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MAGNET RUNDOWN UNIT

GE MODEL 46-294231G1

MANUAL **PART NO. 46-318394**

AMI MODEL GE-MRU

OPERATING MANUAL

REVISION 6

03 MAY 1993

IEC 601-1 TYPE B EQUIPMENT

THERE *ARE* NO APPLIED PARTS INTENDED TO BE PLACED IN CONTACT WITH PATIENTS

OPERATING MANUAL

1.0 GENERAL DESCRIPTION

The Magnet Run Down Unit is designed to power the main coil heaters of the GE superconducting magnets causing the magnetic field to rapidly decay. Power is removed from the heater after a preset time period. Internal battery backup is provided together with test functions to ensure MRU availability.

1.1 PHYSICAL CHARACTERISTICS

Height 7.5 inches (190 mm)
Width 12.0 inches (305 mm)
Depth 6.0 inches (152 mm)
Weight (with batteries) 11 lbs. (5 kg)
Edge & corner radius 0.62 inches (16 mm)
Finish Textured polyurethane paint

1.2 LOCATION

WARNING: *CARE SHOULD BE USED IN SELECTING THE MOUNTING LOCATION TO AVOID AN ACCIDENTAL ACTNATION OF THE GUARDED MRU SWITCH BY CLEANING STAFF, ETC.*

The MRU is designed for permanent wall mounting, and is intended for use is in controlled environment. Mounting hardware should be capable of supporting a 32 lb. (14.5 kg) load. Mounting holes are provided in the rear surface. Holes are provided in the rear and bottom surface for standard electrical conduit (hard wire) installation. A primary power cord is installed for use where conduit is not used.

The MRU should be mounted outside of any area with a magnetic field greater than 200 gauss.

1.3 ELECTRICAL

Input voltage is 100-120 or 200-240 volts **AC,** single phase, 50/60 Hz, with less than 5 watts for battery trickle charge.

Note: *During installation, a short time load of up to* **35** *watts may be present during initial battery recharging.*

Output is 1.8 amperes at 20.7 volts DC into 2 parallel 22 ohm (nominal) loads. The duration of output is 30 seconds (minimum).

The charging duty cycle is continuous.

Temperature range: Operate, 50 to 90 degrees F (10 to 32 C)
Storage, -22 to +140 degrees F (-30 to +**60** C)

Set points are calibrated at a nominal 75 degrees F (24 C).

1.4 INSTALLATION

Installation must be performed only by a qualified General Electric Field Service representative.

As a safety precaution, fuse F2 is not installed in the MRU and will have to be installed and the battery trickle charged for 8 hours prior to use.

All units are shipped strapped for 115 volt operation with a North American NEMA 5-15P connector installed.

ALL 200-240 volt applications MUST be PERMANENTLY INSTALLED. 100-120 volt applications may be PERMANENTLY INSTALLED if desired. For any PERMANENTLY INSTALLED application, refer to the SERVICE MANUAL schematic for connections to TB1. All PERMANENT installations shall be connected to a dedicated Mains circuit, with a disconnect device that is in compliance with local regulatory standards.

2.0 OPERATION

WARNING: *THIS PROCEDURE IS FOR EMERGENCY USE ONLY. LOSS OF EXPENSIVE COOLING FLUIDS AND POSSIBLE MAGNET DAMAGE WILL RESULT.*

In normal operation, the green LED labeled CHARGER will be lit.

TO INITIATE A MAGNET RUN DOWN, OPEN THE CLEAR PROTECTIVE COVER AND FIRMLY DEPRESS, THEN IMMEDIATELY RELEASE, THE RED MAGNET RUN DOWN SWITCH. THE SWITCH WILL REMAIN DEPRESSED FOR APPROXIMATELY **30** SECONDS AS THE MAGNETIC FIELD IS COLLAPSED.

WARNING: MAGNET RUNDOWN WILL NOT COMMENCE UNTIL THE RED MAGNET RUNDOWN SWITCH IS RELEASED FOLLOWING DEPRESSION.

The red LED marked HEATER ACTUATED should light and remain lit.

2.1 TESTING

The following tests should be performed weekly. If any test fails, immediately contact your General Electric Field Service representative.

2.1.1 Verify that the green CHARGER LED is lit.

2.1.2 Depress and hold the TEST BATTERY switch for 15 seconds. The green BATTERY TEST LED should light.

2.1.3 Place TEST HEATER switch to A position. The green HEATER LED should light. Place TEST HEATER switch in B position. The green HEATER LED should light.

If it does not, depress TEST HEATER LED switch to verify that the LED is functioning.

The red LED indicator labeled HEATER ACTUATED will light and stay illuminated indefinitely whenever the MAGNET RUN DOWN switch is operated. Reset **of** this indicator should be only by a General Electric Field Service representative.

2.2 SERVICE

There are no user adjustments or replaceable parts. The fuses which are located inside the MRU should never be replaced by anyone other than a General Electric Field Service representative.

2.2.1 Routine preventative maintenance is required at yearly intervals. This maintenance must be performed by General Electric Field Service.

2.2.2 The unit's exterior is to be cleaned with a cloth dampened with a simple solution of soap and water.

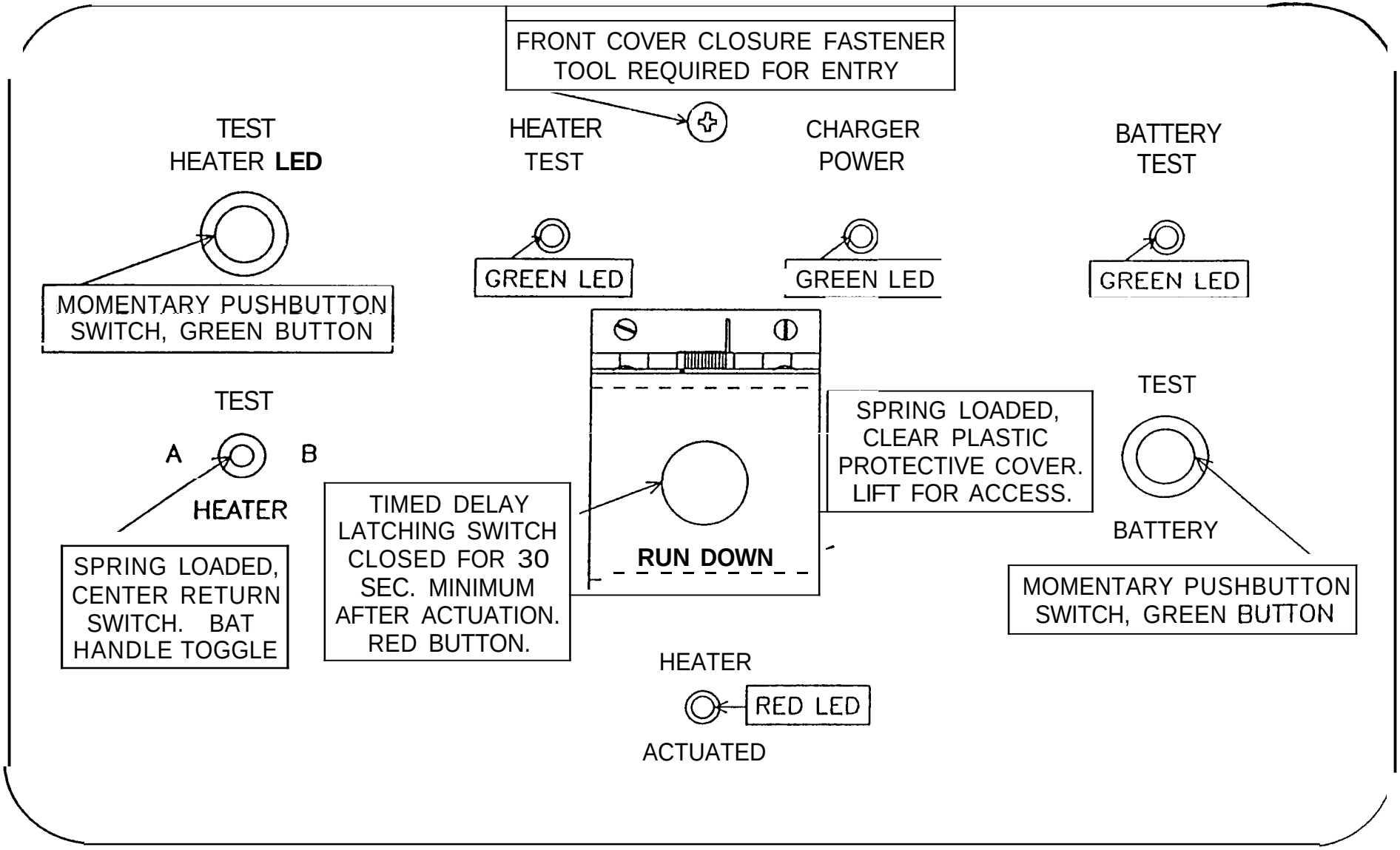

FIGURE 1

MRU FRONT PANEL LAYOUT, LABELING AND CONTROL FUNCTIONAL DESCRIPTIONS.