

**BULLETIN 2407**

*Combination Full Voltage Reversing Starter with Circuit Breaker (FVR)*

Starter Size (Amps) UL/ cUL	Nominal Horsepower (Nominal kW) The horsepower and kW ratings shown are nominal.					Space Factor <sup>[1]</sup>	Catalog Number <sup>[2]</sup> Wiring Type B-D—Class I		Delivery Program	
	Line Voltage						NEMA Type 1/1G	NEMA Type 12		
	220-230V <sup>[3]</sup>	240V	380-415V <sup>[3]</sup>	480V	600V					
16	(0.12-5.5)	0.125-5	(0.12-7.5)	0.125-10	0.125-10	0.5	2407B-C016A_ _	2407B-C016D_ _	[4]	
23	(0.12-7.5)	0.125-7.5	(0.12-11)	0.125-15	0.125-15	0.5	2407B-C023A_ _	2407B-C023D_ _		
30	(5.5-7.5)	7.5-10	(11-15)	15-20	15-20	1.0	2407B-C030A_ _	2407B-C030D_ _		
37	(5.5-11)	7.5-10	(11-18.5)	15-25	15-25	1.0	2407B-C037A_ _	2407B-C037D_ _		
43	(5.5-11)	7.5-15	(11-22)	15-30	15-30		2407B-C043A_ _	2407B-C043D_ _		
60	(7.5-18.5)	10-20	(15-30)	20-40	25-40	1.5	2407B-C060A_ _	2407B-C060D_ _		
72	(7.5-22)	10-25	(15-37)	20-50	25-50		2407B-C072A_ _	2407B-C072D_ _		
85	(7.5-22)	10-30	(15-45)	20-60	25-60	1.5	2407B-C085A_ _	2407B-C085D_ _		
110	(30)	30-40	(45-55)	60-75	60-100	2.0 <sup>[5]</sup>	2407B-B110A_ _	2407B-B110D_ _		
180	(30)	50	—	100	125	2.5 <sup>[5]</sup>	2407B-B180A_ _	2407B-B180D_ _		
	(45)	60	(55-90)	125-150	150		2407B-B180A_ _	2407B-B180D_ _		
250	(37-75)	75-100	(75-132)	200	200-250	3.5	2407B-B250A_ _	2407B-B250D_ _		
304 <sup>[6]</sup>	(90)	—	(150-160)	250	300	4.0	2407B-B300A_ _	2407B-B300D_ _		PE

[1] When selecting certain options, a larger space factor may be required than is listed in this table. To determine actual space requirements, see Options section beginning on page 26 and related footnotes.

[2] The catalog numbers listed are not complete:

- Select the appropriate **control voltage code** from page 21 to identify the control type desired (e.g., 2407B-C016ABD).
- If horsepower rated, select the **number** from page 21 that corresponds to the nominal horsepower desired (e.g., 2407B-C016ABD-41).
- If kW rated, select the **number** from page 21 that corresponds to the nominal kW desired (e.g., 2407B-C016ABD-41K).
- Select the appropriate **suffix letter** from page 21 to identify the circuit breaker type (e.g., 2407B-C016ABD-41CA or 2407B-C016ABD-41KCA).
- Select the appropriate **code** from page 29 to identify the overload relay size (e.g., 2407B-C016ABD-41CA-7FEA4H).
- The catalog numbers listed include an external reset button for the overload relay. To order catalog numbers **without** the external reset button, replace the letter “A” with the letter “K” (e.g., 2407B-C016K\_ \_) or replace the letter “D” with the letter “J” (e.g., 2407B-C016J\_ \_).

[3] Units with these ratings are **NOT** UL listed or cUL certified.

[4] Units with voltages of 240V, 480V, or 600V are on the SC delivery program. Units with voltages of 220V, 230V, 380V, 400V, or 415V are on the PE delivery program.

[5] When selecting circuit breaker type CT or CM, add 0.5 space factor.

[6] 600A vertical bus is required.

Spare Allen-Bradley Parts

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Control Voltage Code								Control Type
220V	230V	240V	380V	400V	415V	480V	600V	
—	—	A	—	—	—	B	C	120V, 60Hz Transformer Control <sup>[1]</sup>
—	—	AD	—	—	—	BD	CD	120V, 60Hz Separate Control <sup>[2]</sup>
P	—	—	N	—	I	—	—	110V, 50Hz Transformer Control <sup>[1],[3]</sup>
PS	—	—	NS	—	IS	—	—	110V, 50Hz Separate Control <sup>[2]</sup>
—	P	—	—	KN	—	—	—	115V, 50Hz Transformer Control <sup>[1],[3]</sup>
—	PS	—	—	KNS	—	—	—	115V, 50Hz Separate Control <sup>[2]</sup>
—	—	—	NP	—	—	—	—	220V, 50Hz Transformer Control <sup>[1],[3]</sup>
—	—	—	NP	—	—	—	—	220V, 50Hz Separate Control <sup>[2]</sup>
—	—	—	—	KNP	—	—	—	230V, 50Hz Transformer Control <sup>[1],[3]</sup>
—	—	—	—	KNP	—	—	—	230V, 50Hz Separate Control <sup>[2]</sup>
—	—	—	—	—	IT	—	—	240V, 50Hz Transformer Control <sup>[1],[3]</sup>
—	—	—	—	—	IT	—	—	240V, 50Hz Separate Control <sup>[2]</sup>
—	—	—	NLP	—	—	—	—	220V, 50Hz Line to Neutral Control (Separate Control) <sup>[4],[5]</sup>
—	—	—	—	KNLP	—	—	—	230V, 50Hz Line to Neutral Control (Separate Control) <sup>[4],[5]</sup>
—	—	—	—	—	ILT	—	—	240V, 50Hz Line to Neutral Control (Separate Control) <sup>[4],[5]</sup>

- [1] Select a control circuit transformer. See Options section beginning on page 26.
- [2] Control circuit fusing (option 21) and/or disconnect interlock (option 98) may be required to comply with NEC/CEC. See Options section beginning on page 26.
- [3] Incorporates primary taps for future conversion to new global IEC voltage standards (e.g., 400V/115V/230V). Allows conversion without the need to replace transformers or coils.
- [4] Requires horizontal neutral bus and vertical neutral bus in 9" (228.60 mm) vertical wireway. Refer to publication 2100-PL001x-EN-P, Section Modifications, to select.
- [5] Select a control circuit fusing (option 21—see Options section beginning on page 26).

**Numerical Values Assigned to Horsepower Ratings  
(Applicable to 240V, 480V, and 600V only)**

Horsepower	Number	Horsepower	Number
0.125	30	20	43
0.25	31	25	44
0.33	32	30	45
0.5	33	40	46
0.75	34	50	47
1	35	60	48
1.5	36	75	49
2	37	100	50
3	38	125	51
5	39	150	52
7.5	40	200	54
10	41	250	56
15	42	300	57

**Numerical Values Assigned to kW Ratings  
(Applicable to 220V, 230V, and 380-415V only)**

kW	Number	kW	Number
0.12	30K	15	43K
0.18	31K	18.5	44K
0.25	32K	22	45K
0.37	33K	30	46K
0.55	34K	37	47K
0.75	35K	45	48K
1.1	36K	55	49K
1.5	37K	75	50K
2.2	38K	90	51K
3.7	39K	110	52K
5.5	40K	132	53K
7.5	41K	150	54K
11	42K	160	55K

		Starter Size	Suffix	Frame
Instantaneous (Magnetic only) Circuit Breaker	High Interrupting Capacity <sup>[1]</sup>	16A-180A	CA	HMCP
		180A-250A	CA	HMCP 250-400
		304A	CA	HMCP 600
Inverse Time (Thermal Magnetic) Circuit Breaker	Standard Interrupting Capacity <sup>[1]</sup>	16A-85A	CT	FDB
		110A-250A	CT	JD
		180A-250A	CT	KD
		304A	CT	LD
	High Interrupting Capacity <sup>[1]</sup>	16A-85A	CM	HFD
		110A-250A	CM	HJD
		180A-250A	CM	HKD
		304A	CM	HLD

[1] For combination unit short circuit withstand rating, see Appendix on page 34.