

WESTINGHOUSE INDUSTRIAL MOTORS AND CONTROLLERS

TYPE F MAGNETIC CONTACTOR, FRAME 32-F5

Description and Maintenance

The type 32-F5 is a 2-pole alternating-current contactor, and can be supplied either with or without blowout. The contactor is designed for mounting on slate or ebony asbestos panels up to and including panels two inches thick.

Rating—The contactor is designed for 75 amperes, eight-hour rating, 90 amperes one-hour rating, 150 amperes peak load. Insulation is for 600 volts maximum.

Operating Coil—(Ref. No. 22). The operating coil is designed for continuous service, and will successfully operate the contactor at from 85 to 110% of rated voltage.

The moving armature is full-floating to allow sealing against the stationary magnet surfaces with a minimum of noise. Noise of the magnet at the sealing surfaces developing after being in service may best be eliminated by removing film or smudge from sealing surfaces with gasoline or benzine and wiping surface dry.

Contacts—Use no oil or lubricant on moving or stationary contacts. The

roughened appearance of the contacts is no indication that good contact is not being obtained. Should it be necessary to remove small beads of copper from contact surfaces or the very dark brown copper oxide as a result of unusually severe service use **only** a fine file. Do not use emery cloth.

It is preferable in servicing or replacing contacts that the contact gap should not exceed $\frac{1}{2}$ inch. The contact pressure measured at the line of contact (which should be the lower part or heel) should be approximately $2\frac{3}{4}$ to $3\frac{1}{4}$ pounds. One of the most accurate means of measuring the contact pressure is by use of a sufficiently heavy spring wire in the form of the letter "C" which may be used to grip the sides of the moving contact adjacent to the line of contact. A spring balance may be then hooked in to the loop and by pulling at right angles to the contact surface an accurate measurement may be obtained by having a lamp circuit connected in series with the contact. The light will go on and off as the surfaces make or break contact. The contacts should not be used

after (refer to Fig. B below) the gap at "H" becomes zero.

Coil—The coil is held in place by means of two flat springs mounted on the stationary magnet. To remove coil first remove the complete armature as instructed in paragraph five (5) below. The coil may then be removed by compressing the flat springs tightly against the magnet iron and pulling the coil forward. The identification of the operating coil is located on the barrel surface of the coil in the form of a thin metal tag. This tag usually bears the style number of the coil.

TABLE OF OPERATING COILS

Volts	Cycles	Style Number
110	60	512 076
220	60	512 077
440	60	512 078
550	60	512 079
110	50	512 092
220	50	512 080
440	50	512 081
550	50	512 093
110	25	512 080
220	25	512 081
440	25	512 082
550	25	512 083

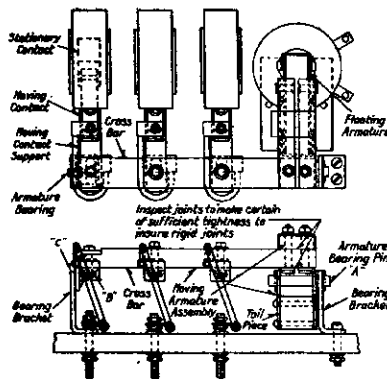


FIG. A

This illustrates the 35-F5 Contactor. The 32-F5 is the same, except for the omission of one pole.

1. See that the moving contact support is tightly bolted to cross bar and is at right angles to same. See Fig. A.
2. Should there be excessive end play in moving armature assembly at "C" adjust bracket at base. There should be no friction in armature bearings. Magnet and floating armature should be in alignment as shown in Fig. A.
3. See that moving contacts make contact squarely and centrally on stationary contacts so as not to rub in arc box. Each of the three moving contacts should touch their respective stationary contact at the same time.

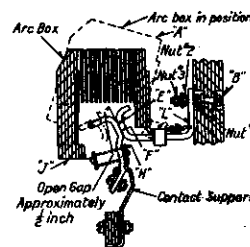


FIG. B

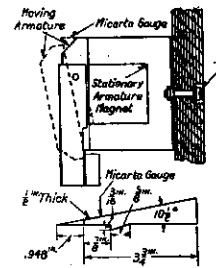


FIG. C

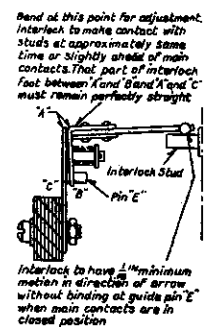


FIG. D

4. Contact surfaces of stationary contacts should all touch a straight edge parallel to base.
5. To remove moving armature assembly remove bolt "B" and armature bearing pin "A". See Fig. A. Loosen shunts at ends connecting to base.
6. The contactor may best be adjusted by using a temporary Micarta or hard wood gauge as shown in Fig. C. Place gauge in magnet gap as shown in Fig. C. Adjust the stationary magnet until the moving armature fits snugly against the gauge. To move the stationary magnet, loosen base screws "C" and tap gently into position. Be sure to tighten screws after adjustment.
7. Fig. B. With magnet open, as adjusted above, contact gap should be approximately $\frac{1}{4}$

inch. The most desirable contact action is when the contact makes at "E" and seals at "F". There should be approximately $\frac{1}{16}$ inch gap at point "H" when contactor is closed.

8. When reconditioning contactor, screw "B" or stud should be locked tight in base by nut #1. Nut #2 should always be tightened before tightening on lead with nut #3, or vice versa when connection is made on rear of base.

9. To remove arc box first hold moving armature in closed position, then give the arc box a slight bump at point "J" with butt of the other hand. When replacing, hold arc box in position "A". Move to the extreme position toward the base so the tip of arc box will be guided into lower hole "L" or under projection provided on stationary contact. Then pull down on outer end of arc box until spring clip catches.

FIG. 1—INSTRUCTIONS FOR FIELD ADJUSTMENT OF FRAME 32-F5 CONTACTOR.