



SIEMENS

Start-up with a small footprint – the SIRIUS 3RM1 Motor Starter

The SIRIUS 3RM1 Motor Starter – multifunctional with a width of just 22.5 mm

[siemens.com/motorstarter/3RM1](https://www.siemens.com/motorstarter/3RM1)

Answers for industry.

Getting started – even when things get tight SIRIUS 3RM1 Motor Starters

Space-saving systems stand for maximum efficiency and pose a challenge for system engineers. Although systems and machinery are becoming increasingly compact and are expected to have smaller footprints, at the same time they need more auxiliary drives. Every millimeter counts in a control cabinet. SIRIUS 3RM1 Motor Starters are precisely tailored to meet these requirements and represent the solution for the development of cutting-edge and future-oriented systems.

It's easy to get started: The new motor starters are so narrow that they fit into almost any gap.

In brief: SIRIUS 3RM1 Motor Starters – multifunctional with a width of just 22.5 mm.



Whether direct or reversing starters – with SIRIUS 3RM1 Motor Starters, you can implement compact control cabinet solutions for small motors up to 3 kW.

Compact

- > Narrow width
- > Multifunctionality
 - Direct and reversing starters
 - Overload protection

Economical

- > Durable and energy-efficient hybrid switching technology
- > Low device variance through wide adjustment range

Simple

- > Less wiring
 - in control circuit thanks to device connectors
 - in main circuit with the infeed system
- > Fast diagnostics

The new SIRIUS 3RM1 Motor Starters are designed for installation in control cabinets and require minimal space. They combine the functionality of contactors and overload relays in a width of just 22.5 mm. In addition, thanks to their use of hybrid switching technology, they have all the benefits of relay and semiconductor technology in a single device, which increases their cost-effectiveness.

The motor starters make your work easier, offering easy adjustment of motor current, minimal wiring costs, and fast troubleshooting. With these motor starters, you can build more compact control cabinets and increase the efficiency of your systems while saving time and money in the installation.

Functionality that adapts

Narrow width

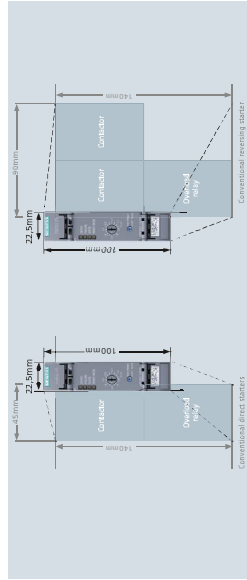
The new motor starters optimally round out the SIRIUS portfolio of compact motor starters. They combine several functions – such as direct or reversing start – in a narrow housing, up to 3kW.

Even subsequent expansions are easier to plan and implement: If more motors are needed in the system, thanks to their narrow width it's easy to add additional SIRIUS 3RM1 Motor Starters to the ones already installed in the control cabinet.

Multifunctional

Motor starters are available as direct or reversing starters. They offer a wide range of operation, configuration, and the width for both device types are identical.

Overload protection
Every motor starter is equipped with integrated electronic overload protection. In other words, you no longer need a separate overload relay when you use SIRIUS 3RM1 Motor Starters. This saves for you: lower wiring costs, shorter installation time, and more room on the mounting rail.



The compact SIRIUS 3RM1 Motor Starter supports combinations of multiple power contactors and overload relays, thereby minimizing the required space in the switching cabinet.

4

Efficiency that drives

Durable and energy efficient

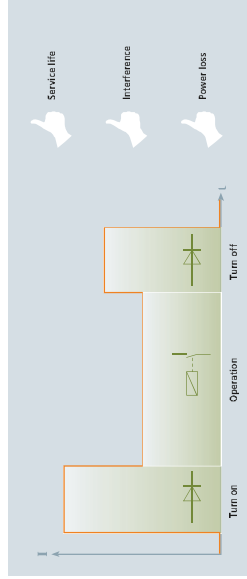
Hybrid switching technology uses low-wear semiconductor technology for switching and energy-efficient relay operation. It uses energy-efficient relay technology. That provides durability, particularly in cases of high starting frequency. This technology significantly reduces maintenance costs and extends the service life of the motor starter. In addition, thanks to the hybrid switching technology, the motor starters have a lower level of electromagnetic interference, which increases the availability of your systems.

Integrated electronic overload protection provides for additional energy savings. This results in a lower level of internal heat, which reduces the need for thermal protection circuits with thermal overload protection. As a result, you benefit from reduced heat generation and hence lower cooling costs. That saves energy.

Flexible use

SIRIUS 3RM1 Motor Starters give you greater freedom when it comes to protecting your motor. You can use a ready-made switch to easily set the motor starters in their specific adjustment range to the current of the connected motor.

On one hand, that reduces the number of device models, saving you warehouse space and processing costs. On the other hand, you remain flexible longer when it comes to protecting your motor. In addition, if a motor in the system is replaced by a more powerful or a weaker model at a later point, in most cases you can simply reset the existing motor starter – eliminating the need to replace it.



The hybrid switching technology of the motor starters combines the benefits of relay technology with those of semiconductor technology, making it particularly energy efficient as well as offering low wear and low interference.

5

Simplicity that pays off

Reduced wiring

Using a device connector, you can supply the motor starter in one assembly without individual wiring.

Main circuit
A three-phase system can be used to quickly, easily and safely supply multiple motor starters in the main circuit: The three-phase busbars are interconnected via a three-phase busbar terminal. The busbar's terminals are arranged in a way that individual devices can be quickly and easily removed from the feeder network.

Easy-to-read status indicator

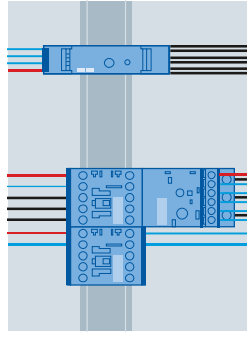
Thanks to the LED status indicator on the housing of the SIRIUS 3RM1 Motor Starters, you can see at a glance whether all the functions are in operation or whether there are any problems. This makes it possible to quickly detect and correct any faults.

Simple connection

You benefit from convenient connection technology when it comes to wiring the motor starter. The SIRIUS 3RM1 Motor Starter control circuit has an optimized angle to provide access to terminals and cables from the same direction. Alternatively, no tools whatsoever are needed for wiring spring-loaded connections: simply insert the cables manually, and you're done.

If necessary, you can individually swap out the removable connection terminals on the unit.

Simple wiring during installation and an easy-to-read status indicator make the SIRIUS 3RM1 Motor Starter a pleasure to use. Whether project planning, assembly, or maintenance – the new SIRIUS 3RM1 Motor Starter will make every day easier for you.



Reduced wiring and significant space savings compared to a conventional design.

The hybrid system supports group configurations up to a base current of 25A.

6

Innovative housing concept

Width

Economical, space-saving width of just 22.5mm



Labeled hinged covers
Simple operation thanks to the hinged covers. The covers are labeled with the connection types of the terminals in the cover.

Device connector
Easy installation and removal thanks to the device connector. The connector is labeled with the connection types of the terminals in the cover.

LED status indicator
Fast, selective start-up, and clear LED error display

Rotary encoder switch
Easy setting of the motor current to be monitored

Test/reset button
Acknowledgment if a malfunction occurs
1. Reset error state or function
2. Perform test
3. Switch from manual to automatic reset

ID matrix code
Fast and easy identification of the motor starter and solid in the case of a fault. The code is available at www.siemens.com/supplies

Connection terminals
Easy, reliable connection thanks to the screw-type or spring-loaded technology

Sealable cover
Simple protection against unauthorized access

Spring-loaded connection

Screw-type connection

Controlling smaller motors

Vielseitige Einsatzbereiche

SIRIUS 3RM1 Motor Starters can be used in many industrial areas to control available motors up to 3kW. They are particularly well suited for use in machine tools and production machinery, as well as in conveyor technology. The devices are optimally suited for group configurations in which multiple motor starters can be controlled by only one circuit breaker.

Ideal addition to the SIRIUS switching technology portfolio for higher switching currents. The new motor starters perfectly round out the existing SIRIUS industrial switching technology portfolio in the field of smaller motors. With a width of just 22.5mm, SIRIUS Motor Starters are perfect for control cabinets where space is at a premium.

Group design for a conveyor system

With SIRIUS 3RM1 Motor Starters, you can quickly and easily implement group control for conveyor systems and production for a wide range of applications, for example for conveyor systems with numerous electric motors. In the main circuit, the three-phase feeder terminal and three-phase busbar supply the complex wiring for the infeed. In a group design, a single circuit breaker can provide short circuit protection up to 55kA. Provisions are in place for the expansion of the conveyor system: The infeed system can be flexibly expanded to allow additional motor starters to be integrated into an existing group design with minimal effort. The SIRIUS Motor Starters are perfect for control cabinets where space is at a premium.



The SIRIUS 3RM1 Motor Starters are an optimum round out the existing SIRIUS switching technology portfolio.



The right type for you

Step 1:
To find the right motor starter, you first need to decide whether you need a direct or a reversing starter.

Step 2:
Decide between the three motor current ranges 0.1 ... 0.5A, 0.4 ... 2.0A, and 1.6 ... 7.0A (even for resistive loads of up to 10A). You can subsequently set the motor starter via the rotary encoder switch on the motor starter – and if the application changes, you can make adjustments within the specific wide setting range.

Step 3:
For additional product specification, choose between the two control voltages 24V DC and 110 ... 230V AC, 110V DC.

Step 4:
Finally, you need to decide which connection technology you prefer: spring-loaded connections or screw-type connections.

All the product data you need for planning your control cabinet is available free of charge on our website: www.siemens.com/3rm1. Available data includes 3D models, dimension drawings, manuals, and edit macros for EPLAN Electric P8. For more information, visit www.siemens.com/planning-efficiency.

Our transparent product portfolio and the online configurator make it a snap to choose the motor starter you need – in just four steps.

Order number overview

SIRIUS 3RM1 Motor Starter		Three-phase standard motor ¹⁾	Adjustment range
Order no.		Standard power rating P	Electronic overload release
3RM1	01	0 ... 0.12 kW	0.1 ... 0.5 A
3RM1	02	0.09 ... 0.75 kW	0.4 ... 2.0 A
3RM1	07	0.55 ... 3 kW	1.6 ... 7.0 A, (10A) ²⁾
		24V DC	Rated control supply voltage V _s
		110 ... 230V AC, 110V DC	Rated control supply voltage V _s
		Spring-type connection	Connection technology
		Spring-loaded connection	Connection technology
		Reversing starter	Function
			Function

¹⁾ Base 4-pin with 40V AC; the concrete start-up and rated data of the motor should be taken into consideration for the selection.
²⁾ Operation of 0.1mV loads with a maximum of 10A.

SIRIUS 3RM1
Motor Starters –
scan and view



Additional information

To learn more about SIRIUS MOTOR STARTERS:
www.siemens.com/motorstarter/3RM1

To learn more about SIRIUS:
www.siemens.com/sirius

Planning Efficiency for SIRIUS:
www.siemens.com/planning-efficiency

Siemens AG
Industry Sector
Industry Automation Division
Control Components and
Systems Engineering
Postfach 23 55
90713 FÜRTH
GERMANY

www.siemens.com/sirius

Subject to change without prior notice
Order No.: E20001-A1100-P305-V1-7600
Dispo 27601
GB120959 MI.CE.SG.MSXX.52.3.01
WS 11121.0
Printed in Germany
© Siemens AG 2012

The information provided in this brochure contains merely general descriptions or characteristics of performance which in actual case of use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract.

All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners.