

# 3RV1 Motor Starter Protectors

## For Motor Protection

SIRIUS



3RV10 Class 10  
up to 12A

Description	Ordering Information
<p>The <b>3RV101 MSP's</b>, can be used as components in Group Installation per NEC 430-53(C) to turn motors on and off. Each device has built-in heater elements that provide overload protection and magnetic trip elements to protect the motor. When the <b>3RV101</b> is used as a component in Group Installation, multiple MSP's can be installed below one circuit breaker to protect its own motor. A contactor can be mounted to the MSP to provide a remotely operated starter.</p>	<ul style="list-style-type: none"> <li>▶ ON/OFF rocker mechanism with lockout.</li> <li>▶ Adjustment dial for setting to motor FLA.</li> <li>▶ Class 10 overload trip characteristics.</li> <li>▶ Short circuit trip at 12 times the maximum setting of the FLA adjustment dial.</li> <li>▶ Short circuit current rating:</li> <li>▶ Ambient compensated up to 140° F (applies to side by side mounting).</li> <li>▶ Phase loss sensitivity.</li> <li>▶ Test trip function.</li> <li>▶ Cage Clamp version.</li> <li>▶ Auxiliaries and Accessories see pages 1/8–1/15.</li> <li>▶ General Information see pages 1/28–1/31.</li> <li>▶ Technical Data see pages 1/20–1/27.</li> <li>▶ Dimensions see page 1/32.</li> </ul>

**Note:** Select MSP by motor Full Load Amperes. Horsepower ratings are for reference only.

Illustration	FLA Adjustment Range	Single-Phase HP Ratings		Three-Phase HP Ratings <sup>①</sup>				Instantaneous short circuit release $I >$ A	UL short-circuit breaking capacity @ 480 V $I_{cu}$ kA	Screw connection		Cage clamp connection	
		115V	230V	200V	230V	460V	575V			Catalog No	List Price \$	Catalog No	List Price \$
<b>3RV101 Frame Size S00<sup>②</sup></b>													
	0.11–0.16	—	—	—	—	—	—	2.1	65	3RV1011-0AA10	116.	3RV1011-0AA20	121.
	0.14–0.2	—	—	—	—	—	—	2.6	65	3RV1011-0BA10	116.	3RV1011-0BA20	121.
	0.18–0.25	—	—	—	—	—	—	3.3	65	3RV1011-0CA10	116.	3RV1011-0CA20	121.
	0.22–0.32	—	—	—	—	—	—	4.2	65	3RV1011-0DA10	116.	3RV1011-0DA20	121.
	0.28–0.4	—	—	—	—	—	—	5.2	65	3RV1011-0EA10	116.	3RV1011-0EA20	121.
	0.35–0.5	—	—	—	—	—	—	6.5	65	3RV1011-0FA10	130.	3RV1011-0FA20	135.
	0.45–0.63	—	—	—	—	—	¼	8.2	65	3RV1011-0GA10	130.	3RV1011-0GA20	135.
	0.55–0.8	—	—	—	—	¼	½	10	65	3RV1011-0HA10	130.	3RV1011-0HA20	135.
	0.7–1	—	—	—	—	½	½	13	65	3RV1011-0JA10	130.	3RV1011-0JA20	135.
0.9–1.25	—	—	—	¼	¾	¾	16	65	3RV1011-0KA10	130.	3RV1011-0KA20	135.	
	1.1–1.6	—	¼	¼	½	¾	1	21	65	3RV1011-1AA10	130.	3RV1011-1AA20	135.
	1.4–2	—	½	½	1	1½	2	26	65	3RV1011-1BA10	130.	3RV1011-1BA20	135.
	1.8–2.5	—	¾	¾	1½	2	2	33	65	3RV1011-1CA10	130.	3RV1011-1CA20	135.
	2.2–3.2	¼	¾	¾	1½	2	2	42	65	3RV1011-1DA10	130.	3RV1011-1DA20	135.
	2.8–4	½	1	1	2	3	3	52	65	3RV1011-1EA10	130.	3RV1011-1EA20	135.
	3.5–5	¾	1½	1½	3	4	4	65	65	3RV1011-1FA10	130.	3RV1011-1FA20	135.
	4.5–6.3	1	2	2	4	5	5	82	65	3RV1011-1GA10	130.	3RV1011-1GA20	135.
	5.5–8	1½	3	3	5	7	7	104	65	3RV1011-1HA10	130.	3RV1011-1HA20	135.
	7–10	2	4	4	7	10	10 <sup>③</sup>	130	65	3RV1011-1JA10	130.	3RV1011-1JA20	135.
	9–12	3	6	6	10	15	15	156	65	3RV1011-1KA10	159.	3RV1011-1KA20	164.
<b>Accessories</b>													
Transverse auxiliary switch <sup>③</sup> 1 NO + 1 NC separately								Approx. weight .02 kg		3RV19 01-1E	24.	3RV19 01-2E	26.

① Select MSP by motor full load amps. Horse power ratings for reference only.  
 ② Size S00 MSP are listed for group installation only.  
 ③ For additional auxiliary switches refer to Accessories, Page 1/8 (screw connection) and Page 1/15 (Cage Clamp connection).

④ All setting ranges are suitable for use in group installation for the following ratings.  
 Maximum short-circuit rating:  
 S00-480 V, 3 phase, 65,000 rms symmetrical amps;  
 600 V, 3 phase, 10,000 rms symmetrical amps.

The 3RV1011 devices except suffix -1J and -1K are suitable for tap conductor protection in group applications used on the above levels.



Description	Ordering Information
<p>The <b>3RV102</b>, <b>3RV103</b>, and <b>3RV104</b> MSP's can be used as Type E self-protected manual combination starters per UL508 (<b>3RV102</b> and <b>3RV104</b> require additional terminal adapters) or as components in Group Installation per NEC 430-53(C) to turn motors on and off. Each device has built-in heater elements that provide overload protection and magnetic trip elements to protect the motor. When the <b>3RV</b> is used as a component in Group Installation, multiple MSP's can be installed below one circuit breaker to protect its own motor. A contactor can be mounted to the MSP to provide a remotely operated starter.</p>	<ul style="list-style-type: none"> <li>▶ ON/OFF rotary handle with lockout and visible trip indication.</li> <li>▶ Adjustment dial for setting to motor FLA.</li> <li>▶ Class 10 overload trip characteristics.</li> <li>▶ Short circuit trip at 12 times the maximum setting of the FLA adjustment dial.</li> <li>▶ Short circuit current rating:</li> <li>▶ Ambient compensated up to 140° F (applies to side by side mounting).</li> <li>▶ Phase loss sensitivity.</li> <li>▶ Test trip function.</li> <li>▶ Accessories see pages 1/8–1/15.</li> <li>▶ General Information see pages 1/28–1/31.</li> <li>▶ Technical Data see pages 1/20–1/27.</li> <li>▶ Dimensions see pages 1/32.</li> </ul>

**Note:** Select MSP by motor Full Load Amperes. Horsepower ratings are for reference only.

Illustration	FLA Adjustment Range	Single-Phase HP Ratings		Three-Phase HP Ratings <sup>①</sup>				Instantaneous short-circuit release $I >$ A	UL Short-circuit breaking capacity @ 480 VAC $I_{CU}$ kA	Screw connection	
		115V	230V	200V	230V	460V	575V			Catalog No	List Price \$
	<b>3RV102 Frame Size S0<sup>②</sup></b>										
	0.11–0.16	—	—	—	—	—	—	2.1	65	3RV1021-0AA10	136.
	0.14–0.2	—	—	—	—	—	—	2.6	65	3RV1021-0BA10	136.
	0.18–0.25	—	—	—	—	—	—	3.3	65	3RV1021-0CA10	136.
	0.22–0.32	—	—	—	—	—	—	4.2	65	3RV1021-0DA10	136.
	0.28–0.4	—	—	—	—	—	—	5.2	65	3RV1021-0EA10	136.
	0.35–0.5	—	—	—	—	—	—	6.5	65	3RV1021-0FA10	150.
	0.45–0.63	—	—	—	—	—	—	8.2	65	3RV1021-0GA10	150.
	0.55–0.8	—	—	—	—	—	1/2	10	65	3RV1021-0HA10	150.
	0.7–1	—	—	—	—	1/2	1/2	13	65	3RV1021-0JA10	150.
	0.9–1.25	—	—	—	—	3/4	3/4	16	65	3RV1021-0KA10	150.
	1.1–1.6	—	1/10	—	—	3/4	1	21	65	3RV1021-1AA10	150.
	1.4–2	—	1/6	—	—	1	1 1/2	26	65	3RV1021-1BA10	150.
	1.8–2.5	—	1/6	1/2	1/2	1 1/2	1 1/2	33	65	3RV1021-1CA10	150.
	2.2–3.2	1/10	1/4	3/4	3/4	1 1/2	2	42	65	3RV1021-1DA10	150.
2.8–4	1/6	1/2	3/4	1	2	3	52	65	3RV1021-1EA10	150.	
	<b>3RV103 Frame Size S2<sup>②</sup></b>										
	3.5–5	1/6	1/2	1	1	3	3	65	65	3RV1021-1FA10	150.
	4.5–6.3	1/4	3/4	1 1/2	1 1/2	5	5	82	65	3RV1021-1GA10	150.
	5.5–8	1/3	1	2	2	5	5	104	65	3RV1021-1HA10	150.
	7–10	1/2	1 1/2	3	3	7 1/2	10	130	65	3RV1021-1JA10	150.
	9–12.5	1/2	2	3	3	7 1/2	10	163	65	3RV1021-1KA10	179.
	11–16	1	3	5	5	10	15 <sup>③</sup>	208	65	3RV1021-4AA10	179.
	14–20	1 1/2	3	5	7 1/2	15	20	260	65	3RV1021-4BA10	179.
	17–22	2	3	7 1/2	7 1/2	15	20	286	65	3RV1021-4CA10	179.
	20–25	2	5	7 1/2	7 1/2	15	20	325	65	3RV1021-4DA10	179.
	<b>3RV104 Frame Size S3<sup>②</sup></b>										
	11–16	1	3	5	5	10	15	208	65	3RV1031-4AA10	289.
	14–20	1 1/2	3	5	7 1/2	15	20	260	65	3RV1031-4BA10	289.
	18–25	2	5	7 1/2	10	20	25	325	65	3RV1031-4DA10	289.
	22–32	3	5	10	10	25	30	416	65	3RV1031-4EA10	289.
28–40	3	7 1/2	15	15	30	40	520	65	3RV1031-4FA10	325.	
36–45	5	7 1/2	15	15	30	40	585	65	3RV1031-4GA10	325.	
40–50	5	10	15	20	40	50	650	65	3RV1031-4HA10	325.	
	<b>3RV104 Frame Size S3<sup>②</sup></b>										
	28–40	3	7 1/2	15	15	30	40	520	65	3RV1041-4FA10	357.
	36–50	5	10	15	20	40	50	650	65	3RV1041-4HA10	357.
	45–63	5	15	20	25	50	60	819	65	3RV1041-4JA10	357.
	57–75	7 1/2	15	25	25	60	75	975	65	3RV1041-4KA10	375.
70–90	10	20	30	30	75	100 <sup>③</sup>	1170	65	3RV1041-4LA10	400.	
80–100	10	25	40	40	75	100	1235	65	3RV1041-4MA10	450.	

① Select MSP by motor full load amps. Horse power ratings for reference only.  
 ② Size S0, S2, S3 are listed as type E combination motor controller. Required terminals see page 1/8.  
 ③ Maximum short-circuit ratings in group installations:  
 S0-480 VAC, 3 phase, 65 kA rms  
 600 VAC, 3 phase, 30 kA rms for ratings 0.11 up to 12.5 A

600 VAC, 3 phase, 10 kA rms for ratings 11 up to 25 A  
 The 3RT1021 devices except suffix -4A, -4B, -4C, and -4D are marked suitable for tap conductor protection in group applications, 600 VAC maximum.  
 The 3RT1021 devices with suffix -4A, -4B, and -4C are marked suitable for tap conductor protection in group applications, 480 VAC maximum.  
 S2-480 VAC, 3 phase, 65 kA rms  
 600 VAC, 3 phase, 30 kA rms

The 3RV1031 are marked suitable for tap conductor protection in group applications.  
 S3-480 VAC, 3 phase, 65 kA rms  
 600 VAC, 3 phase, 30 kA rms  
 3RV1041 devices except suffix 4L and 4M are marked suitable for use in tap conductor protection in group applications.  
 3RV1041 devices with the 4L and 4M suffix are marked suitable for tap conductor protection in group applications, 480 V AC maximum.

Refer to pages 1/20 and 1/21 when using an MSP in a Manual Motor Starter or a Manual Self-Protected Combination Motor Controller.