

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 8000, 4000s, 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.

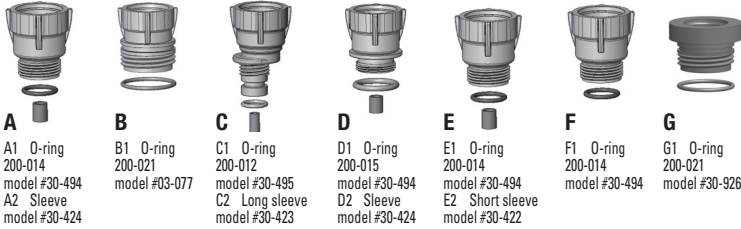
SPECIFICATIONS

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)

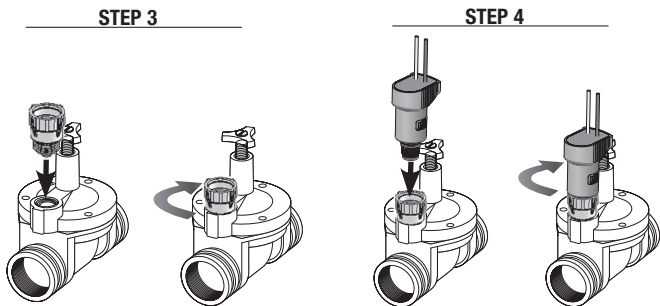
IMPORTANT: Do not use with any controller other than LEIT.

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.

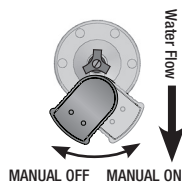
STEP 3: Thread and tighten the conversion adapter clockwise to the compatible valve port. Do not over tighten.

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



STEP 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:

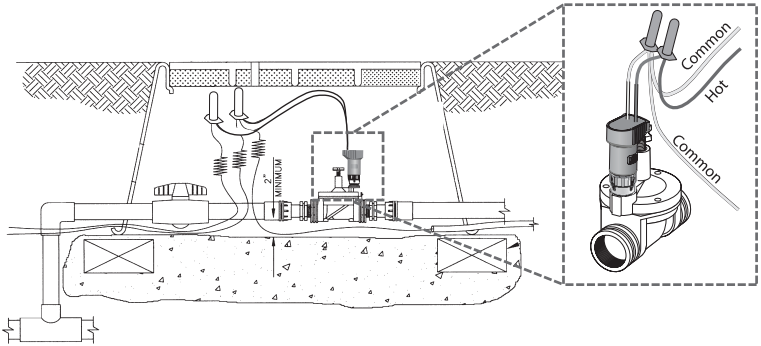
- Examine the adapter and the sleeve to see that they are installed correctly and the adapter is firmly secured.
- Using a 9V battery, touch the red solenoid wire to the positive terminal and the white solenoid wire to the negative terminal to detach the solenoid

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.**

WARRANTY: DIG Corporation guarantees to its customers who have purchased DIG professional irrigation products including LEIT controllers, solenoids and LEIT accessories that the products will be free from original defects in material and workmanship under normal use for a period of three (3) years, from the date of original manufacture. If any apparent defect arises under normal use and service in the DIG product within the warranty period, DIG at its sole discretion, shall have the option to repair or replace part or all of the original product, free of charge after return of such product at user expense, authorized in writing by DIG Corporation. If a product is replaced, the replacement product will be covered for the remainder of the warranty period dating from the original purchase. This warranty applies only to the DIG Corporation professional irrigation products, which are installed as specified and used for irrigation purposes. This warranty applies only to products, which have not been altered, modified, damaged, misused or misapplied.

This warranty does not cover products adversely affected by the system into which the products are incorporated, including improperly designed, installed, operated, or maintained systems. This warranty does not apply to blockage of solenoids, valves, drip line, drippers and microsprinklers due to use of water containing corrosive chemicals, electrolytes, sand, dirt, silt, rust, scale, algae, bacterial slime or other organic contaminants. Tampering with a product (including, but not limited to attempting to disassemble a LEIT controller) will void any warranty the product might otherwise be eligible for. In no event shall DIG's liability exceed the selling price of the product. DIG is not liable for consequential, incidental, indirect or special damages, including but not limited to the labor to inspect, remove or replace products, vegetation loss, loss of energy or water, cost of substitute equipment or services, property damage, loss of use or loss of profits; nor is DIG liable for economic losses, consequential damages or damage to property arising out of installer's negligence or based on strict liability in tort. The user and/or trade customer agrees to the limitations and exclusions of liability of this warranty by purchase or use of DIG products. No representative, agent, distributor or other person has the authority to waive, alter, or add to the printed provisions of this warranty, or to make any representation of warranty not contained here. Some states do not permit the exclusion or limitation of incidental or consequential damages or of implied warranties. Therefore, some of the above exclusions or limitations may not apply to you. This warranty on DIG professional irrigation products is given expressly and in place of all other expressed or implied warranties of merchantability and fitness for a particular purpose, and this warranty is the only warranty on the professional irrigation products made by DIG Corporation.