AUTOMATION PRODUCTS GROUP, INC.

Operator's Manual

LFE Series
Industrial OEM Low Cost Liquid Level Switches

Doc #9004721; Part #200430
Rev. A2, 11/19

Automation Products Group, Inc.

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• Warranty and Warranty Restrictions

This product is covered by APG's warranty to be free from defects in material and workmanship under normal use and service of the product for 24 months. For a full explanation of our Warranty, please visit https://www.apgsensors.com/about-us/terms-conditions. Contact Technical Support to receive a Return Material Authorization before shipping your product back.

Scan the QR code below to read the full explanation of our Warranty on your tablet or smartphone.

• Introduction

The miniature magnetic level sensors are used for liquid level detection. They have been designed for reliable operation in small tanks and containers. Their rugged design and careful engineering make them the optimum solution for OEM and large volume applications.

• Specifications

Operational Versions

LFE-11P-0A ..... for water - PP, 10 VA, NC
LFE-11P-0B ..... for water - PP, 10 VA, NO
LFE-11P-1A ..... for water - PP, 50 VA, NC

LFE-11R-0B ..... for oil - Buna, 10 VA, NO
LFE-11R-1A ..... for oil - Buna, 50 VA, NC

LFE-12P-0A ..... for water - PP, 10 VA, NC

LFE-12R-0A ..... for oil - Buna, 10 VA, NC
LFE-12R-0B ..... for oil - Buna, 10 VA, NO

- **Specifications (continued)**

Characteristics

Switch Rating (resistive load) (50 VA):

Max contact rating..... 50 VA AC; 50 W DC
Max current ..... 0.5 A AC; 0.5 A DC
Max voltage..... 300 V AC; 300 V DC
Life expectancy ..... 10^7 operations (at 12 VDC, 5 mA)

Switch Rating (resistive load) (10 VA):

Max contact rating..... 10 VA AC; 10 W DC
Max current ..... 0.2 A AC; 0.2 A DC
Max voltage..... 100 V AC; 100 V DC
Life expectancy ..... 10^7 operations (at 12 VDC, 5 mA)

Max temperature range..... -14 to 194°F (-10 to 90°C)
Max pressure ..... Polypropylene float: 145 psi (10 bar)
Buna float: 145 psi (10 bar)
Min SG ..... Polypropylene float: 0.9
Buna float: 0.7
Max viscosity ..... 0.5 Pa s
Max humidity ..... 95% RH
Max impact..... 10 G

• Installation Location

Locate the LFE where the change in liquid level will actuate the switch. DO NOT locate near liquid inlets/outlets. If there is turbulence, use a time delay relay to dampen the switch action.

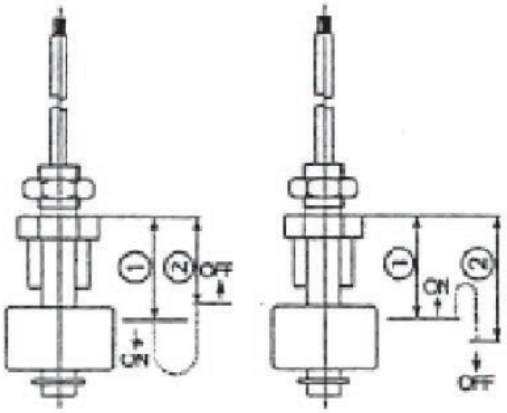


Figure A Figure B

LFE-XXX-XA (Switch closes as level falls), see Figure A

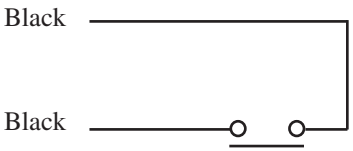
	LFE-11R	LFE-12R	LFE-11P	LFE-12P
Close as level falls	18	28	15	25
Open as level rises	16.5	26.5	13.5	23.5

LFE-XXX-XB (Switch closes as level rises), see Figure B

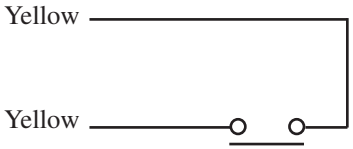
	LFE-11R	LFE-12R	LFE-11P	LFE-12P
Close as level rises	17	26	14	23
Open as level falls	18.5	27.5	15.5	24.5

• Wiring

Wiring shall be in accordance with all local codes. Lead wires are #22 AWG, UL listed (UL1430). APG recommends the use of solderless lugs for connection.



Switch Rating (Resistive)
- Max capacity 50 VA, 50 W
- Max current 0.5 A AC, 0.5 A DC
- Max voltage 300 VAC, 300 VDC



Switch Rating (Resistive)
- Max capacity 10 VA, 10 W
- Max current 0.2 A AC, 0.2 A DC
- Max voltage 100 VAC, 100 VDC

Note: Max pull-load of the lead wire is 19.6 N. Excessive pulling or kinking of the lead wire may break the switch.

Caution!
Protection for electrical surges:
- **Overvoltage**
  Reed switches are not designed for the direct starting of inductive loads such as motors, contactors, solenoid valves, and so on. They are susceptible to damage from overvoltages. DO NOT EXCEED THE CONTACT RATINGS. Contact should be wired to miniature relays, suppressors or similar devices.
- **Overcurrent**
  Momentary surge current may be produced by switching lamps or stray capacity from long cable length, consequently welding the reed switch. Contact should be wired to a relay unit, coils in series, or suppressors.

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