

Chapter 48

CONTACTOR, B.T.H., TYPE LDA250-A3/1

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LEADING PARTICULARS

Contactor, Type LDA250-A3/1	Stores Ref. 5CW/
Rated voltage (main contacts)	112 volts d.c. (126 volts max.)
Rated current	250 amp.
Rating of auxiliary contacts	24 volts d.c., 5 amp.
Voltage drop across contacts at rated current—	
Main contacts	less than 150 mV
Auxiliary contacts	less than 75 mV
Control voltage	16-29 volts d.c.
Pull-in current at 24 volts d.c.	9.3 amp. (approx.)
Hold-in current at 24 volts d.c.	0.47 amp. (approx.)
Weight	4 lb.
Dimensions of case	7 $\frac{1}{8}$ in. \times 3 $\frac{7}{8}$ in. \times 3 $\frac{1}{2}$ in.

Introduction

1. The contactor, Type LDA250-A3/1 (fig. 1) is a single-pole, single-throw contactor for the remote control of circuits carrying up to 250 amp. at a nominal voltage of 112 volts d.c. It incorporates an economy winding to give a reduced holding current.

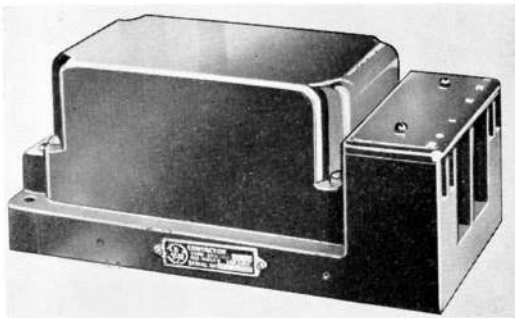


Fig. 1. Contactor, Type LDA250-A3/1

DESCRIPTION

2. The contactor consists essentially of an electro-magnetic relay, with its armature axis in a horizontal plane. When the coil is energized by the application of a suitable voltage across terminals 7 and 8, the armature moves to the closed position against the action of a return spring, thus closing the main contacts (terminals 1 and 2), and operating three sets of auxiliary contacts. Two of these, one normally open and one normally closed, are contacts for external control or indicating purposes, and the third are normally closed contacts which open to bring the economy winding into circuit. Overtravel is allowed for on both main and auxiliary contacts, to compensate for contact wear.

3. A circuit diagram of the contactor is given in fig. 2. All terminals are suitable for crimped cable lugs of the Pren and Prenal

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range, and the main terminal recesses are deep enough to accommodate two cable lugs back to back for the purpose of looping in from one contactor to another.

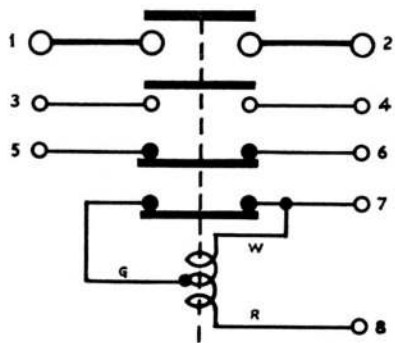


Fig. 2. Circuit diagram

4. Insulation barriers and covers protect the terminals from accidental short-circuit; the terminals are so arranged that the contactor can be installed and connected without the removal of the main cover.

INSTALLATION

5. The contactor is normally installed with its mounting face horizontal, but if a vertical mounting position is essential, the main terminals should be at the bottom. The contactor is weatherproof, but should, as far as possible, be mounted in a position free from direct splash, leakage of tanks, etc.

6. In a location subject to continued vibration, such as engine nacelles, it should be mounted on rubber or some other resilient mounting. In such instances, it should be ensured that the heavy-current cables cannot vibrate independently of the contactor, causing loose connections and terminal wear.

SERVICING

7. The cover should be removed periodically and the interior inspected for general cleanliness and freedom from deterioration of insulation, gaskets, etc. Check all screws and nuts for tightness, and leads for security of connection.

8. Operate the contactor by hand, and check that the main and auxiliary contacts open and close satisfactorily.

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