description

#### SIRIUS 3RV21 Motor Starter Protectors with overload relay function



The Motor Starter Protector with optional automatic reset in case of overload

# Functional Principle – SIRIUS 3RV21 MSP

## Product Description

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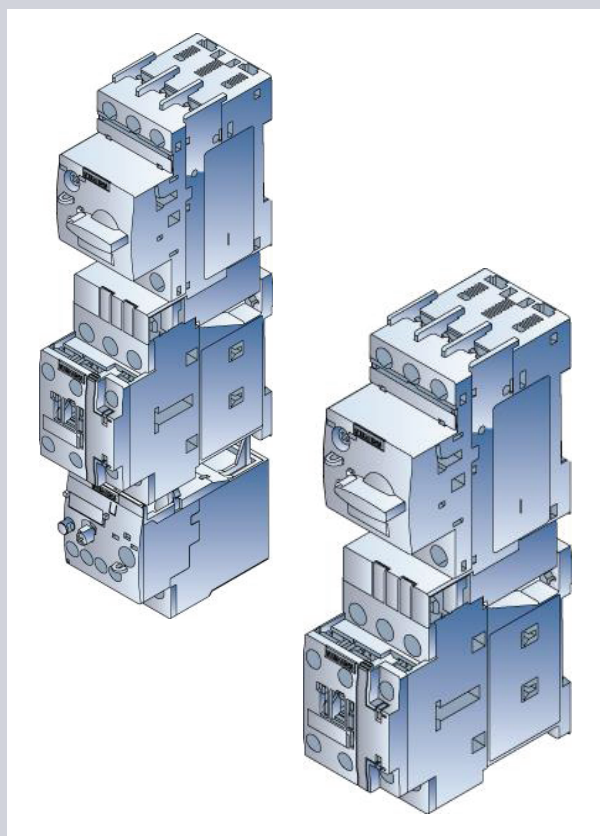
### SIRIUS 3RV21 Motor Starter Protectors with overload relay function

- Available in sizes S00 and S0 from 0.11 - 32 A
- The MSP does not disconnect in case of overload
- Overload is signaled via side-mounted auxiliary contacts 1NO+1NC
- The motor starter has to be disconnected via a downstream contactor
- Automatic reset (reset of auxiliary contacts)



### Automatic / remote reset with SIRIUS 3RV Motor Starter Protectors

- Automatic reset only via SIRIUS 3RV21 MSP
- Elimination of an overload relay
- SIRIUS 3RV21 MSP with overload relay function (1 device)
- Attractive price compared to conventional solutions (approx. 5-10% lower)
- Fewer devices and reduced wiring
- More space in the control cabinet
- Reduced power loss in the control cabinet as one thermal overload relay per starter can be eliminated





# SIRIUS 3RV2 Motor Starter Protectors (MSP)

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## Summary

### Functions

- Short-circuit protection, overload protection, switching (manual)
- Fuseless
- Motor, starter, system and transformer protection as well as fuse monitoring

### Dimensioning and design

- S00 and S0 (up to 40 A in a width of only 45 mm)
- Choice of connection systems:
  - Screw
  - Spring-loaded
  - Ring Lug



**SIRIUS 3RV21 Motor Starter Protectors can be easily and flexibly combined with other SIRIUS devices. They reduce space requirements and wiring costs.**

**SIRIUS 3RV2 Motor Starter Protectors ensure short-circuit and overload protection, offer particularly efficient operation and are suitable for multiple applications areas where automatic reset is needed.**

### Mounting advantages

- Easily and rapidly combinable with any SIRIUS switching device
- Reduced main circuit wiring through combination with:
  - SIRIUS Infeed system
  - 3-phase insulated busbar system
  - Infeed system for 3RA6 compact starters
  - 8US Fast Bus busbar system



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### Application areas / customer benefits

- Minimized space requirements
- Reduced power consumption
- Global applicability thanks to comprehensive approvals

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