

PURE-FLO® Manual Bonnet Switch Operator and Technical/Service Manual Hand Wheel Operated Valves

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Attention: Sales Department

ITT INDUSTRIES VALVES AND VALVE ACTUATORS ARE DESIGNED AND MANUFACTURED USING GOOD WORKMANSHIP AND MATERIALS, AND THEY MEET ALL APPLICABLE INDUSTRY STANDARDS. THESE VALVES ARE AVAILABLE WITH COMPONENTS OF VARIOUS MATERIALS, AND THEY SHOULD BE USED ONLY IN SERVICES RECOMMENDED IN OUR PRODUCT CATALOG OR BY A COMPANY VALVE ENGINEER.

MISAPPLICATION OF THE PRODUCT MAY RESULT IN INJURIES OR PROPERTY DAMAGE. A SELECTION OF VALVE COMPONENTS OF THE PROPER MATERIAL CONSISTENT WITH THE PARTICULAR PERFORMANCE REQUIREMENTS, IS IMPORTANT FOR PROPER APPLICATION.

EXAMPLES OF THE MISAPPLICATION OR MISUSE OF ITT INDUSTRIES VALVES INCLUDE USE IN AN APPLICATION IN WHICH THE PRESSURE/TEMPERATURE RATING IS EXCEEDED OR FAILURE TO MAINTAIN VALVES AS RECOMMENDED.

IF VALVE EXHIBITS ANY INDICATION OF LEAKAGE, DO NOT OPERATE. ISOLATE VALVE AND EITHER REPAIR OR REPLACE.

0.0 GENERAL

This manual provides Operator and Technical/Service instructions for the Pure-Flo Manual Bonnet Switch. It is to be used in conjunction with the Installation, Operation and Maintenance Manual for Pure-Flo Handwheel Operated Valves.

0.1 MODEL NUMBERS

MBSWMS – 30 VDC/250 VAC, 5A Mechanical Switch, Silver Contacts

MBSWMG – 30 VDC/250 VAC, 0.1A Mechanical Switch, Gold Contacts

0.2 SAFETY



CAUTION!

The safety precautions in these operating instructions are specially marked with the standard symbol for danger when non-observance could endanger lives.

Non-observance of these safety precautions can endanger the valve and its functions.

1.0 SWITCH FUNCTION

This option provides positive indication of the closed position for manually operated valves by means of a mechanically switched electrical signal.



Due to the nature of this product, it is possible for the switch to provide a valve closed indication while in fact flow through the valve is occurring. To avoid false indications, it is the responsibility of the operator to ensure the valve is used only in the fully closed and fully open positions.

2.0 INSTALLATION AND ADJUSTMENT

- 2.1 When wiring the switch, the recommended maximum wire size is 16 AWG, although 14 AWG is acceptable. The wire should be stripped a length of .23" (6mm). All inputs must be protected via a circuit breaker or fusible link (see fig. 3).

- 2.2 The switch setting is factory set; however, if adjustment is required:

Remove the switch assembly from the valve bonnet. **Fully close the valve.** Thread the switch assembly into the bonnet until the switch just trips (switch operation can be monitored using a multimeter's continuity function).

CAUTION! Threading past this position could cause damage to the switch upon valve operation.

From this point, back out the switch assembly $\frac{1}{4}$ turn for 0.50, 0.75 and 1.00" valves, and thread in $\frac{1}{4}$ turn for 1.50 and 2.00" valves. Operate the valve and verify switch function. While closing the valve, the switch should trip at approximately $\frac{1}{4}$ turn of the handwheel from the valve-closed position. Further adjustment of the switch trip point can be made with small changes to the threaded position of the switch assembly. After setting the switch, tighten the lock nut. The wire terminal conduit location can then be rotated as required (see fig. 1 & 2).

3.0 VALVE MAINTENANCE AND ADJUSTMENT

Function of the manual bonnet switch must be considered when performing valve maintenance and adjustment procedures.

3.1 TRAVEL STOP

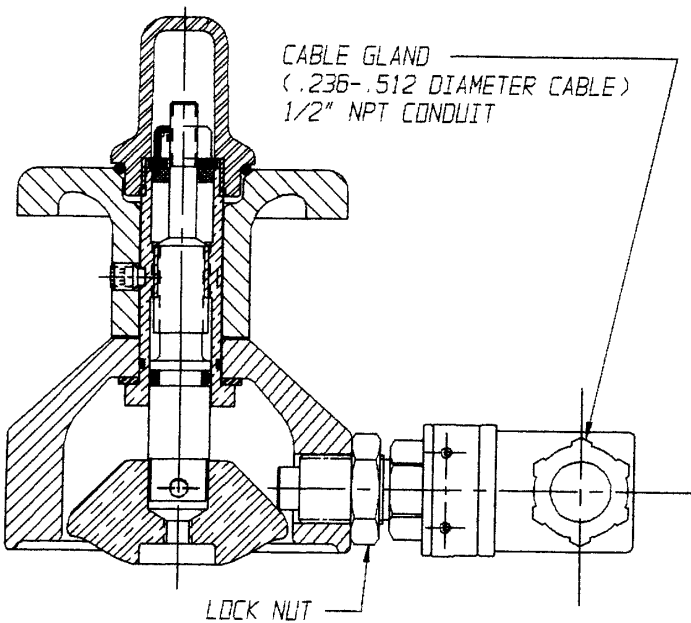
The valve travel stop is factory set and should not require further adjustment. If adjustments are made, function of the switch must be verified and adjusted per Section 2.2.

3.2 VALVE DISASSEMBLY

CAUTION! Before performing maintenance operations that require valve disassembly, such as diaphragm replacement, the switch assembly must be removed from the valve bonnet. After valve assembly, the switch must be installed and adjusted per Section 2.2. This will eliminate the possibility of damaging the switch upon valve operation.

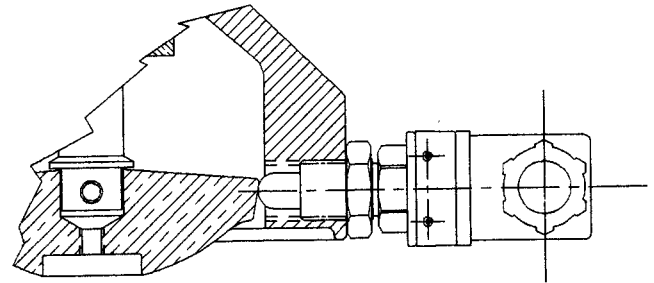


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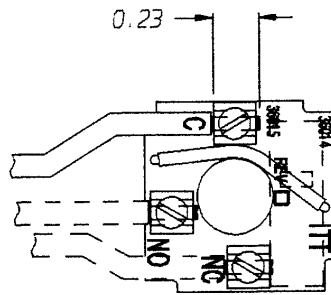
00.50-01.00 MANUAL BONNET SWITCH

FIGURE 1



01.50 & 02.00 MANUAL BONNET SWITCH

FIGURE 2



WIRING:

0.5", 0.75", 1.0" VALVES:
WIRE TO C AND NC TERMINALS

1.5" AND 2.0" VALVES:
WIRE TO C AND NO TERMINALS

FIGURE 3

Pure-Flo Solutions Group

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