

TYPE F MAGNETIC CONTACTOR, Frame No. 62-F

INSTRUCTIONS

Description

The type 62-F is a two-pole alternating-current contactor, and can be supplied either with or without blowout. The contactor is designed for mounting on slate or ebony asbestos panel up to two inches thick.

Rating—The contactor is designed for 300 amperes, eight hour rating, 360 amperes one hour rating, 900 amperes peak load, and 3000 amperes arc rupturing capacity. Insulation is for 600 volts maximum.

Operating Coil—The operating coil is designed for continuous service, and will successfully operate the contactor at from 85 to 110% of rated voltage.

Armature Lever—The bare armature is made from cast iron. The armature core is supported on the bare armature by means of a hinge pin. This arrangement permits the armature core to be self aligning when the operating coil is energized and the contactor is closed. All parts subject to corrosion except the pole faces, are treated to prevent oxidation.

Arc Shields—The arc shield is moulded from a very durable heat resisting compound and is securely fastened to the iron pole pieces of the blowout coil. The arc shield is hinged so that it may be easily raised by hand to make inspection and renewal of the contacts.

Contacts—The contacts are made of hard drawn copper of sufficient cross section to insure long contact life. They are designed to open with a rolling action so that the burn occurs only at the extreme tip of the contact, and does not affect the current carrying surfaces. The contactor has been designed so that a slight wiping action is given to the tips on opening and closing. This action insures a clean low resistance contact area. A steel compression spring gives a positive and sufficient contact pressure up to the maximum life of the contact and produces a quick opening on the tips.

Shunts—The current carrying shunt is made from a flexible braided copper cable which gives complete freedom to the moving armature, and has ample capacity to withstand the maximum current for which the contactor is rated.

Maintenance

Bearings—The bearings of the armature shaft require no lubrication. Oil

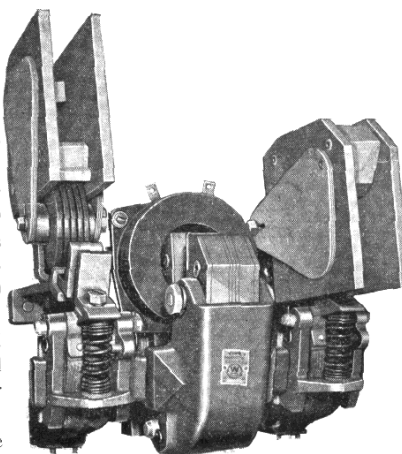


Fig. 1

quickly collects dust, and unless the parts are frequently cleaned, will make the contactor sluggish in opening, thus causing the arc to hang on longer.

Arc Shields—The arc shields should always be down so that the arc is broken within the field of the blowout coil, otherwise the shield will not give satisfactory results. The arc shield should always be renewed before the moulded material is burned away sufficiently to expose the steel pole pieces.

Operating Coil—The operating coil may be removed by taking out the main hinge pin which allows the armature to be lowered, then disconnecting the terminal leads and removing the screws which hold it in place on the stationary core.

Contacts and Spring Pressure—Use no oil or other lubricant on the copper contacts. The contacts normally wear to give the best contact surfaces without any attention. The roughened appearance of the contacts is no indication that good contact is not being obtained. The contacts should be replaced when the maximum usefulness has been reached in order that the contact pressure will not fall below the minimum value for which it is designed. The contact pressure for this unit, measured at the heel of the contact should be between 18 and 22 pounds. To measure the final spring pressure, close the contactor mechanically, place a thin piece of paper between the contacts, then measure the pounds pull necessary to separate the contacts by means of a hook spring balance attached to the

head of the screw which holds the moving contact in place. Read the pounds pull required at the instant the paper can be moved. In case the contact pressure is below the minimum value, after the contacts have been replaced, additional insulating washers should be added under the spring. Low spring pressure should be guarded against to avoid excess heating of the contacts. Excess heating increases the resistance which may cause arcing and welding the contacts together.

Magnet Noise—Humming on the A-C. contactor may develop. Should it become excessive, check to see if any of the following conditions exist.

1. The pole face of the magnet may be corroded, which will not permit the magnet to seal properly.
2. The armature may be distorted through rough use, which will not allow the armature core to find a square seat. Check this by placing a sheet of paper between the two pole faces and close the magnet electrically, which will leave an impression on the high points. Full contact is not actually necessary but should be over a large portion.
3. The voltage may be below the minimum rating of the operating coil.
4. The shading coil on the armature core may be broken.
5. The spring pressure may be too high.

Contact Gap—The contact gap on the 62-F contactor should be approximately $\frac{7}{8}$ inch when the magnet is in the full open position, measured at the heel of the contacts when they are new. A greater gap may prevent the magnet from picking up on the minimum voltage for which the operating coil has been designed.

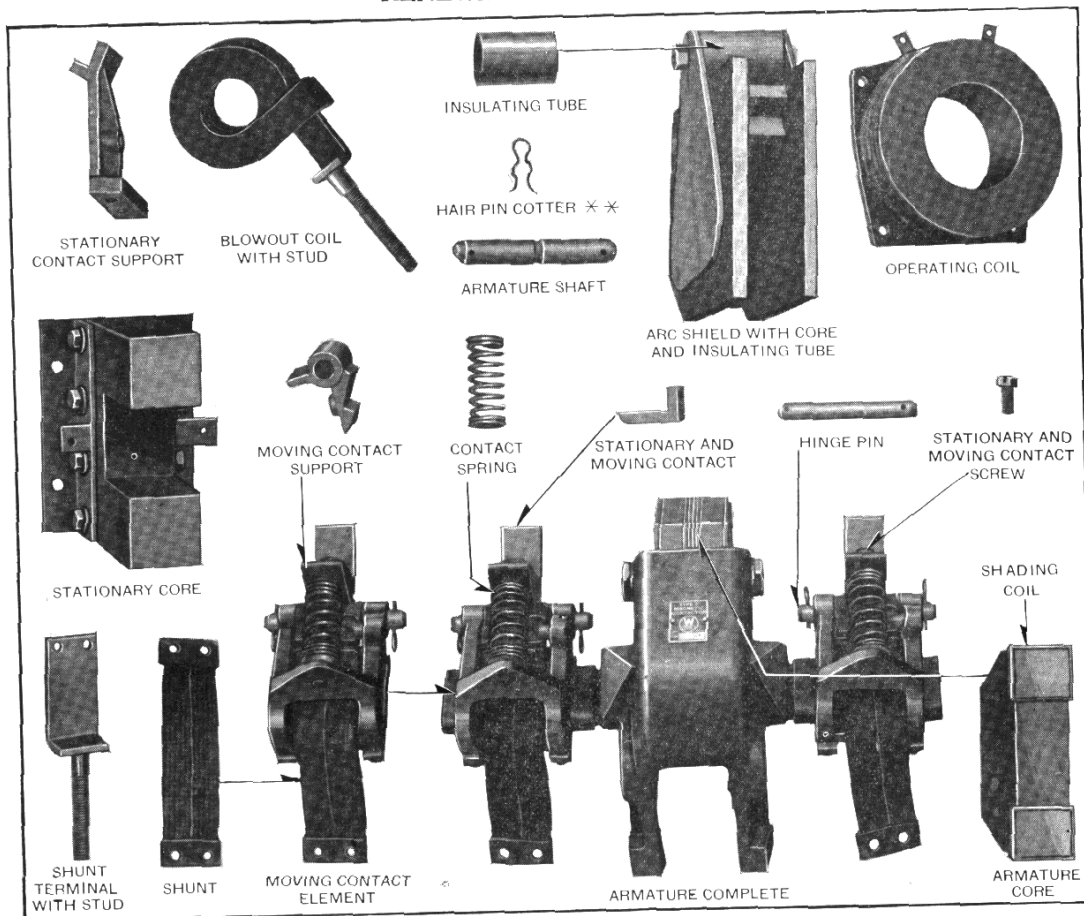
Failure to Close—A magnet may fail to close for any of the following reasons:

1. The lead wire to the operating coil may be disconnected.
2. The operating coil may be open circuited.
3. There may be mechanical friction.
4. The voltage may be below normal.

Failure to Open—Failures may be caused by mechanical interference or friction. The contacts may be welded together, or residual magnetism may be holding magnet due to low spring pressure.

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RENEWAL PARTS DATA



RECOMMENDED STOCK OF RENEWAL PARTS

Style Number of Contactor		With Blowout		Without Blowout		366 945, A		366 941, A	
		1		5		1		5	
Description of Part	Style No. of Part	No. Per Contactor	Contractors in Use		Recommended For Stock	Style No. of Part	No. Per Contactor	Contractors in Use	
			1	5				1	5
Armature Complete.....	368 319	1	0	0		969 154	2	0	0
†Bare Armature.....	969 152	1	0	0		322 689	2	0	0
†Stop.....	246 082	2	0	0		94 401	2	2	4
†Cushion.....	246 084	2	0	0		780 767	2	1	2
Armature Core.....	368 323	1	0	0		311 504	2	0	0
Shading Coil.....	433 033	2	0	0		334 812	2	1	2
†Armature Core Hinge Pin.....	949 559	1	0	0					
†Hinge Pin Insulating Bushing.....	368 321	1	0	0		368 330	2	0	1
†Hinge Pin Insulating Washer.....	116 709	1	0	0		302 860	2	0	0
†Insulated Cross Bar.....	368 320	2	0	1		379 677	2	0	0
Moving Contact Element.....	969 156	2	0	1		281 054	4	2	4
Moving Contact Support.....	301 433	2	2	4		381 320	1	0	0
Moving Contact.....	94 401	2	1	2		662 268	1	0	0
Moving Contact Screw.....	780 767	2	0	1		461 974	1	0	0
Contact Spring.....	204 143	2	1	2		368 322	1	0	0
Shunt.....	517 793	2	2	4		969 155	1	0	0
†Shunt Screw.....	281 054	4	0	0		†	1	1	1
Hinge Pin.....	662 248	2							
						†Stationary Contact Support with Stud.....			
						xStationary Contact Support.....			
						Stationary Contact.....			
						xBlowout Coil with Stud.....			
						†xBlowout Coil Screw.....			
						xArc Shield with Core and Insulating Tube.....			
						†Insulating Tube.....			
						Shunt Terminal with Stud.....			
						†Shunt Screw.....			
						†Bearing Bracket.....			
						Armature Shaft.....			
						†Stationary Core Insulation.....			
						Stationary Core.....			
						†Operating Coil Support.....			
						Operating Coil.....			

Parts indented are included in the part under which they are indented.
†Not illustrated. *Used only on contactor without blowout.

xUsed only on contactor with blowout.
†When ordering, specify identification number stamped on coil.

ORDERING INSTRUCTIONS

Name the part and give the complete nameplate reading. State whether shipment is desired by express, freight or by parcel post. Send all orders or correspondence to nearest Sales Office of the Company. Small orders should be combined so as to amount to a value of at least \$1.00 net; where the total of the sale is less than this, the material will be invoiced at \$1.00.

Westinghouse Electric & Manufacturing Company
East Pittsburgh, Pa.