

RFSN-16

Liquid Level Control
Remote Mechanical
Float Switch

Catalog No. 599211
Cord Length 20'

INTRODUCTION

The Little Giant Model RFSN-16 Liquid Level Control is designed to be used with Little Giant manual sump, effluent, and sewage pumps, or other pumps rated within electrical limits noted below. This control uses a remote mechanical float switch sealed in plastic float cylinder. The switch is activated when the fluid level in the basin causes the cylinder to float to an approximate 45° angle. This causes the switch to activate and in turn causes the pump to start.

SAFETY GUIDELINES



READ INSTRUCTIONS AND SAFETY GUIDELINES THOROUGHLY. FAILURE TO FOLLOW THESE COULD RESULT IN SERIOUS INJURY OR PROPERTY DAMAGE.

WARNING: Risk of electrical shock! This switch is supplied with a grounded type attachment plug. The pump used with this switch must also be equipped with a grounding type attachment plug. **DO NOT REMOVE THE GROUNDING PIN FROM THE PLUG.** To reduce risk of electrical shock, be certain that the switch is connected only to a properly grounded receptacle. For direct wire installation (without piggyback plug), refer to Figure 3.

During normal operation the switch and pump are in contact with water. Also, water may be present in the surrounding area of the switch and pump. Exercise extreme caution when working near these areas.

1. Make certain that electrical connections cannot be reached by rising water. Refer to the National Electrical Code and local requirements. A separate branch circuit is recommended for each pump. Do not use an extension cord.
2. Always remove the plug from the receptacle and turn off the circuit breaker prior to touching, servicing or repairing the switch or pump.
3. Do not stand in water while changing fuses or resetting circuit breakers or repairing the switch.

ELECTRICAL

120V AC, 60HZ, SINGLE PHASE

Maximum pump running current: 15 Amp

Maximum pump starting current: 55 Amp

Recommended for use on pumps of 1 HP or less provided pump draw does not exceed 15 running amps or 55 starting amps.

230V AC, 60HZ, SINGLE PHASE

Maximum pump running current: 15 Amp

Maximum pump starting current: 35 Amp

Recommended for use on pumps of 2 HP or less provided pump amp draw does not exceed 15 running amps or 35 starting amps.

NOTE: This pump control should be used only with pumps equipped with integral thermal overload protection.

INSTALLATION

(in 18" minimum dia. basins)

1. **DECIDE ON THE PUMPING RANGE FOR YOUR INSTALLATION:** Refer to the pumping range chart below to determine the cable length required from mounting point to float. To insure proper installation, a 3.5" minimum tether length is recommended.
2. **INSTALLATION (refer to Figure 1):** Attach float cable to large mounting strap using the two small cable ties provided. Space small ties on each side of clear friction pad, a minimum of one inch apart (see Figure 2). Then fasten the large strap securely to the discharge pipe or other similar mounting. **NOTE:** The large strap and two small cable ties are releasable, which permits readjustment or removal of either strap or ties.
3. **TESTING**
 - a. Without water present, plug pump cord into switch "piggyback" plug (refer to Figure 4).
 - b. Plug piggyback plug into properly grounded outlet.
 - c. Lift float and listen for pump to operate.

PUMPING RANGE (approximate measurements, in inches)

PUMPING RANGE (DIM "A")	3.5	5	7	9	11	13	15	17
TETHER LENGTH (DIM "B")	5	6.3	8	10	11.7	13.5	15.2	17

Figure 1. Typical Installation

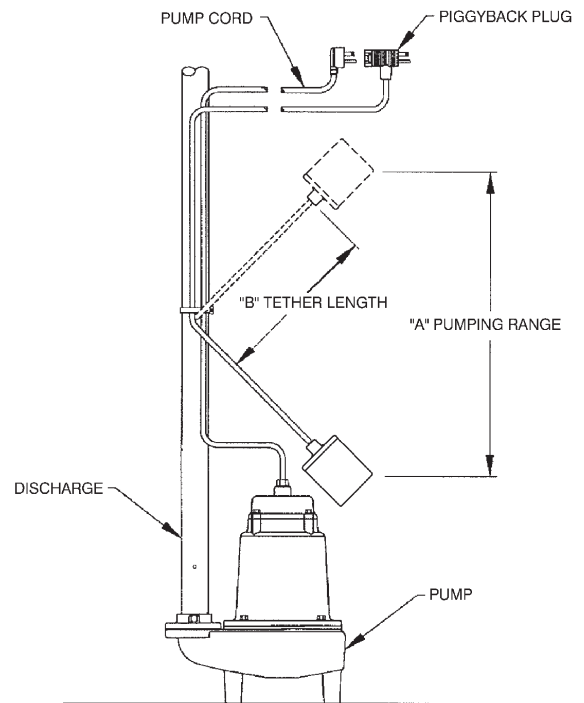
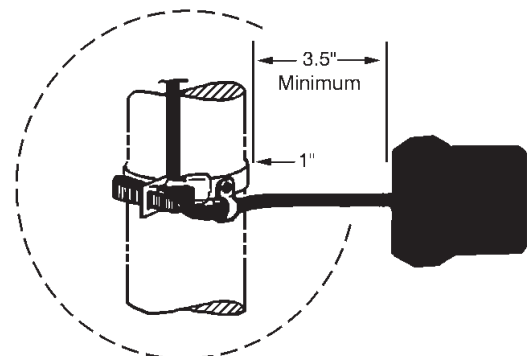


Figure 2. Typical Installation



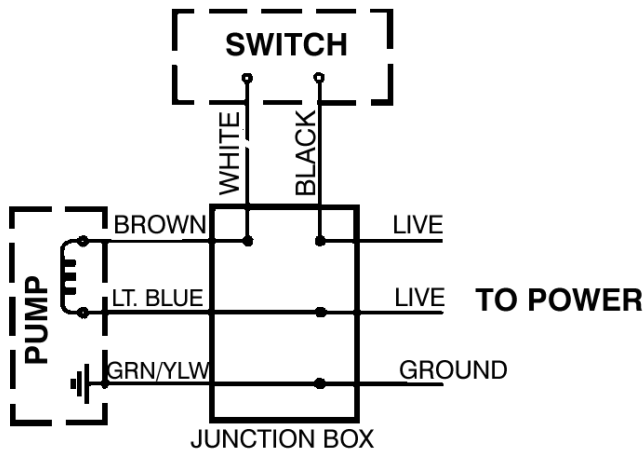
230V AC DIRECT WIRING

FOR 230 VAC DIRECT WIRING INSTALLATION, REFER TO FIGURE 3 (SCHEMATIC) BELOW.

WARNING: In a 230V direct wire installation, one side of the line going to the pump is always "HOT". This condition exists whether the float switch is "ON" or "OFF". To avoid hazards when installing or servicing, install a double-pole disconnect near pump installation.

Check local electrical and building codes before installing. This installation must be in accordance with their regulations as well as the most recent edition of the National Electrical Code Handbook (NEC).

Figure 3. 230V Direct Wire Installation

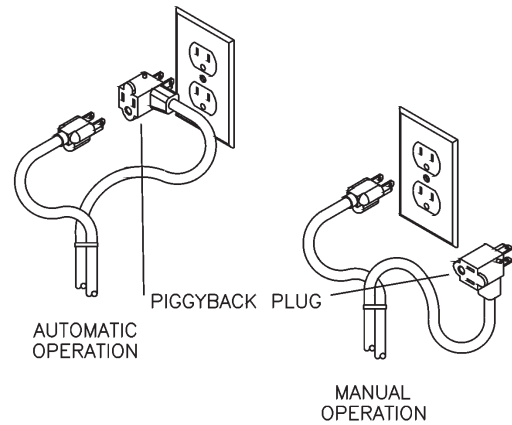


NOTE: Franklin Electric Co., Inc. cannot be responsible for damages caused by the faulty or negligent installation of this control. If you feel that you may encounter problems in installing this device, we respectfully suggest you engage the services of a competent plumber, electrician, or qualified service person.

ADDITIONAL INFORMATION

CAUTION: To prevent damage to pump, do not set switch turn-off level below 2 inches above bottom of pump base. Also be sure that the pump is secured in its position so the float will not become stuck between the pump and the basin, which could prevent the pump from turning "ON" or "OFF". Be sure the cable tie is secure so the switch cord does not accidentally slip and change the pre-set ON/OFF levels.

Figure 4. Piggyback Plug Installation



Manual pump operation possible by plugging pump directly into outlet.

LIMITED WARRANTY

THIS WARRANTY SETS FORTH THE COMPANY'S SOLE OBLIGATION AND PURCHASER'S EXCLUSIVE REMEDY FOR DEFECTIVE PRODUCT.

Franklin Electric Company, Inc. and its subsidiaries (hereafter "the Company") warrants that the products accompanied by this warranty are free from defects in materials or workmanship of the Company that exist at the time of sale by the Company and which occur or exist within the applicable warranty period. Any distributor, sub-distributor, recipient, end-user and/or consumer agrees that by accepting the receipt of the products, the distributor, sub-distributor, recipient, end user and/or consumer expressly agrees to be bound by the terms of the warranty set forth herein.

I. APPLICABLE WARRANTY PERIOD

The products accompanied by this warranty shall be covered by this Limited Warranty for a period of 12 months from the date of original purchase by the consumer. In the absence of suitable proof of purchase date, the warranty period of this product will begin to run on the product's date of manufacture.

II. INSTRUCTIONS APPLICABLE TO THIS LIMITED WARRANTY

1. Consumers wishing to submit a warranty claim must return the products accompanied by this warranty to the point of purchase for warranty consideration.
2. Upon discovery of a defect, any personal injury, property damage or any other type of resulting damage, if applicable, shall be reasonably mitigated to the extent possible.
3. At its discretion, the Company may inspect products either at its facilities or in the field, and after determination of a warranty claim, will, at its option, repair or replace defective parts. Repaired or replaced parts will be returned freight prepaid by the Company.
4. This warranty policy does not cover any labor or shipping charges. The Company shall not be liable for any costs or charges attributable to any product testing, maintenance, installation, repair or removal, or for any tools, supplies, or equipment needed to install, repair, or remove any product.

III. LIMITATIONS APPLICABLE TO THIS LIMITED WARRANTY THIS WARRANTY DOES NOT APPLY TO ANY OF THE FOLLOWING:

1. Any product that is not installed, applied, maintained and used in accordance with the Company's published instructions, applicable codes, applicable ordinances and/or with generally accepted industry standards.
2. Any product that has been subject to misuse, misapplication, neglect, alteration, accident, abuse, tampering, acts of God (including lightning), acts of terrorism, acts of war, fire, improper storage or installation, improper use, improper maintenance or repair, damage or casualty, or to an excess of the recommended maximums as set forth in the product instructions.
3. Any product that is operated with any accessory, equipment, component, or part not specifically approved by the Company.
4. Use of replacement parts not sold by the Company, the unauthorized addition of non-Company products to other Company products, and the unauthorized alteration of Company products.
5. Products damaged by normal wear and tear, normal maintenance services and the parts used in connection with such service, or any other conditions beyond the control of the Company.

6. Any product that has been used for purposes other than those for which it was designed and manufactured.
7. Any use of the product where installation instructions and/or instructions for use were not followed.

The Company reserves the right at any time, and from time to time, to make changes in the design and/or improvements upon its product without thereby imposing any obligation upon itself to make corresponding changes or improvements in or upon its products already manufactured and/or previously sold. The Company further reserves the right to substitute parts or components of substantially equal quality in any warranty service required by operation of this Limited Warranty.

This written Limited Warranty is the entire warranty authorized and offered by the Company. There are no warranties or representations beyond those expressed in this document.

THIS WARRANTY AND REMEDY IS IN LIEU OF ALL OTHER WARRANTIES AND REMEDIES INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND/OR FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY SPECIFICALLY DISCLAIMED AND EXPRESSLY EXCLUDED. CORRECTION OF NON-CONFORMITIES, IN THE MANNER AND FOR THE PERIOD OF TIME AS SET FORTH ABOVE, SHALL CONSTITUTE FULFILLMENT OF ALL LIABILITY OF THE COMPANY TO THE PURCHASER WHETHER BASED ON CONTRACT, NEGLIGENCE, OR OTHERWISE.

THE COMPANY SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES SUCH AS, BUT NOT LIMITED TO:

DAMAGE TO OR LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF USE OF EQUIPMENT, FACILITIES OR SERVICE, LOSS OF PROFIT OR SALES, COST OF PURCHASES OR REPLACEMENT GOODS, CLAIMS OF CUSTOMERS OF THE PURCHASER, FAILURE TO WARN AND/OR INSTRUCT, LOSS OF OTHER PRODUCTS, OR COSTS OF ENVIRONMENTAL REMEDIATION, OR DIMINUTION IN PROPERTY VALUE. THE REMEDIES OF THE PURCHASER SET FORTH HEREIN ARE EXCLUSIVE, AND THE LIABILITY OF THE COMPANY SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, EXCEED THE PRICE OF THE PRODUCTS UPON WHICH SUCH LIABILITY IS BASED. DAMAGES AS SET FORTH IN THIS PARAGRAPH SHALL BE REASONABLY MITIGATED TO THE EXTENT POSSIBLE. THIS PARAGRAPH SHALL ALSO APPLY TO ALL DAMAGES RESULTING FROM CONDITIONS SET FORTH IN SECTION III ABOVE AND (1) DEFECTS IN PRODUCT PROTOTYPES OR REPLACEMENT PART PROTOTYPES THAT HAVE NOT BEEN PUT INTO PRODUCTION, CIRCULATED AND SOLD BY THE COMPANY, AND/OR (2) DEFECTS THAT WERE NOT FOUND AT THE TIME OF SALE DUE TO SCIENTIFIC AND TECHNOLOGICAL REASONS.

This Limited Warranty gives you specific legal rights. You may have other rights, which vary according to the applicable laws and regulations. Where any term of this warranty is prohibited by such laws, it shall be null and void, but the remainder of this warranty shall remain in full force and effect.

DISCLAIMER: Any oral statements about the product made by the seller, the Company, the representatives or any other parties, do not constitute warranties, shall not be relied upon by the user, and are not part of the contract for sale. Seller's and the Company's only obligation, and buyer's only remedy, shall be the replacement and/or repair by the Company of the product as described above. Before using, the user shall determine the suitability of the product for his intended use, and user assumes all risk and liability whatsoever in connection therewith.

For Technical Assistance, please contact. 1.800.701.7894

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