



FLO-CORP.com

CALFLO™ CFAM

Inline Air Flow Meter

OPERATING INSTRUCTIONS

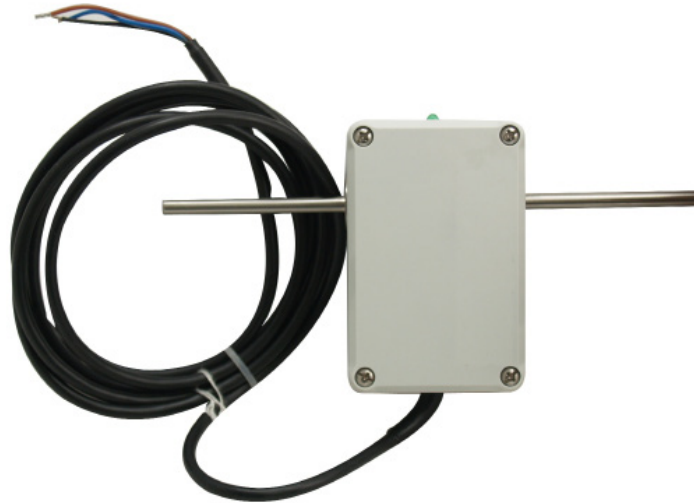


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Introduction

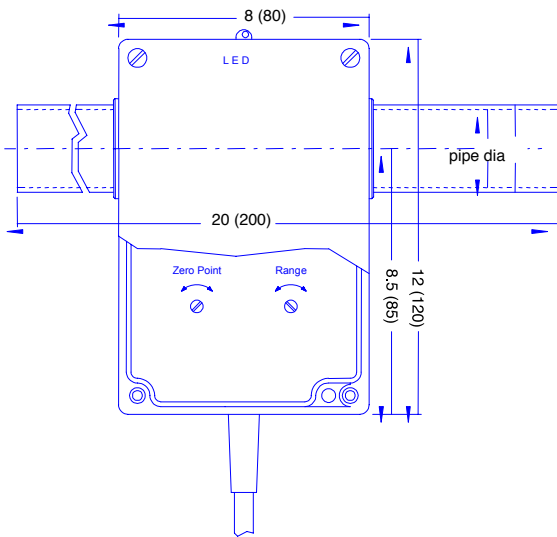
Please read carefully! No liability can be accepted for damage caused by improper use or installation of the AeroMeter™ Inline Air Flow Meter

Ideal for small pipe and low flow applications, AeroMeter is a compact inline flow meter that will accurately measure and control a variety of gaseous media. Completely encapsulated in epoxy resin, AeroMeter features solid-state sensing, adjustable measuring range, LED output display and is well-suited for small pipes up to 3/4" in diameter. Typical applications include vent gas, wet stack gas, sample line flow, purge flow, nitrogen blanket flow and many others. Select the appropriate configurations based on your application or contact our Application Specialist for additional assistance.

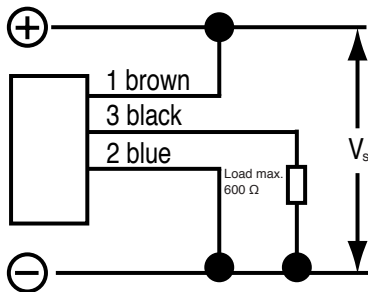
⚠ Safety Precautions

If you are unsure of the suitability of the AeroMeter™ Inline Air Flow Meter for your installation, please consult your FLO-Corp representative for further information.

Dimensions cm (mm)



Connection Diagram



Specifications



Sensor	
Service	Compatible Gasses
Measuring Range	CFAM-00: 0 to 16 fps (5 mps) CFAM-01: 0 to 32 fps (10 mps) CFAM-02: 0 to 65 fps (20 mps) CFAM-03: 0 to 98 fps (30 mps)
Measuring Range Adjustment	Continually adjustable from 20% to 100% of the special measuring range, 2 potentiometers (zero point range)
Accuracy	< 3%
Repeatability	< 1%
Temperature Drift	< 0.3% / K
Process Temperature	F: -4° to 158° C: -20° to 70°
Ambient Temperature	F: -4° to 158° C: -20° to 70°
Pressure	140 psi (10 bar)
Protection Rating	NEMA 4 (IP65)
Approval	CE
Mechanical	
Inline Sensor Pipe Material	Stainless Steel
Sensor Material	Ceramic, platinum with overglaze
Enclosure Material	Makrolon®
Connection Size	1/4", 1/2", 3/4"
Connection Type	Female NPT (Std.); Special Connection (Optional)
Electrical	
Supply Voltage	24 VDC ±15%
Consumption	Approx. 800 mW to 1.3 W (at max. flow)
Output Current	4-20 mA
Loop Resistance	0-600 ohm
Cable	
Cable Jacket Material	Oilflex
Cable Length	6.5 ft, 3-conductor 18 AWG



Installation Instructions

Depending on the pipe system a variety of connectors can be used. (i.e. screw fittings, hose clamps, etc.)

CAUTION: The inline pipe element must not be subjected to any kind of force (i.e. twisting) or high temperatures (i.e. in welding processes). Torsion: 10 Nm up to 40° C

Installation Site: Preferably in horizontal pipes or vertical pipes with ascending flow.

Initial Operation

1. Connect unit to 24 VDC as in connection diagram and wait approx. 5 minutes before adjusting.
2. Adjustment is possible in 4 different ranges: 0-16 fps / 0-32 fps / 0-65 fps and 0-98 fps.
3. Settings are possible of 20% within every measuring range - Based on air with normal pressure.
4. The zero point potentiometer is pre-adjusted. The range potentiometer is in position of max. value (i.e. set measuring range).

Initial State

1. The zero point potentiometer P2 is adjusted ex works to 4 mA
2. The range potentiometer is adjusted to the extreme clockwise position
3. Where ex works adjustment of measuring range has been requested, both potentiometers are sealed with silicone. Adjustment is carried out under manufacturer's test rig conditions. Under different installation conditions on site, deviations in output signal may be possible.

ATTENTION: 18-potentiometers are employed with no mechanical end stop.

Adjustment Procedure

1. Zero point adjustment in stationary medium (roughly)
Adjust the potentiometer P2 after 5 minutes in that way that $I_a = 4 \text{ mA}$.
i.e. if $I_a = > 4 \text{ mA}$ turn potentiometer P2 slowly to the **left**.
if $I_a = < 4 \text{ mA}$ turn potentiometer P2 to the **right**.
2. Adjustments of measuring range at the max. flow rate, which must correspond to 20 mA output.
After 3 minutes at max. flow rate turn potentiometer P1 until $I_a = 20 \text{ mA}$
i.e. if $I_a = > 20 \text{ mA}$ turn potentiometer P1 slowly to the right
if $I_a = < 20 \text{ mA}$ turn potentiometer P1 slowly to the left
3. Check zero point and range adjustments as previously mentioned in step 1 and 2
Correct any discrepancies if necessary
4. LED indicates well operation within the measuring range up to 20 mA.
LED goes off when flow rate exceeds the adjusted range ($I_a = > 20 \text{ mA}$)



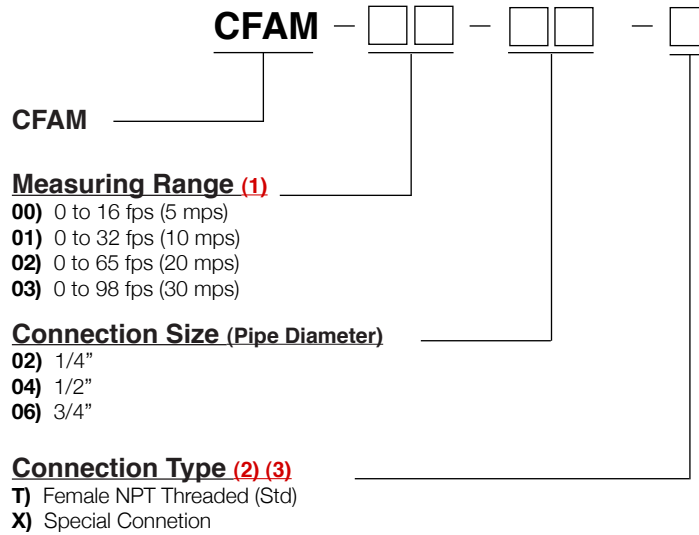
Ordering Information

FLO-CORP MODEL NUMBER BUILDER

For Assistance Call **877.356.5463**

Use the diagram below, working from left to right to construct your Flo-Corp Model Number.
Simply match the category number to the corresponding box number.

Example: CFAM-00-06-T AeroMeter™ Inline Air Flow Meter, 0 to 16 fps Measuring Range, 3/4" Sensor Pipe Diameter, Female NPT Connection



Ordering Notes:

- (1) Select the best configuration based on your requirements
- (2) If you require a Special Connection (X), please consult factory with your requirements
- (3) Comes complete with 6.5' (2m) pre-wired cable and manual

Specifications are subject to change without notice.



Return Policy

Flow Line Options Corporation warrants this product against defects in material or workmanship for the specified period under "Specifications" from the date of shipment from the factory. Flow Line Options Corporation liability under this limited warranty shall not exceed the purchase value, repair, or replacement of the defective unit.

The information contained in this document is subject to change without notice. Flow Line Options Corporation makes no representations or warranties with respect to the contents hereof and specifically disclaims any implied warranties of merchantability or fitness for a particular purpose.

Warranty Policy

Flow Line Options Corp. warrants to the original purchaser of its products that such products will be free from defects in material and workmanship under normal use and service for a period which is of eighteen months from the date of purchase. This warranty covers only those components of the products which are non-moving and not subject to normal wear. Moreover, products which are modified or altered. Flow Line Options obligation under this warranty is solely and exclusively limited to the repair or replacement, at Flow Line Options decision, of the products (or components thereof) which Flow Line Options' examination proves to its satisfaction to be defective. FLOW LINE OPTIONS SHALL HAVE NO OBLIGATION FOR CONSEQUENTIAL DAMAGES TO PERSONAL OR REAL PROPERTY, OR FOR INJURY TO ANY PERSON. This warranty does not apply to products which have been subject to electrical or chemical damage due to improper use, accident, negligence, abuse or misuse. Abuse shall be assumed when indicated by electrical damage to relays, reed switches or other components. The warranty does not apply to products which are damaged during shipment back to Flow Line Options' factory or designated service center or are returned without the original casing on the products. Moreover, this warranty becomes immediately null and void if anyone other than service personnel authorized by Flow Line Options attempts to repair the defective products. Products which are thought to be defective must be shipped prepaid and insured to Flow Line Options' factory or a designated service center (the identity and address of which will be provided upon request) within 30 days of the discovery of the defect. Such defective products must be accompanied by proof of the date of purchase. Flow Line Options further reserves the right to unilaterally waive this warranty and to dispose of any product returned to Flow Line Options where: a. There is evidence of a potentially hazardous material present with product. b. The product has remained unclaimed at Flow Line Options for longer than 30 days after dutifully requesting disposition of the product. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE OF THIS WARRANTY. This warranty and the obligations and liabilities of Flow Line Options under it are exclusive and instead of, and the original purchaser hereby waives, all other remedies, warranties, guarantees or liabilities, express or implied. EXCLUDED FROM THIS WARRANTY IS THE IMPLIED WARRANTY OF FITNESS OF THE PRODUCTS FOR A PARTICULAR PURPOSE OR USE AND THE IMPLIED WARRANTY OF MERCHANT ABILITY OF THE PRODUCTS. This warranty may not be extended, altered or varied except by a written instrument signed by a duly-authorized officer of Flow Line Options Corp.

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