Westinghouse

TYPE GCD SIZE 5 AC CONTACTOR

2 OR 3 POLES **FRONT CONNECTED**

DESCRIPTION

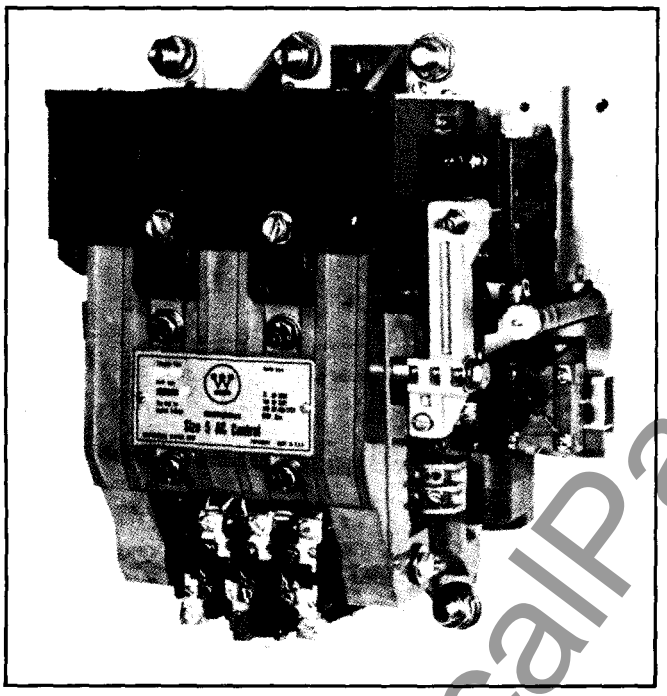

Fig.1
Complete Linestarter Assembly with Type GCD-530 Contactor, Type L-56 Electrical Interlock, Current Transformers and Type A Thermal Overload Relay (Photo BD74-0055)

The Type GCD Size 5 AC Contactor is similar to the Type GCA Size 5 AC Contactor except it is supplied with a D-C operating magnet. It is used where low dropout voltage or exceptionally quiet operation is desired.

A typical linestarter assembly, Fig. 1, incorporates a Type L-56 Electrical Interlock (for auxiliary devices), current transformers and overload relay. In addition, the rectifier, economizing resistor, and a Type L-64 shorting interlock are provided. The rectifier permits operation from an a-c control circuit supply.

The contact ratings are listed in Fig. 2.

Characteristics	Open	Enclosed
Voltage Rating 8-hour rating, Amperes	600 300	600 270

Fig. 2 Ratings

Outline dimensions of the Type GCD Size 5 AC Contactor are shown in Fig. 3.

Operation

A typical control circuit diagram is shown in Fig. 5. When the circuit is completed by the control relay, "CR", a d-c closing voltage is applied to the operating coil, closing the contactor. As the contactor closes, the Type L-64 shorting interlock opens, inserting the economizing resistor into the circuit. This provides the lower d-c holding voltage equal to the continuous rating of the operating coil.

Additional Descriptive Information

Additional information and detail instructions are contained in the following Instruction Leaflets:

--I.L. 15-825-14A—Type GCA Size 5 AC Contactor

--I.L. 15-827-20B—Overload Protection Assembly for GCA Size 5 Contactors

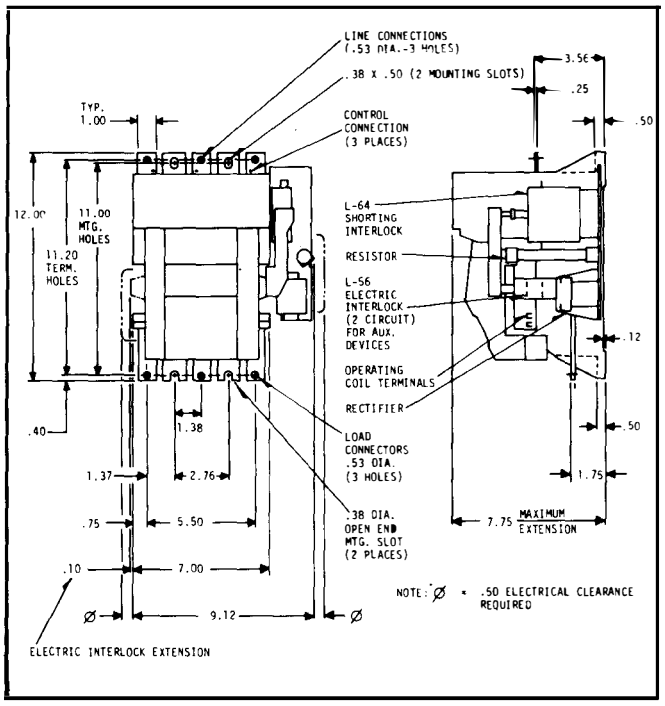

Fig. 3 Type GCD Size 5 AC Contactor Outline (From Dwg 3512C84)

INSTALLATION

This industrial type control is designed to be installed, operated, and maintained by adequately trained workmen. These instructions do not cover all details, variations, or combinations of the equipment, its storage, delivery, installation, check-out, safe operation, or maintenance. Care must be exercised to comply with local, state, and national regulations, as well as safety practices, for this class of equipment.

The Type GCD Size 5 AC Contactor is supplied ready to be installed per the detailed instructions contained in I.L. 15-825-14A.

Before power is applied, the following must be correct for proper contactor operation:

a) Identification of resistor, rectifier and operating--correct watts. ohms, voltage and style number per Fig. 4.
b) Connection of control relay ''CR'', resistor, rectifier, and operating coil per Fig. 5.
c) Type L-64 shorting interlock contact gap. For required gap see Fig. 6; for adjustment procedure see Maintenance instructions.

MAINTENANCE

The following maintenance instructions are to be used in addition to those found in I.L. 15-825-14A.

Resistor, Rectifier, and Operating Coil Application

Fig. 4 lists the common resistor, rectifier and operating coil combinations. Fig. 5 shows typical control circuits for A-C or D-C supply.

For Supply		Use					
		50 Watt Resistor		Rectifier Style Req'd-1	Operating Coil		
Volts	Freq	Style Req'd-1	Ohms		Style Req'd-1 Color-Blue	DC Volts For Reference Closing	Holding	Connect Per Fig.
120	50/60 Hz	443A324H30	250	2018A40G02	2050A14G24	106	15	5a
240	50/60 Hz	443A324H39	1000	2018A40G02	2050A14G26	214	27	5a
480	50/60 Hz	443A324H48	5000	2018A40G03	2050A14G28	430	47	5a
600	50/60 Hz	443A324H51	7500	2018A40G03	2050A14G30	538	61	5a
125	DC	443A324H31	300	None	2050A14G25	125	17	5b
250	DC	443A324H41	1500	None	2050A14G27	250	28	5b

Fig. 4 Resistor, Rectifier and Operating Coil Combinations for Type GCD Size 5 Contactor (From Dwg. 3512C89)

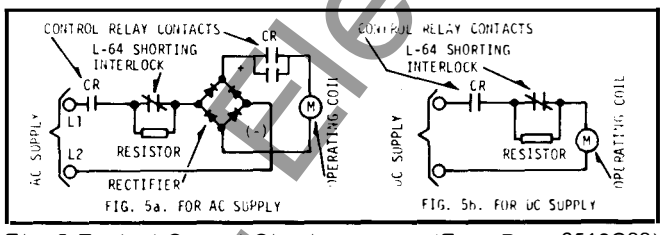

Fig. 5 Typical Control Circuit (From Dwg. 3512C88)

When a new resistor, rectifier or operating coil is installed, check identification for correct watts, ohms, voltage and style number. Parts and wiring must be reinstalled per Installation instructions. In addition, high temperature insulation or sleeving is required on at least the 6 inches of wire adjacent to a resistor terminal. The resistor mounting stud must not be overtightened since this can damage the enamel coating, exposing the resistance wire. Such exposure can lead to eventual resistor failure.

Adjustment of The Type L-64 Shorting Interlock

For proper contactor operation, the Type L-64 shorting interlock is to be initially adjusted for .06 contact gap between its stationary and moving contacts with the contactor fully closed. This gap must never be less than .02'' nor more than .08''. If adjustment is required, see Fig. 6 and follow this procedure:

1) Remove all power.
2) Close contactor manually.
3) Loosen locknut on rear of molded operating arm.
4) Turn adjusting screw (screwdriver slot) to obtain the required .06 gap shown in Fig. 6.
5) Hold adjusting screw in position with screwdriver and tighten locknut on adjusting screw.

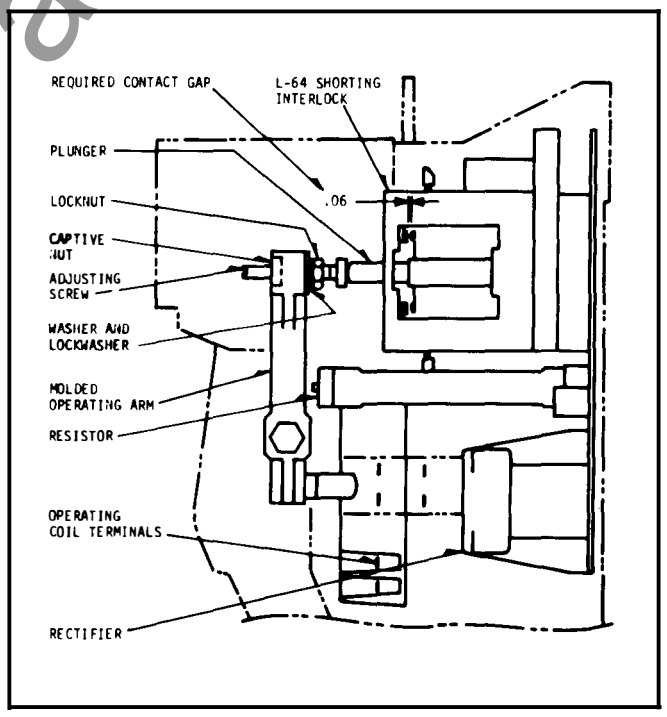

Fig. 6 Adjustment of Type L-64 Shorting Interlock (From Dwg. 3512C85)

RENEWAL PARTS

Complete contactor renewal parts data is listed in RPD 16-100B5D
Complete linestarter renewal parts data is listed in RPD 11-200S5-GCD

Westinghouse Electric Corporation
General Control Division
Asheville, N. C. 28813