The E-Plus 100 is a field mounted flow computer for custody or non-custody transfer measurements. It is a single bi-directional meter run computer that can be used in gas or liquid applications. Multiple primary elements and density equations are supported. A unique graphical interface allows users to have up to three trend screens with two user selectable parameters per screen. This mimics a chart recorder display and allows users the ability to get at-a-glance information concerning their flow conditions.

The E-Plus 100 was developed with a focus on brining the needs of a vast array of specialized industries into a single hardware package. This has allowed users to reduce spare parts requirements, reduce training time for new users, and reduce the total cost of ownership. Whether being implemented as a standalone solution or being integrated into a plant wide control system, the E-Plus 100 has "got you covered".

The E-Plus 100 calculates all the necessary standard equations (AGA, API, ISO, NIST, etc.) for Liquids & Gases. Monthly, daily, or hourly reports are stored in flash memory. If you include the E-Plus 100's impressively low power consumption, battery back-up capabilities, solar power options, and built-in wireless communications the E-Plus 100 proves itself to be the number one flow computer for all applications.

Features

- Low operating power (0.3 watts)
- 0.075% accuracy
- 32 bit processor
- 64x128 programmable display
- Min-max charting
- Wireless radio/Modem ready
- Multiple I/O options
- Custody transfer accuracy
- Test separator reports
- Smart field I/O

Communications

- RS232 Modbus
- RS485 Modbus
- Analog and digital I/O
- Zigbee wireless radio
- FreeWave wireless radio
- Bluetooth

Applications

- Liquid and gas measurement
- Well head measurement and automation
- Custody measurement and control
- Compressor stations
- Well optimization
- PID control
- Field mounted trending
- Multiple primary elements

Reports

- Hourly
- Daily
- Monthly
- Monthly day by day
- Calibration and audit
- Data storage in Years

Alternative Power

- Battery backup
- Solar power

The E-Plus 100 flow computer has the capacity to measure a single bi-directional gas or liquid measurement train. Multiple equations are included among which are AGA3/API14.3, API14.9, API 5, 6, API5.7, API2540, AGA7, AGA9, API21, with more being added continuously. The E-Plus 100 accepts any type of primary element: Venturi, Annubar, Turbine, PD, Ultrasonic, V-Cone, Wedge, Vortex, etc. Additionally, it can carry out density calculations according to the following standards: API12, AGA8; 24A, B, C; NBS for steam, saturated and supersaturated steam, NBS1045 for ethylene, etc. Contact our offices or visit our website for available equation updates.

The E-Plus 100 can have up to three textual display screens with four user-selectable parameters being displayed per screen. In addition, three graphical trend screens can be displayed showing two user selectable parameters per trend. All screens are scrolled at user-defined intervals.

The input/output assignment, flow equations, historical data storage, and other functions are carried out using Dynamic Flow Computers' DYNACOM® software. This software is Windows based, free of charge, and available for download/update at any time on our website.

DYNACOM® Software Capabilities:
- Flow computer diagnostics
- Configure inputs and outputs
- Configure PID control
- Personalize report time and content
- Configure and select the local LCD screen displayed parameters
- Reassign and customize MODBUS® registers and values
- Create and implement custom math and formulas
- Input and output calibration
- Automatic and periodic downloading of flow computer reports
- Obtain historic data for display, saving, exportation, or printing

Historic data is available in the memory of the flow computer for download or display.

Maximum Report Storage:
- Hourly reports: 1536 hours*
- Daily reports: 64 *
- Daily reports, hour by hour: 64*
- Monthly reports: 6*
- Monthly, day by day: 2 months*
- Calibration reports: 20*
- Audit reports: 100*
- Alarm reports: 100*
- Special reports: HTML, and others

*The number of reports stored can vary according to application.

PHYSICAL SPECIFICATIONS

Electrical/Conduit Connections:	Two 3/4" NPT One 1" NPT
Housing (Flow Computer):	Material: copper free aluminum Painting: epoxy or polyurethane. Classification: NEMA 4X class 1 div. 1 – IP66
RTD Connection:	To flow computer terminal block
Display:	Text - 8 Lines x 16 characters Graphics – 64 x 128 pixels
Terminal Blocks:	Easily accessible; removable for easy connection
Certifications:	CSA for class 1, div. 1, groups B, C and D UL for class I, zone 1, AEx d IIB+H2
Temperature Limits:	Operation: -40 to 185 °F (-40 to 85 °C) Storage: -50 to 190 °F (-46 to 87 °C)
Humidity:	100%

ELECTRICAL SPECIFICATIONS

Voltage	10 to 28 VDC
Power Consumption	0.3 watt
Temperature	-40 to 185 °F (-40 to 85 °C)
Humidity	100%
Solar Board (Optional)	10/20 watts, 12 volts
UPS (Optional)	7 day backup
Polarity	Reverse polarity protected
Processor	32 bits @ 16.7Mhz
Flash ROM	4 MB @ 70 Nano seconds
RAM	2 MB @ 70 Nano seconds
Real Time Clock	Years/Months/Days/Hours/Minutes
Internal Battery	Lithium ion

INPUT SPECIFICATIONS

Optic Isolation	Each input is optically isolated with ±250 VDC chassis isolation
Analog Input	Three 4-20mA (or 0-5V) inputs 24 bit resolution
Digital/Switch Input	One input (4 optional with slow pulse) 5-28 VDC 0.25Amp rating For frequency input - square wave only Frequency range 0 - 6000 HZ Signal must be > 3 volts
Frequency Input	Two inputs (Frequency inputs uses one digital input channel and/or one digital output) Square wave 0 - 6kHz, Signal > 3 V Sine wave 0 – 1200Hz, Signal > 70mVp-p Minimum 10uA @ 1KOhm resistance.
RTD	One RTD input (Direct connection to flow computer uses two of the analog input channels) 24 bit resolution

OUTPUT SPECIFICATIONS

|	
Optic Isolation	Each output is optically isolated with ±250 VDC chassis/ground isolation
Digital/Switch/Pulse Output	Two outputs 8-28 VDC 0.25Amp rating On/Off or pulses (to 125 pulses/sec.)
Analog Output	One output (16 bit) 4-20mA (external power required) For PID control or for data transmission

COMMUNICATION SPECIFICATIONS

RS232/485	Quantity 1 @ 1200 – 19200 bps
RS232 (w/Elbow Option)	Quantity 1 @ 1200 – 19200 bps
Protocol	MODBUS® RTU/ASCII
Optional	Modem, Radio, Bluetooth

DIAGNOSTIC SPECIFICATIONS

Monitor/Alarm	Multivariable: P, DP, T Analog inputs/outputs Digital/switch inputs Digital/switch outputs Pulse/frequency inputs Internal temperature Battery voltage Internal power supply

FLOW COMPUTATION SPECIFICATIONS

Number of Trains	One (+1 Aux meter)
Flow Calculation	Gas or liquid

Primary Elements	Differential:
	    Orifice, V-Cone, Wedge, Annubar, Venturi, etc.
	Pulse/Frequency:
	    Turbine, PD, Vortex, Ultrasonic, etc.

Engineering Units	US and Metric
Base Conditions	60°F, 14.7 PSIA (15 °C and 1 Kg. /Cm²) 68°F, 14.7 PSIA (20 °C and 1 Kg/Cm²)
Equations	AGA8 methods 1, 2, and detailed; 24A,B,C; Steam NBS Others added continuously - Consult factory for complete list
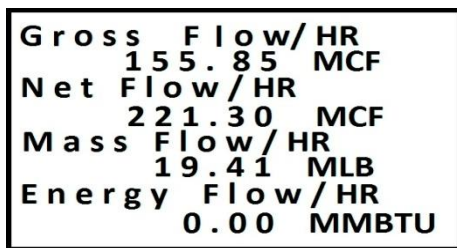
Text Display
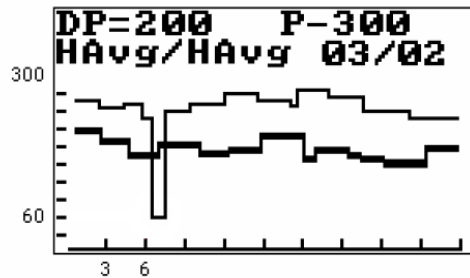
Graphic / Trend Display

Optional Accessories

WDS Upgrade

WDW Upgrade

WDB Upgrade
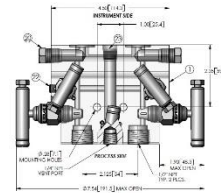
FOUNDATION
WDF Upgrade

P2DAAA Upgrade

Armored 12-08P-W

L-Shaped Bracket

MAN5NF#

Back-Up Battery (BP11V06AH)

Solar 20 Kit

SmartCone®