

CF22 EX Proof Flow Switch

Characteristics

- Explosion-proof housing (EX d).
- Robust with no moving parts.
- Corrosion resistant 316SS Body
- Excellent sensitivity at low flow
- Quick response time for flow or level
- Set-Point Range:
3cm/s to 3m/s (Liquids)
5cm/s to 5m/s (gas)
- Signal Output:
Relay 2x SPDT
- Protection:
Reverse Polarity
Voltage Surge
- Various types of process connections:
Thread, Flange and Sanitary



Description

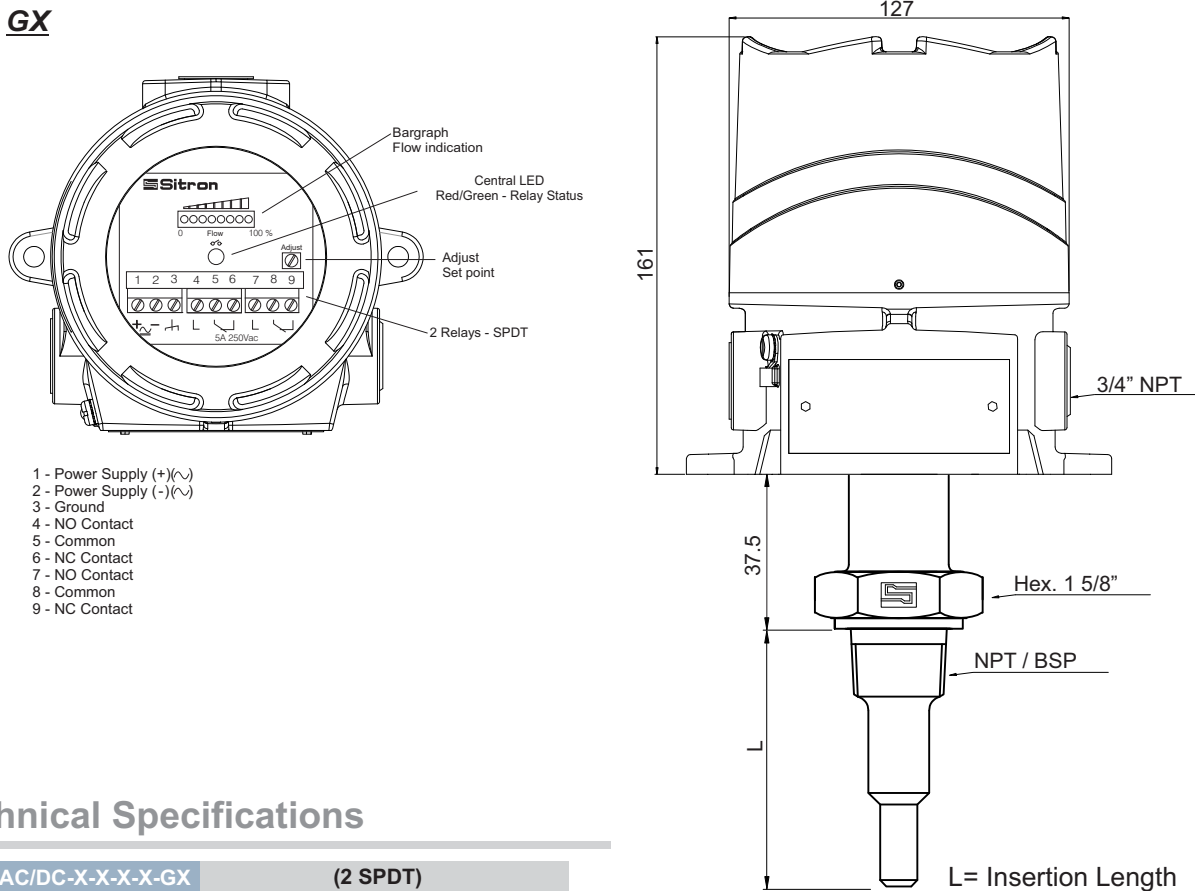
The CF22 Thermal Dispersion Flow Switch with Ex-Proof (GX) housing comes standard with either an AC or DC power supply (CF22AC or CF22 DC). This unit offers reliable liquid and gas flow detection ideally suited for just about any Flow/ No Flow application. Unlike the CF22 with either the small nylon housing (N1) or the small aluminum housing (G1), the CF22 with large aluminum housing (GX) comes with two independent SPDT relays.

Like all of Sitron's products, the CF22 can be configured to accommodate our customer's unique process control requirements. All models can be ordered with a great variety of threaded, flange or sanitary process connections. And while the CF22 is designed to monitor flow status of liquids and gases, with its no moving parts technology it can also be an ideal solution for liquid level detection.

The GX comes standard with a glass window which enables visualization of LED switch status. The GX housing comes with the following certifications: UL, cUL, IECEX and ATEX for installation in hazardous environments.

Dimensions (mm)

GX



- 1 - Power Supply (+)(~)
- 2 - Power Supply (-)(~)
- 3 - Ground
- 4 - NO Contact
- 5 - Common
- 6 - NC Contact
- 7 - NO Contact
- 8 - Common
- 9 - NC Contact

Technical Specifications

CF22AC/DC-X-X-X-X-GX

(2 SPDT)

Power Supply: AC: 85...264Vac (50/60hz) and 125Vdc
DC: 24Vdc ($\pm 10\%$)

Consumption: 130mA

Output: Relay (2 SPDT) 5A - 250Vac

Measuring Range: Liquids: 3cm/s...3m/s
Gas: 5cm/s...5m/s

Accuracy: $\pm 10\%$

Response time: 1...10 sec

Temperature Gradient: 15°C/min

Indication: Bargraph 8 led's

Flow indication (LED): Red = Flow below the set point
Yellow = set point (Relay ON)
Green = flow above the set point

Housing: Aluminum painted (blue) with glass viewing window

Electrical Connection (cable entry): 2 x 3/4" NPT

Process Connection: BSP, NPT, flange or Sanitary

Body Material: 316 S.S

Work Temperature: -10...+80°C

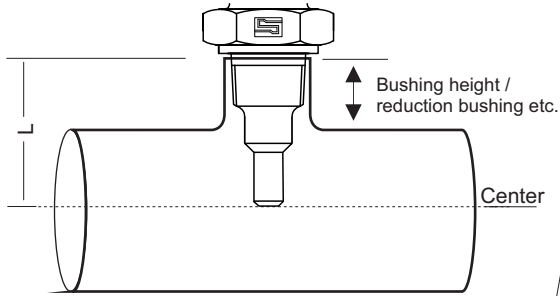
Max Pressure: 100 Bar

Approvals EX proof Housing (Optional): ATEX, DEMKO 07 ATEX 0622294,
0539 II 2 G EX d IIC Gb
0539 II 2 D Ex tb IIIC Db IP66
IECEX
IECx UL 08.0005U
Ex d IIC Gb
Ex tb IIIC Db IP66

Certifications: Class I, Div. 1, Groups B, C, D
Class II, Div. 1, Groups E, F, G
Class III
NEMA Type 4X
Class I Zone 1 A Ex d IIC
Ex d IIC (Canada)

Insertion Length

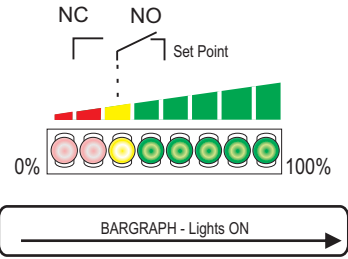
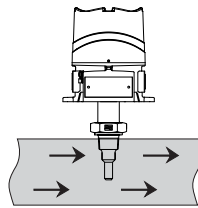
Providing the measure (L) as illustrated:



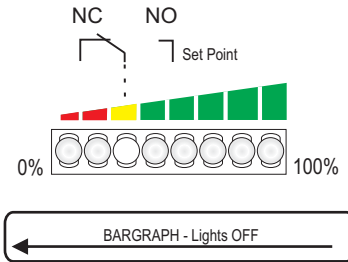
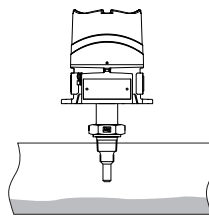
L- Insertion Length

Output Status

Flow Detection



No Flow

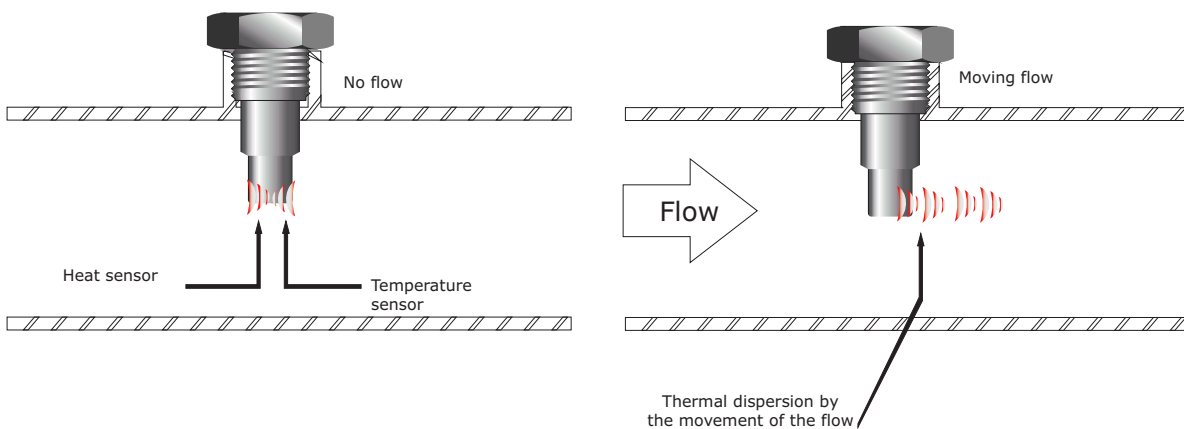


Technology

The 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 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.

Operating Principle

Thermal Dispersion



Order Code

MODEL	
CF22AC	Flow Switch / 2 SPDT / Power supply 85...264Vac (50/60hz) and 125Vdc
CF22DC	Flow Switch / 2 SPDT / Power supply 24 Vdc
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
COATING	
Y	FEMALE DIN - 316SS S NONE
X	OTHER - SPECIFY
INSERTION LENGTH	
L35	35mm
L50	50mm
L75	75mm
L100	100mm
L	SPECIFY
HOUSING	
GX	ALUMINUM w/ GLASS WINDOW (2 SPDT) 5A-250Vac (Ex d)
ELECTRICAL CONNECTION	
9	3/4" NPT
OPTIONS	
ST	316 SS Tag

CF22DC	4	B	S	L50	GX	9	ST
--------	---	---	---	-----	----	---	----

Rev_04.19