

## Thermal Dispersion Flow Switch and Monitor CF520



The best solution for detecting/monitor flow of liquids with an excellent cost-benefit .

### Application

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

## CF520

### Thermal Dispersion Flow Switch and Monitor

The CF520 flow transmitter is ideal for monitoring the flow of liquids. It provides a 4...20mA analog signal and a relay output (SPDT). This technology is generally ideal when the user needs the approximate flow rate but does not want to invest in the more expensive flowmeter technology.

All models offer the user the ability to easily adjust the "Zero" and "Span" of the flow range so that the 4~20mA analog signal matches the process needs. The SPDT output is compared to the adjustment value (set-point) selected by the user, signaling and indicating when this value is reached.

An 8 LED Bargraph provides the user with a visual flow indication as well as the status of the Set-point and a central bi-chromatic LED that indicates when the Set-point has been reached



### Characteristics

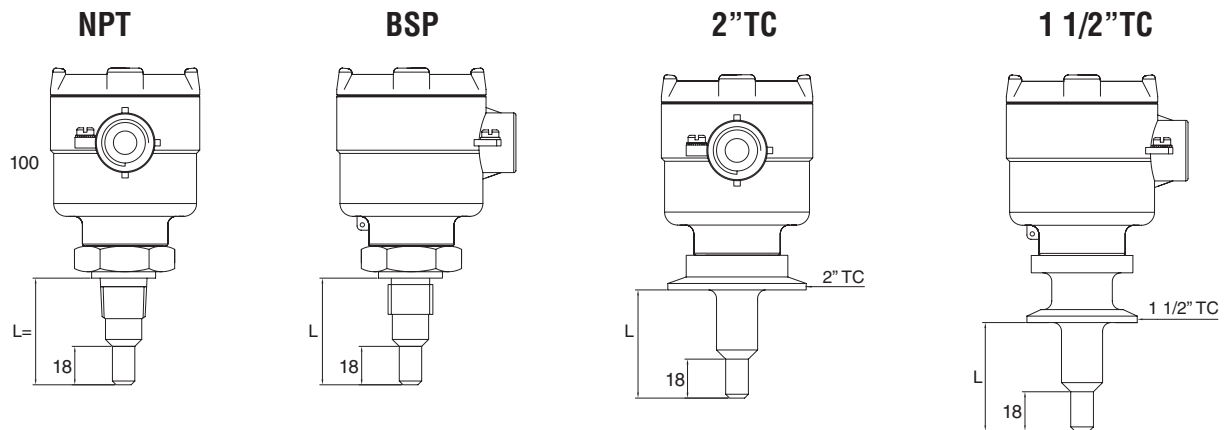
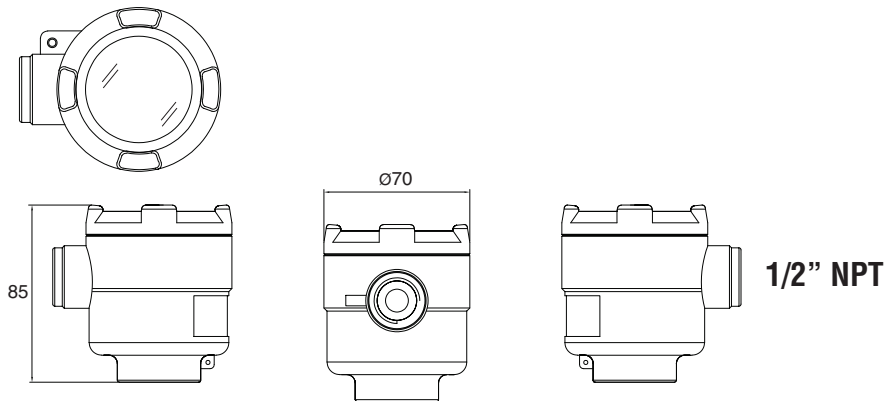
- Ideal for different industrial environments and sanitary applications.
- Robust with no moving parts and easy maintenance.
  - 316 stainless steel body
- Excellent low flow sensitivity.
- Protection class IP66 (IEC 60529).
- Fast flow response time.
- Set-Point range.
  - In the range from 3cm/s to 3m/s (Liquids)
- Signal output.
  - SPDT relay
  - 4~20mA (+/- 10%) for diagnostics and flow indication
- Several types of process connections.
  - Thread, Flange and Sanitary

# CF520

## Thermal Dispersion Flow Switch and Monitor

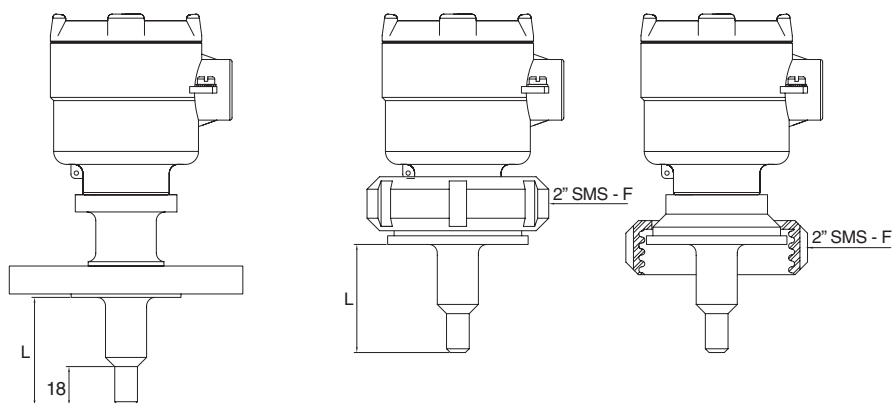
### Dimensions / Process connection Options

#### Housing



#### Flange

#### 2" SMS - Female



## CF520

### Thermal Dispersion Flow Switch and Monitor

#### Technical Specifications

##### CF520 DC-X-X-X-X-X | (1 SPDT) / 4~20mA

**Application:** Flow monitor

**Supply: DC:** 24Vdc ( $\pm 10\%$ )

**Consumption:** <100mA

**Output:** Relay (1 SPDT) 5A - 250Vac / 4~20mA (3 wires)

**Set point range:** Líquids: 3cm/s to 3m/s

**Accuracy:**  $\pm 10\%$

**Response time:** +/- 10 to 40s

**Gradient temperature:** 15°C/min

**Flow rate indication:** Bargraph 8 led's

**Enclosure material:** Aluminum painted

**Electrical connection:** Cable galnd ½" 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)

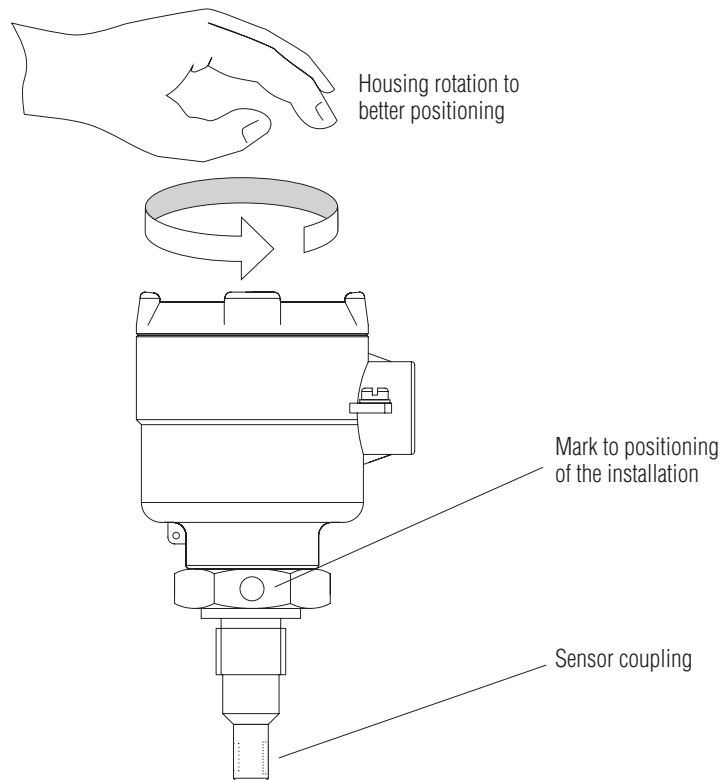
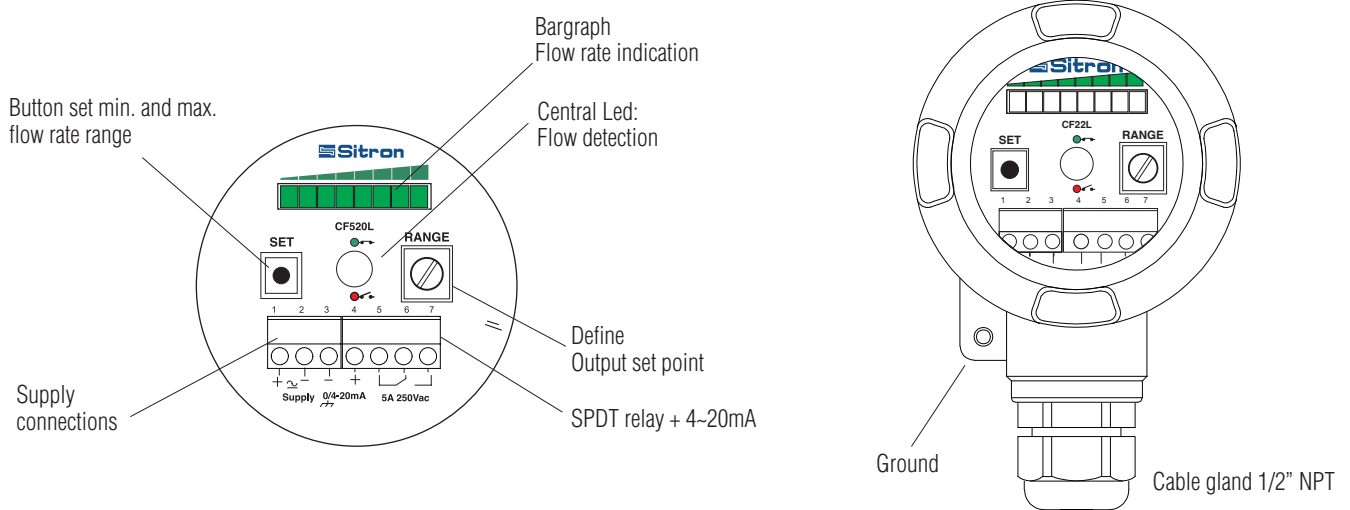
**Pressure:** max. 100 Bar

**Class protection:** Aluminum IP66

# CF520

## Thermal Dispersion Flow Switch and Monitor

### Overview

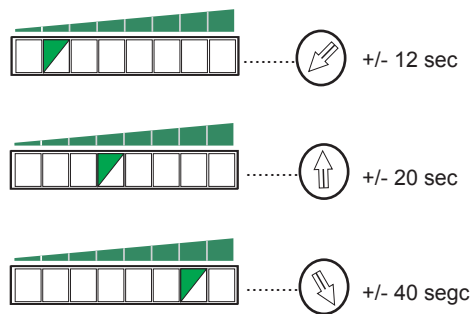


# CF520

## Thermal Dispersion Flow Switch and Monitor

### Set point

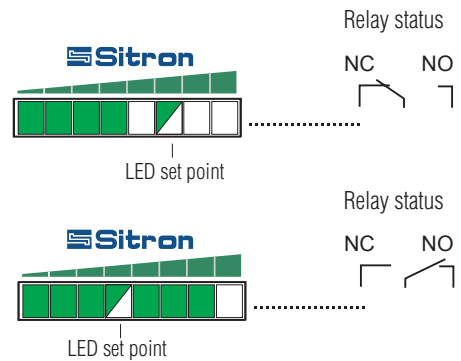
#### LED flashing.



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

#### Example:

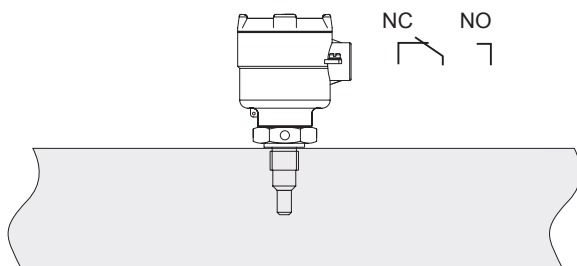
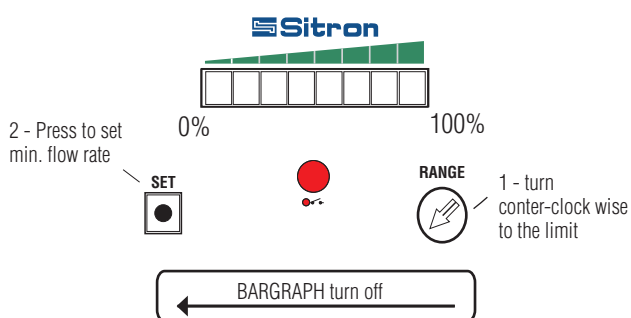
Switch status



### Flow Detection example

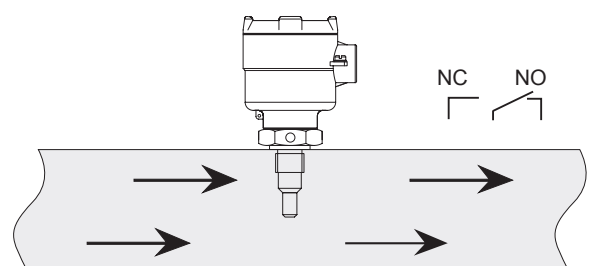
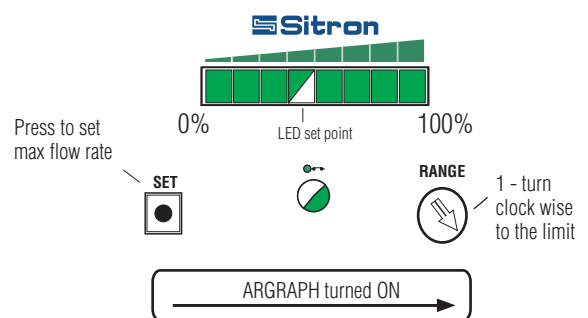
#### No Flow

Leds Turned off



#### Max Flow

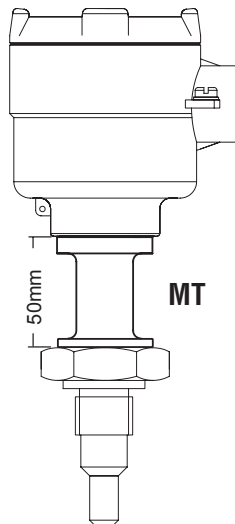
Leds turned On



## CF520

### Thermal Dispersion Flow Switch and Monitor

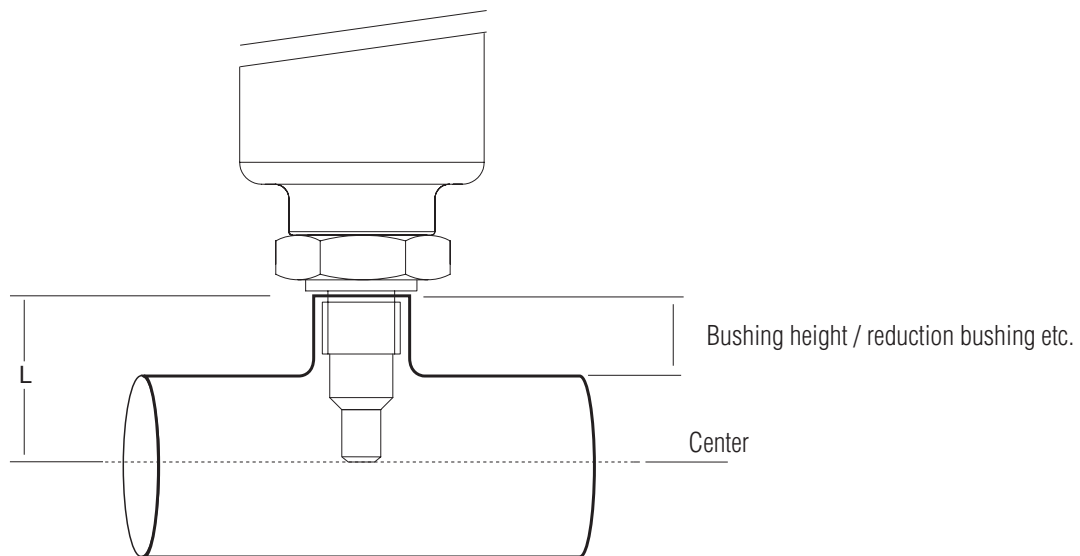
#### Extended Neck for heat dissipation



MT - up to 120°C

#### Insertion length Setting

Provide the measurement (L) as illustrated



L- Insertion Length

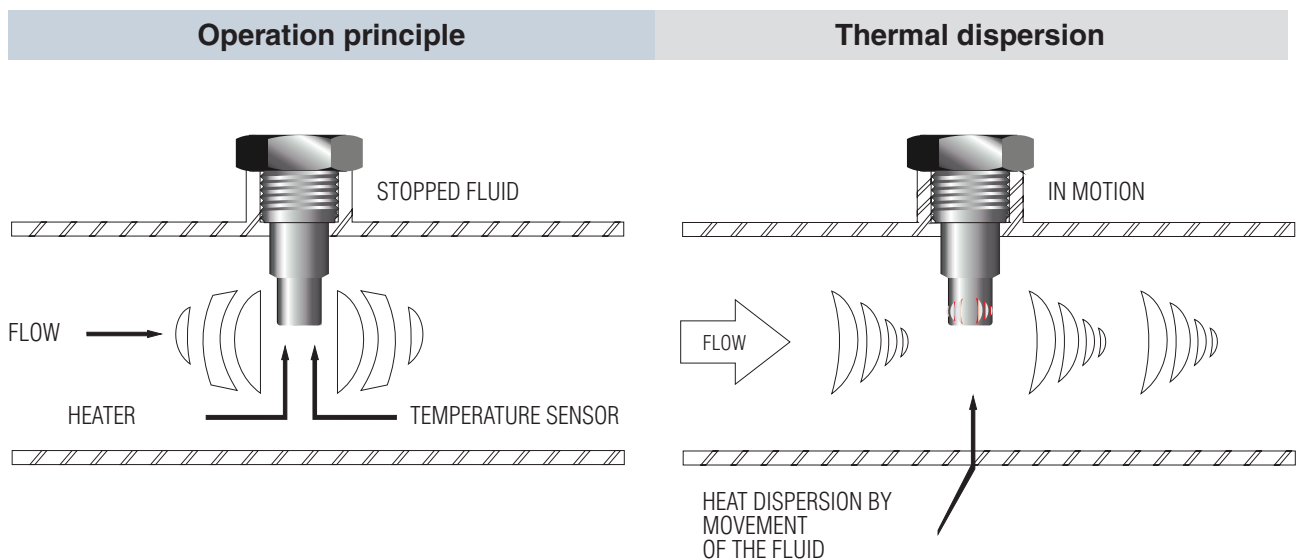
## CF520

### Thermal Dispersion Flow Switch and Monitor

#### 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 CF520 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.





# Order Code

MODEL	
CF520DC	
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
	J FLANGE ANSI 300# - PVC
0	4" K FLANGE ANSI 150# - 304 SS
X	OTHER 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
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
OPTIONS	
MT	Medium Temp - 50mm 316SS Neck (80-120C)
ST	Identification Tag

CF520DC	4	G	S		G1	7		
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Order in any stage of production	75%
Order complete and ready for shipment	100%

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Overcome and evolve with the newest Sitron technology

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