Control Wave™

Bristol® ControlWave® EFM
Automation. Measurement. Synergy.

Now available with 8-slot chassis and Ethernet

Features

Operators wishing to automate remote installations such as natural gas wells or custody-transfer metering stations are often frustrated when flow computers cannot meet the needs. That's because making the jump to an RTU complicates all the design details that flow computers have made easy.

Emerson Process Management has taken care of that problem. In our Bristol® ControlWave® EFM, we have combined a powerful RTU in a package that provides all the integration benefits offered by flow computers.

Like a flow computer, all the major design, integration, packaging, sizing and hazardous area certification details have been worked out:

• Smart transducers for DP, pressure and temperature have been selected and integrated.

• Solar power system engineering and sizing are done.

• Package design, layout and assembly are complete.

• Class I, Division 2 approval has been obtained at the instrument level to eliminate underwriting hassles.

• An application program for 1 – 4 run measurement is built-in.

• Open communication and a broad selection of radios allow ControlWave EFM to readily drop in to your network.

Unlike a flow computer, ControlWave EFM exceeds most RTU capabilities:

• Widely varying site needs are met by flexibility in comm. and I/O. Up to ten ports or 96 I/O points interface with analyzers, chromatographs, computers, smart transmitters, ultrasonic meters, multiple SCADA networks and an array of field devices.

The heart of Bristol® ControlWave® EFM is a ControlWave Micro RTU that is optimized for low power consumption. Up to six open slots provide a great deal of flexibility for comm. and I/O.

The ControlWave EFM integrated package is perfect for well site automation and custody transfer installations.

• For users wishing to write their own programs, or modify ours, we offer a complete, IEC 61131-3 programming environment and full support from Emerson is available, every step of the way.

• Ample processing horsepower means that users need not worry about running out of resources for demanding applications.

Synergy. Imagine combining all of the functionality of a flow computer AND RTU, and you will begin to see the value that ControlWave EFM offers. ControlWave EFM delivers superior life-cycle economics to measurement and SCADA systems to which Emerson Process Management is committed, today and tomorrow.

EMERSON™
Process Management

ControlWave EFM at a Glance

Base Configuration:

- Integral ControlWave Micro, RTU with the following cards:

  - ARM9 CPU card including 1 RS 485 and 2 RS 232 serial ports

  - "System controller" card that accepts 4.9 Vdc to 16.0 Vdc input power and includes interfaces for a smart DP/P transducer assembly, three-wire RTD and display/keypad

  - Two open card slots (4-slot chassis)

  - Six open card slots (8-slot chassis)

- Pre-loaded application program for a 4-meter run M&R station

- Weatherproof fiberglass housing, 14 ½" H x 12" W x 8 ½" D

Selection Options:

- 150 MHz Ethernet CPU or low power, 33 MHz CPU

- 4-slot or 8-slot ControlWave Micro chassis

- Cards available for each open card slot are:

  - Comm Expansion card

  - Analog I/O card, 6 AI and 2 AO points

  - Digital I/O card, 12 DI and 4 DO points

  - Mixed I/O card, 6 DI/DO (selectable per point), 2 High-speed counter input, 4 AI and optional 1 AO points

- High-speed counter card, 4 points

- OEM modem and radio selections for the Comm Expansion card include a dial-up modem or spread-spectrum radio.

- Display/Keypad Options: Either a 2-line LCD with 2 pushbuttons or a 4-line LCD with 25-key keypad

- Hazardous area approval – either Class I Division 2 at the component level or for the Integral Package as a whole

- Internal, 12V, 33 AH lead acid cell battery with 30W or 40W solar panel and charger module - not available with the 8-slot chassis

- Emerson's Bristol MVT smart transducer assembly, which provides measurement of differential pressure and static pressure – available in the following ranges: 150" / 500 psi; 150" / 1000 psi; 150" / 2000 psi; 300" / 1000 psi; 300" / 2000 psi; 300" / 4000 psi; 25 psid / 2000 psi; and 25 psid / 4000 psi

- Bendable RTD assembly, pre-wired, available with cable length of 6 feet, 15 feet or 25 feet

- Thermowell, available in insertion lengths of 2 ½", 4 ½" and 7 ½"

- 12 Vdc-to-24 Vdc loop power supply (installed on snap track)

- Discrete output relay board (installed on snap track)

- Power distribution board (installed on snap track)-- provides a way to organize wiring and is required if any of the following are also ordered: 21 Vdc loop supply module, Discrete output relay module, standard model radio

- Standard model Freewave or MDS radio, installed on an internal plate and connected to an RS 232 port on the ControlWave Micro

- Polyphaser surge suppressor for radio

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