

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

Section 1

CR309 Magnetic Reversing Starters

600 Horsepower Maximum, Open, NEMA Type 1, 3R, 12, 4/4X

NEMA Sizes 00-7

600 Volts Maximum

50/60 Hertz

Application

These reversing starters are used for full-voltage starting and reversing of squirrel-cage induction motors up to 600 horsepower, 600 Volts maximum.

These starters are used for single-phase or polyphase motors on applications where plugging and/or reversing operations are required.

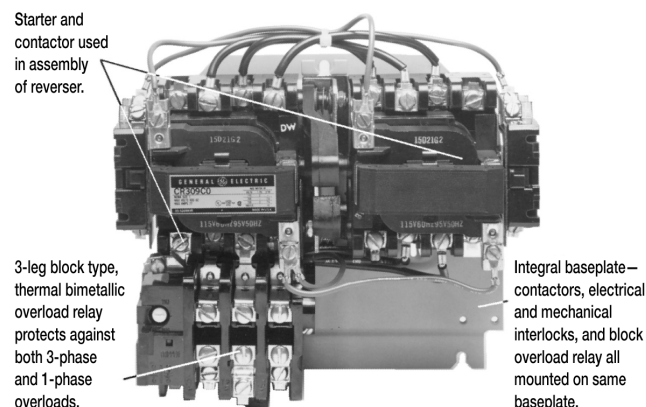
Refer to page 1-7 for features of basic starter.

Jogging Duty

The horsepower ratings shown in the product tables for CR309 reversing starters are not to be used when operation requires continuous plug-stop or jogging (inching) duty at a rate in excess of five times per minute or 10 times in 10 minutes. Refer to page 1-4 for information.

Product Number Selection Instructions

- Specify by complete Product Number and form.
Example: CR309D103 is a Size 2 reversing starter, three-pole in NEMA Type 1 enclosure with 230-240-Volt, 60-Hertz coil
- Order forms not listed or with special modifications by complete description using a listed Product Number as reference wherever possible.
Example: Similar to CR309D103 except with three-position FORWARD-REVERSE-STOP push button in cover.
Total
- Reversing starters are available with coils of other ratings than those shown in listing on pages 1-18 and 1-19. Refer to coil suffix table on page 1-4 for information. To order forms with other coil ratings, insert suffix from coil table in place of fifth and sixth numbers of listed starter Product Number shown on page 1-18 or 1-19.
Example: A CR309C102 NEMA Size 1 reverser in Type 1 enclosure with 24-Volt, 60-Hertz coil becomes a CR309C124.
- 50-Hertz Forms**
Pricing for 50-Hertz forms is the same as shown in tables for 60-Hertz reversing and combination reversing starters. Order by description using a listed Product Number as reference. Refer to page 1-4 for horsepower ratings of starters at 380-Volt, 50 Hertz.
- Starters Less Overload Relays**
CR309 open NEMA Types 1 and 3R reversing starters (with horizontal mechanical interlock) are available without overload relays. The following table shows omission prices to be deducted from those list prices as shown in tables on pages 1-18 and 1-19. Order desired form by adding the suffix, in parenthesis, to Product Number of Open, Types 1, 3R, 4/4X, and 12 forms shown in pricing table on pages 1-18 and 1-19, that include overload relays.
Example: To omit overload protection from a size 0 starter, Product Number CR309B103, order CR309B103BAA



Typical CR309 Reversing Starter

6. Product Notes

Motor full-load current should not exceed continuous ampere rating of starter. External reset not included on standard listed forms (NEMA Type 12).

Order heaters by complete Product Number from appropriate heater tables on pages 1-153 to 1-159.

Reference Publications

Descriptive bulletin	GEA-10928
Instructions	
NEMA Size	Publication Number
00, 0, 1	GEH-5190
2	GEH-4775
3	GEH-4806
4	GEH-4807
5	GEH-4839
6	GEH-5198

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