

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



Characteristics

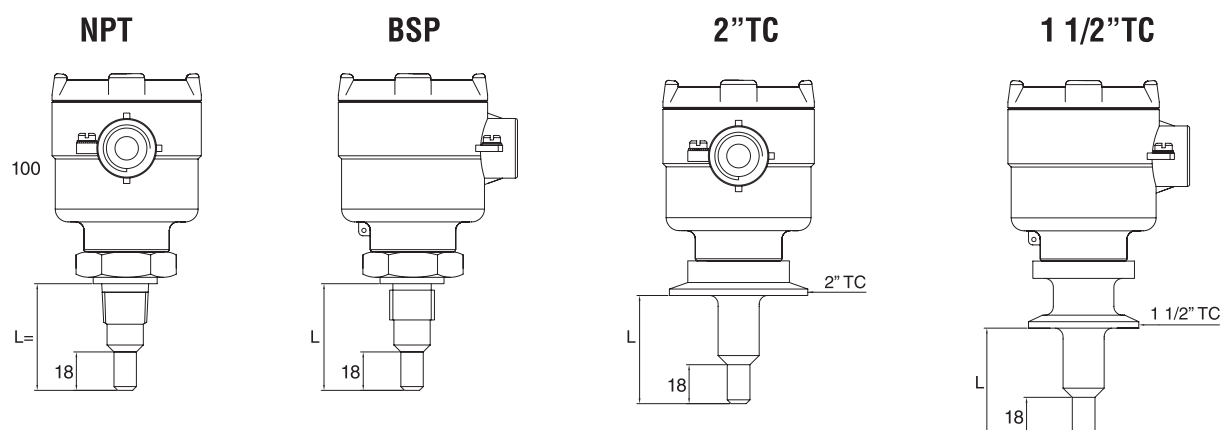
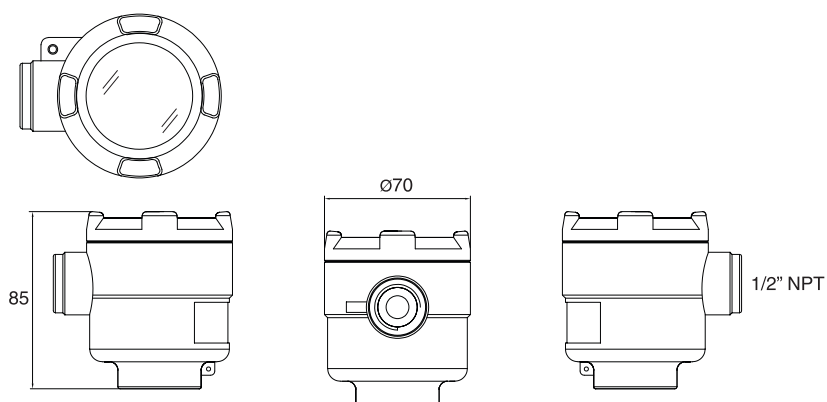
- Ideal for different industrial environments and sanitary applications.
- Robust with no moving parts and easy maintenance.
 - 316 stainless steel body
 - Coating for corrosive media
- Excellent low flow sensitivity.
- Protection class IP66 (IEC 60529).
- Set-Point range.
 - In the range from 3cm/s 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

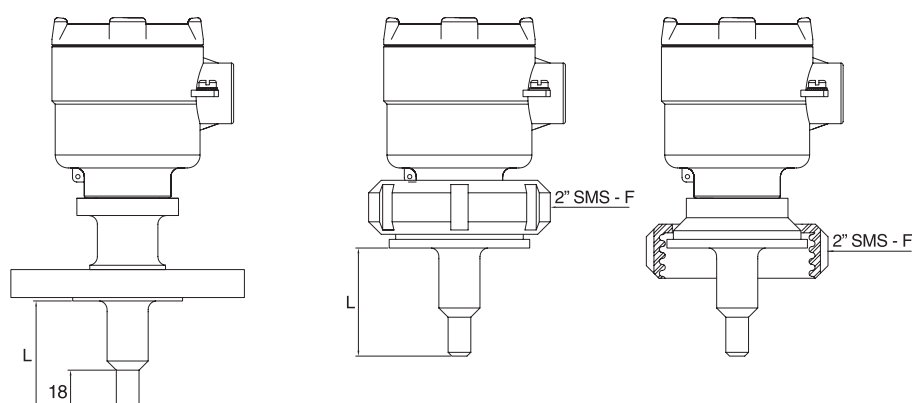
Dimensions / Process Connection Options

Housing



Flange

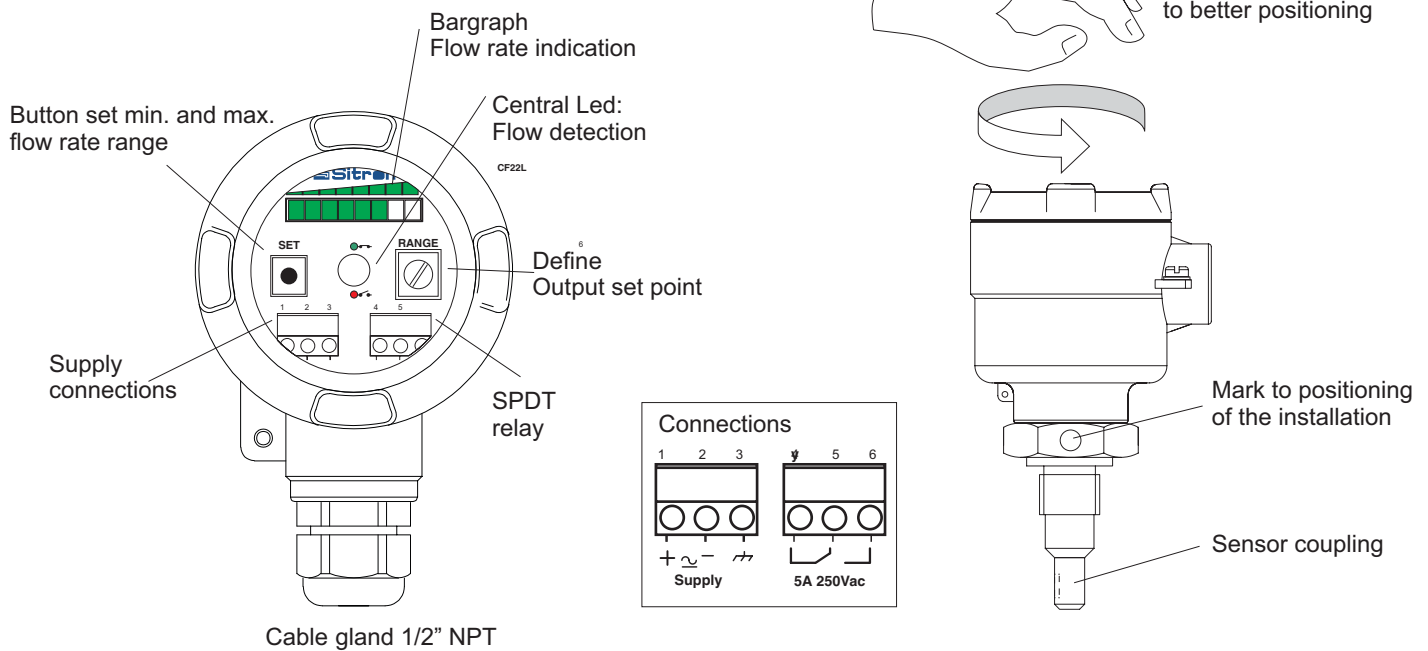
2" SMS - Female



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...264 Vac (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: 1 to 10s

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

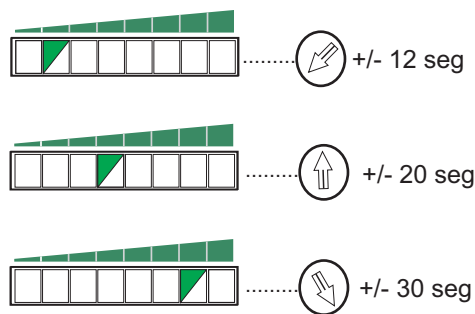
Class protection: Aluminum IP66

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Thermal Dispersion Flow Switch

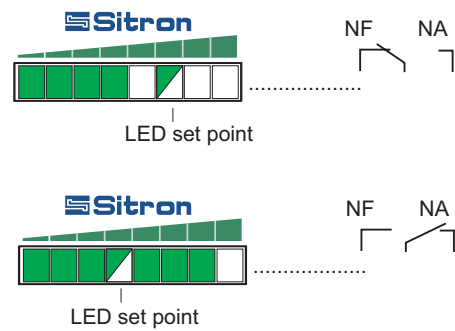
Set Point

LED flashing.



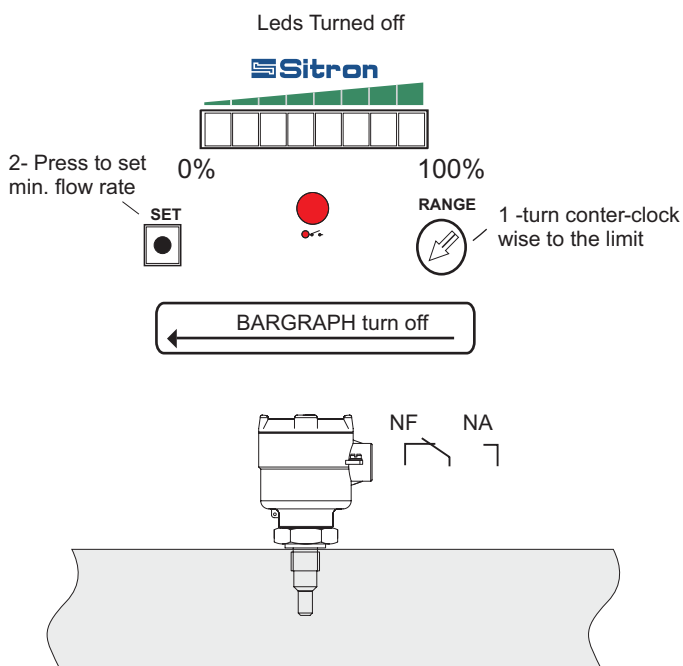
The flow detection time will depend on the set-point setting.

Example: Switch status

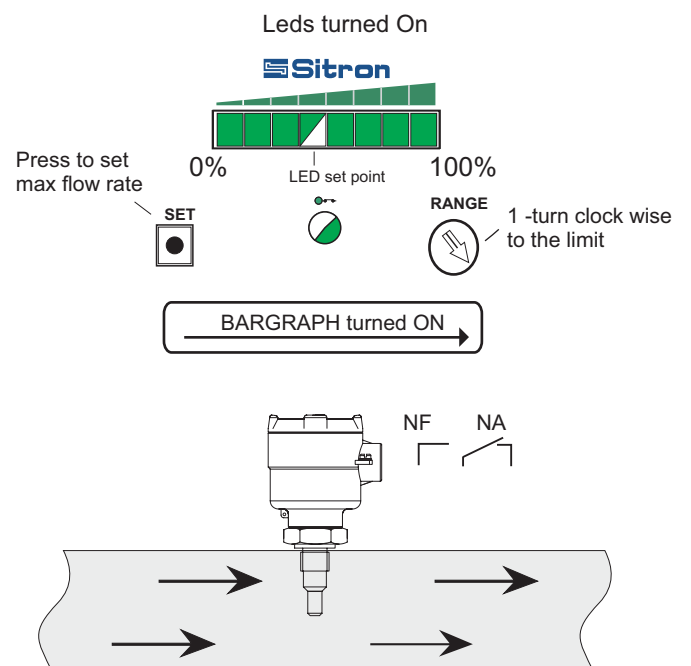


Flow Detection Example

No Flow



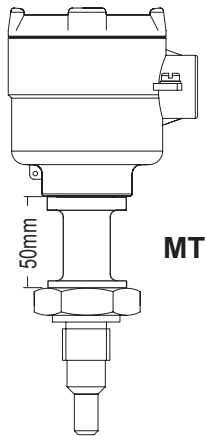
Max Flow



CF22

Thermal Dispersion Flow Switch

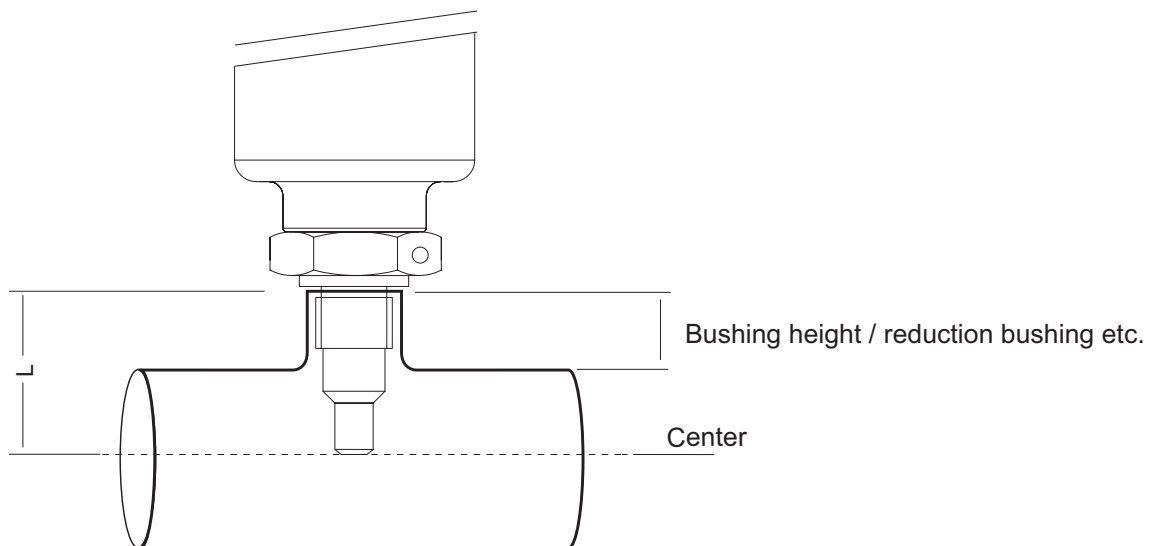
Extended Neck For Heat Dissipation



MT - up to 120°C

Insertion length Setting

Provide the measurement (L) as illustrated



L - Insertion Length

CF22

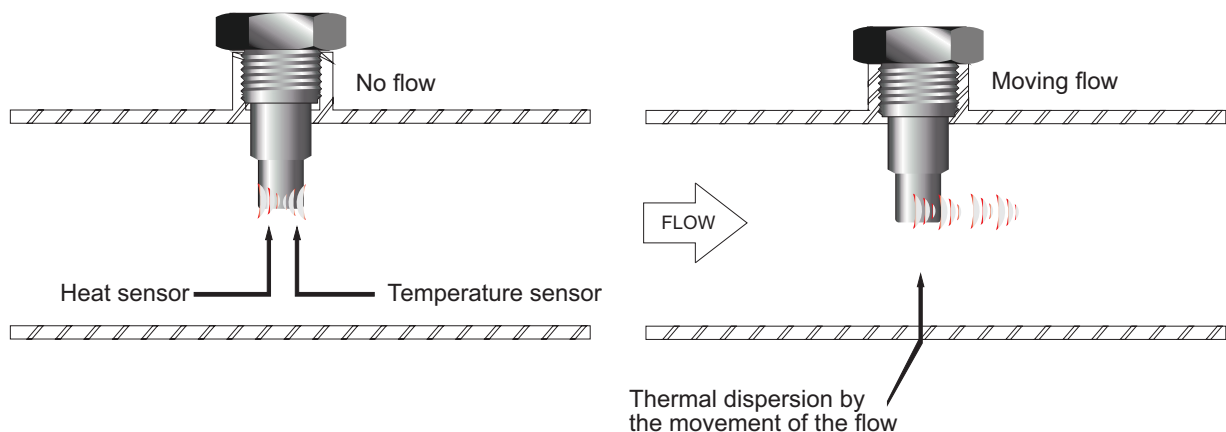
Thermal Dispersion Flow Switch

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.

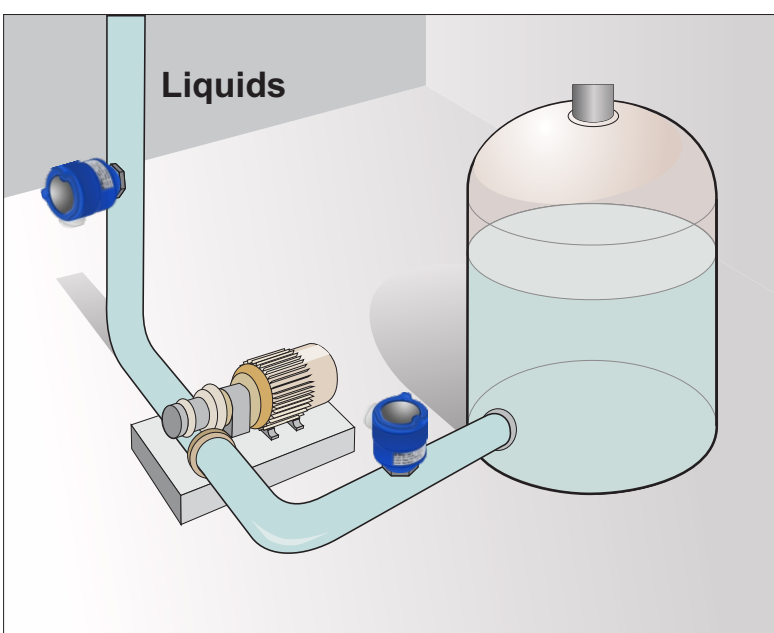
As the medium (air or fluid) flows over the sensor tip, there is a dispersion of thermal energy which is inversely proportional to the flow. The electronics of the CF22 registers and measures the temperature change and indicates either the presence or absence of flow via LED indication as well as an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

Thermal dispersion Technology

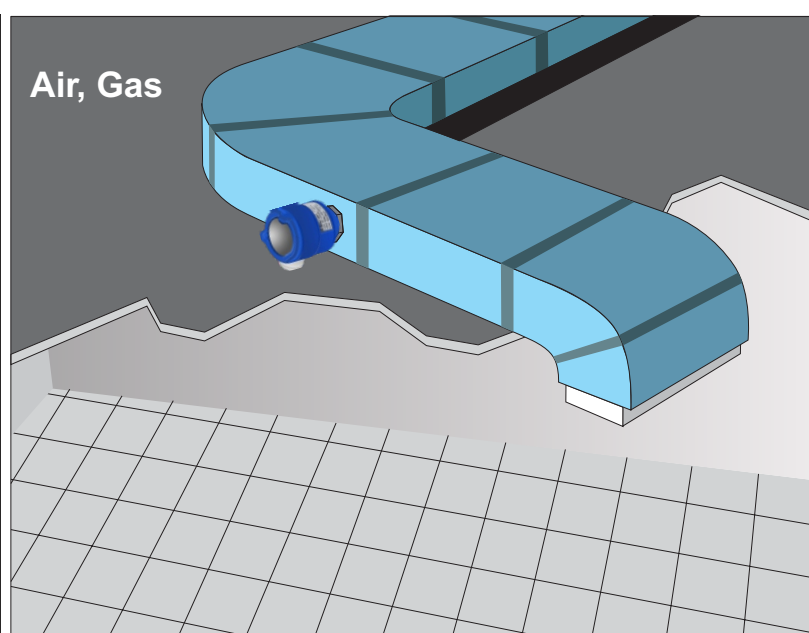


Applications

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
	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
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

Sitron's

Terms & Conditions

Design: Sitron reserves the right to make any alterations or changes necessary to improve the Products, correct defects or to make the Products safer, without prior notice or consent by Buyer.

Pricing: All stipulated amounts shall be in US dollars and all prices quoted are valid for thirty (30) days from date of offer, unless otherwise stated.

Safety and Instructions: The Buyer ensures that it and all its representatives and agents will observe all safety and technical instructions in Sitron's operating manuals, catalogs or other directions or instructions (either written or verbal).

Delivery and Freight: All goods are sold FOB point of shipment, Brasil. Transportation to the destination is the Buyer's responsibility and Buyer alone shall bear the cost of freight, optional or other shipping requirements, and or insurance. Sitron shall not be liable for loss or damage to the Products after said Products are delivered to or received by the shipper/carrier, and all risk of damage or loss shall immediately pass to Buyer. Receiving, unloading and storing of Products will be the responsibility of the Buyer. Buyer also accepts that courier may choose to return Products to Sitron if any local taxes or duties are not paid by Buyer at point of delivery. Buyer must make any and all claims for corrections or deductions within ten days of the delivery of the Products.

Shipment Delays: Sitron has no control over the length of time shipments may be held at customs, etc. For this reason, Sitron commits only to a "shipment date", not a "delivery date". Buyer shall not hold Sitron liable for claims resulting from delay in shipment except in cases where these terms are accepted in writing by Sitron. Acceptance of delivery of Products by Buyer shall constitute a waiver of all claims for delay.

Partial Deliveries: While Sitron strives to deliver all orders on time and complete, Sitron reserves the right to make partial deliveries when necessary.

Changes: Any changes initiated by the Buyer which affects the products specifications; quantities ordered; delivery schedule; method of shipment or packing; or delivery location, must be made in writing and signed by both parties. In this case, Sitron reserves the right to adjust the pricing and or delivery of the order, which will be agreed to by both parties before further work is performed on the order. Any such requests will be priced according to the scope of changes and the status of the current order. Customer must sign and return or acknowledge approval of drawings along with any Purchase Order. If approval drawings are not returned with order, the delivery date may be held or pushed back until Customer has acknowledged approval.

Cancellation: Any cancellation of the Contract by the Buyer shall be effective only if made in writing and accepted, in writing by the Sitron. In such a case, Sitron is entitled to reasonable cancellation charges including but not limited to labor, material and other related expenses.

Termination Fee Schedule:

Order entered but not released for manufacturing	10%
Order in any stage of production	75%
Order complete and ready for shipment	100%

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The Buyer must make all tools, resources or personnel available to help Sitron to diagnose the defect without any back charge. In absence of Buyer's cooperation in this regard, there shall be no liability under the above Warranty. Sitron's liability under this warranty shall be limited to repair or replacement at Sitron's option of such defective Products, FOB factory, upon proof of defect satisfactory to Sitron. Warranty does not include transport.

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Insurance: The responsibility for insuring the Goods after the risk in them has passed to the Buyer shall be that of the Buyer.

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