

## Uni-Switch™ Universal Flow Switch

© Copyright 2023 Caleffi

**626 Series**



### Function

The Caleffi Series 626 water flow switch detects the presence or absence of flow in piping of heating, air conditioning, cooling and water treatment systems as well as in pumping and process systems. In heating systems, the flow switch is normally used to shut off the burner of the boiler whenever there is no circulation of the carrier fluid in the boiler circuit. A lack of circulation can damage critical components and impair the operation of temperature sensitive safety and protection devices.

This item is designed for use in closed hydronic systems. Do not use in plumbing applications. This item does not meet the low-lead plumbing standards of U.S. and Canada.

### General Characteristics

A stainless steel bellows separates the electrical and hydronic sections, preventing the possibility of contact of the fluid with the electrical components. Stainless steel is used in the construction of many key parts, including the bellows, which protects the switch from corrosion. With a protection classification of NEMA type 5 (IP54), the switch can be used in particularly humid and dusty environments. The cover is made of a special non-combustible plastic material. The normally open and normally closed contacts on the switch enable any electrical device to be switched on or off as required at the operating flow rate. The operating point can be easily adjusted with the calibration screw.

### Technical Characteristics

Connection size:	1" NPT male
Maximum operating pressure:	150 psig (10 bar)
Maximum temperature of the fluid:	250 °F (120 °C)
Minimum temperature of the fluid:	-20 °F (-30 °C)
Maximum ambient temperature:	130 °F (55 °C)
Suitable for pipes:	1" to 8" (25 to 200mm)

### Electrical Data

Max. Voltage:	250 VAC
Max. Current:	15A
Electrical connection:	½" NPT threaded with strain relief
Protection class:	NEMA type 5 (IP54)
Certification Mark:	CE cULUS LISTED



## SAFETY INSTRUCTION

This safety alert symbol will be used in this manual to draw attention to safety related instructions. When used, the safety alert symbol means **ATTENTION! BECOME ALERT! YOUR SAFETY IS INVOLVED! FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN A SAFETY HAZARD.**



**WARNING:** This product can expose you to chemicals including lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



**CAUTION:** All work must be performed by qualified personnel trained in the proper application, installation, and maintenance of systems in accordance with all applicable codes and ordinances.



**CAUTION:** Over-tightening and breakage can occur with the use of Teflon® pipe joint compounds. Teflon® provides lubricity so that care must be exercised not to over-tighten joints. Failure to follow these instructions could result in property damage and /or personal injury.



**CAUTION:** Electrical shock hazard. Disconnect ALL power sources when installing or servicing this equipment to prevent electrical shock or equipment damage. Failure to follow these instructions could result in property damage and/or personal injury.



**WARNING:** The outer surface of the device, especially in polymer type components, must not come into contact with any chemical substance, either on purpose or accidentally. The system fluid and any chemical additives used within the water piping system – whether for washing or as protection – must be compatible with the materials used to make the device and with the function it performs.

Caleffi shall not be liable for damages resulting from stress corrosion, misapplication or misuse of its products.



## CONSIGNE DE SÉCURITÉ

Ce symbole d'avertissement servira dans ce manuel à attirer l'attention sur la sécurité concernant instructions. Lorsqu'il est utilisé, ce symbole signifie.

**ATTENTION! DEVENEZ ALERTE ! VOTRE SÉCURITÉ EST EN JEU ! NE PAS SUIVRE CES INSTRUCTIONS PEUT PROVOQUER UN RISQUE DE SECURITE.**



**AVERTISSEMENT:** Ce produit peut vous exposer à des produits chimiques comme le plomb, qui est connu dans l'État de Californie pour causer le cancer, dommages à la naissance ou autre. Pour plus d'informations rendez-vous [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).



**ATTENTION:** Tous les travaux doivent être effectués par du personnel qualifié formé à la bonne application, installation et maintenance des systèmes conformément aux codes et règlements locaux.



**ATTENTION:** Un serrage excessif et la rupture peut se produire avec l'utilisation de composés à joint de tuyau en Téflon®. Pouvoir lubrifiant Teflon® permet de sorte qu'il faut prendre soin de ne pas trop serrer les articulations. Le non-respect de ces instructions peut entraîner des dommages matériels et/ou des blessures.



**ATTENTION:** Risque d'électrocution. Appareil sous tension. Coupez l'alimentation électrique avant d'exécuter toute intervention. Le non respect de ces indications peut provoquer des lésions corporelles ou des dégâts matériels.

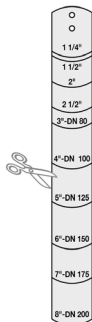
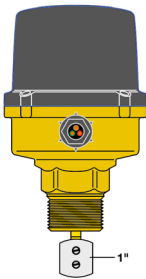
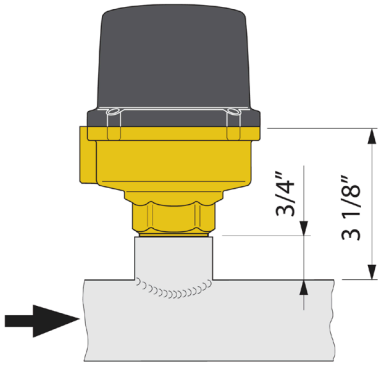


**AVERTISSEMENT:** La surface extérieure de l'appareil, en particulier les composants de type polymère, ne doit pas entrer en contact avec des substances chimiques, que ce soit volontairement ou accidentellement. Le produit et les additifs chimiques utilisés dans les canalisations d'eau - que ce soit pour le lavage ou la protection - doivent être compatibles avec les matériaux utilisés pour la fabrication de l'appareil et avec la fonction qu'il remplit.

Caleffi ne pourra être tenue responsable des dommages résultant de la corrosion, d'une mauvaise utilisation ou une mauvaise utilisation des produits.

## Installation:

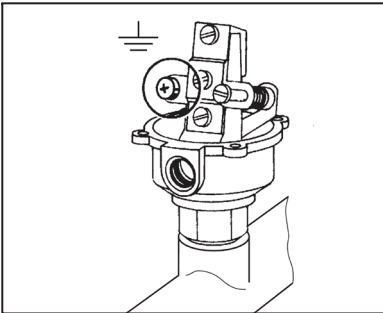
To install the flow switch correctly follow these instructions:



- When selecting the blade, identify the diameter of the pipe to which the Uni-Switch will be installed;
- The Uni-Switch comes complete with the 1" blade;
- For diameters of 1 1/4" (DN 32) and above, the pre-installed blade should be removed and the long blade installed, cutting it to the correct corresponding size for the desired diameter;
- Install the flow switch to the pipe, carefully observing the direction of flow indicated by the arrows stamped on the cover and on the switch mounting plate. When installed, the distance between the upper surface of the pipe and upper surface of the switch mounting plate should be 3 1/8" (80 mm);
- The tee connection in the pipe can be formed by the direct welding of a threaded socket;
- This also applies to a 1" (DN 25) diameter pipe, as the blades are designed to be contained in these smaller dimensions.
- It is however advisable to check that the weld is free from burrs on the inside so that the blade can move freely in the connection;
- Whenever possible the flow switch should be installed with control stem in the vertical position to avoid deposits of impurities which may cause it to function incorrectly.

## Electrical Connections:

Unscrew the four cover screws and lift off the outer cover .



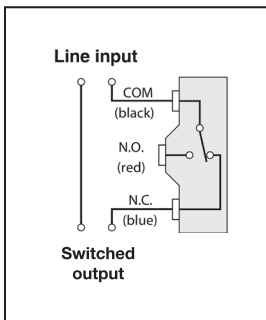
**CAUTION:** Make sure the wires do not obstruct the function of the switch mechanism.

**AVERTISSEMENT:** Assurez-vous que les fils ne sont pas entraver le fonctionnement de la changer le mécanisme.

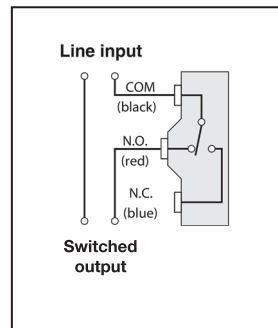
**CAUTION:** In order to maintain NEMA 5 (IP54) protection of internal switching components, included strain relief must be used.

**AVERTISSEMENT:** Afin de maintenir la protection NEMA 5 (IP54) des composants de commutation internes, le serre-câble inclus doit être utilisé.

Diagrams showing the internal connections of the micro-switch with:



Flow switch used to activate a device when flow stops. When the decreasing operating flow is reached or stops the common (black wire) and the normally open (red wire) contacts open, while the common (black wire) and the normally closed (blue wire) contacts close.



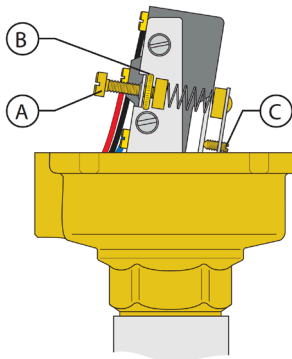
Flow switch is used to activate a device when flow starts. When flow starts and the increasing operating flow is reached or exceeded, the common (black wire) and normally open (red wire) contacts are closed, while the common (black wire) and the normally closed (blue wire) contacts are open.

Electrical Rating:

	125 V <sub>AC</sub>		250 V <sub>AC</sub>	
	N.C.	N.O.	N.C.	N.O.
Resistive Load	15 A	15 A	15 A	15 A
Inductive Load	15 A	15 A	15 A	15 A
Motor Load	5 A	2.5 A	3 A	1.5 A
Horsepower	1/8 HP	1/8 HP	1/4 HP	1/4 HP

Calibration:

The minimum and maximum operating flow rates are given in the table on next page. If the required operating flow rate differs from the value shown in the table, correct it as follows: turn the setting screw (A) clockwise to achieve contact closure at higher flow rates, or counter-clockwise for lower values. After making the adjustment, fix the setting screw (A) in place with the locking ring nut (B). **Avoid all contact with the presetting screw (C). After making the adjustment, make sure the flow switch is working as required for the system.** An incorrect setting would seriously compromise device operation.



Operating flow rates: gpm (lpm)

<b>Diameter of pipe</b>	<b>1"</b>	<b>1 1/4"</b>	<b>1 1/2"</b>	<b>2"</b>	<b>2 1/2"</b>	<b>3"</b>	<b>4"</b>	<b>5"</b>	<b>6"</b>	<b>8"</b>
<b>Minimum calibration</b> Operating flow rate with <b>increasing flow</b>	5.7 (21.7)	7.5 (28.4)	11.4 (43.4)	13.2 (50.1)	22.0 (83.5)	29.9 (113)	44.0 (167)	61.1 (232)	72.6 (275)	162 (618)
<b>Minimum calibration</b> Operating flow rate with <b>decreasing flow</b>	4.0 (15.0)	5.5 (20.9)	8.4 (31.7)	9.7 (36.7)	16.3 (61.8)	22.9 (86.8)	37.4 (142)	51.5 (197)	63.8 (242)	145 (551)
<b>Maximum calibration</b> Operating flow rate with <b>increasing flow</b>	12.3 (46.8)	16.7 (63.5)	26.0 (98.5)	29.5 (112)	51.5 (195)	69.5 (264)	94.6 (359)	136 (518)	189 (718)	334 (1269)
<b>Maximum calibration</b> Operating flow rate with <b>decreasing flow</b>	11.9 (45.1)	16.3 (61.8)	25.5 (96.9)	29.0 (110)	50.6 (192)	68.6 (260)	92.4 (351)	127 (484)	158 (601)	308 (1169)

# NOTES

LEAVE THIS MANUAL WITH THE USER.

Laissez ce manuel à la disposition de l'utilisateur.



Caleffi North America, Inc.  
3883 West Milwaukee Road  
Milwaukee, WI 53208  
T: 414.238.2360 F: 414.238.2366

12-2023

**For Technical Support call 1-414-338-6338, or  
email [techsupport.us@caleffi.com](mailto:techsupport.us@caleffi.com)**