

Manual Control

Fractional HP Switches, Class MMS, MRS

Class MMS, MRS

Class MMS and MRS motor starting switches provide manual "ON-OFF" control of single or three phase AC motors where overload protection is not required or is provided separately. Compact construction and a 600 volt rating make these switches suitable for a wide range of industrial and commercial uses. Typical applications include small machine tools, pumps, fans, conveyors and many other types of electrical machinery. They can also be used on non-motor loads such as resistance heating applications.

Continuous Current Rating

MMS & MRS: 30 amperes at 250 volts max, 26.4 amperes at 277 volts, 20 amperes at 600 volts max, 30 amperes resistive at 600 volts max.

Two Speed—Class MRS

Two speed manual switches may be used with separate winding three phase or single phase AC motors where overload protection is not required or is provided separately. Two switches are employed to give "ON-OFF" control in each speed.

Reversing—Class MRS

Reversing manual switches provide a compact means of starting, stopping and reversing AC motors where overload protection is not required or is provided separately. They are suitable for use with three phase squirrel cage motors and for single phase motors which can be reversed by reconnecting motor leads. Two switches are used, one to connect the motor forward rotation and one for reverse.

Enclosures

Class MMS, MRS, NEMA Type 1 surface mounting enclosures are sheet steel with a thermo-plastic wrap-around cover for convenience in wiring. The NEMA Type 1 enclosure is also available in an oversized version which allows more wiring space. A zinc alloy die casting is used for NEMA Type 4 enclosures.

Pilot Lights

Red or green neon pilot light units are available for flush mounting plates, NEMA Type 1 enclosures, and NEMA Type 4 enclosures. Pilot lights may be either factory or field installed. (For switches that contain a pilot light, a Red light is standard. For a Green pilot light add "G" to the end of the catalog number.)

Terminals

Binding head screw type terminals are suitable for #10 or smaller copper wire, and are accessible from the front. All terminals are clearly marked.

Mounting

Open types without a pilot light fit standard single gang switch boxes, and can be used with any cover plate having a standard toggle cutout. Single-unit flush mounting types, including those with pilot lights, are suitable for wall mounting in a standard switch box or for machine cavity mounting without a box.

Operation

Available with toggle handle or with removable key type operator to discourage unauthorized operation.

General



Class MMS Switch in a NEMA Type 1 Enclosure

Emergency Off Actuator

A toggle operator extender is available for Class MMS, MRS, NEMA Type 1 surface mounted units. The extender has a red vinyl button that provides a fast and easy method for locating and switching the device's toggle operator into the OFF position. The Emergency Off Actuator is available in kit form only for field installation.

Handle Guard/Lock-Off

An optional handle guard on Class MMS, MRS, NEMA Type 1 enclosed switches prevents accidental operation of the toggle operator and also allows the toggle operator to be padlocked in either the "ON" or "OFF" position. This handle guard is available in kit form for field installation on NEMA Type 1 surface and flush mounting enclosures. Standard NEMA Type 4 metallic enclosures include provisions for padlocking the device in the OFF position.

Manual Control

Switches^①, Class MMS, MRS

Selection



Class MMS Switch in a NEMA Type 1 Enclosure

Ordering Information

- ▶ Heater Elements not Required.
- ▶ Field Modification Kits see page 16-80.
- ▶ Dimensions see page 16-100.
- ▶ Wiring Diagrams see page 16-130.

Horsepower Ratings			DC Ratings					
Device	No of Poles	Motor Type AC	Maximum HP			DC Ratings		
			115V	230V	450-575V	90V	115V	230V
Class MMS	2	Single Phase	2	2	3	1	2	1 1/2
	3	3-Phase	2	7 1/2	10	1	2	1 1/2
Class MRS Reversing	2	Single Phase	2	2	3	1	2	1 1/2
	3	3-Phase	2	7 1/2	10	1	2	1 1/2
Class MMS Two Speed	2	Single Phase	2	2	3	1	2	1 1/2
	3	3-Phase, Constant or Variable Torque	2	7 1/2	10	1	2	1 1/2
	3	3-Phase, Constant Horsepower	2	7 1/2	10	1	2	1 1/2

Switch—Class MMS, Single Phase and 3-Phase

Type of Operator	No of Poles	Switch Features ^②	General Purpose Flush Mounting Open Switch with Flush Plate (No Enclosure Provided)								NEMA Type 1 General Purpose Enclosure Surface Mounting				NEMA Type 3R, 4 & 12 Watertight, Dust-tight Metallic Enclosure with Clear Cover	NEMA Type 4 ^③ Watertight, Dust-tight Metallic Enclosure	NEMA Type 7 & 9 ^④ Class I Groups B, C & D & Class II Groups E, F, G Enclosures			
			Open Type		Gray Flush Plate		Standard Stainless Steel Flush Plate		Jumbo Stainless Steel Flush Plate		Standard		Oversized							
			Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$						
Toggle	2	Standard	MMSK01	32.00	MMSKF1	36.00	MMSKS1	40.50	—	—	MMSKG1	40.50	MMSKGJ1	49.00	MMSKWN1	170.00	MMSKW1	189.00	MMSKR1	207.00
		Red Pilot Light 115V AC	MMSK01A ^③	75.00	MMSKF1A	80.00	MMSKS1A	83.00	MMSKSJ1A	97.00	MMSKG1A	83.00	MMSKGJ1A	91.00	MMSKWN1A	212.00	MMSKW1A	258.00	—	—
		Red Pilot Light 230V AC	MMSK01B ^③	75.00	MMSKF1B	80.00	MMSKS1B	83.00	MMSKSJ1B	97.00	MMSKG1B	83.00	MMSKGJ1B	91.00	MMSKWN1B	212.00	MMSKW1B	258.00	—	—
	3	Standard	MMSK02	82.00	MMSKF2	86.00	MMSKS2	90.00	—	—	MMSKG2	90.00	MMSKGJ2	100.00	MMSKWN2	212.00	MMSKW2	233.00	MMSKR2	254.00
		Red Pilot Light 208-240V AC	MMSK02B ^③	125.00	MMSKF2B	130.00	MMSKS2B	133.00	MMSKSJ2B	147.00	MMSKG2B	133.00	MMSKGJ2B	142.00	MMSKWN2B	281.00	MMSKW2B	302.00	—	—
		Red Pilot Light 440-600V AC	MMSK02C ^③	125.00	MMSKF2C	130.00	MMSKS2C	133.00	MMSKSJ2C	147.00	MMSKG2C	133.00	MMSKGJ2C	142.00	MMSKWN2C	281.00	MMSKW2C	302.00	—	—
Key	2	Standard	MMSK03	49.00	MMSKF3	54.00	MMSKS3	57.00	—	—	MMSKG3	57.00	MMSKGJ3	69.00	MMSKWN3	187.00	—	—	—	—
		Red Pilot Light 115V AC	MMSK03A	91.00	MMSKF3A	97.00	MMSKS3A	101.00	MMSKSJ3A	111.00	MMSKG3A	101.00	MMSKGJ3A	107.00	MMSKWN3A	229.00	—	—	—	—
		Red Pilot Light 230V AC	MMSK03B	91.00	MMSKF3B	97.00	MMSKS3B	101.00	MMSKSJ3B	111.00	MMSKG3B	101.00	MMSKGJ3B	107.00	MMSKWN3B	229.00	—	—	—	—
	3	Standard	MMSK04	127.00	MMSKF4	103.00	MMSKS4	107.00	—	—	MMSKG4	107.00	MMSKGJ4	117.00	MMSKWN4	237.00	—	—	—	—
		Red Pilot Light 208-240V AC	MMSK04B	142.00	MMSKF4B	147.00	MMSKS4B	151.00	MMSKSJ4B	163.00	MMSKG4B	151.00	MMSKGJ4B	160.00	MMSKWN4B	306.00	—	—	—	—
		Red Pilot Light 440-600V AC	MMSK04C	142.00	MMSKF4C	147.00	MMSKS4C	151.00	MMSKSJ4C	163.00	MMSKG4C	151.00	MMSKGJ4C	160.00	MMSKWN4C	306.00	—	—	—	—

Reversing Switch—Class MRS, Single Phase and 3-Phase

Type of Operator	Number of Poles	Suitable Motor Types	Switch Features ^④ (Including Mechanical Interlock)	General Purpose Flush Mounting Open Switch with Flush Plate (No Enclosure Provided)		NEMA Type 1 General Purpose Enclosure Surface Mounting		Replacement Switch Class MRS	
				Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
Toggle	2	Single Phase 3-Lead Repulsion-Induction	Standard	MRSKF11	163.00	MRSKG11	172.00	MRSK01T	40.50
			Red Pilot Device—115V AC	MRSKF11A	233.00	MRSKG11A	242.00	MRSK01AT	83.00
			Red Pilot Device—230V AC	MRSKF11B	233.00	MRSKG11B	242.00	MRSK01BT	83.00
	3	3-Phase; Also Single Phase Capacitor, Split Phase, or 4-Lead Repulsion-Induction	Standard	MRSKF22	258.00	MRSKG22	268.00	MRSK02T	90.00
			Red Pilot Light—110-120V AC	MRSKF22A	328.00	MRSKG22A	336.00	MRSK02AT	133.00
			Red Pilot Light—208-220V AC	MRSKF22B	328.00	MRSKG22B	336.00	MRSK02BT	133.00
		Red Pilot Light—440-600V AC	MRSKF22C	328.00	MRSKG22C	336.00	MRSK02CT	133.00	

Two Speed Switch—Class MMS, Single Phase and 3-Phase

Type of Operator	Number of Poles	Suitable Motor Types	Switch Features ^④ (Including Mechanical Interlock)	General Purpose Flush Mounting Open Switch with Flush Plate (No Enclosure Provided)		NEMA Type 1 General Purpose Enclosure Surface Mounting		Replacement Switch Class MRS	
				Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
Toggle	2	Single Phase Two Winding (3-Lead)	Standard	MMSKF11	163.00	MMSKG11	172.00	MRSK01T	40.50
			(2) Red Pilot Devices—115V AC	MMSKF11A	302.00	MMSKG11A	310.00	MRSK01AT	83.00
			(2) Red Pilot Devices—230V AC	MMSKF11B	302.00	MMSKG11B	310.00	MRSK01BT	83.00
	3	3-Phase Separate Winding (Wye-Connected)	Standard	MMSKF22	258.00	MMSKG22	268.00	MRSK02T	90.00
			(2) Red Pilot Lights—208-240V AC	MMSKF22B	396.00	MMSKG22B	405.00	MRSK02BT	133.00
			(2) Red Pilot Lights—440-600V AC	MMSKF22C	396.00	MMSKG22C	405.00	MRSK02CT	133.00

① Manual switches do not include overloads.

② Furnished with (1) 3/4" NPT outlet in bottom (reversible for top feed). In order to obtain a 3/4" NPT outlet in top and bottom, add suffix letter "H" to type number with List Price adder.

③ Do not use as replacement interiors for NEMA Type 4 metallic enclosures. For replacement unit, order Type MMSK01 or MMSK02 and separate pilot light kit.

④ For switches that contain a pilot light, a Red light is standard. For a Green pilot light add "G" to the end of the catalog number.

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NEMA & General Purpose Control