

TEST INSTRUCTIONS

NOTE: Follow these suggested steps before attempting any repair of AGASTAT relays. This will prove if fault actually lies with the AGASTAT.

1. Check voltage of control circuit at coil terminals.
2. Make sure that energy is applied to coil. If the core actuates (on Type 1 units), or the switch contacts transfer (on Type 2 units), the unit has started to function.
3. Observe the movement of spindle. (Observation best made when time setting is between 1 to 10 seconds.) If the nylon collar on the spindle is gradually moving upward, the relay is satisfactorily performing its second step. Current must be removed from Type 2 units before spindle will move upward.
4. If switch trips after time delay has elapsed, the relay has functioned normally.
5. If, after the switch trips, the circuit does not close, contacts may be dirty. Clean by sliding paper between contacts when contacts are closed.

WARRANTY

The AGASTAT time delay relay is warranted against mechanical and electrical defects for a period of one year from date of shipment from factory if it has been installed and used in accordance with factory recommendations. New parts will be furnished free of charge in exchange for parts which have proven defective. The furnishing of these parts shall constitute fulfillment of the Company's obligations and liabilities.



ELASTIC STOP NUT CORPORATION OF AMERICA
AGASTAT DIVISION ■ ELIZABETH, NEW JERSEY

How To Install Your

AGASTAT[®]

time/delay/relay



MOUNTING—TIMING

CONTACT ARRANGEMENT

TERMINAL CONNECTIONS

TEST INSTRUCTIONS

INSTALLATION

Mount relay in vertical position (unless horizontal mounting was specified and relay is marked "HORIZONTAL") using four 8-32 screws installed from back of panel in tapped mounting holes. Screws should not project more than 3/16 inch into coil box to prevent damage to coil. If mounting bracket or plate accompanies relay, this should first be attached to back of coil box, after which the unit may be front-mounted to the panel.

OPERATING VOLTAGE

Check the type designation for proper operating voltage before energizing unit.

NE, FE, DE=A.C. Units

NF, FF, DF=D.C. Intermittent Units

ND, FD, DD=D.C. Continuous Units

TIMING ADJUSTMENT

Needle Valve Units are adjustable from .2 second to 3 minutes or more. Your AGASTAT has been factory adjusted to the delay specified; if no delay was specified, it was set for an approximate 10 seconds delay.

To change this setting, turn the adjusting screw SLOWLY clockwise to increase the time delay, counterclockwise to shorten it, as indicated by "increase" and "decrease" on the timing head. Turn the screw only a fraction of a revolution before each timing check for best results.

Dial Head Units provide a full range of adjustment with one revolution of the dial. Color-coded dials identify the following linear adjustment ranges:

Dial Color	Model Code	Linear Adj. Range
Special Green	SG	.10 to 1 sec.
Green	G	.5 to 3 sec.
White	W	1.5 to 9 sec.
Yellow	Y	2.5 to 25 sec.
Special Red	SR	5.0 to 100 sec.
Red	R	10.0 sec. to 5 mins.
Blue	B	30.0 sec. to 15 mins.

All units provide linear adjustment within these ranges; shorter absolute time settings or longer times, up to double those listed, may be obtained on individual units.

Each dial is lettered from "A" through "E", with "O" as the zero mark. To increase the time delay period, turn the dial clockwise; to shorten the time, turn dial counterclockwise. Longest time will be obtained at "E" end of scale, shortest at "A" end. Dials may safely be turned past "O" in either direction, although a "dead zone" will occur between "E" and "O".

CONTACT CAPACITY

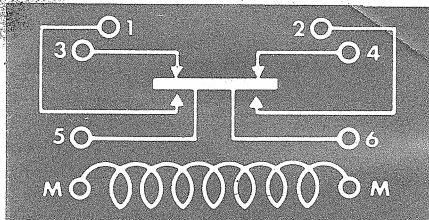
Ratings are Based on Resistive Loads

Nominal Operating Voltage	Single Break	Double Break
28 volts D.C.	10 amps	20 amps
110 volts D.C.	1 amp	2 amps
220 volts D.C.	.5 amp	1 amp
120 volts 60 cycle	10 amps	20 amps
240 volts 60 cycle	5 amps	10 amps
480 volts 60 cycle	2.5 amps	5 amps

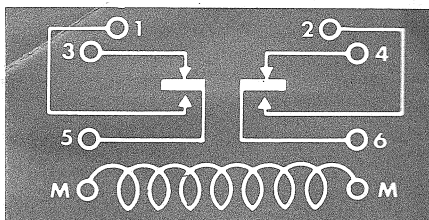
Inductive and capacitive loads should not have in-rush currents that exceed five times normal operating load.

Contact life is contingent upon the number of operations and the load on the contacts.

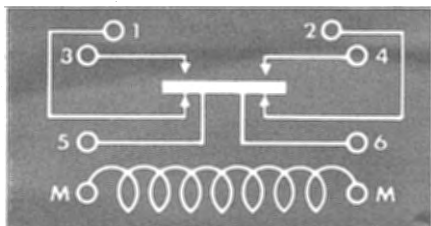
CONTACT ARRANGEMENT AND TERMINAL CONNECTIONS



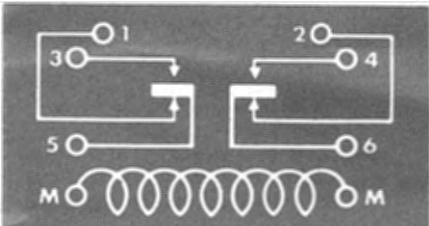
Models—NE-11, FE-11, ND-11, FD-11, NF-11, FF-11, DE-11, DD-11, DF-11



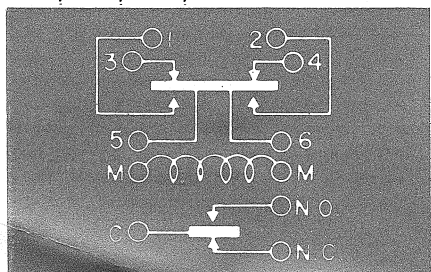
Models—NE-12, FE-12, ND-12, FD-12, NF-12, FF-12, DE-12, DD-12, DF-12



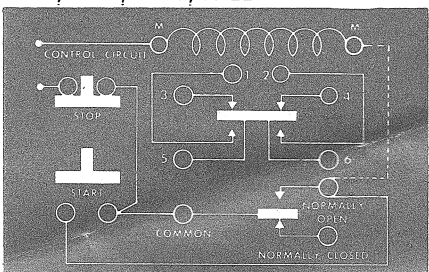
Models—NE-21, FE-21, ND-21, FD-21, NF-21, FF-21, DE-21, DD-21, DF-21



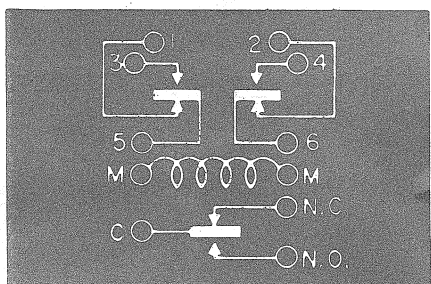
Models—NE-22, FE-22, ND-22, FD-22, NF-22, FF-22, DE-22, DD-22, DF-22



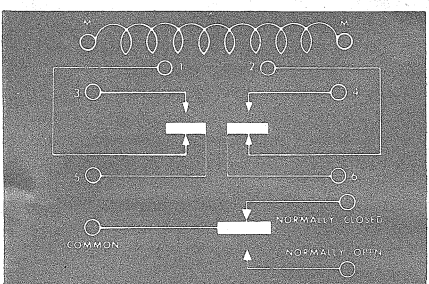
Models—NEL-11, FEL-11, NDL-11, FDL-11, NFL-11, FFL-11, DEL-11, DDL-11, DFL-11, also NET-11, FET-11, NDT-11, FDT-11, NFT-11, FFT-11, DET-11, DDT-11, DFT-11. Also available in double pole (-12) models.



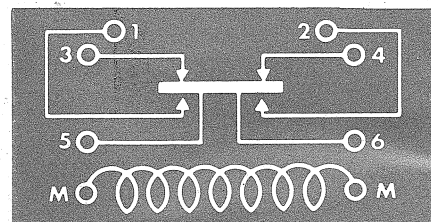
Dotted line represents jumper wire connected between coil (M) and NO contact of the micro-switch when electrical interlock is desired. For models NEL-11, FEL-11, NDL-11, FDL-11, NFL-11, FFL-11, DEL-11, DDL-11, DFL-11. Also available in double pole (-12) models.



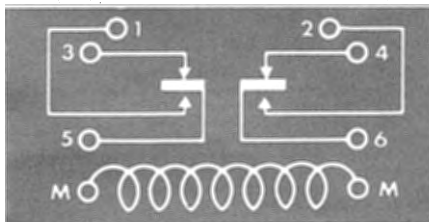
Models—NET-22, FET-22, NDT-22, FDT-22, NFT-22, FFT-22, DET-22, DDT-22, DFT-22. Also available in single pole (-21) models.



Models—NEH-22, FEH-22, NDH-22, FDH-22, NFH-22, FFH-22, DEH-22, DDH-22, DFH-22. Also available in single pole (-21) models.



Double Head Models—NED-11, FED-11, NDD-11, FDD-11, NFD-11, FFD-11, DED-11, DDD-11, DFD-11



Double Head Models—NED-12, FED-12, NDD-12, FDD-12, NFD-12, FFD-12, DED-12, DDD-12, DFD-12