MANUAL: SHO-FLOW®
Flow Indicator Operations

INSTRUCTIONS FOR SAFE OPERATION AND MAINTENANCE

⚠WARNING **Read instruction manual before use. Operation of this device without understanding the manual and receiving proper training is a misuse of this equipment. A person who has not read and understood all operating and safety instructions is not qualified to operate the SHO-FLOW® flow indicator.**

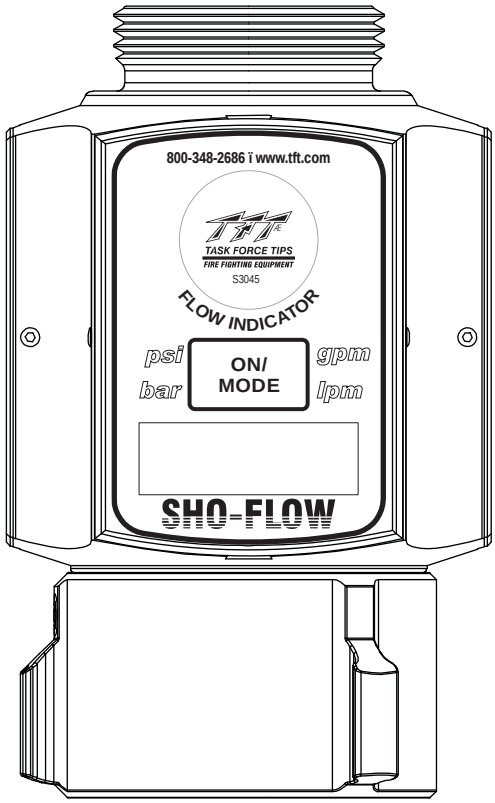
⚠WARNING **This equipment is intended for use by trained personnel for firefighting. Their use for other purposes may involve hazards not addressed by this manual. Seek appropriate guidance and training to reduce risk of injury.**

⚠WARNING **Nozzle must be properly connected. Mismatched or damaged threads may cause nozzle to leak or uncouple under pressure and could cause injury.**

⚠CAUTION **Do not couple aluminum to brass. Dissimilar metals coupled together can cause galvanic corrosion that can result in inability to unscrew threads or complete loss of thread engagement.**

This instruction manual is intended to familiarize firefighters and maintenance personnel with the operation, servicing and safety procedures associated with special purpose nozzles.

This manual should be kept available to all operating and maintenance personnel.



⚠DANGER

PERSONAL RESPONSIBILITY CODE

The member companies of FEMSA that provide emergency response equipment and services want responders to know and understand the following:

1. Firefighting and Emergency Response are inherently dangerous activities requiring proper training in their hazards and the use of extreme caution at all times.
2. It is your responsibility to read and understand any user's instructions, including purpose and limitations, provided with any piece of equipment you may be called upon to use.
3. It is your responsibility to know that you have been properly trained in Firefighting and /or Emergency Response and in the use, precautions, and care of any equipment you may be called upon to use.
4. It is your responsibility to be in proper physical condition and to maintain the personal skill level required to operate any equipment you may be called upon to use.
5. It is your responsibility to know that your equipment is in operable condition and has been maintained in accordance with the manufacturer's instructions.
6. Failure to follow these guidelines may result in death, burns or other severe injury.

FEMSA

Fire and Emergency Manufacturers and Service Association
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1.0 MEANING OF SAFETY SIGNAL WORDS

A safety related message is identified by a safety alert symbol and a signal word to indicate the level of risk involved with a particular hazard. Per ANSI standard Z535.6-2006, the definitions of the four signal words are as follows:

DANGER **DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.**

WARNING **WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.**

CAUTION **CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.**

NOTICE **NOTICE is used to address practices not related to personal injury.**

2.0 GENERAL INFORMATION

The Sho-Flow water flow indicator is designed for installation behind a nozzle or on the outlet of a pump panel to quickly determine the flow present in the hose line and the pressure where the Sho-Flow is installed. Any firefighting, training, or testing operation that utilizes hose lines or nozzles is a potential application for the Sho-Flow. The Sho-Flow will work best if the amount of turbulence from elbows, valves, wyes, etc. is minimized both downstream and upstream of the unit, as with any flow measuring device.

The Sho-Flow is intended for use with water or solutions of water and foam concentrate. It is not intended for use with pure foam concentrate, compressed air foam, hydrocarbons or other liquids. The Sho-Flow is not intended for continuous outdoor storage, because direct sunlight may cause damage to the electronics. Extended storage in hot, or cold environments will shorten battery life. An arrow indicates the direction of flow. Reverse installation will not damage the flow indicator but incorrect readings will result.

3.0 SPECIFICATIONS

Physical Specifications

Model #'s	SF-NF-NF-125 SF-IF-IF-125 SF-BF-BF-475	SF-NF-NF-200 SF-IF-IF-200 SF-BF-BF-750	SF-NF-NF-300 SF-IF-IF-300 SF-BF-BF-11L	SF-NJNJ-500 SF-IJIJ-500 SF-BJBJ-2000	SF-NJNJ-1250 SF-IJIJ-1250 SF-BJBJ-4500
Flow Range	30-125 GPM *100-475 LPM*	50-200 GPM *175-750 LPM*	70-300 GPM *250-1100 LPM*	125-500 GPM *500-2000 LPM*	300-1250 GPM *1100-4500 LPM*
Standard Inlets Female	1.5"-9 NH 1.5"-11.5 NPSH 1.5"-11 BSP	1.5"-9 NH 1.5"-11.5 NPSH 1.5"-11 BSP	1.5"-9 NH 1.5"-11.5 NPSH 1.5"-11 BSP	2.5"-7.5 NH 2.5"-8 NPSH 2.5"-11 BSP	2.5"-7.5 NH 2.5"-8 NPSH 2.5"-11 BSP
Standard Outlets Male	1.5"-9 NH 1.5"-11.5 NPSH 1.5"-11 BSP	1.5"-9 NH 1.5"-11.5 NPSH 1.5"-11 BSP	1.5"-9 NH 1.5"-11.5 NPSH 1.5"-11 BSP	2.5"-7.5 NH 2.5"-8 NPSH 2.5"-11 BSP	2.5"-7.5 NH 2.5"-8 NPSH 2.5"-11 BSP
Weight	2.5 LBS *1.1 KG*	2.5 LBS *1.1 KG*	2.5 LBS *1.1 KG*	4.1 LBS *1.9 KG*	4.1 LBS *1.9 KG*

Operational Specifications

Flow Accuracy	5% Full Scale	**Operating Temperature**	32-158° F (0-70° C)
Pressure Accuracy	5% Full Scale	**Storage Temperature**	-30-185° F (-35-85° C)
Max Operating Pressure	250 PSI (17 BAR)	**Expected Battery Life**	24 Hrs Lithium 10 Hrs Alkaline
Hydrostatic Test Pressure	800 PSI (55 BAR)		
Non-recoverable Pressure Loss @ Max Flow	1250 Model: 15 PSI (1.1 BAR) All Other Models: 5 PSI (0.5 BAR)		

4.0 OPERATION

1) Press ON/MODE button to turn on electronics.
2) Display will toggle between flow and pressure with a red or green light to indicate pressure or flow. Also while displaying flow, numbers will flash.
3) Pressing the ON/MODE button for ~1 second will lock the display on flow. Pressing again will lock the display on pressure. Pressing a third time will turn the unit off.
4) Anytime the pressure is less than 5 psi (0.5 bar) for 1 minute, the Sho-Flow flow indicator will automatically turn off.
5) If the display indicates "- - - -", the flow is too low to be displayed.
6) The 1.5" Sho-Flow may be programmed to give an audible flow warning.

⚠WARNING **Kinks in supply hose may reduce water flow and cause injury or death to persons dependant on water flow. When the SHO-FLOW is attached directly to a fixed supply, it is recommended that an outlet elbow be used to minimize risk of hoseline kinks.**

⚠WARNING **The Sho-Flow is not rated for use in explosive atmospheres.**

⚠CAUTION **The SHO-FLOW must be properly connected. Mismatched or damaged connectors may cause leaking or uncoupling under pressure and could cause injury.**

5.0 FLOW WARNING SET POINT PROGRAMMING - 1.5" VERSION

1) Press and hold the ON/MODE button for 30 seconds. Release when display shows dashes.
2) Adjust water flow to the desired low flow warning level. Display will indicate flow.
3) Press and hold ON/MODE button until (PSI) LED turns on. Release button.
4) (GPM) LED should now be blinking.
5) Adjust water flow to the desired high flow warning level. Display will indicate flow.
6) Press and hold ON/MODE button until (BAR) LED turns on. Release button.
7) Verify that display cycles through low flow and high flow warning set points.
8) Programming is complete.

If flow warning set points are programmed, display will cycle through low flow warning set point and then high flow warning set point when unit is turned on.

If the flow warning set points are programmed, an alarm will sound during the following conditions:

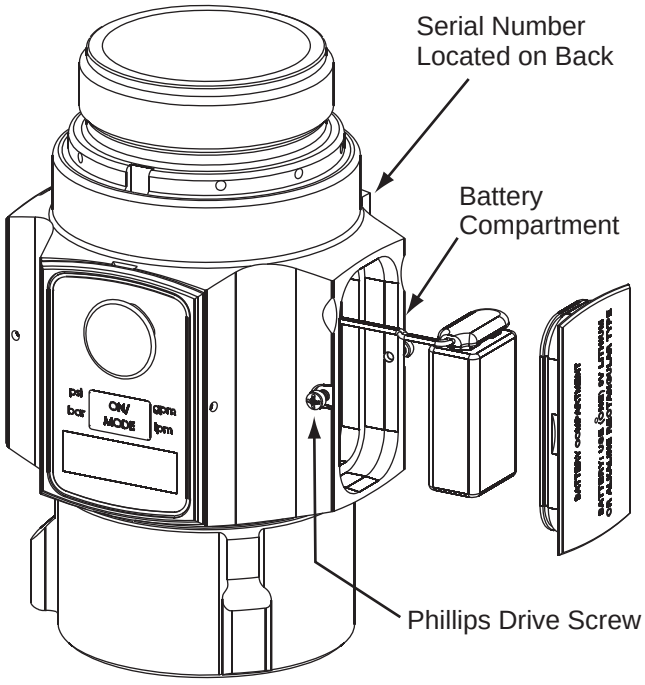
Low Flow: Water flow is greater than the minimum rated flow of the device and less than the low flow set point

High Flow: Water flow is greater than the high flow set point

6.0 CHANGING BATTERY

When the battery power gets low the display indicates "LO BATT" but continues to operate until dead.

1) Recommended battery: 9V lithium.
2) Alkaline batteries are acceptable, but battery life is significantly less.
3) Using #2 Phillips screwdriver loosen screws. Pull lid at finger pockets to remove.
4) Replace battery.
5) Replace lid, be sure not to pinch wires between lid and case. Wires cannot be under battery.
6) Turn screws only until contact.



7.0 USE WITH SALT WATER

Use with salt water is permissible provided the SHO-FLOW flow indicator is thoroughly cleaned with fresh water after each use. The service life of the SHO-FLOW may be shortened due to the effects of corrosion and is not covered under warranty.

7.1 CORROSION

All parts of the a SHO-FLOW flow indicator are aluminum hardcoat anodized for corrosion protection. The effects of corrosion can be minimized by good maintenance practices. See Section 8.0 for maintenance.

8.0 MAINTENANCE

No maintenance is required. No calibration is required under normal circumstances. If unit becomes damaged and does not display correct data, send it back to the factory for service.

⚠CAUTION **Dissimilar metals coupled together can cause galvanic corrosion that can result in the inability to unscrew the threads or complete loss of thread engagement over time. Per NFPA 1962 (1998 edition), if dissimilar metals are left coupled together an anti-corrosive lubricant should be applied to the threads. Also the coupling should be disconnected and inspected at least quarterly.**

⚠CAUTION **Any alterations to the SHO-FLOW flow indicator and its markings could diminish safety and constitutes a misuse of this product.**

9.0 WARRANTY

Task Force Tips, Inc., 3701 Innovation Way, Valparaiso, IN 46383-9327 USA (“TFT”) warrants to the original purchaser of its special purpose nozzle (“equipment”), and to anyone to whom it is transferred, that the equipment shall be free from defects in material and workmanship during the five (5) year period from the date of purchase.

TFT’s obligation under this warranty is specifically limited to replacing or repairing the equipment (or its parts) which are shown by TFT’s examination to be in a defective condition attributable to TFT. To qualify for this limited warranty, the claimant must return the equipment to TFT, at 3701 Innovation Way, Valparaiso, IN 46383-9327 USA, within a reasonable time after discovery of the defect. TFT will examine the equipment. If TFT determines that there is a defect attributable to it, TFT will correct the problem within a reasonable time. If the equipment is covered by this limited warranty, TFT will assume the expenses of repair.

If any defect attributable to TFT under this limited warranty cannot be reasonably cured by repair or replacement, TFT may elect to refund the purchase price of the equipment, less reasonable depreciation, in complete discharge of its obligations under this limited warranty. If TFT makes this election, claimant shall return the equipment to TFT free and clear of any liens and encumbrances.

This is a limited warranty. The original purchaser of the equipment, any person to whom it is transferred, and any person who is an intended or unintended beneficiary of the equipment, shall not be entitled to recover from TFT any consequential or incidental damages for injury to person and/or property resulting from any defective equipment manufactured or assembled by TFT. It is agreed and understood that the price stated for the equipment is in part consideration for limiting TFT’s liability. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above may not apply to you.

TFT shall have no obligation under this limited warranty if the equipment is, or has been, misused or neglected (including failure to provide reasonable maintenance) or if there have been accidents to the equipment or if it has been repaired or altered by someone else.

THIS IS A LIMITED EXPRESS WARRANTY ONLY. TFT EXPRESSLY DISCLAIMS WITH RESPECT TO THE EQUIPMENT ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND ALL IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE. THERE IS NO WARRANTY OF ANY NATURE MADE BY TFT BEYOND THAT STATED IN THIS DOCUMENT.

This limited warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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