Westinghouse

TYPE GCL SIZE 6 AC CONTACTOR

2 OR 3 POLES FRONT CONNECTED

DESCRIPTION

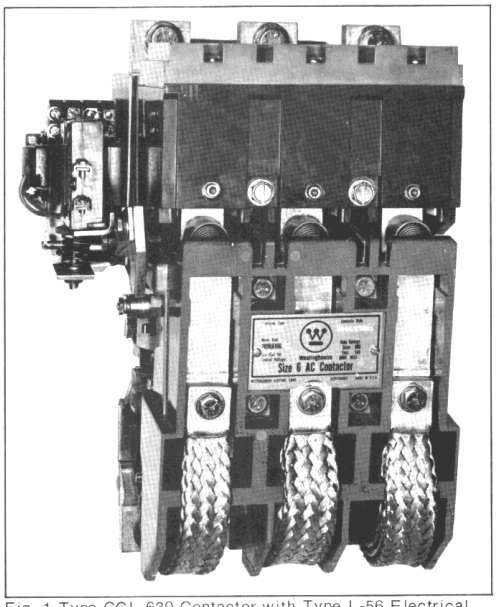

Fig. 1 Type GCL 630 Contactor with Type L-56 Electrical Interlock (Photo BD-71-1055)

The type GCL Size 6 AC Contactor is similar to the Type GCA Size 6 AC Contactor except it is mechanically latched closed.

A typical contactor assembly, Fig. 1, incorporates a closing coil, mechanical latch mechanism, electrically operated trip solenoid, a Type L-64 clearing interlock, and a Type L-56 Electrical Interlock (for auxiliary devices).

The contact ratings are listed in Fig. 2.

Characterisitcs	Open	Enclosed
Voltage Rating	600	600
8-hour rating, Amperes	600	540

Fig. 2 Ratings

Outline dimensions of the Type GCL Size 6 AC Contactor are shown in Fig. 3.

OPERATION

A typical control circuit is shown in Fig. 5.

a) **Closing** - When the "Close" pushbutton is operated, the closing coil is energized, closing the contactor. As the contactor closes, the latch lever hooks over the latch pin to mechanically latch the contactor closed. The Type L-64 clearing interlock deenergizes the closing coil.

b) **Opening** - When the "Trip" pushbutton is operated, the trip solenoid coil is energized, unhooking the latch lever from the latch pin, which allows the contactor to open. As the contactor opens, the Type L-64 clearing interlock deenergizes the trip solenoid coil.

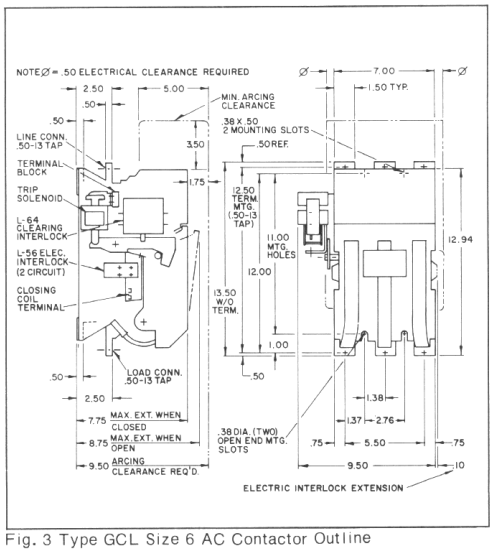

Fig. 3 Type GCL Size 6 AC Contactor Outline (From Dwg. 3512C76)

Additional Descriptive Information

Additional information and detail instructions for the basic 3 pole contactor are contained in the Instruction Leaflet for the Type GCA Size 6 AC Contactor, I.L. 15-825-15A.

INSTALLATION

The Type GCL Size 6 AC Contactor is supplied ready to be installed per the detailed instructions contained in I. L. 15-825-15A.

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

a) **Style numbers** of closing and trip solenoid coils per Fig. 4.

b) **Connections** of closing coil, trip solenoid coil and Type L-64 clearing interlock per Fig. 5.

c) **Adjustments** of latch assembly per Fig. 6 and Fig. 7.

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, checkout, 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.

MAINTENANCE

The following Maintenance Instructions are to be used in addition to those found in I.L. 15-825-15A.

Closing Coil and Trip Solenoid Coil Application

Fig. 4 lists the common closing and trip solenoid coils. Fig. 5 shows a typical control circuit.

When a new closing coil or trip solenoid is installed, check indentification for correct style numbers.

Note: If replacement of trip solenoid **coil** is required, **DO NOT** attempt to change coils. Order a new trip solenoid **complete** with the correct coil, as listed in the renewal parts data.

FOR 60 Hz AC VOLTS	USE	
	CLOSING COIL STYLE	TRIP SOLENOID COIL STYLE
120	2050A12G05	2968892G24
240	2050A12G10	2968892G22
480	2050A12G15	2968892G23
600	2050A12G17	2968892G09
Note: The trip solenoid coil is rated for intermittent duty. Do not apply continuous voltage.		

Fig. 4 Closing and Trip Solenoid Coils for GCL Size 6 AC Contactor (From Dwg. 3512C90)

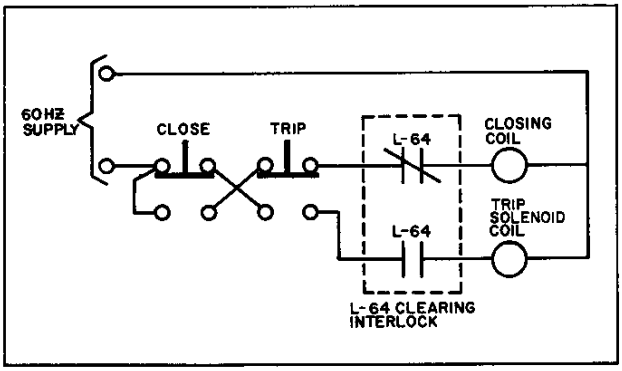

Fig. 5 Typical Control Circuit (From Dwg. 3512C77)

Contact Overtravel and Forces

The contact overtravel and contact forces will be slightly less than the Type GCA Size 6 AC Contactor, since the contactor crossbar is in a different position when latched.

With new contacts, the contact overtravel is .15 * .02 inches (9/64 to 11/64 inches) and the total contact forces per pole should be:

Initial Force	7.5 to 8.5 pounds
Final Force	8.75 to 9.75 pounds

Contact replacement is necessary when the overtravel on any pole (with the contactor in the latched position) has been reduced to .05 (3/64) inch.

The methods listed in the Maintenance Instructions of I.L. 15-825-15A should be used when measuring overtravel forces or replacing contacts.

Adjustments Fig. 6 and Fig. 7

Three (3) independent adjustments are required for proper contactor operation. When adjustment is required, follow this procedure. **REMOVE ALL POWER** to the contactor before making any adjustments.

1) **Latch Adjustment** -Fig.6

a) Manually close contactor to the fully closed position.

b) Loosen latch bolts.

c) Move latch to obtain .005/.010 clearance shown.

d) Retighten latch bolts to 100 inch pounds while maintaining clearance.

2) **Trip Solenoid Adjustment** - Fig. 6

a) Manually close contactor. The latch mechanism will now hold the contactor closed.

b) Loosen trip solenoid adjusting screw jamnut.

c) Adjust screw length to obtain the .28/.32 gap shown.

d) Tighten jamnut on adjusting screw to lock adjustment.

3) **Clearing Interlock Adjustment** Fig. 7

With the contactor in the open position:

a) Loosen clearing interlock adjusting screw jamnut.

b) Adjust screw length to obtain the .03 shown.

c) Tighten jamnut on adjusting screw to lock adjustment. With the contactor open and this adjustment, the interlock plunger can be **manually** depressed .03 further.

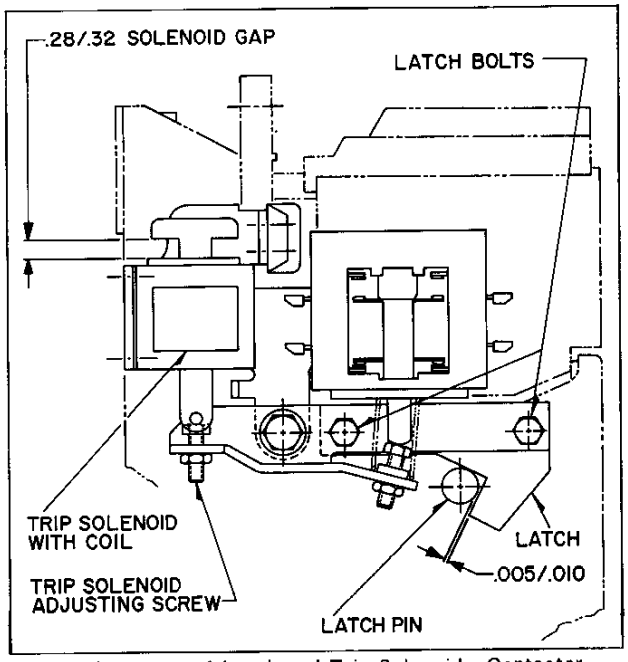

Fig. 6 Adjustment of Latch and Trip Solenoid - Contactor Closed (From Dwg. 3512C74)

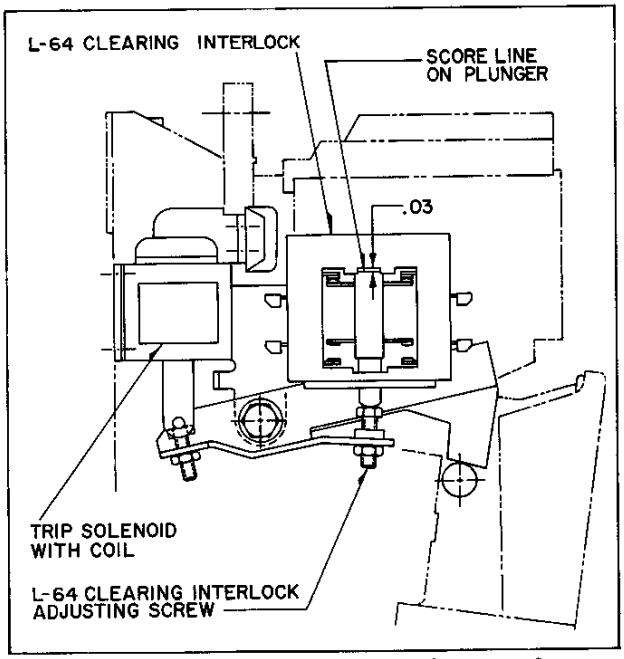

Fig. 7 Adjustment of Clearing Interlock - Contactor Open (From Dwg. 3512C75)

RENEWAL PARTS

Complete contactor renewal parts data is listed in RPD 16-100B6L.

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