*Anchor*FLOW ™

Data Sheet

Description

The *Anchor*FLOW flow computer is a complete gas flow measurement system. *Anchor*FLOW provides a full function single to five run natural gas flow measurement computer function as an application within an IEC-61131-3 programming environment. This means users can add PIDs or any custom control loops with IEC 61131-3 Ladder Logic or Structured Text Languages within a single industrial strength package.

*Anchor*FLOW provides a Flow Computer System with MMI connectivity via Modbus. Isolated analog inputs directly feed FLOW calculations. Users select modes of operation via PC configuration screens that are easy to use, easy to verify. The system provides for hourly and daily history.

The system clock is synchronized with an on-board real-time clock that provides battery backup-up operation through extended power-off cycles. The user can remotely reset current system time.

Local and remote electronic data recording of system variables includes calculated flows as well as all critical inputs such as pressures, temperatures, mol percentage of gases, etc. for repeating local flow calculations.

*Anchor*FLOW provides ModbusTCP and ModbusRTU compatibility for ease of integration to any SCADA System.

*Anchor*FLOW is configured with the *Anchor*FLOW*Config*™ PC based Windows® program. *Anchor*FLOW*Config* is easy to use PC based software that provides support personnel with windows for viewing, configuring and testing the system. No programming is required. *Anchor*FLOW*Config* generates Excel® "csv" event log and history data for flexible report generation.
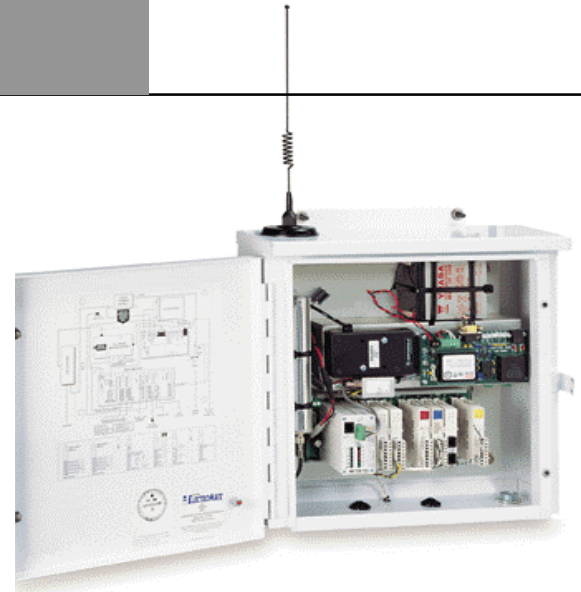
Status and alarm notification can be programmed by the user to generate a message for events such as power loss, input out of range condition, flow cut-off or out-of-range and more. Email, fax, and alphanumeric pager notification is available.

Internet and network based communications options provide simple enterprise integration. Wireless communications options include cell, radio, and satellite. Dial and leased line connections are supported.

Electrically isolated I/O channels provide the capability to read and control any analog, digital, and serial signals. Industrial NEMA standard enclosures are available to meet the toughest environmental conditions. An optional 19" rack mount unit with visible status/alarm annunciation is also available.

The Flow Computer open system design results in a cost-effective solution while offering the user the option of customizing the system.

Modbus Master capability and the custom control programmability of IEC 61131-3 provides for remote I/O as well as extensive control capability within the Flow computer system remote unit.

Key Features:

- **FLOW - AGA-3 1992, Update–1994; AGA-7**

- **Compressibility – AGA-8 1992 (Supercedes NX-19)**

- **Update: once per Second each run**

- **Electronically archive 1000 events locally**

- **Daily History of 30 days**

- **Network based communications via wireless, cellular, dial line, leased, CDPD, circuit switched, and satellite**

- **Enterprise ready with Ethernet host protocols**

- **Optically isolated I/O channels provide electrical surge protection**

- **Modular design can accommodate thousands of I/O channels**

- **Modbus Compatible**

- **Modbus Master Capable**

AnchorFLOW ™

Technical Specifications

GENERAL SPECIFICATIONS

The standard configuration has been designed to monitor two runs. The modular I/O system design allows for additional expansion if required.

Base Unit:	10 Analog Input Channels 4 Digital Relay Outputs Ethernet and serial host port
(Options)	
Enclosures:	Din Rail, Sub-Panel, 3U 19" Rack Mount, or NEMA 4X, Battery Backup, Heater / Thermostat, AC Power Sense
Cellular Modem:	Cellular Phone, Data Cable, and Antenna.
Modem:	Phone Line Modem

COMMUNICATION SPECIFICATIONS

Protocols:	Modbus/TCP and Modbus RTU/ASCII
Ethernet Port:	10/100 Mbps Fast Ethernet (IEEE – 802.3 10Base-T and 100Base-TX) using Cat5 cable with RJ-45 connector.
Serial Port:	RS-232 baud rate is user selectable from 2400-115,200bd. Expandable up to 16 RS-232/485 ports.
Modem:	V.34 (Std. Hayes "AT" compatible)
Cell - Modem:	Digital Cellular Phone
Driver Toolkit:	Communicate with custom Visual Basic, Visual C++, Java, and Linux applications.

PHYSICAL SPECIFICATIONS

Dimensions:	12"H x 12"W x 6"D 3U 19" Rack Mount

ELECTRICAL SPECIFICATIONS

Power Supply:	104-132VAC, 47-63hz
Battery Backup:	24hr, 4 Amp-hr
Memory:	16Mb RAM, 8Mb Flash

ENVIRONMENTAL SPECIFICATIONS

Operating Temp:	-40 to 70 degrees C
Storage Temp:	-40 to 85 degrees C
Humidity:	0-95%, non-condensing

I/O CHANNEL SPECIFICATIONS

Analog Inputs:	Voltage Inputs:	+/- 150mV DC +/- 10V DC 0-250V DC 0-250V RMS AC
	Current Inputs:	+/- 20ma 0-10arms AC/DC
	Accuracy:	0.06% error DC 0.2% error AC
	Optical Isolation:	4000V
	Max Volts In:	Common mode up to 500V
	Impedance:	1Mohm 0-250V 100Mohm mV
Digital Outputs:		5-60VDC .75amp
(Relay Out)		0-130V AC/DC

Additional I/O available:
Digital Inputs: 90-280VAC, 2.5-32VDC, Dry Contact
Analog Outputs: Current 4-20ma, +/- 10VDC, 5-60VDC
Serial Interfaces: RS-232 or RS-485

Ordering Information:

Model	Runs		Description	
FLOWR	1		Base Controller w/ I/O interfaces	
	2	Code	Enclosure	
		0	Without Enclosure (Sub-Panel Mounted)	
		1	Without Enclosure (Din Rail Mounting)	
		2	With NEMA 4X Enclosure	
		3	3U19" Rack Mount Enclosure w/ LED Alarm Panel	
			Code	Communications
			0	Standard Modem
			1	Cellular Modem
			2	No Modem
FLOWR-1	2	1		