

# 3RV Motor Starter Protectors

## For Motor Protection


SIRIUS



**3RV20 Class 10  
up to 40A**

Description	Ordering Information
<p>The 3RV20x MSP's are UL approved as Self Protected Combination Motor Controllers which are also called Type E. In this application, all the required functions for a motor branch are provided in one device: disconnect, short circuit protection, motor control and overload protection. A type E terminal adaptor is required. The 3RV20x MSP's are also approved for use as follows:</p> <ul style="list-style-type: none"> <li>– Manual Motor Controller: Motor starter, motor disconnect, control and overload—protection.</li> <li>– Group Installation: Motor starter only, motor disconnect, control and overload protection.</li> <li>– Tap conductor Protection in Group Installation acc. NEC: Motor starter only; motor disconnect, control and overload protection.</li> </ul> <p>When the 3RV20x is used with one of the 3 above mentioned approvals, the 3RV20x can be installed downstream of one circuit breaker or fuse set.</p> <p>For more detailed application information and rules how to apply, size and rate the 3RV20x in control panels in general, in group installations or in accordance to international IEC standards visit our website: <a href="http://www.usa.siemens.com/controlpaneldesign">www.usa.siemens.com/controlpaneldesign</a></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 13 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>▶ Terminal versions: screw, spring, ring lug.</li> <li>▶ Auxiliaries and Accessories see pages 1/7–1/17.</li> <li>▶ General Information see pages 1/29–1/32.</li> <li>▶ Technical Data see pages 1/18–1/28.</li> <li>▶ Dimensions see page 1/33.</li> </ul>

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

Illustration	FLA Adjustment Range [A]	Single-Phase HP Ratings		Three-Phase HP Ratings <sup>1)</sup>				Instantaneous short circuit release [A]	UL short-circuit breaking capacity @ 480V [kA]	Size S00 <sup>2) 4)</sup>	
		115V	230V	200V	230V	460V	575V			Order Number	Order Number
	0.11-0.16	—	—	—	—	—	—	2.1	65	3RV2011-0AA●●	—
	0.14-0.2	—	—	—	—	—	—	2.6	65	3RV2011-0BA●●	—
	0.18-0.25	—	—	—	—	—	—	3.3	65	3RV2011-0CA●●	—
	0.22-0.32	—	—	—	—	—	—	4.2	65	3RV2011-0DA●●	—
	0.28-0.4	—	—	—	—	—	—	5.2	65	3RV2011-0EA●●	—
	0.35-0.5	—	—	—	—	—	—	6.5	65	3RV2011-0FA●●	—
	0.45-0.63	—	—	—	—	—	—	8.2	65	3RV2011-0GA●●	3RV2021-0GA●●
	0.55-0.8	—	—	—	—	—	—	10	65	3RV2011-0HA●●	3RV2021-0HA●●
	0.7-1	—	—	—	—	—	1/2	13	65	3RV2011-0JA●●	3RV2021-0JA●●
	0.9-1.25	—	—	—	—	—	1/2	16	65	3RV2011-0KA●●	3RV2021-0KA●●
	1.1-1.6	—	1/10	—	—	—	3/4	21	65	3RV2011-1AA●●	3RV2021-1AA●●
	1.4-2	—	1/8	—	—	—	3/4	26	65	3RV2011-1BA●●	3RV2021-1BA●●
	1.8-2.5	—	1/8	1/2	1/2	1	1 1/2	33	65	3RV2011-1CA●●	3RV2021-1CA●●
	2.2-3.2	1/10	1/4	1/2	3/4	1 1/2	2	42	65	3RV2011-1DA●●	3RV2021-1DA●●
	2.8-4	1/8	1/8	3/4	3/4	2	3	52	65	3RV2011-1EA●●	3RV2021-1EA●●
	3.5-5	1/8	1/2	1	1	3	3	65	65	3RV2011-1FA●●	3RV2021-1FA●●
	4.5-6.3	1/4	1/2	1	1 1/2	3	5	82	65	3RV2011-1GA●●	3RV2021-1GA●●
	5.5-8	1/3	1	2	2	5	5	104	65	3RV2011-1HA●●	3RV2021-1HA●●
	7-10	1/2	1 1/2	2	3	5	7 1/2	130	65	3RV2011-1JA●●	3RV2021-1JA●●
	9-12.5	1/2	2	3	3	7 1/2	10	163	65	3RV2011-1KA●●	3RV2021-1KA●●
	11-16	1	2	3	5	10	—	208	65	3RV2011-4AA●●	3RV2021-4AA●●
	14-20	1 1/2	3	5	5	10	—	260	65	—	3RV2021-4BA●●
	17-22	1 1/2	3	5	7 1/2	15	—	286	65	—	3RV2021-4CA●●
	20-25	2	3	5	7 1/2	15	—	325	65	—	3RV2021-4DA●●
23-28	2	5	7 1/2	10	20	—	364	50	—	3RV2021-4NA●●	
27-32	2	5	7 1/2	10	20	—	400	50	—	3RV2021-4EA●●	
30-36 <sup>3)</sup>	3	5	10	10	25	—	432	12	—	3RV2021-4PA●●	
34-40 <sup>3)</sup>	3	7 1/2	10	10	30	—	480	12	—	3RV2021-4FA●●	

Screw terminals, no auxiliary: ●● = 10  
 Screw Terminals, with 1NO/1NC Aux: ●● = 15  
 Spring terminals, no auxiliary: ●● = 20  
 Spring Terminals, with 1NO/1NC Aux: ●● = 25  
 Ring Lug Terminals, no Auxiliary: ●● = 40

1) Select motor starter protector by motor full load amps. Horse power ratings for reference only.

2) The motor starter protectors rated up to 32 A can be used as manual motor controllers or as Type E combination motor controllers. For use as a Type E combination motor controller, a Type E terminal is required. See accessories page 1/10.

3) These products are NOT certified as Type E combination motor controllers. They can only be used as manual motor controllers.

4) 3RV2 MSP's can only be used with Innovations contactors and accessories



Description	Ordering Information
<p>The 3RV103 / 104 MSP's are UL approved as Self Protected Combination Motor Controllers which are also called Type E. In this application, all the required functions for a motor branch are provided in one device: disconnect, short circuit protection, motor control and overload protection. A type E terminal adaptor is required for 3RV104.</p> <p>The 3RV103 / 104 MSP's are also approved for use as follows:</p> <ul style="list-style-type: none"> <li>– Manual Motor Controller: Motor starter, motor disconnect, control and overload protection.</li> <li>– Group Installation: Motor starter only, motor disconnect, control and overload protection.</li> <li>– Tap conductor Protection in Group Installation acc. NEC: Motor starter only; motor disconnect, control and overload protection.</li> </ul> <p>When the 3RV103 /104 is used with one of the 3 above mentioned approvals, they can be installed downstream of one circuit breaker or fuse set.</p> <p>For more detailed application information and rules how to apply, size and rate the 3RV103 /104 in control panels in general, in group installations or in accordance to international IEC standards visit our website: <a href="http://www.usa.siemens.com/controlpaneldesign">www.usa.siemens.com/controlpaneldesign</a></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 13 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>▶ Auxiliaries and Accessories see pages 1/7–1/17.</li> <li>▶ General Information see pages 1/29–1/32.</li> <li>▶ Technical Data see pages 1/18–1/28.</li> <li>▶ Dimensions see page 1/33.</li> </ul>

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

Illustration	FLA Adjustment Range [A]	Single Phase HP rating <sup>1)</sup>		3 Phase HP Rating <sup>1)</sup>				Inst. Short-Circuit Release [A]	UL AIC (480V) [kA]	Trip Class 10	Trip Class 20
		115V	230V	200V	230V	460V	575V			Order Number <sup>4)</sup>	Order Number <sup>4)</sup>
	<b>3RV103 Frame Size S2</b>										
	11 - 16	1	3	5	5	10	15	208A	65	<b>3RV1031-4AA10</b>	<b>3RV1031-4AB10</b>
	14 - 20	1.5	3	5	7.5	15	20	260A	65	<b>3RV1031-4BA10</b>	<b>3RV1031-4BB10</b>
	18 - 25	2	5	7.5	10	20	25	325A	65	<b>3RV1031-4DA10</b>	<b>3RV1031-4DB10</b>
	22 - 32	3	5	10	10	25	30	416A	65	<b>3RV1031-4EA10</b>	<b>3RV1031-4EB10</b>
	28 - 40	3	7.5	15	15	30	40	520A	65	<b>3RV1031-4FA10</b>	<b>3RV1031-4FB10</b>
	36 - 45	5	7.5	15	15	30	40	585A	65	<b>3RV1031-4GA10</b>	<b>3RV1031-4GB10</b>
40 - 50	5	10	15	20	40	50	650A	65	<b>3RV1031-4HA10</b>	<b>3RV1031-4HB10</b>	
	<b>3RV104 Frame Size S3</b>										
	28 - 40	3	7.5	15	15	30	40	520A	65	<b>3RV1041-4FA10</b>	<b>3RV1042-4FB10</b>
	36 - 50	5	10	15	20	40	50	650A	65	<b>3RV1041-4HA10</b>	<b>3RV1042-4HB10</b>
	45 - 63	5	15	20	25	50	60	819A	65	<b>3RV1041-4JA10</b>	<b>3RV1042-4JB10</b>
	57 - 75	7.5	15	25	25	60	75	975A	65	<b>3RV1041-4KA10</b>	<b>3RV1042-4KB10</b>
	70 - 90	10	20	30	30	75	100 <sup>3)</sup>	1170A	65	<b>3RV1041-4LA10</b>	<b>3RV1042-4LB10</b>
80 - 100	10	25	40	40	75	100 <sup>3)</sup>	1235A	65	<b>3RV1041-4MA10</b>	<b>3RV1042-4MB10</b>	

1) Select motor starter protector by motor full load amps. Horse power ratings for reference only.

2) Size S3 is listed as type E combination motor controller. For required Type E terminals see page 1/10.

3) Shaded ratings apply for group installation only. These ratings do not apply as UL listed manual combination starters.

4) Pre-assembled motor starter protector and transverse auxiliary switch with 1NO + 1NC is available. Replace the last digit of the order no. with a "5".

5) 3RV1 MSP's can only be used with 3RT1 contactors and accessories.

Refer to pages 1/18 to 1/20 when using an MSP in a Manual Motor Starter or a Manual Self-Protected Combination Motor Controller.