

NEMA Full Voltage Power Devices

NEMA Rated Full Voltage Starters - Magnetic

Section 1

CR308, CR408 Magnetic Starters

Nonreversing, Combination, NEMA Type 1, 3R, 12, 4/4X

NEMA Sizes 0-6, Nonfusible Disconnect Type

600 Volts Maximum 50/60 Hertz

List Price includes a holding interlock, pressure terminals for the line and load connections, plus a 3-leg block type overload relay (manual reset). All enclosures include external reset. Three heaters should be ordered as separate items. See pages 1-153 to 1-159 for selection.

CR308/408 Nonfusible Disconnect

Voltage (60Hz)	NEMA Size	Maximum Horsepower	Continuous Amp Rating	NEMA Type 1		NEMA Type 3R		NEMA Type 12		NEMA Type 4/4X	
				Product Number CR	List Price GO-10G1	Product Number CR	List Price GO-10G1	Product Number CR	List Price GO-10G1	Product Number CR	List Price GO-10G1
200-208	0	3	18	308BT081A1AAAAA		408B6081A1AAAAA		408B2081A1AAAAA		408B4081A1AAAAA	
200-208	1	7 1/2	27	308CT081A1AAAAA		408C6081A1AAAAA		408C2081A1AAAAA		408C4081A1AAAAA	
200-208	2	10	45	308DT081A1AAAAA		408D6081A1AAAAA		408D2081A1AAAAA		408D4081A1AAAAA	
200-208	3	25	90	408E1081A1AAAAA		408E6081A1AAAAA		408E2081A1AAAAA		408E4081A1AAAAA	
200-208	4	40	135	408F1081A1AAAAA		408F6081A1AAAAA		408F2081A1AAAAA		408F4081A1AAAAA	
200-208	5	75	270	308G123AAA		308G623AAAA		308G223AEA		308G423AAAA	
200-208	6	150	540	308HH123AAAA		308HH623AAAA		308HH223AAEA		308HH423AAAA ¹	
230-240	0	3	18	308BT031A1AAAAA		408B6031A1AAAAA		408B2031A1AAAAA		408B4031A1AAAAA	
230-240	1	7 1/2	27	308CT031A1AAAAA		408C6031A1AAAAA		408C2031A1AAAAA		408C4031A1AAAAA	
230-240	2	15	45	308DT031A1AAAAA		408D6031A1AAAAA		408D2031A1AAAAA		408D4031A1AAAAA	
230-240	3	30	90	408E1031A1AAAAA		408E6031A1AAAAA		408E2031A1AAAAA		408E4031A1AAAAA	
230-240	4	50	135	408F1031A1AAAAA		408F6031A1AAAAA		408F2031A1AAAAA		408F4031A1AAAAA	
230-240	5	100	270	308G103AAA		308G603AAAA		308G203AEA		308G403AAAA	
230-240	6	200	540	308HH103AAAA		308HH603AAAA		308HH203AAEA		308HH403AAAA ¹	
460-480	0	5	18	308BT041A1AAAAA		408B6041A1AAAAA		408B2041A1AAAAA		408B4041A1AAAAA	
460-480	1	10	27	308CT041A1AAAAA		408C6041A1AAAAA		408C2041A1AAAAA		408C4041A1AAAAA	
460-480	2	25	45	308DT041A1AAAAA		408D6041A1AAAAA		408D2041A1AAAAA		408D4041A1AAAAA	
460-480	3	50	90	408E1041A1AAAAA		408E6041A1AAAAA		408E2041A1AAAAA		408E4041A1AAAAA	
460-480	4	100	135	408F1041A1AAAAA		408F6041A1AAAAA		408F2041A1AAAAA		408F4041A1AAAAA	
460-480	5	200	270	308G104AAA		308G604AAAA		308G204AEA		308G404AAAA	
460-480	6	400	540	308HH104AAAA		308HH604AAAA		308HH204AAEA		308HH404AAAA ¹	
575-600	0	5	18	308BT051A1AAAAA		408B6051A1AAAAA		408B2051A1AAAAA		408B4051A1AAAAA	
575-600	1	10	27	308CT051A1AAAAA		408C6051A1AAAAA		408C2051A1AAAAA		408C4051A1AAAAA	
575-600	2	25	45	308DT051A1AAAAA		408D6051A1AAAAA		408D2051A1AAAAA		408D4051A1AAAAA	
575-600	3	50	90	408E1051A1AAAAA		408E6051A1AAAAA		408E2051A1AAAAA		408E4051A1AAAAA	
575-600	4	100	135	408F1051A1AAAAA		408F6051A1AAAAA		408F2051A1AAAAA		408F4051A1AAAAA	
575-600	5	200	270	308G105AAA		308G605AAAA		308G205AEA		308G405AAAA	
575-600	6	400	540	308HH105AAAA		308HH605AAAA		308HH205AAEA		308HH405AAAA ¹	

¹Painted steel Type 4 enclosure is standard for NEMA Size 6 forms.

- NEMA Size 0-6 starters with 115-120 Volt, 60-Hertz coil for separate control are available at listed prices. To order, replace Digits 8 and 9 of listed Product Numbers with 02.
Example: CR408C2051A1AAAAA with 115-120 Volt, 60-Hertz coil for separate control becomes CR408C2021A1AAAAA.
- Motor full load current should not exceed continuous ampere rating of starter.



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NEMA Sizes 0-6, Fusible Disconnect Type

600 Volts Maximum 50/60 Hertz

List Price includes a holding interlock, pressure terminals for the line and load connections, plus a 3-leg block type overload relay (manual reset). Fuses not included. All enclosures include external reset. Three heaters should be ordered as separate items. See pages 1-153 to 1-159 for selection.

CR308/408 Fusible Disconnect (Class H Fuse Clips)

Voltage (60Hz)	NEMA Size	Maximum Horsepower	Continuous		NEMA Type 1		NEMA Type 3R		NEMA Type 12		NEMA Type 4/4X	
			Amp Rating	Fuse Clip Amp Rating	Product Number CR	Product Number CR	Price	Product Number CR	Price	Product Number CR	Price	
200-208	0	3	18	30	308BT08HA1AAAAA	408B608HA1AAAAA	408B208HA1AAAAA	408B408HA1AAAAA				
200-208	1	7 1/2	27	60	308CT08HB1AAAAA	408C608HB1AAAAA	408C208HB1AAAAA	408C408HB1AAAAA				
200-208	2	10	45	100	308DT08HC1AAAAA	408D608HC1AAAAA	408D208HC1AAAAA	408D408HC1AAAAA				
200-208	3	25	90	200 ¹	408E108HD1AAAAA	408E608HD1AAAAA	408E208HD1AAAAA	408E408HD1AAAAA				
200-208	4	40	135	400 ¹	408F108HE1AAAAA	408F608HE1AAAAA	408F208HE1AAAAA	408F408HE1AAAAA				
200-208	5	75	270	400 ¹	308G123BAA	308G623BAAA	308G223BEA	308G423BAAA				
230-240	0	3	18	30	308BT03HA1AAAAA	408B603HA1AAAAA	408B203HA1AAAAA	408B403HA1AAAAA				
230-240	1	7 1/2	27	60	308CT03HB1AAAAA	408C603HB1AAAAA	408C203HB1AAAAA	408C403HB1AAAAA				
230-240	2	15	45	100	308DT03HC1AAAAA	408D603HC1AAAAA	408D203HC1AAAAA	408D403HC1AAAAA				
230-240	3	30	90	200 ¹	408E103HD1AAAAA	408E603HD1AAAAA	408E203HD1AAAAA	408E403HD1AAAAA				
230-240	4	50	135	400 ¹	408F103HE1AAAAA	408F603HE1AAAAA	408F203HE1AAAAA	408F403HE1AAAAA				
230-240	5	100	270	400 ¹	308G103BAA	308G603BAAA	308G203BEA	308G403BAAA				
460-480	0	5	18	30	308BT04H31AAAAA	408B604H31AAAAA	408B204H31AAAAA	408B404H31AAAAA				
460-480	1	7 1/2	27	30	308CT04H31AAAAA	408C604H31AAAAA	408C204H31AAAAA	408C404H31AAAAA				
460-480	1	10	27	60	308CT04H61AAAAA	408C604H61AAAAA	408C204H61AAAAA	408C404H61AAAAA				
460-480	2	15	45	60	308DT04H61AAAAA	408D604H61AAAAA	408D204H61AAAAA	408D404H61AAAAA				
460-480	2	25	45	100	308DT04H11AAAAA ¹	408D604H11AAAAA	408D204H11AAAAA	408D404H11AAAAA				
460-480	3	30	90	100	408E104H11AAAAA	408E604H11AAAAA	408E204H11AAAAA	408E404H11AAAAA				
460-480	3	50	90	200 ¹	408E104H21AAAAA	408E604H21AAAAA	408E204H21AAAAA	408E404H21AAAAA				
460-480	4	60	135	200 ¹	408F104H21AAAAA	408F604H21AAAAA	408F204H21AAAAA	408F404H21AAAAA				
460-480	4	100	135	400 ¹	408F104H41AAAAA	408F604H41AAAAA	408F204H41AAAAA	408F404H41AAAAA				
575-600	0	5	18	30	308BT05H31AAAAA	408B605H31AAAAA	408B205H31AAAAA	408B405H31AAAAA				
575-600	1	10	27	30	308CT05H31AAAAA	408C605H31AAAAA	408C205H31AAAAA	408C405H31AAAAA				
575-600	2	20	45	60	308DT05H61AAAAA	408D605H61AAAAA	408D205H61AAAAA	408D405H61AAAAA				
575-600	2	25	45	100	308DT05H11AAAAA ¹	408D605H11AAAAA	408D205H11AAAAA	408D405H11AAAAA				
575-600	3	30	90	100	408E105H11AAAAA	408E605H11AAAAA	408E205H11AAAAA	408E405H11AAAAA				
575-600	3	50	90	200 ¹	408E105H21AAAAA	408E605H21AAAAA	408E205H21AAAAA	408E405H21AAAAA				
575-600	4	60	135	200 ¹	408F105H21AAAAA	408F605H21AAAAA	408F205H21AAAAA	408F405H21AAAAA				
575-600	4	100	135	400 ¹	408F105H41AAAAA	408F605H41AAAAA	408F205H41AAAAA	408F405H41AAAAA				

¹Oversized enclosure provided as standard.

- NEMA Size 0-6 starters with 115-120Volt, 60-Hertz coil for separate control are available at listed prices. To order, replace Digits 8 and 9 of listed Product Numbers with 02.
Example: CR408E108HD1AAAAA with 115-120 Volt, 60-Hertz coil for separate control becomes CR408E102HD1AAAAA.
- For ordinary starting duty only
- Motor full load current should not exceed continuous ampere rating of starter.



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NEMA Rated Full Voltage Starters - Magnetic

Section 1

CR308, CR408 Magnetic Starters

Nonreversing, Combination, NEMA Type 1, 3R, 12, 4/4X

NEMA Sizes 0-6, Fusible Disconnect Type

600 Volts Maximum 50/60 Hertz

List Price includes a holding interlock, pressure terminals for the line and load connections, plus a 3-leg block type overload relay (manual reset). Fuses not included. All enclosures include external reset. Three heaters should be ordered as separate items. See pages 1-153 to 1-159 for selection.

CR308/408 Fusible Disconnect (Class R Fuse Clips)

Voltage (60Hz)	NEMA Size	Maximum Horsepower	Continuous Fuse Clip		NEMA Type 1		NEMA Type 3R		NEMA Type 12		NEMA Type 4/4X	
			Amp Rating	Amp Rating	Product Number CR	Product Number CR	Price	Product Number CR	Price	Product Number CR	Price	
200-208	0	3	18	30	308BT08RA1AAAAA	408B608RA1AAAAA	408B208RA1AAAAA	408B408RA1AAAAA				
200-208	1	5	27	30	308CT08RA1AAAAA	408C608RA1AAAAA	408C208RA1AAAAA	408C408RA1AAAAA				
200-208	1	7 1/2	27	60	308CT08RB1AAAAA	408C608RB1AAAAA	408C208RB1AAAAA	408C408RB1AAAAA				
200-208	2	10	45	60	308DT08RB1AAAAA	408D608RB1AAAAA	408D208RB1AAAAA	408D408RB1AAAAA				
200-208	3	20	90	100	408E108RC1AAAAA	408E608RC1AAAAA	408E208RC1AAAAA	408E408RC1AAAAA				
200-208	3	25	90	200 ¹	408E108RD1AAAAA	408E608RD1AAAAA	408E208RD1AAAAA	408E408RD1AAAAA				
200-208	4	40	135	200 ¹	408F108RD1AAAAA	408F608RD1AAAAA	408F208RD1AAAAA	408F408RD1AAAAA				
200-208	5	-	-	-	-	-	-	-				
200-208	6	150	540	600	308HH123PAAA	308HH623PAAA	308HH223PAEA	308HH423PAAA ²				
230-240	0	3	18	30	308BT03RA1AAAAA	408B603RA1AAAAA	408B203RA1AAAAA	408B403RA1AAAAA				
230-240	1	5	27	30	308CT03RA1AAAAA	408C603RA1AAAAA	408C203RA1AAAAA	408C403RA1AAAAA				
230-240	1	7 1/2	27	60	308CT03RB1AAAAA	408C603RB1AAAAA	408C203RB1AAAAA	408C403RB1AAAAA				
230-240	2	15	45	60	308DT03RB1AAAAA	408D603RB1AAAAA	408D203RB1AAAAA	408D403RB1AAAAA				
230-240	3	25	90	100	408E103RC1AAAAA	408E603RC1AAAAA	408E203RC1AAAAA	408E403RC1AAAAA				
230-240	3	30	90	200 ¹	408E103RD1AAAAA	408E603RD1AAAAA	408E203RD1AAAAA	408E403RD1AAAAA				
230-240	4	50	135	200 ¹	408F103RD1AAAAA	408F603RD1AAAAA	408F203RD1AAAAA	408F403RD1AAAAA				
230-240	5	-	-	-	-	-	-	-				
230-240	6	200	540	600	308HH103PAAA	308HH603PAAA	308HH203PAEA	308HH403PAAA ²				
460-480	0	5	18	30	308BT04R31AAAAA	408B604R31AAAAA	408B204R31AAAAA	408B404R31AAAAA				
460-480	1	10	27	30	308CT04R31AAAAA	408C604R31AAAAA	408C204R31AAAAA	408C404R31AAAAA				
460-480	2	25	45	60	308DT04R61AAAAA	408D604R61AAAAA	408D204R61AAAAA	408D404R61AAAAA				
460-480	3	50	90	100	408E104R11AAAAA	408E604R11AAAAA	408E204R11AAAAA	408E404R11AAAAA				
460-480	4	100	135	200 ¹	408F104R21AAAAA	408F604R21AAAAA	408F204R21AAAAA	408F404R21AAAAA				
460-480	5	200	270	400	308G104FAA	308G604FAAA	308G204FEA	308G404FAAA				
460-480	6	400	540	600	308HH104PAAA	308HH604PAAA	308HH204PAEA	308HH404PAAA ²				
575-600	0	5	18	30	308BT05R31AAAAA	408B605R31AAAAA	408B205R31AAAAA	408B405R31AAAAA				
575-600	1	10	27	30	308CT05R31AAAAA	408C605R31AAAAA	408C205R31AAAAA	408C405R31AAAAA				
575-600	2	15	45	30	308DT05R31AAAAA	408D605R31AAAAA	408D205R31AAAAA	408D405R31AAAAA				
575-600	2	25	45	60	308DT05R61AAAAA	408D605R61AAAAA	408D205R61AAAAA	408D405R61AAAAA				
575-600	3	30	90	60	408E105R61AAAAA	408E605R61AAAAA	408E205R61AAAAA	408E405R61AAAAA				
575-600	3	50	90	100	408E105R11AAAAA	408E605R11AAAAA	408E205R11AAAAA	408E405R11AAAAA				
575-600	4	60	135	100 ¹	408F105R11AAAAA	408F605R11AAAAA	408F205R11AAAAA	408F405R11AAAAA				
575-600	4	100	135	200 ¹	408F105R21AAAAA	408F605R21AAAAA	408F205R21AAAAA	408F405R21AAAAA				
575-600	5	200	270	400	308G105FAA	308G605FAAA	308G205FEA	308G405FAAA				
575-600	6	400	540	600	308HH105PAAA	308HH605PAAA	308HH205PAEA	308HH405PAAA ²				

¹Oversized enclosure provided as standard.

²Painted steel Type 4 enclosure is standard for NEMA Size 6 forms.

• NEMA Size 0-6 starters with 115-120Volt, 60-Hertz coil for separate control are available at listed prices. To order, replace Digits 8 and 9 of listed Product Numbers with 02. Example: CR408D604R61AAAAA with 115-120 Volt, 60-Hertz coil for separate control becomes CR408D602R61AAAAA.

- For ordinary starting duty only
- Motor full load current should not exceed continuous ampere rating of starter.
- HP rating is based on dual element fuses.



NEMA Full Voltage Power Devices NEMA Rated Full Voltage Starters - Magnetic

Section 1

CR306, CR307, CR308, CR309, CR310, CR311, CR387, CR390, CR407, CR408, CR410, CR411, CR487, CR490 Magnetic Starters

Factory-Installed Modifications

Starter Modifications—Factory Installed

The general information at the top of page 1-124 regarding factory-installed modifications, also applies to those listed in the table below.

Type of Installation/ Starters	Item No.	Modifications	Enclosure Type	Starter NEMA Size								
				00	0	1	2	3	4	5	6	
Pilot Devices Mounted In Cover or Flange of CR306 CR307 CR308 CR387 CR407 CR408 CR487	4	Indicating Light ¹										
	4a	One (Red Only) ²	1									
	4b	One (Specify Red or Green) (HEAVY-DUTY, CR104P)	Any									
	4c	Two (Includes 1 NC Auxiliary Contact) ⁴ (HEAVY-DUTY, CR104P)	Any									
	4d	One Push-To-Test and/or Transformer Type (Red or Green)	Any									
	4e	Two Push-To-Test (Includes 1 NC Auxiliary Contact) and/or Transformer Type ⁴	Any									
Pilot Devices Mounted In Cover or Flange of CR309 CR310 CR311 CR390 CR410 CR411 CR490	5	Push Buttons										
	5a	FORWARD-STOP-REVERSE	Any									
	5b	HIGH-LOW-OFF	Any									
	5c	FAST-SLOW-STOP	Any									
	5d	HIGH-LOW Push Button and H-O-A Selector Switch	Any									
	5e	Single Push Button, Unwired (Specify Marking) ⁵	Any									
	5f	Single Illuminated Push Button, Unwired (Specify Marking) ⁵	Any									
	6	Selector Switches										
	6a	LOW-OFF-HIGH	Any									
	6b	SLOW-OFF-FAST	Any									
	6c	FORWARD-OFF-REVERSE	Any									
	6d	LOW-HIGH and HAND-OFF-AUTO	Any									
	6e	HAND-OFF-AUTO	Any									
	6f	Single Selector Switch Maintained (Specify Marking and Positions) (Specify Two or Three Positions) ⁵	Any									
6g	Key Operated Maintained (Specify Marking and Key-Removal Positions) (Specify Two or Three Positions) ⁵	Any										
6h	Nonstandard Markings	Any										

Note: For indicating light modifications on CR309-311 & CR390, see p. 1-124.

¹ One indicating light: Wired in parallel with operating coil.

Two indicating lights: Red is wired in parallel with operating coil, green is wired through an auxiliary contact.

Factory-installed field modification kit for sizes 00-4 and size 5 without CPT.

Not available in NEMA Size 00. Use Size 0 starter and modification.

Maximum of three additional auxiliary contacts available on size 0-1.

Specify CR104P operator and contact block by product number.

Control Circuit Fusing

Per the NEC and UL508 Section 18.2 - Control Circuit Fuses must be used when the branch circuit protective device rating is too large to serve as protection for the control circuit. This depends on the control wire size and whether all control circuit wires are within the enclosure. See table below:

Provide supplemental control circuit protection if control circuits with wires longer than 12 inches are connected to branch circuit protection exceeding the ratings below

Control Circuit Wire Size (AWG)	Maximum Branch Circuit Protection Rating (Amperes)		Maximum Supplemental Control Circuit Protection Rating (Amperes)
	Conductors within Enclosure	Conductors outside Enclosure	
22	12	3	3
20	20	5	5
18	25	7	7
16	40	10	10
14	100	45	20
12	120	60	25

The factory must provide this protection, if the circuit provided by the factory requires the fuses. The factory will provide control circuit fuses in enclosed starters and contactors with pilot devices, control relays or other control components that are factory wired; when used with line voltage control; when the size listed below is being supplied.

Non-combination starters (CR305, CR306, CR309, CR385, CR386)

Size 4 and above

Combination starters

Size 0-3 with Mag-Break Protector

Size 3 with:

—Circuit Breaker greater than 100 amps, or

—Fuse Clips greater than 100 amps, or

Size 4 and above with any circuit breakers, circuit protector or fuse clips.

Control Circuit fuses (Modification 9) must be added to the enclosed starter or contactor pricing.

All CPTs will be supplied with primary fuses. CPTs without primary fuses are no longer available.

When control circuit fuses are not factory supplied, customer provided wiring or branch circuit protection sizing to these contactors and starters may still require that the customer/installer add the fusing in the field. It will be the customer/installer's responsibility to ensure code compliance under these conditions.

