

# LEMA 1600HE SOLENOID ACTUATOR

## INTRODUCTION

THANK YOU for purchasing DIG's LEMA 1600HE solenoid actuator. The LEMA 1600HE is designed to be used in conjunction with all models of the LEIT 4000, X and XRC controllers. The LEMA 1600HE is a potted, zero maintenance, high-efficiency, watertight, 2-way magnetic solenoid actuator that requires minimal power to operate with the LEIT controllers. The LEMA can be installed on most brand name valves using one of DIG's adapters.

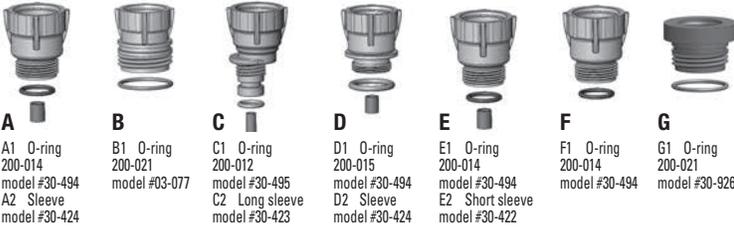
## SPECIFICATIONS

**MAXIMUM WIRE RUNS:** 14 AWG 4,500 feet (1365 m) 12 AWG 7,500 feet (2272 m)

### VALVE ADAPTERS:

DIG valve adapters are compatible with the following valves:

- A. Model 30-920 use with BERMAD series 200, HIT series 500, DOROT series 80, GRISWOLD series 2000, DW and BUCKNER series VB valves
- B. Model 30-921 use with RAIN BIRD DV, DVF, PGA, PEB (3/4" and 1" only), GB, EFB-CP, BPE, PESB (3/4" and 1" only) and ASVF valves
- C. Model 30-922 use with HUNTER series ASV, HPV, ICV, PGV, SRV, IBV and ASVF valves
- D. Model 30-923 use with WEATHERMATIC series 12000, 21000 valves
- E. Model 30-924 use with IRRITROL series 100, 200B, 205, 217B, 700, 2400, 2500, 2600 and TORO series 220, P220 valves
- F. Model 30-925 use with SUPERIOR series 950, HUNTER HBV and TORO series 252 valves (1.5" and larger)
- G. Model 30-926 use with RAIN BIRD series PEB and PESB (1 1/2" and 2" only) valves



## INSTALLATION OF LEMA 1600HE (2-WAY) SOLENOID

Select the appropriate adapter for the valve(s) that will be used (see list above)

**IMPORTANT:** Do not use with any controller other than LEIT.

**STEP 1:** Shut off mainline to the valve.

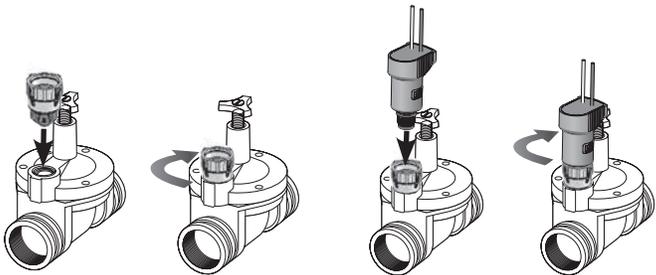
**STEP 2:** Unscrew the conventional solenoid from the valve and remove the solenoid housing, solenoid stem, plunger, spring, and O-ring (if necessary). For BUCKNER and SUPERIOR valves, do not remove the existing O-ring.

**STEP 3:** Thread and tighten the conversion adapter clockwise to the compatible valve port. Do not over tighten.

**STEP 4:** Screw the LEMA 1600HE assembly into the correct adapter. Firmly tighten the solenoid by hand, **but do not over tighten.**

STEP 3

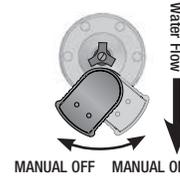
STEP 4



**STEP 5:** After installation of the solenoid is completed, turn the water supply on to pressurize the mainline, checking that the valve is operating correctly. The valve should open momentarily and then shut off.

**NOTE:** Maximum static operating pressure is up to 150 PSI.

Test each valve in manual operation by turning the solenoid counter-clockwise to open and clockwise to close.



**NOTE:** If a valve remains open in manual operation:

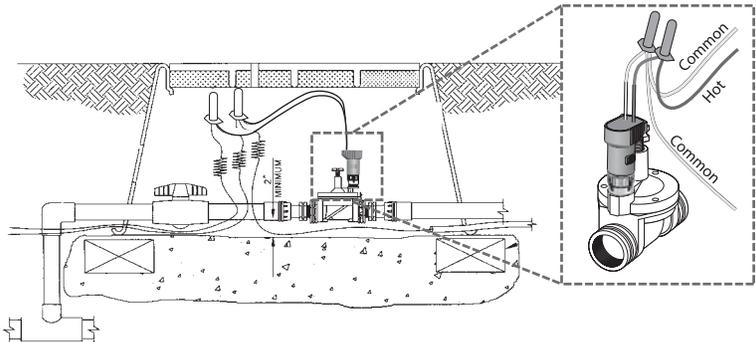
- Examine the adapter and the sleeve to see that they are installed correctly and the adapter is firmly secured.
- Using a 9V battery, touch the red solenoid wire to the positive terminal and the white solenoid wire to the negative terminal to detach the solenoid

**NOTE:** The LEMA solenoid actuator only operates with 2-way normally closed valves.

**CAUTION:** For all brand name valves with a manual bleed lever, make sure the lever is in closed position. Do not move the lever after installing the actuator and the valve adapter. If the manual lever on the valve is used it can damage the adapter or the sleeve causing the valve to stay open.

**WARNING:** The solenoid actuators must not be tested with any AC valve tester or DC tester over 9-volts. If you do so, it will cause irreparable damage to the LEMA solenoid actuator and the controller unit. Testing the solenoids with equipment rated higher than 9-volts will void the warranty.

**STEP 6:** Splice the solenoid actuator wires and connect the incoming direct burial color code (hot) wire to the red wire from the solenoid actuator **USING A DRY-SPLICE WATERPROOF CONNECTOR**. Loop the incoming white common wire to the white wire from the solenoid actuator. Install copper crimp sleeve to secure splices. Leave the wires slightly loose on each side so that repairs, if needed, can be carried out easily.



If there are problems installing the LEMA solenoid actuator onto the valve, contact: **DIG TECHNICAL SERVICE AT 1-800-322-9146 OR 760-727-0914.**