



Overcome and evolve with the newest Sitron technology

Thermal Dispersion Flow Switch CF22



The best solution for detecting flow in ducts or pipelines of liquids or gases with an excellent cost-benefit.

Application

- Chemicals, Water Treatment
- Food and Beverage
- Basic Sanitation and Fire Fighting System
- Pharmaceutical industry
- Ventilation system

CF22

Thermal Dispersion Flow Switch

The CF22 Flow Switch models are designed to detect the flow of liquids and gases (air) in pipes or ducts.

It utilizes Thermal Dispersion flow detection technology, which makes it very efficient for low or high flow detection.

The housing with viewing window gives the operator a switch status as well as: an 8 LED bargraph with flow rate indication and a central LED that indicates the switch detection status.

The connection and body are made of 316 stainless steel and can be coated for corrosive media.



Characteristics

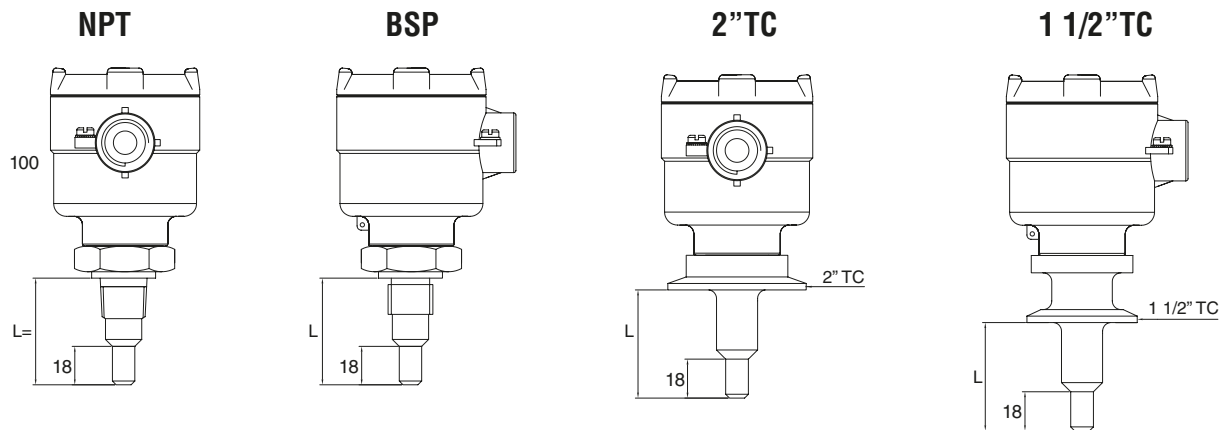
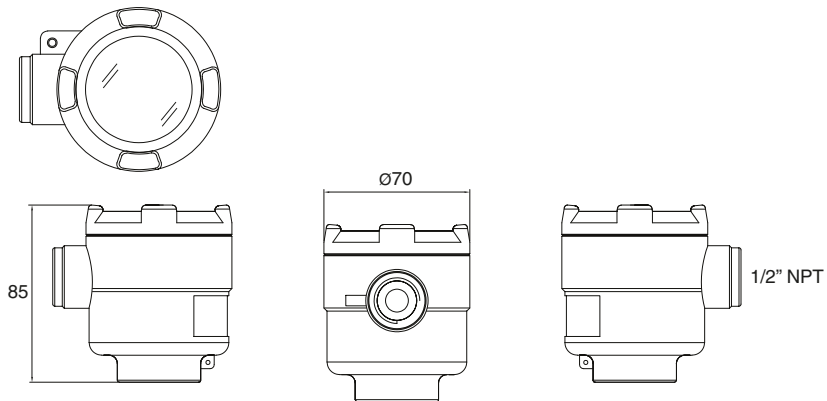
- Ideal for different industrial environments and sanitary applications.
- Robust with no moving parts and easy maintenance.
 - 316 stainless steel body
 - Coating for corrosive media
- Excellent low flow sensitivity.
- Protection class IP66 (IEC 60529).
- Fast flow response time.
- Set-Point range.
 - In the range from 3cm/s to 3m/s (Liquids)
 - 5cm/s to 5m/s (Air)
- Signal output.
 - SPDT relay
- Several types of process connections.
 - Thread, Flange and Sanitary

CF22

Thermal Dispersion Flow Switch

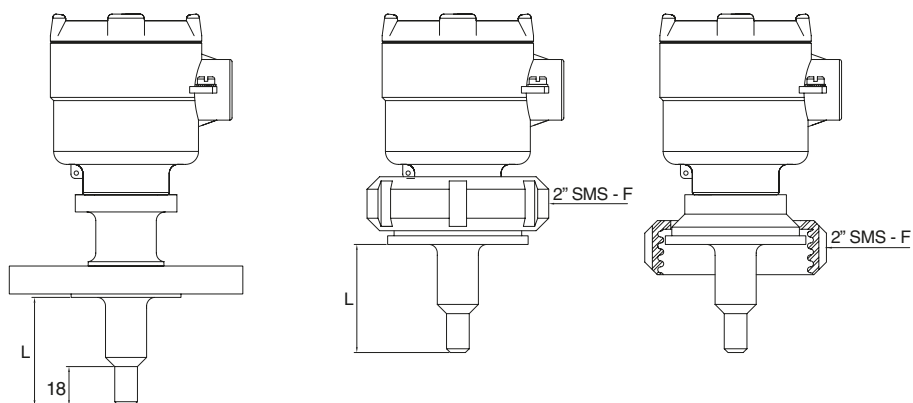
Dimensions / Process Connection Options

Housing



Flange

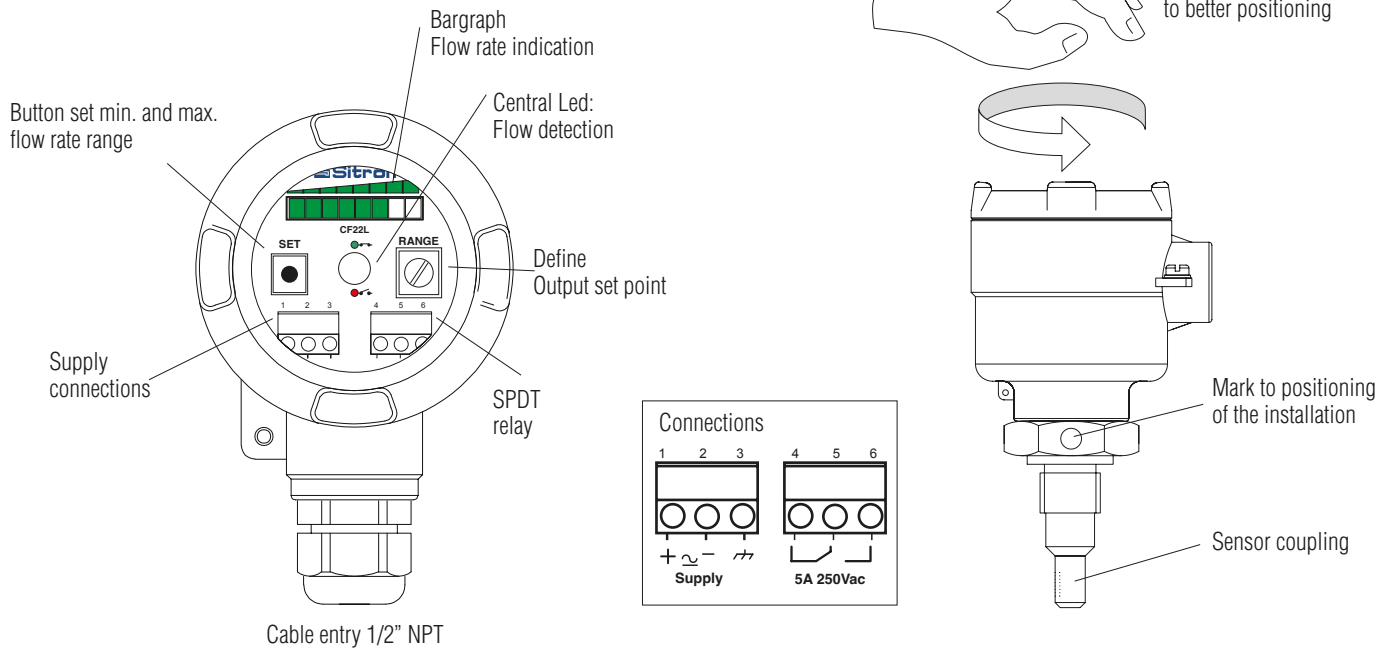
2" SMS - Female



CF22

Thermal Dispersion Flow Switch

Overview



Technical Specifications

CF22AC/DC-X-X-X-X-X (1 SPDT)

Application: Flow detection

Supply: DC: 24Vdc ($\pm 10\%$) | AC: 85...250 (50/60Hz) & 125Vdc

Consumption: <100mA

Output: Relay (1 SPDT) 5A - 250Vac

Set point range: Liquids: 3cm/s to 3m/s | Air: 5cm/s to 5m/s

Accuracy: $\pm 10\%$

Response time: +/- 10 to 30s

Gradient temperature: 15°C/min

Flow rate indication: Bargraph 8 led's

Enclosure material: Aluminum painted or Plastic (polymer)

Electrical connection: Cable gland 1/2" NPT

Process connection: BSP, NPT, Flange or Sanitary

Wetted parts: 316 SS

Ambient temperature: -10 to 70°C

Process temperature: -10 to + 80°C (extended neck up to 120°C)

Pressure: max. 100 Bar

Isolation: 500V r.m.s

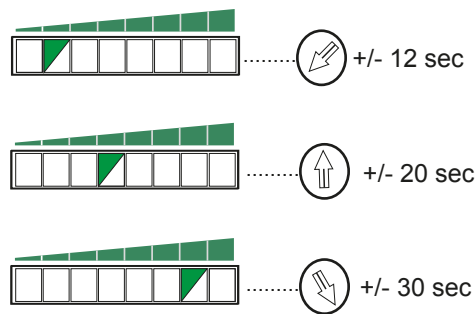
Class protection: Aluminum IP66

CF22

Thermal Dispersion Flow Switch

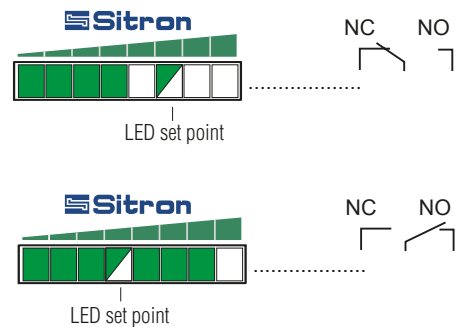
Set Point

LED flashing.



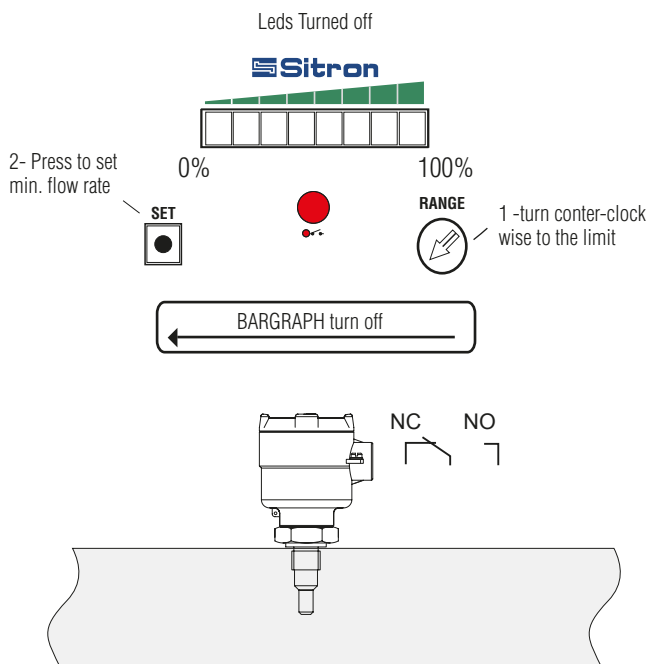
The flow detection time will depend on the set-point setting.

Example: Switch status

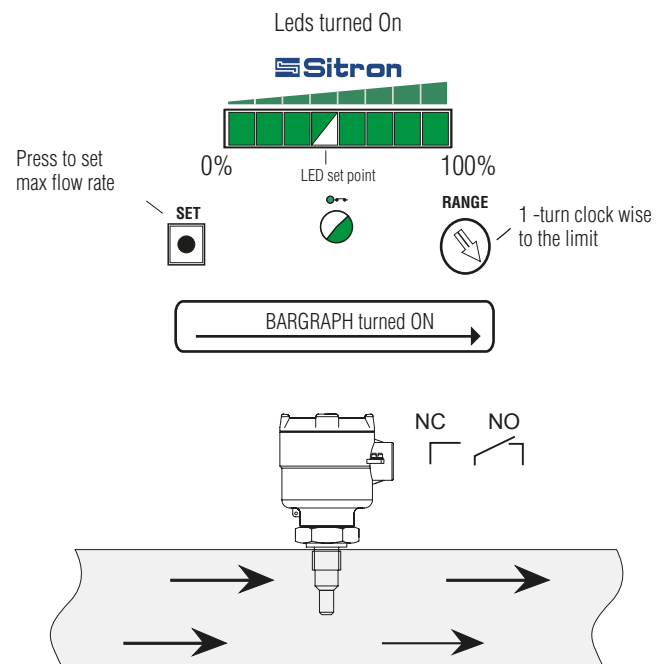


Flow Detection Example

No Flow



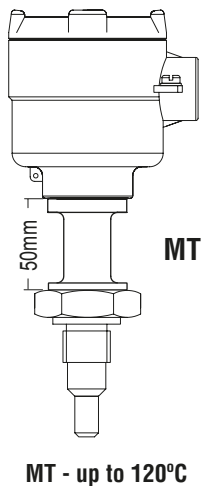
Max Flow



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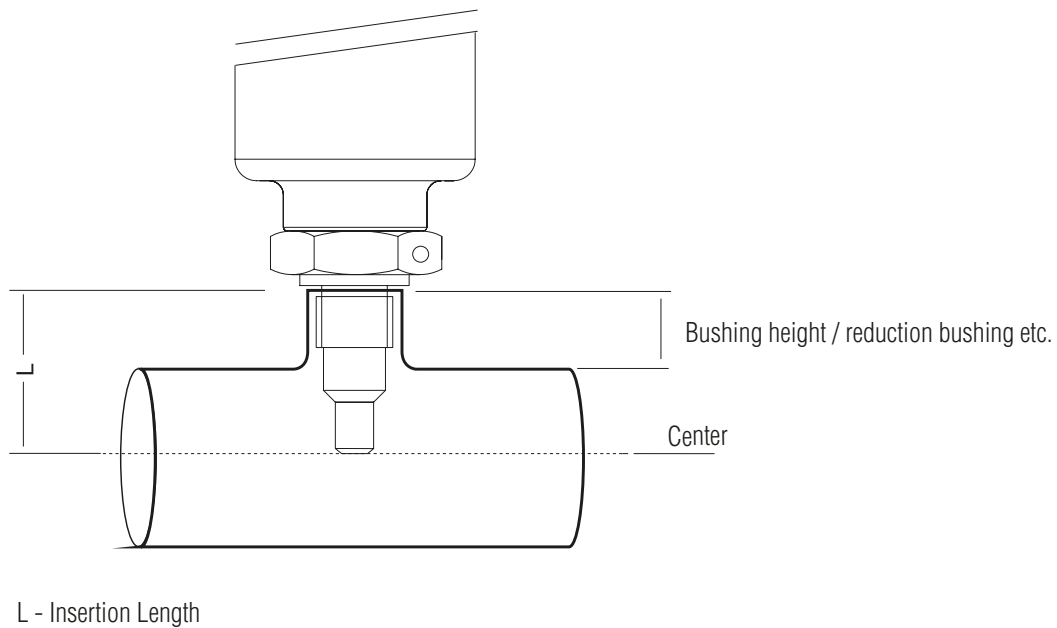
Thermal Dispersion Flow Switch

Extended Neck For Heat Dissipation



Insertion length Setting

Provide the measurement (L) as illustrated



CF22

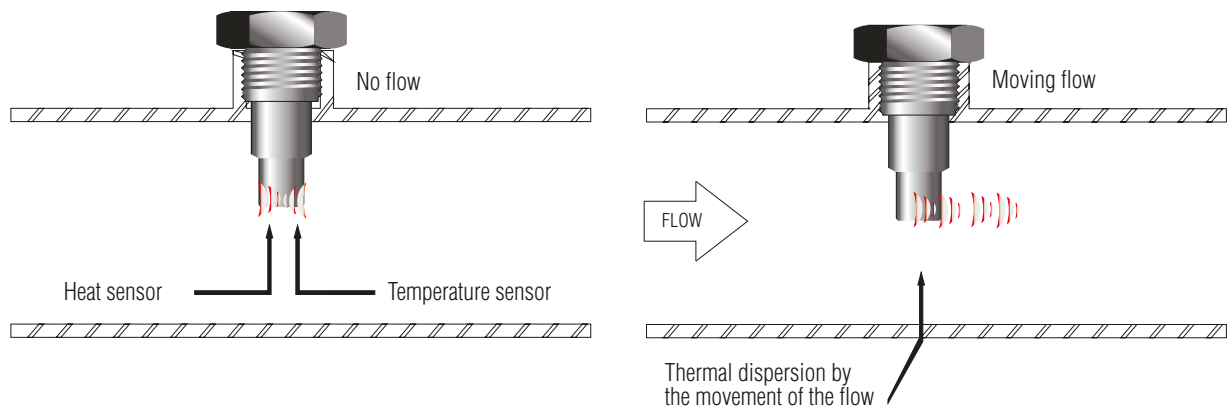
Thermal Dispersion Flow Switch

Technology

The CF22 line of flow switches utilize the principle of thermal dispersion. A typical configuration for this flow switch technology incorporates at least two temperature resistance detectors (RTD's), installed within the tip of the sensor. One of the sensors is heated and the other is used as a reference by monitoring the fluid temperature.

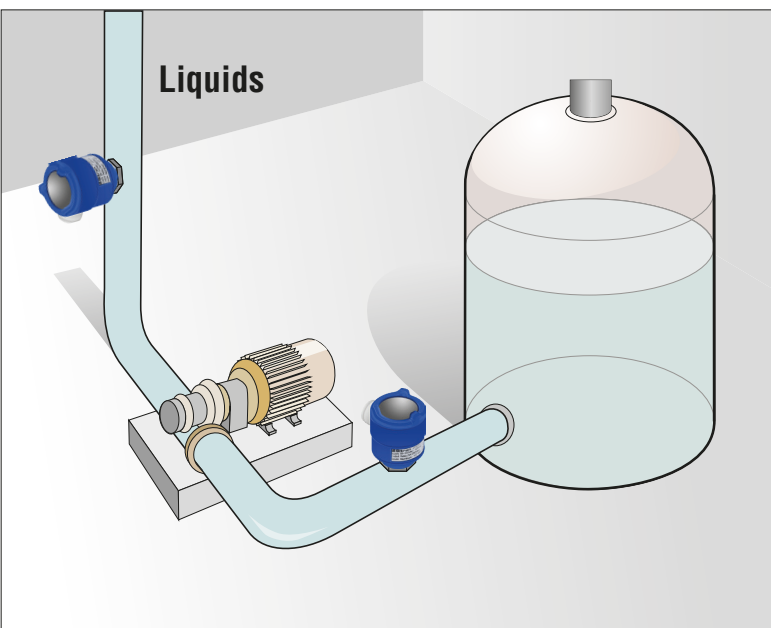
As the medium (air or fluid) flows over the sensor tip, there is a dispersion of thermal energy which is inversely proportional to the flow. The electronics of the CF22 registers and measures the temperature change and indicates either the presence or absence of flow via LED indication as well as an SPDT relay alarm output.

Thermal dispersion Technology

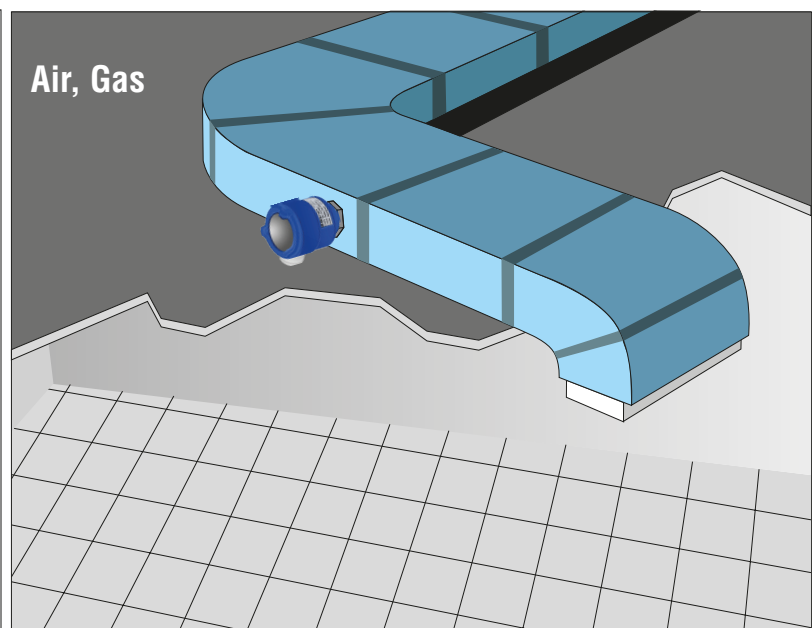


Applications

Hidraulic pump protection



Air flow system detection



Order Code

MODEL	
CF22AC	
CF22DC	
SIZE	
3	1/2"
4	3/4"
5	1"
PROCESS CONNECTION TYPE	
6	1 1/2" B BSP
7	2" D FLANGE ANSI 150# - Carbon Steel Painted
8	2 1/2" E FLANGE ANSI 150# - 316 SS
9	3" F FLANGE ANSI 150# - PVC
A	1 1/4" G FLANGE ANSI 300# - Carbon Steel Painted
B	Metric Thread H FLANGE ANSI 300# - 316 SS
0	4" J FLANGE ANSI 300# - PVC
X	OTHER K FLANGE ANSI 150# - 304 SS
	L FLANGE ANSI 300# - 304 SS
	M Metric Thread
	N NPT
	R SMS Female
	S SMS Male
	T TRI-CLAMP
	Y FEMALE DIN - 316SS
	X OTHER - SPECIFY
COATING	
S	NONE
H	HALAR® Coated
INSERTION LENGTH	
L35	35mm
L50	50mm
L75	75mm
L100	100mm
L	SPECIFY
HOUSING	
G1	SMALL ALUMINUM (1SPDT) 5A-250Vac
GE	SMALL ALUMINUM Encapsulated
ELECTRICAL CONNECTION	
7	CABLE GLAND W/ 1/2" NPT
M	M12 Connector (NO or NC)
OPTIONS	
MT	Medium Temp - 50mm 316SS Neck (80-120C)
ST	Identification Tag

CF22DC

4

G

S

N1

7

MT



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