E-Plus TS

Dynamic FLOW COMPUTERS
Made to Measure.

Introduction

The E-Plus TS is a **four (4) meter run**, custody flow computer using an ultra-low power, 32-bit microprocessor.

It is designed to receive signals from a **Test Separator** vessel in order to determine daily production of oil, gas, and water for each given well (*up to eight (8) wells).

Reports are generated to the current **API 20. 1 Allocation Metering** standard. The D.P gas meter is measured via a **Multivariable Module 205 Sensor**, while the oil flow meter (including **BS&W**) is used to correct crude volume alongside the shrinkage factor.

A **Salt water** correction algorithm is included for the water outlet meter.

E-Plus TS Details

Specification
32 Bit Processor
7-24 VDC @ 0.3 WATT
NEMA 7, 4X Class 1 Div. 1
Group B, C and D Housing

Display
8 Lines, 16 Characters
64x128 Pixels
Min Max Charting
Minutes, Hours or Days
Automatic Scrolling

Standard Interfacing
Serial Modbus
(3) Analog Inputs
(1) Analog Output
(3) Digital I/O's
(1) Comm. Port-RS232/485 Selectable
(1) Optional Additional RS232 Port
Rosemount Multivariable-
DP, Press., & Temp.
0.075 % Accuracy of
Calibrated Range

Interrogation Upgrade Options
TCP/IP Encapsulated Modbus
GSM/ Radio
Zigbee Radio
Bluetooth
Satellite
Foundation Fieldbus

Applications
Test Separator
Well Head Measurement
Custody Measurement
Allocation Measurement
Gas Process Plants
PID Control
Smart Field I/O

Standardization
API, ISO, AGA

Units of Measurement
US Customary

Metered Products
Natural Gas (AGA8)
Process Gas (AGA8)
Crude Oil (API 20.1 for Allocation Metering)
Water

Instrumentation
Orifice Meter (API 14.3/AGA3)
Turbine/ Freq. Meter (AGA7)
Wedge

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Technical Data- E-Plus TS	
POWER	
VOLTAGE RANGE	10-28 VDC
POWER CONSUMPTION	0.3 WATT
OPERATING CONDITIONS	
UNITS	US
TEMPERATURE	- 40 TO 185 °F
HUMIDITY	100%
HOUSING	NEMA 4X CLASS 1 DIV. 1
DISPLAY	-20 TO 70 °C WIDE ANGLE
FEATURES	
DISPLAY	PLASMA 8 LINES 16 CHARACTER AND GRAPHICS 64x128 PIXELS
PROCESSOR	32-BIT MOTOROLA 68332 @ 16.7 MHz
FLASH ROM	4 MB @ 70 NANO SECONDS
RAM	2 MB @ 70 NANO SECONDS
FREQUENCY INPUT	TWO (2) CHANNELS
	SQUARE WAVE 0-6 kHz, SIGNAL > 3V
	SINE WAVE 0-1200 Hz, SIGNAL > 70mVp-p
	MINIMUM 10 uA @ 1 KOhm RESISTANCE
MULTIVARIABLE	BUILT-IN ROSEMOUNT MULTIVARIABLE TRANSMITTER WITH DIRECT SPI DIGITAL CONNECTION. MAXIMUM UPDATE SPEED ONCE EVERY 109 MILLISECONDS.
	TEMPERATURE RANGE: - 200 thru 1200 F
	PRESSURE RANGE: 0 thru 3626 PSIG
	DP RANGE: 0 thru 250 inches OR
	0 thru 1000 inches
ANALOG I/O	ONE (1) 16-BIT OPTICALLY ISOLATED OUTPUT
	THREE (3) 24-BIT ANALOG INPUTS
	BUILT-IN ENCLOSURE TEMPERATURE AND BATTERY VOLTAGE READINGS
DIGITAL I/O	ONE (1) DIGITAL OUTPUT
	(Max 200mA Sourcing, 300mA Sinking with 8.2 Ohm low load protection,
	8-28 VDC)
SERIAL COMMUNICATION	ONE (1) SERIAL PORT RS-485/RS-232 SELECTABLE
	ONE (1) OPTIONAL RS-232 SERIAL PORT
COMMUNICATION PROTOCOL	MODBUS