

Fractional HP Starters, Class SMF

General

Class SMF

Class SMF fractional horsepower starters provide overload protection as well as manual on-off control for small horsepower motors in a variety of industrial and commercial applications. Available in one or two pole versions, these devices are suitable for use with AC single phase motors up to 1 HP. Two pole starters can also be used with DC motors up to $\frac{3}{4}$ HP. Typical applications include fans, conveyors, pumps, and small machine tools.

Continuous Current Rating

16 amperes.

Overload Trip Assembly

Motor protection is provided by a Class SMFH heater element which must be installed before the starter will operate.

Two Speed Starters

Two speed manual starters are designed for control of small single phase AC motors having separate windings for high and low speed operation. Two toggle operated starters are used, with overload protection included for each motor winding. Surface mounting devices, and those with a gray flush plate, utilize a mechanical interlock which allows direct control of the motor by means of the toggle operators.

Enclosures

Class SMF, 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 starters 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

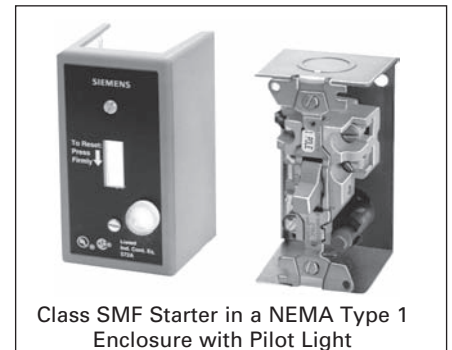
Binding head screw type terminals are suitable for #10 or smaller copper wire, and are accessible from the front. All terminals are clearly marked.

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.



Class SMF Starter in a NEMA Type 1 Enclosure with Pilot Light

Emergency Off Actuator

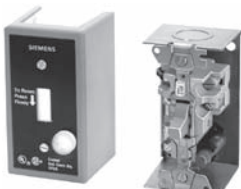
A toggle operator extender is available for Class SMF, NEMA Type 1 surface mounted units. The extender has a red vinyl button that provides a fast and easy method for locating and switching the device's toggle operator into the OFF position. The Emergency Off Actuator is available in kit form only for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

Handle Guard/Lock-Off

An optional handle guard on Class SMF, NEMA Type 1 enclosed starters 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 can be factory installed on NEMA Type 1 enclosed starters and is also 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.

Fractional HP Starters with Melting Alloy Overload, Class SMF

Selection

 <p>Class SMF Starter in a NEMA Type 1 Enclosure with Pilot Light</p>	Ordering Information		Horsepower Ratings			
	<p>► Heater Elements see page 9/124.</p> <p>► Field Modification Kits see page 9/102.</p> <p>► Dimensions see page 9/137.</p> <p>► Wiring Diagrams see page 9/172.</p>			Maximum Horsepower		
				AC Single Phase		DC
			Volts	1-Pole	2-Pole	2-Pole
			115	1	1	¾
			230	1	2	¾
			277	1	1	—

Starter—Class SMF, Single Phase^①

Type of Operator	No. of Poles	Starter Features⑤	General Purpose Flush Mounting Open Starter 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 Watertight, Dust-tight Metallic Enclosure		NEMA Type 3R, 7 & 9 Div 1 and Div 2 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\$	Catalog Number	List Price\$	Catalog Number	List Price\$	Catalog Number	List Price\$
Toggle	1	Standard	SMFF01	—	SMFFF1	—	SMFFS1	—	—	—	SMFFG1	—	SMFFGJ1	—	SMFFWN1	—	—	—	—	
		Red Pilot Light	SMFF01P	—	SMFFF1P	—	SMFFS1P	—	SMFFSJ1P	—	SMFFG1P	—	SMFFGJ1P	—	—	—	—	—	—	
	2	Standard	SMFF02	—	SMFFF2	—	SMFFS2	—	—	—	SMFFG2	—	SMFFGJ2	—	SMFFWN2	—	—	—	—	
		Red Pilot Light	SMFF02P	—	SMFFF2P	—	SMFFS2P	—	SMFFSJ2P	—	SMFFG2P	—	SMFFGJ2P	—	—	—	—	—	—	
Key	1	Standard	SMFF03	—	SMFFF3	—	SMFFS3	—	—	—	SMFFG3	—	SMFFGJ3	—	SMFFWN3	—	—	—	—	
		Red Pilot Light	SMFF03P	—	SMFFF3P	—	SMFFS3P	—	SMFFSJ3P	—	SMFFG3P	—	SMFFGJ3P	—	—	—	—	—	—	
	2	Standard	SMFF04	—	—	SMFFS4	—	—	—	SMFFG4	—	SMFFGJ4	—	SMFFWN4	—	—	—	—	—	
		Red Pilot Light	SMFF04P	—	SMFFF4P	—	SMFFS4P	—	SMFFSJ4P	—	SMFFG4P	—	SMFFGJ4P	—	—	—	—	—	—	

Starter With Handle Guard/Lock-Off—Class SMF, Single Phase^①

Toggle	1	Standard	—	—	④	—	④	—	④	—	SMFFG5	—	SMFFGJ5	—	—	—	SMFFW1 ^②	—	SMFFR1 ^②	—
		Red Pilot Light	—	—	④	—	④	—	④	—	SMFFG5P	—	SMFFGJ5P	—	—	—	SMFFW1P ^②	—	SMFFR1P ^②	—
		(2) ¼" NPT Outlets	—	—	④	—	④	—	④	—	—	—	—	—	—	—	SMFFW1H	—	SMFFR1H	—
		(2) ¾" NPT Outlets and Red Pilot Light	—	—	④	—	④	—	④	—	—	—	—	—	—	—	SMFFW1PH	—	—	—
	2	Standard	—	—	④	—	④	—	④	—	SMFFG6	—	SMFFGJ6	—	—	—	SMFFW2 ^②	—	SMFFR2 ^②	—
		Red Pilot Light	—	—	④	—	④	—	④	—	SMFFG6P	—	SMFFGJ6P	—	—	—	SMFFW2P ^②	—	—	—
		(2) ¼" NPT Outlets	—	—	④	—	④	—	④	—	—	—	—	—	—	—	SMFFW2H	—	SMFFR2H	—
		(2) ¾" NPT Outlets and Red Pilot Light	—	—	④	—	④	—	④	—	—	—	—	—	—	—	SMFFW2PH	—	—	—

One Starter in Duplex Enclosure—Class SMF, Single Phase^①

Type of Operator	Number of Poles	Starter Features ^⑤	General Purpose Flush Mounting Open Starter with Flush Plate - (No Enclosure Provided)				NEMA Type 1 General Purpose Enclosure Surface Mounting		Replacement Starters	
			Gray Flush Plate For Wall or Cavity Mounting		Stainless Steel Flush Plate for Wall or Cavity Mounting					
			Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$	Catalog Number	List Price \$
Toggle	2	Standard	—	—	—	—	SMFFG02	—	—	—
		Red Pilot Light	—	—	—	—	SMFFG02P	—	—	—
Key	2	Red Pilot Light	—	—	—	—	SMFFG04P	—	—	—

Two Starters In Duplex Enclosure—Class SMF, Single Phase^①

Toggle	2 Per Starter	Standard	SMFFF222	—	—	—	SMFFG222	—	—	—
		Red Pilot Light on Each Starter	SMFFF222P	—	—	—	SMFFG222P	—	—	—
Key	2 Per Starter	Red Pilot Light on Each Starter	SMFFF44P	—	—	SMFFS44P	SMFFG44P	—	—	—

Starter And "Auto-Off-Hand" SPDT Selector Switch (AC Only)—Class SMF, Single Phase^①

Toggle	1	Standard	SMFFF71	—	—	—	SMFFG71	—	—	—
		Red Pilot Light	SMFFF71P	—	—	SMFFS71P	SMFFG71P	—	—	—
	2	Standard	—	—	—	—	SMFFG72	—	—	—
		Red Pilot Light	SMFFF72P	—	—	SMFFS72P	SMFFG72P	—	—	—
Key	2	Red Pilot Light	SMFFF74P	—	—	SMFFS74P	SMFFG74P	—	—	—

Two Speed Starters (AC Only)—Class SMF, Single Phase^③

Toggle	1	Mechanical Interlock	SMFFF11	—	—	—	SMFFG11	—	—	SMFF01T
		Mechanical Interlock and (2) Red Pilot Lights	SMFFF11P	—	—	—	SMFFG11P	—	—	SMFF01PT
		Mechanical Interlock, HIGH-OFF-LOW Selector Switch and (2) Red Pilot Lights	—	—	—	—	—	—	—	SMFF01PT
		Mechanical Interlock	SMFFF22	—	—	—	SMFFG22	—	—	—
	2	Mechanical Interlock and (2) Red Pilot Lights	SMFFF22P	—	—	—	SMFFG22P	—	—	SMFF02PT
		Mechanical Interlock, HIGH-OFF-LOW Selector Switch and (2) Red Pilot Lights	—	—	—	SMFFS202P	—	—	—	SMFF02PT

^① One heater element required.

^② Furnished with (1) ¾" NPT Outlet in bottom (reversible for top feed).

^③ Two heater elements required.

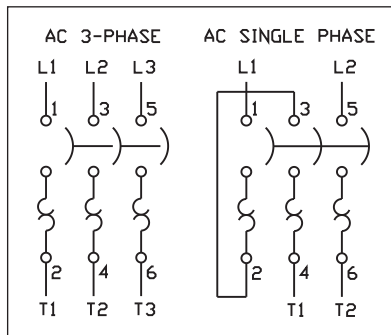
^④ Order Open Type starter plus separate handle guard kit.

^⑤ For starters that contain a pilot light, a Red light is standard. For a Green pilot light add "G" to the end of the catalog number.

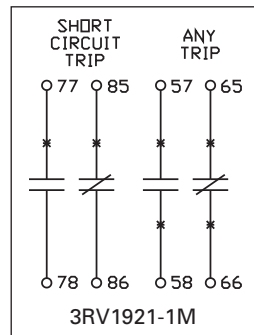
Class 11 - 3RV, SMF, MMS

Wiring Diagrams

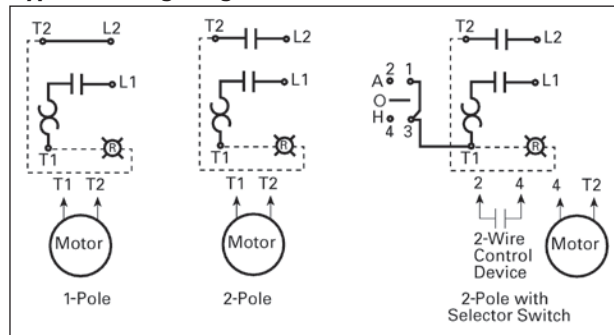
Class 11 - 3RV



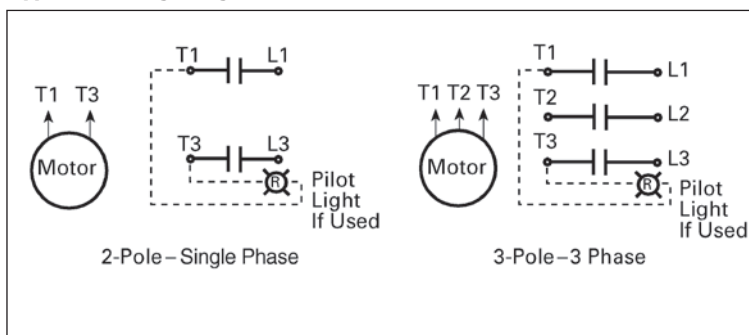
Signaling Contact for Class 11 - 3RV



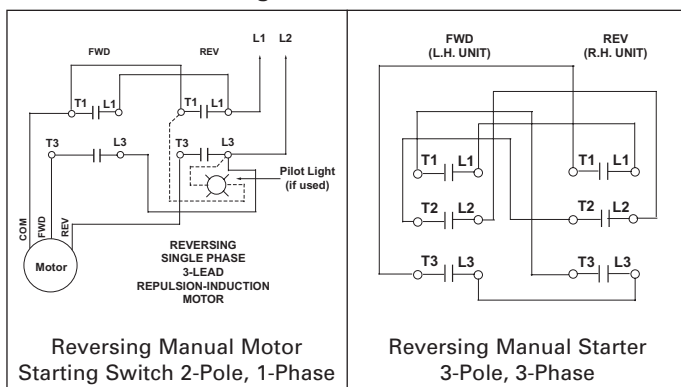
Typical Wiring Diagrams—Class SMF



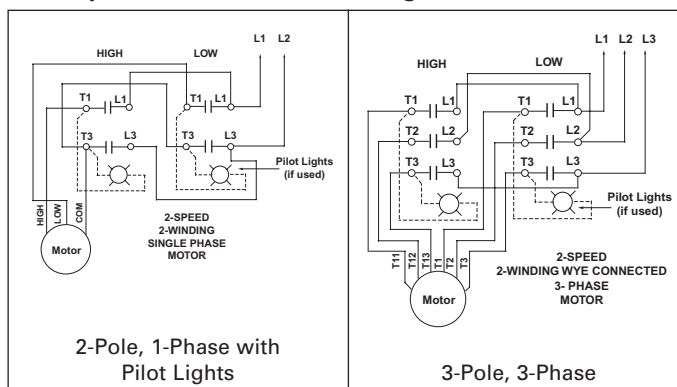
Typical Wiring Diagrams—MMS



AC Reversing Manual Starter and Manual Motor Starting Switches



AC 2-Speed Manual Motor Starting Switches



3-Pole Reversing Switches

