DRIVES

INSTRUCTION SHEET D-3824-5

Contactor Auxiliary Contact Kits
Model Number 23C100 and 23C102 for MaxPak® Plus Non-Reversing Non-regenerative MaxPak® Plus Drives and all Regenerative MaxPak® Plus Drives Model Number 23C101 and 23C103 for Reversing Non-Regenerative MaxPak® Plus drives
Models Number 23C104 for Non-Reversing MaxPak® Plus Drives (200-300 HP)
Model Number 23C105 for Reversing MaxPak® Plus Drives (200-200 HP)
Assembly Drawings 705388 and 801595-88

DANGER

ONLY QUALIFIED ELECTRICAL PERSONNEL FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THIS EQUIPMENT AND THE HAZARDS INVOLVED SHOULD INSTALL, ADJUST, OPERATE, AND/OR SERVICE THIS EQUIPMENT. READ AND UNDERSTAND THIS MANUAL IN ITS ENTIRETY BEFORE PROCEEDING. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SEVERE BODILY INJURY OR LOSS OF LIFE.

DESCRIPTION

The products described in this instruction manual are manufactured by Reliance Electric Industrial Company.

Six auxiliary contact kits are available. Two (23C100 and 23C102) are intended for installation in non-reversing non-regenerative MaxPak Plus controllers and all regenerative MaxPak Plus controllers below 200 HP and provide one contact block for mounting on the motor armature contactor. Two other kits (23C101 and 23C103) are designed for use with non-reversing controllers below 200 HP with each providing two contact blocks, allowing one contact to be added to the forward contactor, FM, and one to the reverse contactor RM. Two other auxiliary contact kits are available for; higher horsepowers. One is (23C104) intended for installation ink non-reversing MaxPak Plus controllers and provides one contact block for mounting on the motor armature contactor. The other kit (23C105) is designed for use with reversing controllers, allowing one contact to be added to the forward contactor, FM, and one to the reverse contactor, RM.

Each kit provides one auxiliary contact per contactor for customer use. The contact blocks allow the customer to select *either* normally open (N.O.) or normally closed (N.C.) contact sense as the application requires.

NOTE: Auxiliary contact kits 23C100 and 23C101 are mechanically incomplete with non-regenerative controllers rated from 5 thru 20 HP at 230 volts A-C and from 5 thru 40 HP at 460 volts A-C. Use kit models 23C102 and 23C103 with these low horsepower controllers.

DANGER

EXTERNAL POWER WIRING MAY REMAIN ENERGIZED WHEN THE MAIN A-C POWER IS DISCONNECTED. IDENTIFY ALL SUCH EXTERNAL WIRING. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SEVERE BODILY INJURY OR LOSS OF LIFE.

CONTACT SPECIFICATIONS

MODELS	
23C104 and 23C105 Only	**23C100 and 23C103 Only**
Max Load = 600 VAC @ 10A 600 VDC @ 5A	Max Load = 600 VAC @ 10A Max A-C Make = 3600 VA Max A-C Break = 360 VA
Min Load = 17 VAC @ .006A 17 VDC @ .005A	
Max A-C Make = 7200 VA	
Max A-C Break = 720 VA	
Max D-C Make/Break = .2 A	

Table 1
Kit Specifications

Model Number	For Use On Controllers Which Are:	Number of Contact Blocks	Contacts Available To User	HP Rating
23C100	Non Regenerative, Non Reversing. All Regenerative	1	(1) N.O.	Below 200
23C101	Non Regenerative. Reversing	2	(1) N.O. per block	Below 200
23C102	Non Regenerative. Non Reversing. All Regenerative	1	(1) N.O. or (1) N.C.	Below 200
23C103	Non Regenerative. Reversing	2	(1) N.O. or (1) N.C. per block	Below 200
23C104	Non Regenerative	1	(1) N.O. or (1) N.C.	200-300
23C105	Reversing	2	(1) N.O. or (1) N.C. per block	200-300

DANGER

DO NOT INSTALL MODIFICATION KITS WITH POWER APPLIED TO THE UNIT. DISCONNECT AND LOCK OUT INCOMING POWER BEFORE ATTEMPTING SUCH INSTALLATION. FAILURE TO OBSERVE THIS PRECAUTION COULD RESULT IN SEVERE BODILY INJURY OR LOSS OF LIFE.

INSTALLATION OF 23C100 OR 23C102

(Refer to Assembly Drawing 705388)

1. If the controller is already equipped with a contactor cover kit or input disconnect kit, it will first be necessary to remove the cover plate furnished with each of these kits. In the case of the incoming line disconnect kits, the disconnect should be removed and set aside during installation of the auxiliary contact kit.
2. Select (23C102 only) the desired contact sense (N.C. or N.O.) and wire the contact block to the yellow wire harness.
3. Mount the auxiliary contact to the lower side of the M contactor as shown on sheet 2 of the assembly drawing using the single #6-23 x 3/4" screw furnished as bill of material Item 2 with the kit.
4. Mount the disconnect-type terminal board and channel assembly to the auxiliary panel as shown on the assembly drawing using the self tapping screws provided. Holes are prepunched in the auxiliary panel to accept this assembly.

   NOTE: If a blower motor starter kit or field current regulator kit has been previously added, and mounted in the lower portion of the auxiliary panel, the terminal board and channel assembly should be mounted onto the right hand mounting plate of the existing kit as shown in the assembly drawing.
5. A legend plate, indicating that these auxiliary contacts receive power from a source not disconnected with the disconnection of main incoming drive power, has been provided with this kit. See the precaution on page 1 of this manual. This legend plate, required by N.E.C., must be mounted on the door of the drive cabinet. If an incoming line disconnect with a thru-the-door operating handle has been installed into the drive, this legend plate should be mounted near the handle.
6. User wiring may now be connected to the terminals of the disconnect-type terminal board provided with the kit.
7. Reinstall the input disconnect.

INSTALLATION OF 23C101 OR 23C103

(Refer to Assembly Drawing 705388)

1. If the controller is already equipped with a contactor cover kit or input disconnect kit, it will first be necessary to remove the cover plate furnished with each of these kits. In the case of the incoming line disconnect, the disconnect should be removed and set aside during installation of the auxiliary contact kit.
2. Select (23C103 only) the desired contact sense (N.C. or N.O.) and wire the contact block to the yellow wire harness.
3. Remove the screw holding the existing auxiliary contact to the bottom side of the forward contactor (FM).
4. Add the auxiliary contact provided in this kit outboard of the original contact, placing the insulating paper between the two contacts and securing this two contact assembly to the bottom of the FM contactor using the long screw and stiffening bar provided in the kit. Starting at the bottom of the contactor, the assembly should be made up of the original contact, the insulating paper, the newly added contact, the metal stiffening bar and the long mounting screw.
5. Add the second, shorter screw into the second hole in the contact block assembly.
6. Mount the disconnect-type terminal board and channel assembly of the auxiliary panel as shown on the assembly drawing using the self tapping screws provided. Holes are prepunched in the auxiliary panel to accept this assembly.

   NOTE: If a blower motor starter kit or field Current regulator kit or field current regulator kit has been previously added, and mounted in the lower portion of the auxiliary panel, the terminal board and channel assembly should be mounted onto the right hand mounting plate of this existing kit as shown in the assembly drawing.
7. Install the second auxiliary contact to the TOP sided of the reversing contactor, RM, following the sequence of steps 4 and 5.
8. Connect the auxiliary contacts(s) to the terminal board using the yellow-wire harness provided and dress this harness to existing auxiliary wiring using the ty-raps furnished withy the kit.
9. A legend plate, indicating that these auxiliary contact receive power from a source not disconnected with the disconnection of main incoming drive power, has been provided with this kit. See the precaution on page 1 of this manual. This legend plate, required by N.E.C., must be mounted on the door of the drive cabinet. If an incoming line disconnect with a thru-the-door operating handle has been installed into the drive, this legend plate should be mounted near the handle.
10. User wiring may now be connected to the terminals of the disconnect-type terminal board provided with the kit.
11. Reinstall the input disconnect.

REPAIR PARTS

A complete parts list is provided on sheet 1 of assembly drawing 705388.

INSTALLATION OF 23C104 INTO NON-REVERSING CONTROLLERS

(Refer to Assembly Drawing 801595-88 Supplied With Kit)

1. If the controller is already equipped with a contactor cover kit or input disconnect kit, it will first be necessary to remove the cover plate furnished with each of these kits. In the case of the incoming line disconnect kits, the disconnect should be removed and set aside during installation of the auxiliary contact kit.
2. Select the desired contact sense or and wire the contact block to the yellow wire harness.
3. Loosen the two screws on the lower side of the M contactor that are used to mount auxiliary contacts. (See the assembly drawing supplied with this kit for mounting location.)
4. Slide in the auxiliary contact supplied with this kit and tighten the two screws. (Note: The two long screws and two nuts that are supplied with the auxiliary contact are not used.)
5. Mount the disconnect-type terminal board and channel assembly to the auxiliary panel as shown on the assembly drawing supplied with kit using the self tapping screws provided. Holes are prepunched in the auxiliary panel to accept this assembly.

   NOTE: If a blower motor starter kit or field current regulator kit has been previously mounted in the lower portion of the auxiliary panel, the terminal board and channel assembly should be mounted onto the right hand mounting plate of the existing kit as shown in the assembly drawing.
6. A legend plate, indicating that these auxiliary contacts receive power from a source not disconnected with the disconnection of main incoming drive power, has been provided withy this kit. See the precaution on page 1 of this manual. This legend plate, required by must be mounted on the door of the drive cabinet. if an incoming line disconnect with a thru-the-door operating handle has been installed into the drive, this legend plate should be mounted near the handle.
7. User wiring may now be connected to the terminals of the disconnect-type terminal board provided with the kit.
8. Reinstall the input disconnect.

INSTALLATION OF 23C105 INTO REVERSING CONTROLLERS

1. If the controller is already equipped with a contactor cover kit or incoming line disconnect kit, it will first be necessary to remove the cover plate furnished with each of these kits. In the case of the incoming line disconnect kits, the disconnect should be removed and set aside during installation of the auxiliary contact kit.
2. Select the desired contact sense (N.C. or and wire the contact block to the yellow wire harness.
3. Loosen the two screws holding the existing auxiliary contact to the bottom side of the forward contactor (FM).
4. Swing the existing auxiliary contact out enough to mount the auxiliary contact from this kit outboard of the original contact using the two screws and nuts supplied with the contact.
5. Remount the two auxiliary contacts to the contactor (FM).
6. Mount the disconnect-type terminal board and channel assembly to the auxiliary panel as shown on the assembly drawing using the self tapping screws provided. Holes are prepunched in the auxiliary panel to accept this assembly.

   NOTE: If a blower motor starter kit or field current regulator kit has been perviously mounted in the lower portion oft the auxiliary panel, the terminal board and channel assembly should be mounted onto the right hand mounting plate of the existing kit as shown in the assembly drawing.
7. Install the second auxiliary contact to the TOP side of the reversing contactor, RM, following the sequence of steps 3, 4 and 5.
8. Connect the auxiliary contacts(s) to the terminal board using the yellow-wire harness provided and dress this harness to the existing auxiliary panel wiring using the ty-raps furnished with the kit.
9. A legend plate, indicating that these auxiliary contacts receive power from a source not disconnected with the disconnection of main incoming drive power, has been provided with this kit. See the precaution on page 1 of this manual. This legend plate, required by N.E.C., must be mounted on the door of the drive cabinet. if an incoming line disconnect with a thru-the-door operating handle has been installed into the drive, this legend plate should be mounted near the handle.
10. User wiring may now be connected to the terminals of the disconnect-type terminal board provided with the kit.
11. Reinstall the input disconnect.

REPAIR PARTS

A complete parts list is provided on assembly drawing 801595-88 supplied with the kit.

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