

# AUTOMATION

PRODUCTS  
GROUP, INC.

Operator's Manual

## **FT-100 Series**

**Mechanically Activated,  
Narrow Angle Float Switch**

Rev. A3, 6/09



Automation Products Group, Inc.

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## • Warranty and Warranty Restrictions

APG warrants its products to be free from defects of material and workmanship and will, without charge, replace or repair any equipment found defective upon inspection at its factory, provided the equipment has been returned, transportation prepaid, within 24 months from date of shipment from factory.

THE FOREGOING WARRANTY IS IN LIEU OF AND EXCLUDES ALL OTHER WARRANTIES NOT EXPRESSLY SET FORTH HEREIN, WHETHER EXPRESSED OR IMPLIED BY OPERATION OF LAW OR OTHERWISE INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

No representation or warranty, express or implied, made by any sales representative, distributor, or other agent or representative of APG which is not specifically set forth herein shall be binding upon APG. APG shall not be liable for any incidental or consequential damages, losses or expenses directly or indirectly arising from the sale, handling, improper application or use of the goods or from any other cause relating thereto and APG's liability hereunder, in any case, is expressly limited to the repair or replacement (at APG's option) of goods.

Warranty is specifically at the factory. Any on site service will be provided at the sole expense of the Purchaser at standard field service rates.

All associated equipment must be protected by properly rated electronic/electrical protection devices. APG shall not be liable for any damage due to improper engineering or installation by the purchaser or third parties. Proper installation, operation and maintenance of the product becomes the responsibility of the user upon receipt of the product.

Returns and allowances must be authorized by APG in advance. APG will assign a Return Material Authorization (RMA) number which must appear on all related papers and the outside of the shipping carton. All returns are subject to the final review by APG. Returns are subject to restocking charges as determined by APG's "Credit Return Policy".

## • Introduction

This narrow angle sensing device is used to accurately monitor liquid levels in potable water, water and sewage applications. The FT-100 is not sensitive to rotation.

### **Normally Open Model (high level)**

The control switch turns on (closes) when the float tips slightly above horizontal, signaling a high level. It turns off (opens) when the float drops slightly below horizontal.

### **Normally Closed Model (low level)**

The control switch turns on (closes) when the float drops slightly below horizontal, signaling a low level. It turns off (opens) when the float tips slightly above horizontal.

## • Specifications

Operational Version:	FT-100A Normally Open FT-100B Normally Closed FT-100C (SPDT) form C
Float:	PP housing; 2.74 in. dia. x 4.83 in. long
SPDT Rating:	5 A, 120/230 VAC, 50/60 Hz
Max. Water Depth:	30 ft. (9 m)
Max. Temperature:	140°F (60°C)
Max. Pressure:	30 psi
Cable:	18 AWG, 2 or 3 conductor (UL, CSA), SJOW, water resistant CPE jacket

*Note: This switch is not recommended for controlling 1.) electrical loads less than 100 mA, 12 VAC, or 2.) non-arcing electrical loads.*



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## • Installation

**Warning! – Electrical Shock Hazard**

Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

**Warning! – Explosion or Fire Hazard**

Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code ANSI/NFPA 70.

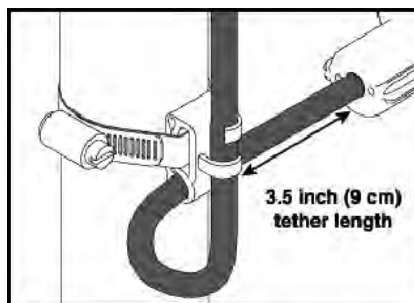
Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electrical Code ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing or cable.

### Mounting Clamp

1. Place the cord into the clamp as shown in Figure A.
2. Locate the clamp at the desired activation level and secure the clamp to the discharge pipe as shown in Figure A. **Note:** Do not install cord under hose clamp.
3. Tighten the hose clamp using a screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
4. Bring cable leads back to control device and wire according to Figures B or C.
5. Check installation. Allow system to cycle to ensure proper operation.

*Note: All hose clamp components are made of 18-8 stainless steel material.*

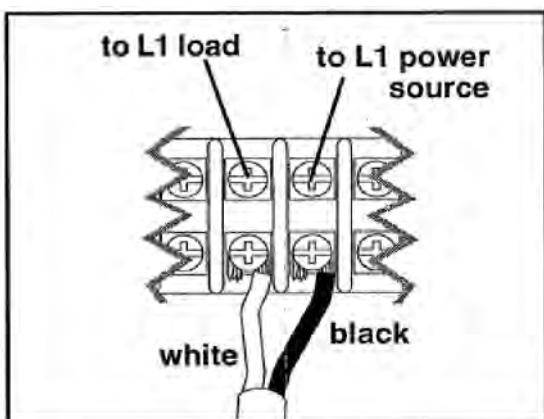
Figure A



## Wiring Diagrams

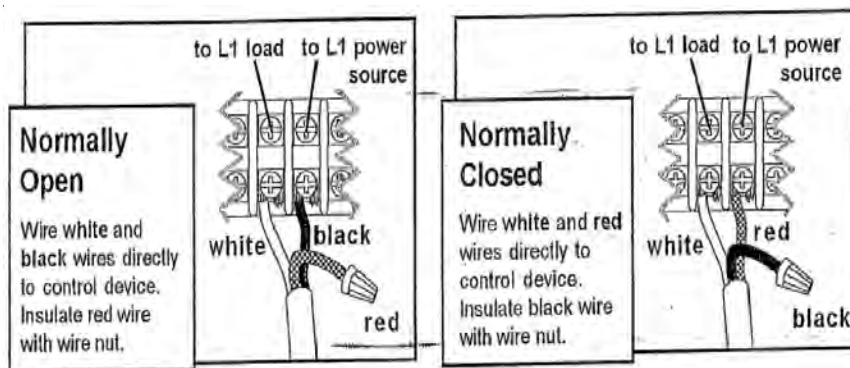
1. For the FT-100A or FT-100B connect cable leads directly into control device as shown in Figure B.

Figure B



2. For the FT-100C connect cable leads directly into control device as shown in Figure C.

Figure C



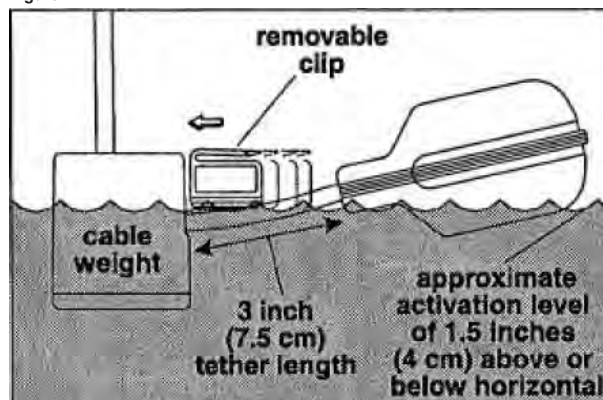
### Cable Weight

1. Suspend switch and cable weight at desired activation level as shown in Figure D.
2. Connect cable leads directly into control device as shown in Figures B or C.
3. Check installation. Allow system to cycle to ensure proper operation.

To adjust cable weight:

1. Release clip.
2. Adjust cable weight to desired position.
3. Lay switch cable in weight channel.
4. Align clip with weight channel and slide towards switch cable as shown in Figure D.
5. Snap clip snugly up to cable, moving clip to tightest possible position.

Figure D



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