

## Product Selection

### For use with Line-connected Motors

- NOTE: See and use the SMC Estimation Wizard and SMC Thermal Estimation Wizard to confirm that the SMC controller selection meets the application requirements. See [Sizing and Selection Tools](#) for more information. For additional assistance, visit [ab.rockwellautomation.com](http://ab.rockwellautomation.com) or contact Industrial Controls Technical Support by email at [raictechsupport@ra.rockwell.com](mailto:raictechsupport@ra.rockwell.com) or by phone at 440-646-5800.

**Table 22 - 200/208V AC SMC Flex Controllers for Use with Line-connected Motors**

Rated Voltage [V AC]	Motor Current [A] <sup>(1)</sup>	Max. kW, 50 Hz	Max. Hp, 60 Hz	Control Power <sup>(2)</sup>	Open Type Cat. No. <sup>(3)</sup>
200/208	1...5	—	1	100...240V AC, 50/60 Hz	150-F5NBD
				24V AC/DC	150-F5NBR
	5...25	—	5	100...240V AC, 50/60 Hz	150-F25NBD
				24V AC/DC	150-F25NBR
	8.6...43	—	10	100...240V AC, 50/60 Hz	150-F43NBD
				24V AC/DC	150-F43NBR
	12...60	—	15	100...240V AC, 50/60 Hz	150-F60NBD
				24V AC/DC	150-F60NBR
	17...85	—	25	100...240V AC, 50/60 Hz	150-F85NBD
				24V AC/DC	150-F85NBR
	27...108	—	30	100...240V AC, 50/60 Hz	150-F108NBD
				24V AC/DC	150-F108NBR
	34...135	—	40	100...240V AC, 50/60 Hz	150-F135NBD
				24V AC/DC	150-F135NBR
	67...201	—	60	100...240V AC, 50/60 Hz	150-F201NBD
				24V AC/DC	150-F201NBR
	84...251	—	75	100...240V AC, 50/60 Hz	150-F251NBD
				24V AC/DC	150-F251NBR
	106...317	—	100	100...240V AC, 50/60 Hz	150-F317NBD
				24V AC/DC	150-F317NBR
120...361	—	125	100...240V AC, 50/60 Hz	150-F361NBD	
			24V AC/DC	150-F361NBR	
160...480	—	150	100...240V AC, 50/60 Hz	150-F480NBD	
			24V AC/DC	150-F480NBR	
208...625	—	200	110/120V AC, 50/60 Hz	150-F625NBE	
			230/240V AC, 50/60 Hz	150-F625NBA	
260...780	—	250	110/120V AC, 50/60 Hz	150-F780NBE	
			230/240V AC, 50/60 Hz	150-F780NBA	
323...970	—	350	110/120V AC, 50/60 Hz	150-F970NBE	
			230/240V AC, 50/60 Hz	150-F970NBA	
416...1250	—	400	110/120V AC, 50/60 Hz	150-F1250NBE	
			230/240V AC, 50/60 Hz	150-F1250NBA	

- (1) Motor FLA rating must fall within specified current range for unit to operate properly. Special consideration should be given when using a motor with a potentially high starting current (greater than ten times motor FLA) with the SMC Flex controller in the Full Voltage starting mode. Contact Rockwell Automation technical support for further guidance.
- (2) For controllers with 24V AC/DC control power, separate 120V or 240V single-phase power supply is required for fan operation.
- (3) Devices rated 108 A and greater are not equipped with line and load terminal lugs. See [page 40](#) for terminal lug kits.

**Table 23 - 230V AC SMC Flex Controllers for Use with Line-connected Motors**

Rated Voltage [V AC]	Motor Current [A] <sup>(1)</sup>	Max. kW, 50 Hz	Max. Hp, 60 Hz	Control Power <sup>(2)</sup>	Open Type Cat. No. <sup>(3)</sup>
230	1...5	1.1	1	100...240V AC, 50/60 Hz	150-F5NBD
				24V AC/DC	150-F5NBR
	5...25	5.5	7.5	100...240V AC, 50/60 Hz	150-F25NBD
				24V AC/DC	150-F25NBR
	8.6...43	11	15	100...240V AC, 50/60 Hz	150-F43NBD
				24V AC/DC	150-F43NBR
	12...60	15	20	100...240V AC, 50/60 Hz	150-F60NBD
				24V AC/DC	150-F60NBR
	17...85	22	30	100...240V AC, 50/60 Hz	150-F85NBD
				24V AC/DC	150-F85NBR
	27...108	30	40	100...240V AC, 50/60 Hz	150-F108NBD
				24V AC/DC	150-F108NBR
	34...135	37	50	100...240V AC, 50/60 Hz	150-F135NBD
				24V AC/DC	150-F135NBR
	67...201	55	75	100...240V AC, 50/60 Hz	150-F201NBD
				24V AC/DC	150-F201NBR
	84...251	75	100	100...240V AC, 50/60 Hz	150-F251NBD
				24V AC/DC	150-F251NBR
	106...317	90	125	100...240V AC, 50/60 Hz	150-F317NBD
				24V AC/DC	150-F317NBR
120...361	110	150	100...240V AC, 50/60 Hz	150-F361NBD	
			24V AC/DC	150-F361NBR	
160...480	132	200	100...240V AC, 50/60 Hz	150-F480NBD	
			24V AC/DC	150-F480NBR	
208...625	200	250	110/120V AC, 50/60 Hz	150-F625NBE	
			230/240V AC, 50/60 Hz	150-F625NBA	
260...780	250	300	110/120V AC, 50/60 Hz	150-F780NBE	
			230/240V AC, 50/60 Hz	150-F780NBA	
323...970	315	400	110/120V AC, 50/60 Hz	150-F970NBE	
			230/240V AC, 50/60 Hz	150-F970NBA	
416...1250	400	500	110/120V AC, 50/60 Hz	150-F1250NBE	
			230/240V AC, 50/60 Hz	150-F1250NBA	

(1) Motor FLA rating must fall within specified current range for unit to operate properly. Special consideration should be given when using a motor with a potentially high starting current (greater than ten times motor FLA) with the SMC Flex controller. Contact Rockwell Automation technical support for further guidance.

(2) For controllers with 24V AC/DC control power, separate 120V or 240V single-phase power supply is required for fan operation.

(3) Devices rated 108 A and greater are not equipped with line and load terminal lugs. See [page 40](#) for terminal lug kits.

**Table 24 - 400/415/460V AC SMC Flex Controllers for Use with Line-connected Motors**

Rated Voltage [V AC]	Motor Current [A] <sup>(1)</sup>	Max. kW, 50 Hz	Max. Hp, 60 Hz	Control Power <sup>(2)</sup>	Open Type Cat. No. <sup>(3)</sup>
400/415 (kW) 460 (Hp)	1...5	2.2	3	100...240V AC, 50/60 Hz	150-F5NBD
				24V AC/DC	150-F5NBR
	5...25	11	15	100...240V AC, 50/60 Hz	150-F25NBD
				24V AC/DC	150-F25NBR
	8.6...43	22	30	100...240V AC, 50/60 Hz	150-F43NBD
				24V AC/DC	150-F43NBR
	12...60	30	40	100...240V AC, 50/60 Hz	150-F60NBD
				24V AC/DC	150-F60NBR
	17...85	45	60	100...240V AC, 50/60 Hz	150-F85NBD
				24V AC/DC	150-F85NBR
	27...108	55	75	100...240V AC, 50/60 Hz	150-F108NBD
				24V AC/DC	150-F108NBR
	34...135	75	100	100...240V AC, 50/60 Hz	150-F135NBD
				24V AC/DC	150-F135NBR
	67...201	110	150	100...240V AC, 50/60 Hz	150-F201NBD
				24V AC/DC	150-F201NBR
	84...251	132	200	100...240V AC, 50/60 Hz	150-F251NBD
				24V AC/DC	150-F251NBR
	106...317	160	250	100...240V AC, 50/60 Hz	150-F317NBD
				24V AC/DC	150-F317NBR
120...361	200	300	100...240V AC, 50/60 Hz	150-F361NBD	
			24V AC/DC	150-F361NBR	
160...480	250	400	100...240V AC, 50/60 Hz	150-F480NBD	
			24V AC/DC	150-F480NBR	
208...625	355	500	110/120V AC, 50/60 Hz	150-F625NBE	
			230/240V AC, 50/60 Hz	150-F625NBA	
260...780	450	600	110/120V AC, 50/60 Hz	150-F780NBE	
			230/240V AC, 50/60 Hz	150-F780NBA	
323...970	560	800	110/120V AC, 50/60 Hz	150-F970NBE	
			230/240V AC, 50/60 Hz	150-F970NBA	
416...1250	710	1000	110/120V AC, 50/60 Hz	150-F1250NBE	
			230/240V AC, 50/60 Hz	150-F1250NBA	

(1) Motor FLA rating must fall within specified current range for unit to operate properly. Special consideration should be given when using a motor with a potentially high starting current (greater than ten times motor FLA) with the SMC Flex controller. Contact Rockwell Automation technical support for further guidance.  
 (2) For controllers with 24V AC/DC control power, separate 120V or 240V single-phase power supply is required for fan operation.  
 (3) Devices rated 108 A and greater are not equipped with line and load terminal lugs. See [page 40](#) for terminal lug kits.

**Table 25 - 500/575V AC SMC Flex Controllers for Use with Line-connected Motors**

Rated Voltage [V AC]	Motor Current [A] <sup>(1)</sup>	Max. kW, 50 Hz	Max. Hp, 60 Hz	Control Power <sup>(2)</sup>	Open Type Cat. No. <sup>(3)</sup>
500 (kW) 575 (Hp)	1...5	2.2	3	100...240V AC, 50/60 Hz	150-F5NCD
				24V AC/DC	150-F5NCR
	5...25	15	20	100...240V AC, 50/60 Hz	150-F25NCD
				24V AC/DC	150-F25NCR
	8.6...43	22	40	100...240V AC, 50/60 Hz	150-F43NCD
				24V AC/DC	150-F43NCR
	12...60	37	50	100...240V AC, 50/60 Hz	150-F60NCD
				24V AC/DC	150-F60NCR
	17...85	55	75	100...240V AC, 50/60 Hz	150-F85NCD
				24V AC/DC	150-F85NCR
	27...108	75	100	100...240V AC, 50/60 Hz	150-F108NCD
				24V AC/DC	150-F108NCR
	34...135	90	125	100...240V AC, 50/60 Hz	150-F135NCD
				24V AC/DC	150-F135NCR
	67...201	132	200	100...240V AC, 50/60 Hz	150-F201NCD
				24V AC/DC	150-F201NCR
	84...251	160	250	100...240V AC, 50/60 Hz	150-F251NCD
				24V AC/DC	150-F251NCR
	106...317	200	300	100...240V AC, 50/60 Hz	150-F317NCD
				24V AC/DC	150-F317NCR
120...361	250	350	100...240V AC, 50/60 Hz	150-F361NCD	
			24V AC/DC	150-F361NCR	
160...480	315	500	100...240V AC, 50/60 Hz	150-F480NCD	
			24V AC/DC	150-F480NCR	
208...625	450	600	110/120V AC, 50/60 Hz	150-F625NCE	
			230/240V AC, 50/60 Hz	150-F625NCA	
260...780	560	800	110/120V AC, 50/60 Hz	150-F780NCE	
			230/240V AC, 50/60 Hz	150-F780NCA	
323...970	710	1000	110/120V AC, 50/60 Hz	150-F970NCE	
			230/240V AC, 50/60 Hz	150-F970NCA	
416...1250	900	1300	110/120V AC, 50/60 Hz	150-F1250NCE	
			230/240V AC, 50/60 Hz	150-F1250NCA	

- (1) Motor FLA rating must fall within specified current range for unit to operate properly. Special consideration should be given when using a motor with a potentially high starting current (greater than ten times motor FLA) with the SMC Flex controller. Contact Rockwell Automation technical support for further guidance.
- (2) For controllers with 24V AC/DC control power, separate 120V or 240V single-phase power supply is required for fan operation.
- (3) Devices rated 108 A and greater are not equipped with line and load terminal lugs. See [page 40](#) for terminal lug kits.

**Table 26 - 690V AC SMC Flex Controllers for Use with Line-connected Motors**

Rated Voltage [V AC]	Motor Current [A] <sup>(1)</sup>	Max. kW, 50 Hz	Max. Hp, 60 Hz	Control Power	Open Type Cat. No. <sup>(2)</sup>
690/Y (kW) <sup>(3)</sup> 600 (Hp)	27...108	90	100	100...240V AC, 50/60 Hz	150-F108NZZ
	34...135	132	125	100...240V AC, 50/60 Hz	150-F135NZZ
	67...201	160	200	100...240V AC, 50/60 Hz	150-F201NZZ
	84...251	200	250	100...240V AC, 50/60 Hz	150-F251NZZ
	106...317	315	400	100...240V AC, 50/60 Hz	150-F317NZZ
	120...361	355	450	100...240V AC, 50/60 Hz	150-F361NZZ
	160...480	450	600	100...240V AC, 50/60 Hz	150-F480NZZ
	208...625	630	800	110/120V AC, 50/60 Hz	150-F625NZE
				230/240V AC, 50/60 Hz	150-F625NZA
	260...780	800	1000	110/120V AC, 50/60 Hz	150-F780NZE
				230/240V AC, 50/60 Hz	150-F780NZA
	323...970	1000	1300	110/120V AC, 50/60 Hz	150-F970NZE
				230/240V AC, 50/60 Hz	150-F970NZA
	416...1250	1200	1600	110/120V AC, 50/60 Hz	150-F1250NZE
230/240V AC, 50/60 Hz				150-F1250NZA	

- (1) Motor FLA rating must fall within specified current range for unit to operate properly. Special consideration should be given when using a motor with a potentially high starting current (greater than ten times motor FLA) with the SMC Flex controller. Contact Rockwell Automation technical support for further guidance.
- (2) Devices rated 108 A and greater are not equipped with line and load terminal lugs. See [page 40](#) for terminal lug kits.
- (3) To be used only in a Y-type system.

### For Use with Delta-connected Motors

- NOTE: See and use the SMC Estimation Wizard and SMC Thermal Estimation Wizard to confirm that the SMC controller selection meets the application requirements. See [Sizing and Selection Tools](#) for more information. For additional assistance, visit [ab.rockwellautomation.com](http://ab.rockwellautomation.com) or contact Industrial Controls Technical Support by email at [raictechsupport@ra.rockwell.com](mailto:raictechsupport@ra.rockwell.com) or by phone at 440-646-5800.

**Table 27 - 200/208V AC SMC Flex Controllers for Use with Delta-connected Motors**

Rated Voltage [V AC]	Motor Current [A] <sup>(1)</sup>	Max. kW, 50 Hz	Max. Hp, 60 Hz	Control Power <sup>(2)</sup>	Open Type Cat. No. <sup>(3)</sup>
200/208	1.7...8.7	—	2	100...240V AC, 50/60 Hz	150-F5NBD
				24V AC/DC	150-F5NBR
	8.7...43	—	10	100...240V AC, 50/60 Hz	150-F25NBD
				24V AC/DC	150-F25NBR
	14.9...74	—	20	100...240V AC, 50/60 Hz	150-F43NBD
				24V AC/DC	150-F43NBR
	20.8...104	—	30	100...240V AC, 50/60 Hz	150-F60NBD
				24V AC/DC	150-F60NBR
	29.4...147	—	40	100...240V AC, 50/60 Hz	150-F85NBD
				24V AC/DC	150-F85NBR
	47...187	—	60	100...240V AC, 50/60 Hz	150-F108NBD
				24V AC/DC	150-F108NBR
	59...234	—	75	100...240V AC, 50/60 Hz	150-F135NBD
				24V AC/DC	150-F135NBR
	116...348	—	100	100...240V AC, 50/60 Hz	150-F201NBD
				24V AC/DC	150-F201NBR
	145...435	—	150	100...240V AC, 50/60 Hz	150-F251NBD
				24V AC/DC	150-F251NBR
	183...549	—	200	100...240V AC, 50/60 Hz	150-F317NBD
				24V AC/DC	150-F317NBR
208...625	—	200	100...240V AC, 50/60 Hz	150-F361NBD	
			24V AC/DC	150-F361NBR	
277...831	—	300	100...240V AC, 50/60 Hz	150-F480NBD	
			24V AC/DC	150-F480NBR	
283...850	—	300	110/120V AC, 50/60 Hz	150-F625NBE	
			230/240V AC, 50/60 Hz	150-F625NBA	
300...900	—	300	110/120V AC, 50/60 Hz	150-F780NBE	
			230/240V AC, 50/60 Hz	150-F780NBA	
400...1200	—	400	110/120V AC, 50/60 Hz	150-F970NBE	
			230/240V AC, 50/60 Hz	150-F970NBA	
533...1600	—	500	110/120V AC, 50/60 Hz	150-F1250NBE	
			230/240V AC, 50/60 Hz	150-F1250NBA	

- (1) Motor FLA rating must fall within specified current range for unit to operate properly. Special consideration should be given when using a motor with a potentially high starting current (greater than ten times motor FLA) with the SMC Flex controller. Contact Rockwell Automation technical support for further guidance.
- (2) For controllers with 24V AC/DC control power, separate 120V or 240V single-phase power supply is required for fan operation.
- (3) Devices rated 108 A and greater are not equipped with line and load terminal lugs. See [page 40](#) for terminal lug kits.

**Table 28 - 230V AC SMC Flex Controllers for Use with Delta-connected Motors**

Rated Voltage [V AC]	Motor Current [A] <sup>(1)</sup>	Max. kW, 50 Hz	Max. Hp, 60 Hz	Control Power <sup>(2)</sup>	Open Type Cat. No. <sup>(3)</sup>
230	1.7...8.7	2.2	2	100...240V AC, 50/60 Hz	150-F5NBD
				24V AC/DC	150-F5NBR
	8.7...43	11	15	100...240V AC, 50/60 Hz	150-F25NBD
				24V AC/DC	150-F25NBR
	14.9...74	22	25	100...240V AC, 50/60 Hz	150-F43NBD
				24V AC/DC	150-F43NBR
	20.8...104	30	40	100...240V AC, 50/60 Hz	150-F60NBD
				24V AC/DC	150-F60NBR
	29.4...147	45	50	100...240V AC, 50/60 Hz	150-F85NBD
				24V AC/DC	150-F85NBR
	47...187	55	60	100...240V AC, 50/60 Hz	150-F108NBD
				24V AC/DC	150-F108NBR
	59...234	75	75	100...240V AC, 50/60 Hz	150-F135NBD
				24V AC/DC	150-F135NBR
	116...348	110	125	100...240V AC, 50/60 Hz	150-F201NBD
				24V AC/DC	150-F201NBR
	145...435	132	150	100...240V AC, 50/60 Hz	150-F251NBD
				24V AC/DC	150-F251NBR
	183...549	160	200	100...240V AC, 50/60 Hz	150-F317NBD
				24V AC/DC	150-F317NBR
208...625	200	250	100...240V AC, 50/60 Hz	150-F361NBD	
			24V AC/DC	150-F361NBR	
277...831	250	350	100...240V AC, 50/60 Hz	150-F480NBD	
			24V AC/DC	150-F480NBR	
283...850	250	350	110/120V AC, 50/60 Hz	150-F625NBE	
			230/240V AC, 50/60 Hz	150-F625NBA	
300...900	250	350	110/120V AC, 50/60 Hz	150-F780NBE	
			230/240V AC, 50/60 Hz	150-F780NBA	
400...1200	400	400	110/120V AC, 50/60 Hz	150-F970NBE	
			230/240V AC, 50/60 Hz	150-F970NBA	
533...1600	500	600	110/120V AC, 50/60 Hz	150-F1250NBE	
			230/240V AC, 50/60 Hz	150-F1250NBA	

(1) Motor FLA rating must fall within specified current range for unit to operate properly. Special consideration should be given when using a motor with a potentially high starting current (greater than ten times motor FLA) with the SMC Flex controller. Contact Rockwell Automation technical support for further guidance.  
 (2) For controllers with 24V AC/DC control power, separate 120V or 240V single-phase power supply is required for fan operation.  
 (3) Devices rated 108 A and greater are not equipped with line and load terminal lugs. See [page 40](#) for terminal lug kits.

**Table 29 - 400/415/460V AC SMC Flex Controllers for Use with Delta-connected Motors**

Rated Voltage [V AC]	Motor Current [A] <sup>(1)</sup>	Max. kW, 50 Hz	Max. Hp, 60 Hz	Control Power <sup>(2)</sup>	Open Type Cat. No. <sup>(3)</sup>
400/415 (kW) 460 (Hp)	1.7...8.7	4	5	100...240V AC, 50/60 Hz	150-F5NBD
				24V AC/DC	150-F5NBR
	8.7...43	22	30	100...240V AC, 50/60 Hz	150-F25NBD
				24V AC/DC	150-F25NBR
	14.9...74	37	50	100...240V AC, 50/60 Hz	150-F43NBD
				24V AC/DC	150-F43NBR
	20.8...104	55	75	100...240V AC, 50/60 Hz	150-F60NBD
				24V AC/DC	150-F60NBR
	29.4...147	75	100	100...240V AC, 50/60 Hz	150-F85NBD
				24V AC/DC	150-F85NBR
	47...187	90	125	100...240V AC, 50/60 Hz	150-F108NBD
				24V AC/DC	150-F108NBR
	59...234	132	150	100...240V AC, 50/60 Hz	150-F135NBD
				24V AC/DC	150-F135NBR
	116...348	160	250	100...240V AC, 50/60 Hz	150-F201NBD
				24V AC/DC	150-F201NBR
	145...435	250	350	100...240V AC, 50/60 Hz	150-F251NBD
				24V AC/DC	150-F251NBR
	183...549	315	450	100...240V AC, 50/60 Hz	150-F317NBD
				24V AC/DC	150-F317NBR
	208...625	355	500	100...240V AC, 50/60 Hz	150-F361NBD
				24V AC/DC	150-F361NBR
	277...831	450	700	100...240V AC, 50/60 Hz	150-F480NBD
				24V AC/DC	150-F480NBR
283...850	500	700	110/120V AC, 50/60 Hz	150-F625NBE	
			230/240V AC, 50/60 Hz	150-F625NBA	
300...900	500	700	110/120V AC, 50/60 Hz	150-F780NBE	
			230/240V AC, 50/60 Hz	150-F780NBA	
400...1200	710	1000	110/120V AC, 50/60 Hz	150-F970NBE	
			230/240V AC, 50/60 Hz	150-F970NBA	
533...1600	900	1400	110/120V AC, 50/60 Hz	150-F1250NBE	
			230/240V AC, 50/60 Hz	150-F1250NBA	

- (1) Motor FLA rating must fall within specified current range for unit to operate properly. Special consideration should be given when using a motor with a potentially high starting current (greater than ten times motor FLA) with the SMC Flex controller. Contact Rockwell Automation technical support for further guidance.
- (2) For controllers with 24V AC/DC control power, separate 120V or 240V single-phase power supply is required for fan operation.
- (3) Devices rated 108 A and greater are not equipped with line and load terminal lugs. See [page 40](#) for terminal lug kits.