

## Manual Motor Controllers

Class 11, SMF, MMS and MRS



Refer to the additional brochures listed below for information on other NEMA and general purpose control products. Order on-line via the Siemens Literature Fulfillment System or contact your local Siemens sales office.

- Open NEMA Starters  
(Publication No. NEBR-OPNST-0605)
- Enclosed NEMA Starters  
(Publication No. NEBR-ENCST-0605)
- Pump Controls  
(Publication No. NEBR-PUMPC-0605)
- Lighting & Heating Contactors  
(Publication No. NEBR-LAHCO-0605)
- Control Power Transformers  
(Publication No. NEBR-CPTRA-0605)

Note: The last four digits of the publication number indicate month and year of last revision and may change upon each revision.

## Product Guide

# manual MOTOR STARTERS

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**SIEMENS**

## Manual Motor Starters for Industrial and Construction Applications



Manual starters and switches are used in many applications for local control of equipment in the industrial or construction markets, such as operating power saws, pumps, fans, conveyors, blowers, packaging, sorting and other machinery. These starters are UL listed and CSA approved, and meet the standard national code for wiring practices. They are designed for ease of installation and wiring, and provide large terminals and ample space for wire routing. They can be flush or surface mounted and adapt to multiple NEMA type environmental conditions. Application may vary from a clean indoor hospital environment to the harsh, hazardous indoor and outdoor chemical plants.

### Class SMF

Class SMF fractional horsepower starters provide On-Off control for small single phase motors up to 1 HP AC or up to ¾ HP DC. It also can operate two speed AC, single phase, one or two poles motors.

The SMF product line is available with red or green indicator lights, and a lockable mechanism. Toggle or key operated units for flush or surface mounted devices in open, NEMA Type 1, 3R, 4, 12, 7, and 9 are available for various applications. Heater elements to protect motors from overload currents are used with these devices.



Heating Element for Class SMF



SMFFG1 On-Off



SMFFG1P With Light



SMFFG5 Lockable

### Class MMS and MRS

Class MMS and MRS manual motor switches and manual reversing switches are designed to operate single- or three-phase AC or DC motors. Overload protection should be provided externally, if required. Applications for two speed motors can also use these switches. They are used for up to 10 HP AC and 2 HP DC operated motors.

Class MMS and MRS switches are available in flush or surface mounting options in open type or NEMA Type 1, 3R, 4, 12, 7, and 9 enclosures. A handle guard for NEMA Type 1 enclosures which locks in the off or the on position is available to prevent accidental operation.



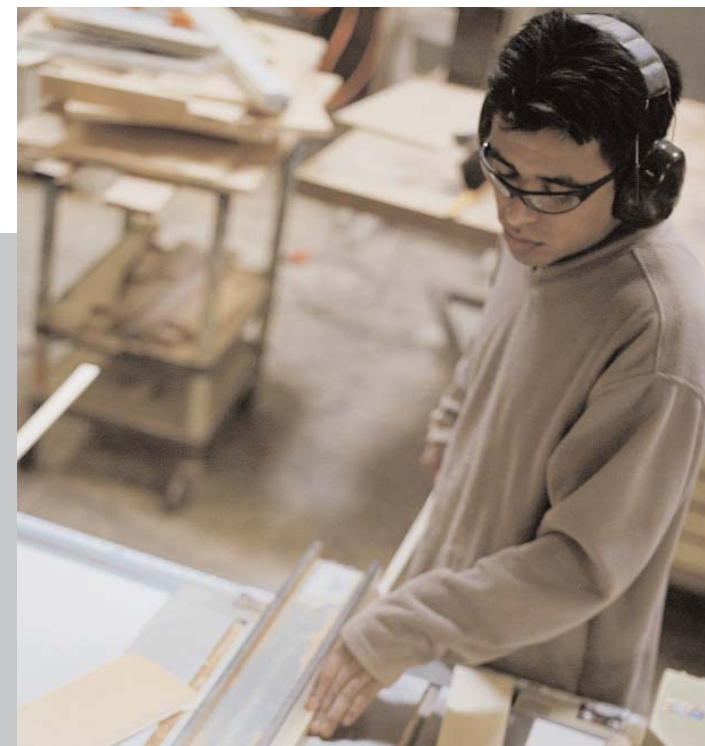
MMSK01 Open



MMSKW1 NEMA 4



Light Kit for Class SMF, MMS, MRS



### Class 11 3RV

Class 11 3RV across the line manual motor starters and switches provide local control for single- or three-phase motors up to 15 HP. Starters have bimetallic heater elements to provide over-current protection. They are available in open, NEMA Type 1 for general purpose applications also NEMA Type 7 and 9 for explosion proof, and NEMA Type 3, 4, 7 and 9 for watertight outdoor applications.

The overload device is ambient compensated which helps prevent the starter from nuisance tripping when the panel temperature is higher than the ambient temperature of the motor. The overload provides class 10 overcurrent protection for the motor. The built-in differential trip bar causes the starter to trip faster on phase loss conditions, protecting the motor.

The 3RV is used to manually control the operation of the machinery while protecting the motors from being damaged. Controllers with the LVP option provide the OSHA requirements for protecting personnel from potential injury caused by the automatic start-up of machinery following a voltage drop or power interruption when low voltage protection is specified.

### Class 11 Accessories

Auxiliary contacts can easily be added to the top or side of the 3RV. Contacts are available as normally open or normally closed or combinations up to 2 NO and 2 NC.

Signaling contacts are used to indicate starter trips including short circuit trips. The undervoltage release indicates low voltage to the motor. For shunt trip indication, use the snap-on shunt trip module. For conforming to the "Type E" self protected combination starter, use the terminal cover to provide protection required for the terminals.



Class 11 Open



Class 11 NEMA 7 & 9



Class 11 NEMA 1



Class 11 Accessories