

CLASS 7310, D-C. SPEED REGULATING RHEOSTAT

Frame No. 3 INSTRUCTIONS



FIG. 1—CLASS 7310 SPEED REGULATING RHEOSTAT

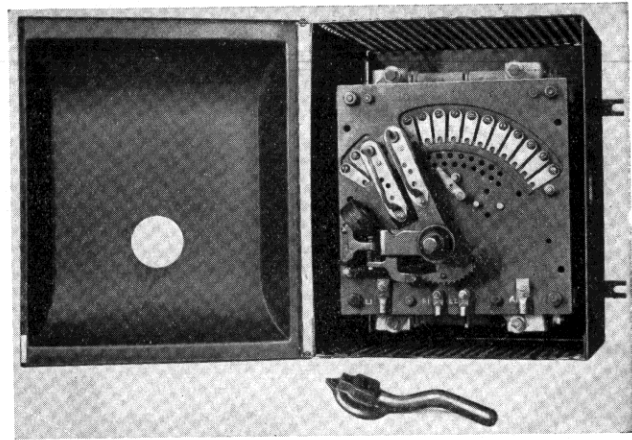


FIG. 2—VIBRATIONS WILL NOT CHANGE THE SPEED SETTING. REGULATING ARM IS HELD ON SETTING BY PAWL AND RATCHET. SPRING TENSION FOR LOW VOLTAGE RELEASE IS ON STARTING ARM ONLY.

Ratings

$\frac{1}{2}$ to 10 Hp. 115 Volts, $\frac{1}{2}$ to 20 Hp. 230 Volts.

Resistors

On the smaller ratings wire wound bobbin type resistors are mounted directly on the contact studs on the rear of the faceplate. On the larger ratings, edgewound strap tubes are fastened to the faceplate so that the faceplate and resistor as a unit can easily be removed from the enclosure.

Installation

These rheostats are designed for wall mounting and should be so placed that the openings are at top and bottom. Inasmuch as the continuous duty rating means a considerable amount of heat, care must be taken to see that a plentiful supply of air is assured.

Follow Underwriter's and local building codes. Make connections as per diagram.

Operation

To start the motor, first close the line switch and then move the operating handle to the left. As soon as contact is made the motor should start and accelerate to approximately half speed. The operating handle can then be moved toward the right to increase speed. There is a ratchet device attached to the arm which enables the operator by the sense of feeling to know whether the arm is squarely on a contact or not. The circuit may be broken and the

motor stopped by moving the operating arm toward the left beyond the first or low speed point. There is a magnetic blowout on the line contact which effectively prevents arcing or burning.

Speed Control

These rheostats are made with either A.E.S. Class 93 or 95 resistors. Class 93 is for varying torque application such as fans and centrifugal pumps, while Class 95 is for constant torque applications. The speed obtained is dependent on the load on the motor. Class 95 resistors are calculated to give 50 per cent speed reduction at 80 per cent of full load torque. If this much reduction is not obtained, it means that the motor is underloaded and the load must be increased or else additional resistors provided.

Maintenance

Some arcing and burning of the contact making parts is unavoidable and periodic inspection and cleaning should be made. Smoothing the contacts with sandpaper will usually keep the rheostat in good operating condition although dressing with a file may be needed occasionally. After each cleaning, the contacts should be very lightly greased.

If through abnormal conditions the resistors are damaged, the faceplate together with the resistors can easily be removed from the box and the damaged units repaired or replaced. Where several motors of the same rating are in use a complete spare resistor

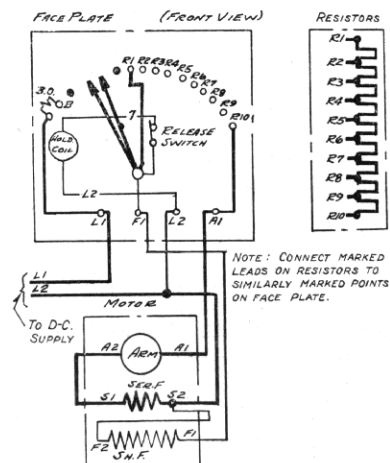
should be kept on hand. The contacts are reversible and when badly burned or worn should be turned over.

Drip Proof

When drip proof construction is ordered, suitable covers or shields are added to prevent dripping water from entering the rheostat.

Dimensions

See DLP 42A604 for standard.
See DLP 45A720 for drip proof.



NOTE: CONNECT MARKED LEADS ON RESISTORS TO SIMILARLY MARKED POINTS ON FACE PLATE.

NOTE: WHEN RHEOSTAT IS USED WITH A SHUNT WOUND MOTOR OR WITH A COMPOUND MOTOR WITH SERIES CONNECTED TO ARMATURE INTERNALLY, CONNECT A2 TO L2.

FIG. 3—WIRING DIAGRAM.

The above diagram is for compound-wound motors. For shunt-wound motors the series field coil is omitted.

*To be filed as an Instruction Leaflet and as Renewal Parts Data; for Renewal Parts, see reverse side of this sheet.

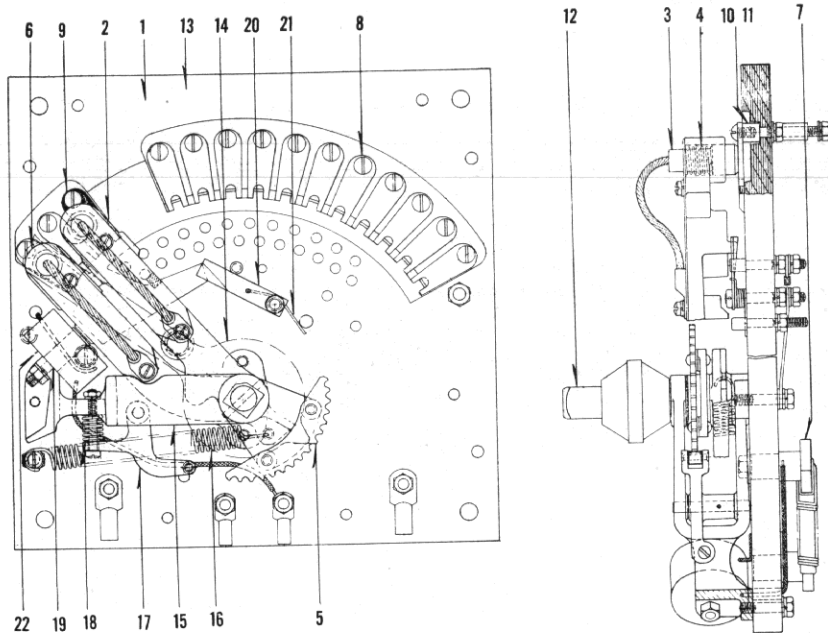
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RENEWAL PARTS DATA



This is a list of the Renewal Parts and the quantities of each that we recommend should be stocked by the user of this apparatus to minimize service interruptions caused by breakdowns. The parts recommended are those most subject to wear in normal operations, or to damage or breakage due to possible abnormal conditions.

This list of Renewal Parts is given only as a guide. When continuous operation is a primary consideration, additional insurance against shutdowns is desirable. Under such conditions more renewal parts stock should be carried, considering the severity of service and the time required to secure replacements.

Ordering Instructions

Name the part and give its style number. Give the complete name plate 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.

RESISTORS—A. E. S. 95 MACHINE DUTY

Hp.	Volts	Rheostat Complete Style No.	Resistor Complete Style No.	Tie Rod Assembly Style No.	Resistor Unit Style No.	No. Required	Resistor Unit Style No.	No. Required	Resistor Unit Style No.	No. Required
1/2	115	885164	885192	.....	°808544	2	°808543	1	°808542	1
1	115	885165	885193	.....	°808540	3	°808541	1	.....	.....
2	115	885166	885194	.....	°808534	7	°808536	1	.....	.....
3	115	885167	885195	.....	°808570	6	°808571	1	°808572	1
5	115	885168	885196	667255	389070	2	389071	2	.....	.....
7 1/2	115	885169	885197	833727	490585	5	.....	.....	.....	.....
10	115	885170	885198	833727	388991	5	388992	1	.....	.....
1/2	230	885174	885202	.....	°808550	1	°808549	3	.....	.....
1	230	885175	885203	.....	°808547	1	°808546	3	.....	.....
2	230	885176	885204	.....	°808542	1	°808540	7	.....	.....
3	230	885177	885205	.....	°808576	6	°808578	1	°808575	1
5	230	885178	885206	667255	389075	1	475539	4	.....	.....
7 1/2	230	885179	885207	833727	490591	5	.....	.....	.....	.....
10	230	885180	885208	833727	490588	6	.....	.....	.....	.....
15	230	885181	885209	833727	490586	8	.....	.....	.....	.....
20	230	885182	885210	833727	388991	14	.....	.....	.....	.....

°Resistor Bobbins.

Recommended Stock of Renewal Parts

For Rheostat in use up to and including			1	5	
Rei No.	Name of Part	No. Per Unit	Recommended For Stock		Style No. of Part
1	Face Plate Complete.....	1	0	0	833732A
2	Contact Arm Complete with Contacts—Upper.....	1	0	0	885291
3	Contact with Shunt.....	1	1	1	850791
4	Contact Spring.....	1	0	1	809450
5	Ratchet.....	1	0	0	850036
6	Contact Arm Complete with Contact—Lower.....	1	0	0	885292
3	Contact with Shunt.....	1	1	1	850791
4	Contact Spring.....	1	0	1	809450
7	Blowout Coil.....	1	0	1	833795
8	Stationary Contact.....	13	7	13	833797
9	Stationary Contact—Dummy.....	1	0	1	833798
10	Contact Stud—2½" Long.....	11	1	2	833799
11	Contact Stud—1½" Long.....	3	0	0	833892
12	Shaft Assembly.....	1	0	0	833723
13	Base.....	1	0	0	809446
14	Handle.....	1	0	0	833794
15	Bearing Bracket.....	1	0	0	850792
16	Return Spring.....	1	0	1	809449
17	Pawl.....	1	0	0	850793
18	Pawl Spring.....	1	0	1	850794
19	Core.....	1	0	0	825012
20	Flapper Switch.....	1	0	1	850797
21	Flapper Switch Spring.....	1	0	1	850800
22	Magnet Coil—115 Volts.....	1	1	1	822168
22	Magnet Coil—230 Volts.....	1	1	1	822169

RESISTORS—A. E. S. 93 FAN DUTY

Hp.	Volts	Rheostat Complete Style No.	Resistor Complete Style No.	Tie Rod Assembly Style No.	Resistor Unit Style No.	No. Req.	Resistor Unit Style No.	No. Req.	Resistor Unit Style No.	No. Req.	Resistor Unit Style No.	No. Req.	Resistor Unit Style No.	No. Req.	Resistor Unit Style No.	No. Req.	Resistor Unit Style No.	No. Req.	Resistor Unit Style No.	No. Req.
1/2	115	885145	885216	.....	°808550	1	°808547	1	°808545	1	°808543	1	.....	.....	.....	.....	.....	.....	.....	.....
1	115	885146	885217	.....	°808547	1	°808544	1	°808542	1	°808540	1	.....	.....	.....	.....	.....	.....	.....	.....
2	115	885147	885218	.....	°808542	1	°808540	1	°808539	1	°808537	1	°808536	1	808535	1	°808534	2	.....	.....
3	115	885148	885219	.....	°808578	1	°808576	1	°808574	2	°808573	1	°808572	1	808570	2	.....	.....	.....	.....
5	115	860173	885220	667255	389076	1	664406	1	591228	1	389070	1	.....	.....	.....	.....	.....	.....	.....	.....
7 1/2	115	860174	885221	667255	475539	1	389073	1	389070	1	389069	1	.....	.....	.....	.....	.....	.....	.....	.....
10	115	885149	885222	667256	389071	1	389070	2	389069	1	705580	1	705577	1	.....	.....	.....	.....	.....	.....
1/2	230	885153	885226	.....	°808556	1	°808553	1	°808550	1	°808549	1	.....	.....	.....	.....	.....	.....	.....	.....
1	230	885154	885227	.....	°808553	1	°808549	1	°808548	1	°808546	1	.....	.....	°808541	1	°808540	2	.....	.....
2	230	885155	885228	.....	°808548	1	°808546	1	°808544	1	°808543	1	°808542	1	°808541	1	°808540	2	.....	.....
3	230	885156	885229	.....	°808584	1	°808583	1	°808580	2	°808578	2	°808577	1	°808576	1	.....	.....	.....	.....
5	230	860175	885230	667255	389079	1	389076	2	508021	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
7 1/2	230	860176	885231	667255	389078	1	389077	1	389075	2	475539	1	.....	.....	.....	.....	.....	.....	.....	.....
10	230	885157	885232	667256	389077	1	389076	1	664406	2	591227	2	.....	.....	.....	.....	.....	.....	.....	.....
15	230	885158	885233	833727	490593	1	490591	1	490589	2	490587	2	490586	1	490585	1	388992	1	388991	1
20	230	885159	885234	833727	490592	1	490590	1	490589	1	490588	1	490587	1	490586	1	490585	1	388992	1

°Resistor Bobbins.

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Westinghouse Electric & Manufacturing Company
East Pittsburgh, Pa.