

FloBoss™ S600 Flow Manager

The FloBoss S600 Flow Manager is a panel-mount flow computer designed specifically for hydrocarbon liquid and gas measurement where versatility and accuracy matter. The standard features of the unit make it ideal for fiscal measurement, custody transfer, batch loading and meter proving applications. The unit allows multi-stream, multi-station applications to be configured, enabling you to simultaneously meter liquids and gasses.

The FloBoss S600 Flow Manager is designed for use either as a stand-alone flow computer or as a system component. The intelligent I/O boards fit both gas and liquid applications and support two streams and a header. Adding I/O boards (maximum 3) allows you to configure up to six streams and two headers. Orifice, ultrasonic, turbine, positive displacement, Coriolis, annubar & V-Cone flow meter types are all supported.

The FloBoss S600 uses distributed processing to achieve maximum performance. The main CPU incorporates a hardware floating point processor. Each additional card also has local processing to convert inputs and output from engineering units to field values and vice-versa, as well as running background tests and PID loops.



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All metering calculations are performed using 64 bit (double) precision floating point numbers for the highest accuracy. Cumulative totals are stored in three separate memory locations (Tri-reg format) for maximum integrity. The user language Logicalc™ also allows double precision mathematical functions to be performed on the database objects.

The analog performance of the FloBoss S600 is of the highest order, allowing longer intervals between calibration checks.

The FloBoss S600 Flow Manager offers multiple communication interfaces:

- One LAN port for Ethernet 10 baseT connectivity (using FTP and TCP/IP protocols). An optional second Ethernet port can be added if required.
- HART communication is facilitated by way of a 12 channel I/O board, point to point and multi-drop architectures are supported (up to 50 Transmitters).
- An embedded web-server allows remote access to the flow computer. Security is provided by way of user name and password protection with a detailed event log for audit purposes. Supports Windows® Internet Explorer® version 5 or greater.
- Two EIA-232 (RS-232) serial ports for connection to a printer or RTU.
- Three EIA-422/485 (RS-422/RS485) serial ports (up to 57600 bps baud) for connection to a Modbus SCADA data network or DCS Supervisory System.
- One dedicated configuration port for connection to the Config 600 Software.

Configuration can be set through the keypad interface, the Config 600 Lite software interface, or the Config 600 Professional software interface. The Config 600 Lite and Config 600 Professional interfaces allow both download of new or modified configurations and upload of existing configuration from the FloBoss S600. The keypad interface consists of a backlit LCD display, 29-button keypad, and an alarm status LED.

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Specifications

I/O CAPABILITY

Analog Inputs: 0 to 5.2 V dc or 0 to 22 mA, >16 bits.

Analog Outputs: 0 to 21 mA, 12 bit minimum.

4-Wire RTD: PT100 (-100 to 200°C).

Digital Input: 30 V max optically isolated.

Digital Output: Open Collector, 36 V max, 100 mA.

Dual Pulse Inputs: DC to 10 KHz, IP252/76, ISO 6551:1996, and API Chapter 5.5 Level A, B or E.

Pulse Outputs: Open Collector, dc to 100 Hz.

Prover Pulse Bus: Open Collector, dc to 5 KHz.

Sphere Switches: Supports 1, 2, or 4 switch mode.

Frequency Input: DC to 10 KHz, 3 V pk-pk.

CPU CAPABILITY

50 MHz i80486DX2. 16 MB DRAM.

1 MB SRAM (Battery Backed). 4 MB Flash.

Form 'C' Watchdog relay. Real-Time Operating System Windriver VxWorks.

CALCULATIONS

Gas: ISO 5167, ISO 6976, NX 19, SGERG, GPA 2172 & 2145, PTZ, GOST 8.563.1 & 2 (97), AGA 3, AGA 5, AGA 7, AGA 8.

Liquid: API 2540, API 11-2-1, API 11-2-2.

Prover: Compact, Uni-direction, Bi-direction, Master Meter, Dual Chronometry. Up to 4 sphere switch.

POWER REQUIREMENTS

Supply Voltage: 20-32 V dc, 24 W (nominal).

Protection: 2.5 A Anti-surge fuse.

Supply Isolation: Galvanically isolated from unit to earth ground, 50 V.

Transducer Outputs: 24 V dc, 500 mA; 15 V dc, 100 mA.

ENVIRONMENTAL

Operating Temperature: 0 to 60°C.

Storage Temperature: -40 to 70°C.

Operating Humidity: To 90% non-condensing.

WEIGHT

4.3 kg.

DIMENSIONS

Case Depth: 304 mm. Allow 300 mm clearance for board extraction and connectors.

Front Panel: 85 mm W x 270 mm H.

APPROVALS AND COMPLIANCES

Available with European CE Mark.

OIML R117 compliant.

EN12405 For EFM devices compliant.

Approved by NMI (Netherlands Measurement Institute, CMI (Czech Metrology Institute), and OMH (Hungarian National Office of Measure).

OMNL (Algeria).

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The FloBoss S600 Flow Manager provides the following functions through the Config 600 configuration tool:

- Stream and station totalization.
- Batch totalization and correction.
- 3-term PID control.
- Flow balancing.
- Flow scheduling.
- Automatic proving sequence.
- K factor linearization.
- Valve monitor/control.
- Sampler control.
- Station densitometer.
- Station gas chromatograph.
- Forward, reverse and error totals.
- Comprehensive maintenance mode.

Refer to Specification Sheet 4:C600.

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Emerson Process Management

Flow Computer Division

Marshalltown, IA 50158 U.S.A.

Houston, TX 77065 U.S.A.

Pickering, North Yorkshire UK Y018 7JA

