

# SFC 332



## Introduction

The SFC 332 is a 32-bit **bi-directional, dual meter run**, custody flow computer used in **liquid custody pipeline** applications.

Fifty (50) previous days, batches, and hours of historical data are stored in full format-type reports, as well as 100 previous audit trail reports and alarms. Sixteen (16) different product files are user-configurable with easy switch feature, and **product scheduling for batch operation** is available.

**\*Proving with automatic meter factor implementation** is possible using unidirectional, bi-directional, reduced volume, Calibron™ or Brooks™ type Provers. **Automatic 4-way Valve/ Piston Control** is a standard proving feature. Repeatability is checked regularly by the flow computer.

**Special real-time Turbine Diagnostic** functions are available to detect bent or missing turbine blades, wobble, pulsation or flow cavitation. A **turbine meter signature** is generated at different flow rates, and then assessed for changes in fidelity continuously. A frequency or analog signal can be received from a **Densitometer**.

An optional **Multivariable Module 205 Sensor** may be integrally mounted to the SFC 332 to allow accurate determination of **differential pressure, static pressure, and temperature**.



## SFC 332 Details

### Specification

32 Bit Processor  
12-30 VDC @ 4 WATT  
NEMA 7, 4X Class 1 Div. 1  
Group B, C and D Housing

### Display

2 Lines, 16 Characters  
Min Max Charting  
Minutes, Hours or Days

### Standard Interfacing

Serial Modbus  
(3) Frequency Channels  
(4) Analog Inputs  
(2) Single-ended Analog Outputs  
(2) RTD Inputs  
**\*\***(4) Digital Inputs  
**\*\***(5) Digital Outputs  
(1) RS232 Port  
(1) RS485 Port  
(1) Printer Output  
Rosemount Multivariable-  
DP, Press., & Temp.  
0.075 % Accuracy of  
Calibrated Range

### Interrogation Upgrade Options

TCP/IP Encapsulated Modbus  
GSM/ Radio  
Satellite

### Applications

Proving  
Turbine Diagnostic  
Batching  
Product Scheduling  
Well Head Measurement  
Custody Measurement  
Allocation Measurement  
Gas Process Plants  
PID Control  
Smart Field I/O

### Standardization

API, ISO, AGA

### Units of Measurement

Metric & US Customary

*\*\*I/O Expansion Terminal strip is  
required*

### Products

Crude Oil (6A, 23A/24A, 24A)  
Refined Products (5B/6B, 6B,  
23B/24B)  
Specialized Products (6C, 24C)  
LPG (New 23/24, New 24)  
Butadiene (ASTM 1550)

### Instrumentation

Turbine/ Freq. Meter

11104 West Airport Blvd, Suite 108  
Stafford, Texas 77477 USA  
T: 281.565.1118  
F: 281.565.1119  
sales@dynamicflowcomputers.com

<b>Technical Data- SFC 332</b>	
<b>POWER</b>	
VOLTAGE RANGE	12-30 VDC
POWER CONSUMPTION	4 WATT
<b>OPERATING CONDITIONS</b>	
UNITS	US or METRIC
TEMPERATURE	- 40 TO 185 °F
HUMIDITY	100%
HOUSING	NEMA 4X CLASS 1 DIV. 1
<b>FEATURES</b>	
DISPLAY	PLASMA 2 LINES 16 CHARACTERS
PROCESSOR	32-BIT MOTOROLA 168332 @ 16.7 MHz
FLASH ROM	4 MB @ 70 NANO SECONDS
RAM	2 MB @ 70 NANO SECONDS
FREQUENCY INPUT	THREE (3) CHANNELS 0-5000 Hz WITH TURBINE DIAGNOSTIC FUNCTION >70 Mv FOR SIN WAVE >6 VOLTS FOR SQUARE WAVE
ANALOG INPUT	FOUR (4) 24-BIT CHANNEL EXPANDABLE TO SIX (6) ANALOG INPUTS
RTD INPUTS	TWO (2) CHANNELS, FOUR (4) WIRES
ANALOG OUTPUT	TWO (2) CHANNELS, 12-BIT SINGLE ENDED
DIGITAL OUTPUT	OUTPUTS (1) AND (2)- PULSE/SWITCH- 0.5 AMPS RATING OUTPUTS (3) TO (5)- SWITCH OUTPUTS- 0.25 AMPS RATING
STATUS INPUTS	FOUR (4) ON/OFF TYPE SIGNAL
ALL INPUTS AND OUTPUTS ARE OPTICALLY ISOLATED	
SERIAL COMMUNICATION	ONE (1) RS-485 @ 38400 BAUDS VARIABLE ONE (1) RS-232 @ 19200 BAUDS VARIABLE
COMMUNICATION PROTOCOL	MODBUS