

# CR120B 600 volt industrial relay

## DESCRIPTION

General Electric's CR120B 600 volt multi-circuit industrial relay line includes the basic magnetic relay, timer attachments and latch attachment. These units plus contact modules and mounting accessories provide for maximum flexibility.

## RATINGS

| AC—NEMA A600            |        | DC—NEMA P300               |        |
|-------------------------|--------|----------------------------|--------|
| Max. Ac Voltage         | 600    | 125 V                      | 138 VA |
| Max. Continuous Current | 10 Amp | 250 V                      |        |
| Max. Volt-Ampere Rating | 7200   | 300 V or Less              |        |
| Max. Current            | 60     | Dc Max. Volt-Ampere Rating |        |
| Make                    | 60     |                            |        |
| Break                   | 6      |                            |        |

## INSTALLATION

1. Remove all packing.
2. Operate the magnet and operating arm by pulling the manual operator to assure free movement.
3. Mount the relay on a vertical panel.
4. Make all electrical connections. Normally open contacts are indicated by green, and normally closed by white.

## COIL REMOVAL

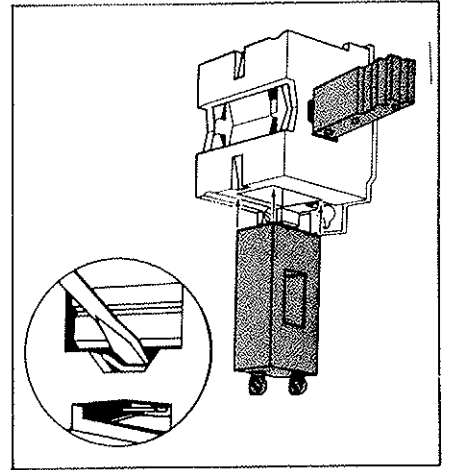


Figure 1

## CONTACT REMOVAL/CONVERSION

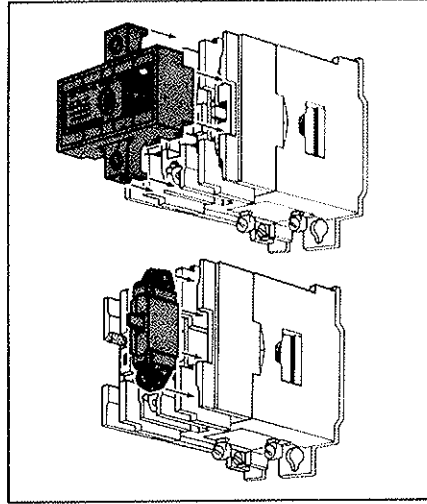


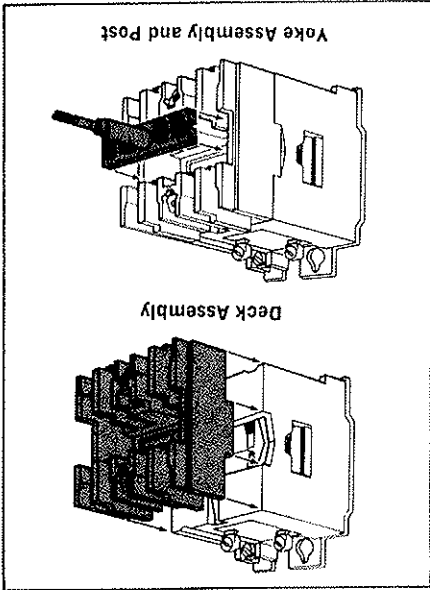
Figure 2

1. Disconnect power from the device.
  2. Loosen cover screws or screws above screwdriver.
- Contact modules may be removed, inspected, converted or replaced using only a screwdriver.

## To install additional adder decks:

1. Remove power from the device.
2. Loosen cover screws and remove cover.
3. Unscrew steel post and replace with the longer post supplied with the adder deck. If adding two decks, only the extra long post supplied with the second adder deck should be used.
4. Add the deck to the relay using the screws provided.

Figure 3



Yoke Assembly and Post

Deck Assembly

1. Disconnect power from the device.
  2. Remove from panel, if so mounted.
  3. Insert a screwdriver blade between magnet and magnet retaining clip. Twist blade to force retaining clip away from magnet. Push down on screwdriver, dislodging magnet; then applying firm pressure with screwdriver, push magnet through coil to position shown in Figure 1.
  4. Grasp the coil terminals and pull out.
- TO REASSEMBLE:**
5. Insert coil and center in housing.
  6. Slide magnet back through coil and center with housing window. Insert blade of screwdriver through window, perpendicular to magnet. Using blade of screwdriver, push retaining clip away from magnet and apply pressure on magnet from opposite side. Snap magnet back into position under retaining clip. Magnet must be centered in housing window in order for it to seat properly.

## INSTALLING ADDER DECKS

Additional decks of contact modules may be added to the relay making a relay with up to 12 poles.

3. Lift out contact module. Contacts may be inspected through green transparent side of module.
4. To convert contact from normally open to normally closed or normally closed to normally open;
  - a. Remove contact module terminal screws and reassemble on opposite side.
5. Reassemble:
  - b. Replace contact module in deck.

**CAUTION:** Before installing in a nuclear application, determine that the product is intended for such use.

## INSTRUCTIONS

**control**



5. Slip the T-shaped yoke over the steel post.
6. Add the contact modules. For a normally open contact, assemble with green tabs up. A normally closed contact should have the white side up. Make sure the screws are on the top side of each module.
7. If a second adder deck is being used, repeat steps 4, 5, and 6.
8. Reassemble the cover.

**INSTALLING INDICATING LIGHT ATTACHMENT**

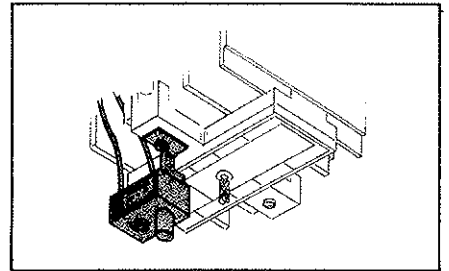


Figure 4

1. Remove one of the cover screws.
2. Using screw supplied with indicating light kit, install the light as shown.
3. Wire to coil terminals or any other source of the proper voltage.

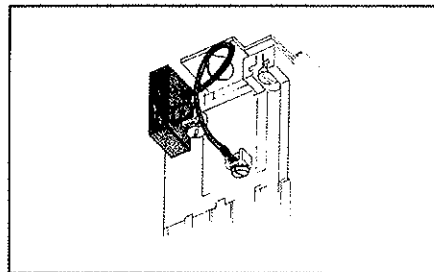


Figure 5

1. Remove coil terminal screws.
2. Install surge suppressor and lead to coil terminals as shown.

**INSTALLING OVERLAPPING CONTACTS**

Standard contacts are non-overlapping, i.e., during pickup and dropout there is a period where all contacts are open. If overlapping contacts are required, contact modules CR120BX1A may be used. These contacts will overlap with each other but not necessarily with standard contacts. Normally open and normally closed overlapping contacts will all be closed for a period of time during pickup and dropout. For installing the contact modules, see section on Contact Removal/Conversion.

**CONTACT MODULE IDENTIFICATION**

The type of contact module can be identified even after installation by the terminal color. Standard modules have a brass terminal, overlapping modules have a gray color, and gold plated contact modules have red on the terminal.

† Coil is dual rated 120 V, 60 Hz/110 V, 50 Hz.  
 Standard Contact Modules ..... CR120BX1  
 Overlapping Contact Modules ..... CR120BX1A  
 Gold Plated Contact Modules ..... CR120BX1B

| Suffix No. ... | Frequency | Voltage |
|----------------|-----------|---------|
| 025            | 60        | 24      |
| 022            | 60        | 15      |
| 0221           | 60        | 120     |
| 023            | 60        | 200     |
| 003            | 60        | 230     |
| 004            | 60        | 460     |
| 005            | 60        | 575     |
| 006            | 60        | 600     |
| 007            | 50        | 110     |
| 008            | 50        | 220     |
| 009            | 50        | 380     |
| 004            | 50        | 440     |
| 009            | 50        | 550     |

**ACCESSORY KITS**

- Standard Contact Modules ..... CR120BX1
- Overlapping Contact Modules ..... CR120BX1A
- Gold Plated Contact Modules ..... CR120BX1B
- First Adder Deck (Can accommodate up to 8 total contact modules) ..... CR120BX3
- Second Adder Deck (Use with first adder deck or 8 pole relay to accommodate up to 12 total contact modules) ..... CR120BX14
- Mounting Track (40 in. long for 16 relays) Breakaway type ..... CR120BX4
- Non Breakaway type ..... CR120BX18
- Indicating Light ..... CR120BX5
- 115 V 50/60 Hz ..... CR120BX6
- 230 V 50/60 Hz ..... CR120BX7
- 460 V 50/60 Hz ..... CR120BX7
- Surge Suppressor ..... CR120BX2
- 115 V 50/60 Hz ..... CR120BX2
- Wiring Trough Covers ..... CR120X15A
- 1 1/2 in. wide x 6 ft ..... CR120X15A
- 2 in. wide x 6 ft ..... CR120X16A
- 2 1/2 in. wide x 6 ft ..... CR120X17A
- NEMA 1 Enclosure ..... CR120BX15
- (For up to 8 pole relay) ..... CR120BX15
- Retaining Shields—6 ft long for use with mounting track ..... CR120BX9
- without mounting track ..... CR120BX8
- Retaining Shield Brackets (pkg of 8) for use with mounting track ..... CR120BX13
- without mounting track ..... CR120BX12
- Latch and Time-Delay Kits—Latch relays and time-delay relays are also available as either kits or complete relays. See General Purpose Control Catalog GEP-1260 for Ordering and Pricing Information.

**RENEWAL PARTS**

Coils (Order 55-13696G... plus suffix number per table below).



These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation, operation, or maintenance. Should further information be desired or should particular problems arise which are not covered sufficiently for the purchaser's purposes, the matter should be referred to the General Electric Company.