



### OMNI FLOW COMPUTER

For more than 25 years, OMNI flow computer has been considered to be the best flow computer available for performance, reliability, support, and lifecycle.

### PERFORMANCE

OMNI flow computers are designed to meet the measurement needs of the oil and gas industry. When AC or DC power is applied to the OMNI, it is available and ready for measurement in less than one second. The OMNI is not hindered by inefficient, slow loading, memory-hungry operating systems, intended for the PC, mobile phone, tablets, or other devices. The OMNI's highly efficient firmware integrates with bulletproof hardware and is designed solely for measurement of custody transfer applications. The OMNI exceeds all requirements for data processing, accuracy, and calculation cycle time for all recognized standards bodies, including API, ISO, OIML, and AGA. Coupled with the largest flow computer specialist support team and unique on-line support tools and documentation, the OMNI continues to be the first choice of industry experts.

### RELIABILITY

The OMNI has mean time between failures (MTBF) of greater than 8,000 days. This is not a theoretical calculation or an arbitrary

statement, but actual field performance data. We have documented cases of exposure to lightning strikes, hurricanes, water immersion, and even a car crash.

OMNI serial numbers 001, 002, 003, and 004, produced in 1991, are still in daily operation. Although they are somewhat different to today's OMNI in certain areas of functionality, they can be upgraded to current factory specifications at any time. We believe we are the only flow computer manufacturer who can make this claim.

### SECURITY

There are always at least two parties to a measurement transaction, which might include: buyer, seller, field owners, or government regulator. It does not matter what task your flow computer is performing – custody transfer, allocation, royalty, pipeline, ship loading, utilities, or LACT – compliance to the contractually agreed measurement standards is the responsibility of the system operator. Even the slightest discrepancy over time can cost hundreds of man-hours, or at a minimum, hundreds of thousands of dollars.

When flow computers have an “open” or “programmable” architecture it opens the door for the manufacturer's calculations to be compromised, edited, or modified in a variety of ways. The traceability to any approvals a device may have previously obtained can be overwritten, manipulated, or

**OMNI FLOW COMPUTERS, INC.**

[www.omniflow.com](http://www.omniflow.com)

Page 1 of 13

simply avoided during application programming by the manufacturer or integrator. Even the simple audit of firmware revision and checksum for compliance could require the complete verification of all the flow computer calculations and functions. Only OMNI gives you the assurance that what is implemented at the factory is what is being used in the field for your measurement and applications. Buyer, seller, auditor, and regulator alike need to have the same assurance and peace of mind.

### **CONTINUITY**

Without changing its familiar construction and easy-to-use menu navigation, every part of the OMNI undergoes continuous development. OMNI manages all parts of its product design, development, manufacturing, and distribution 100% under one roof. This guarantees that all advances in technology are incorporated by specialists and are backward compatible. You do not have to buy a new computer every few years with the hidden engineering costs, training and adoption time associated with buying an all new device nor with the costs associated with obsolescence to your control system. With an OMNI you simply upgrade internal hardware and firmware.

OMNI does not use a third-party PC operating system such as Windows<sup>®</sup> or Linux. These operating systems were intended for short lifetime consumer markets such as PCs, mobile phones, and other devices, and are not designed with a supported lifecycle of 15 or 20 years. OMNI users are not at the mercy of third-party suppliers of "freeware" who may decide to stop supporting key system utilities and obsolete your flow computer overnight, long before its end of lifecycle.

### **TRACEABILITY**

OMNI recognizes that most flow computer manufacturers, integrators, and even users are not qualified and experienced embedded

software developers and programmers. For this reason, OMNI does the programming, testing, and verification. Three quick steps determine what standards and tasks the flow computer is performing. Simple configuration, never programming, is all that is required to install, operate, and maintain an OMNI. We take responsibility for our software implementation. We do not delegate this to others, least of all our users. This is the real significance of ISO9001:2008 quality assurance.

### **AFFORDABILITY**

The OMNI represents reliability, stability, and security. Without constant design changes or frequent software updates, you don't lose time, money and measurement as a result of manufacturer or integrator inexperience or product changes.

### **APPLICATIONS**

- Crude oil
- Refined products
- LPGs
- Anhydrous ammonia
- Ethylene
- Chemical
- Natural gas
- NGLs
- Specialty gases
- Water and steam product selection

### **COMMUNICATIONS**

In today's modern and changing IT environment, flexibility in communications is an essential consideration for your choice of flow computer. Not only communication with higher level systems such as supervisory, DCS, pipeline integrity and accounting systems, but with lower level devices such as secondary instrumentation on the pipeline or the system PLC.

- Ethernet – 8 sockets/port
- RS232/485 - Configurable

**OMNI FLOW COMPUTERS, INC.**

[www.omniflow.com](http://www.omniflow.com)

Page 2 of 13



## Data Sheet

# OMNI<sup>®</sup> 3000E & 6000E Flow Computer

- TCP/IP Encapsulated Modbus, Modbus/TCP,
- Modbus; ASCII, RTU + Modem compatibility, Master and Slave
- Peer-to-Peer
- HART<sup>®</sup>
- Honeywell DE
- Allen-Bradley DF1; Full and half Duplex
- Direct plug and play compatibility to Ultrasonic and Coriolis flowmeters + Gas Chromatographs

The industry generally prefers Ethernet communications wherever possible, but the communication protocols also need to integrate with legacy equipment using serial communications at the same time. OMNI offers a mix-and-match ability to meet even the most demanding system user's needs. A total of six (6) communications ports can be set up in the OMNI – Up to six (6) RS232/485 and up to two (2) Ethernet ports in combination - up to six total.

OMNI Ethernet modules offer up to eight (8) sockets per port for concurrent connections with security enabled – Password, MAC Address, IP Address or IP Range.

Network printing is a standard feature that includes multiple printer IP address identification with the additional feature of report assignment to each printer.

Communication to smart devices installed on the pipeline is simply achieved by selection of the appropriate OMNI hardware module. Within the OMNI firmware, the protocols and register maps will automatically implement based on the device type you select. Connection to HART or Honeywell DE enabled transmitters and multivariable (MV or MVS) units requires specific modules as identified in the Mode Selection Guide of this Specification (Connections for Smart Transmitters, Flow Meters and Multivariable Devices).

## Data Sheet

# OMNI<sup>®</sup> 3000E & 6000E Flow Computer

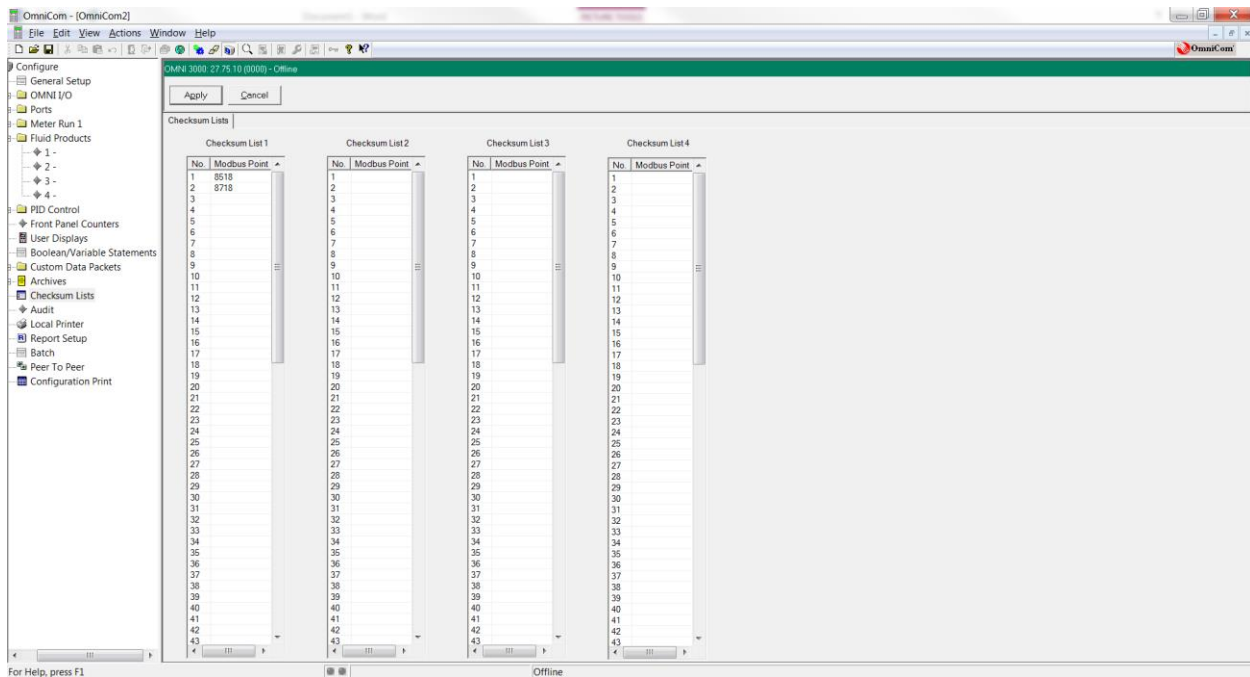
## SOFTWARE

OMNICOM is the companion PC Windows-based software that enhances the use of OMNI 3000 and OMNI 6000 flow computers. It simplifies the configuration of an OMNI either online or offline, allows the user to perform operations such as quality monitoring in gas systems, batching, and proving in liquid systems.

This single Windows program can perform any task on an OMNI. There are no high level programs that permit back door changes to the core flow computer software/firmware in contravention to the requirements of WELMEC software controls for measuring instruments.

OMNICOM features:

- Online and offline configuration
- Administration of User Login and Passwords
- Local and Remote access
- Multiple site access
- Extensive F1 help
- Built in safety limits
- Extensive Communications logging and debugging
- Customizable reports
- Windows 7, (8 and 10 pending) supported



OMNI FLOW COMPUTERS, INC.

[www.omniflow.com](http://www.omniflow.com)

Page 4 of 13





### OMNI 3000E AND 6000E FEATURES

Often referred to as simply “The OMNI” and installed in over 90 countries worldwide, the OMNI 3000E & 6000E flow computers continue to be selected for their industry leading standards in design, performance, and value.

With its fast one second power-up recovery, field proven reliability, longevity, and usability, OMNI has the lowest cost of ownership in the business. The result of continuous end user requirement development, the OMNI track record stands alone protecting the interest of both buyer and seller in custody transfer measurements.

Some of the features that come with the OMNI 3000E and 6000E include:

- Five-year limited warranty
- Stream, batch, & station totalization
- Multiple products with individual product totalizers
- Multiple batch consolidation
- Batch recalculation
- Batch stack – product scheduling
- Automatic prove sequence control
- All meter types: DP, PD, turbine, Coriolis, ultrasonic
- K-factor and meter-factor linearization
- Level A pulse fidelity
- Viscosity linearization
- All prover types
- Multiple I/O types, 4-20mA, 1-5V, HART, Honeywell DE, Rosemount MV, Coriolis
- Meter run and station densitometer
- Redundant gas chromatograph interface
- Run switching
- Premium billing
- Maintenance mode
- Multiple Modbus/TCP and Modbus over Ethernet (multiple socket), as well as conventional RS232/485 connections
- AC or DC powered
- Configure from keypad or PC
- Multiple metrological approvals
- Broad ambient temperature range
- Calculations performed to 64-bit double precision accuracy
- PID control loop with primary and secondary control parameters
- Virtual inputs for system simulation and testing
- Unique on-board help
- Simple firmware upgrades
- Remote “*Audit by Exception*”
- Multiple Users with Name/Password



## Data Sheet

# OMNI<sup>®</sup> 3000E & 6000E Flow Computer

### 3000E AND 6000E FIRMWARE ENHANCEMENT

Based on customer feedback, significant enhancements have been added in the following areas:

- Audit/Traceability
- Access security
- Doubling of many key features such as Boolean and Variable statements
- Alarm and Audit logs.
- Products increased from 16 to 32.
- The unique transparency of an OMNI configuration is also further improved to be best in class.

### Security Enhancements

Security enhancements have been introduced, which can be optionally implemented to control access to the OMNI by both personnel and external data systems (SCADA, PLC, etc.)

User Accounts can be administered and access permissions controlled for multiple named personnel. This includes the ability to upload or download OMNICOM files and change meter factors.

In addition to the customary multiple level front panel security, it is now possible to assign each device connected to a communications port with its own user name (PLC, SCADA, etc.) and password.

### Auditing and Alarms

Full auditing of all configuration changes irrespective of the origin – including from communication links, front panel, programming statement results, or OMNICOM – are captured with date/time stamp, the origin, and totals at the time of change.

The audit log and alarm log have each been expanded to 1,000 events. The audit log meets the requirements set out in API MPMS Chapters 21.1 and 21.2.

Both Boolean and Variable programming statements have been increased from 64 to 128 each. Additionally, a new feature has been added to the audit trail so that any changes to the configuration initiated by a programming statement are also captured

**OMNICOM** has also been enhanced to enable many of the changes indicated above and several new time-saving features, including an all-new Modbus register browser that can directly paste selected registers into lists and statements – a manual is no longer needed!

Register	Hex Value	Data Type	Level A	Level B	Level C	Description
7104	1B0D	Float	R	R	R	Meter 1 Energy Flowrate
7204	1C24	Float	R	R	R	Meter 2 Energy Flowrate
7404	1CEC	Float	R	R	R	Meter 4 Energy Flowrate
7643	1D0B	Float	R	R	R	Meter 1 Energy or NSV Increment per 500mS
7653	1DE5	Float	R	R	R	Meter 2 Energy or NSV Increment per 500mS
7663	1DEF	Float	R	R	R	Meter 3 Energy or NSV Increment per 500mS
7673	1DF9	Float	R	R	R	Meter 4 Energy or NSV Increment per 500mS
7683	1E03	Float	R	R	R	Station Energy or NSV Increment per 500mS
7694	1E7C	Float	R	R	R	Station Energy Flowrate
8552	2163	Float	R	R	R	Meter 1 Previous Daily Energy in Float Format
8559	218D	Float	R	R	R	Meter 1 Previous Batch Energy/NSV in Float Format
8652	21CC	Float	R	R	R	Meter 2 Previous Daily Energy in Float Format
8659	21F1	Float	R	R	R	Meter 2 Previous Batch Energy/NSV in Float Format
8752	2230	Float	R	R	R	Meter 3 Previous Daily Energy in Float Format
8759	2255	Float	R	R	R	Meter 3 Previous Batch Energy/NSV in Float Format
8852	2294	Float	R	R	R	Meter 4 Previous Daily Energy in Float Format
8859	2259	Float	R	R	R	Meter 4 Previous Batch Energy/NSV in Float Format
8952	22F8	Float	R	R	R	Station Previous Daily Energy Total in Float Format
8959	231D	Float	R	R	R	Station Previous Batch Energy/NSV in Float Format
19508	484C	Float	R	R	R	Meter 1 Highest Energy Flowrate of the Current Day
19518	4856	Float	R	R	R	Meter 1 Highest Energy Flowrate of the Previous Day
19578	4892	Float	R	R	R	Meter 1 Energy Flowrate in Maintenance Mode
19608	4890	Float	R	R	R	Meter 2 Highest Energy Flowrate of the Current Day
19618	488A	Float	R	R	R	Meter 2 Highest Energy Flowrate of the Previous Day
19678	48F6	Float	R	R	R	Meter 2 Energy Flowrate in Maintenance Mode
19708	4914	Float	R	R	R	Meter 3 Highest Energy Flowrate of the Current Day
19718	491E	Float	R	R	R	Meter 3 Highest Energy Flowrate of the Previous Day
19778	495A	Float	R	R	R	Meter 3 Energy Flowrate in Maintenance Mode
19808	4978	Float	R	R	R	Meter 4 Highest Energy Flowrate of the Current Day

The results of Boolean and Variable statements can now be viewed live, in real-time.

For further information on the OMNI 3000E and 6000E please contact OMNI Sales.

OMNI FLOW COMPUTERS, INC.

[www.omniflow.com](http://www.omniflow.com)

Page 6 of 13



**SUMMARY**

OMNI pioneered flow computing based on maintaining a fixed calculation cycle time rather than task loading. Today's OMNI flow computer still maintains a measurement calculation cycle time of 500mS that exceeds any industry requirements. Calculations are carried out in double-precision (64-bit), floating point format for greatest accuracy. Totalization integrity is assured through the well-established industry practice of triplicated (Tri-reg) storage and checking routines.

The modular design lets you buy the hardware you need for any given application. A Model Design document is available for further information. When you need to add an additional meter run, simply add any other I/O modules you need.

"Future-Proof" is a term used freely by our competitors, yet subject to considerable doubt in practice. OMNI has demonstrated "future-proof" since 1991. Even OMNI flow computers in long-term service are backward compatible through upgrade paths to today's specifications, approvals and customer requirements.

## Flow Computer Specifications

### Dimensions

**Panel Cut-out:** 8.25 x 4.75 in (210 x 121 mm)

**Behind Panel:** OMNI 3000: 8.75 in (222 mm). OMNI 6000: 15.5 in (394 mm)

**Front Panel Bezel:** 9 x 5 in (229 x 127 mm)

**Weight:** OMNI 3000: 9 lbs (4.08 kg),  
OMNI 6000: 16 lbs (7.26 kg)

### Environmental

**Operating Temperature:** +14°F to +140°F (-10°C to +60° C)

**Storage Temperature:** -4° to +158° F (-20° to +70° C)

**Relative Humidity:** 90% non-condensing maximum

**Safety Classification:** For use in a classified safe electrical area.

**EMC:** Compliant with European Union Electro-Magnetic Coupling regulations:

**Emissions:** EN55022-B

**Immunity:** EN61000-4, IEC-EN 61000-6-2

### Electrical

**Supply Voltage:** 90 to 264 VAC, (47 to 440 Hz) or 22 to 26 VDC.

**Power:** 10 to 20 Watts (excluding transducer loops) 10 to 35 Watts (including transducer loops).

Maximum DC Offset from +DC or -DC to Earth ground =120 VDC.

Transducer Output Power: 24 VDC at ~400 mA for most configurations (when AC powered)

**Isolation:** All analog inputs and outputs are optically isolated from computer logic supply. Maximum common mode voltage on any input or output is  $\pm 250$  VDC to chassis ground.

**Transient/Over-voltage Protection:** Current limiting, Transorbs and self-resetting fuses.

### OPERATOR DISPLAY KEYPAD

**Keypad Characteristics:** 34-key, domed membrane, with tactile and audio feedback

**Data Entry Lockout:** Internal switch and software passwords

**Display:** Alphanumeric, 4 lines of 20 characters with backlight, viewing angle, contrast and backlight adjustment.

**Viewable Temperature:** +32°F to +122°F (0°C to 50°C)

### Operating Mode Indicator LEDs

Quantity: Four

Dual Color: Red/Green

Functions: Active Alarm, Diagnostic Mode, Program Mode, Alpha Shift Mode.

### Electromechanical Counters

**Quantity:** Three, with programmable function

**Display:** 6-digit, non-resettable

**Maximum Rate:** 10 counts per second

### Security

**Software:** Multi-level password control

**Hardware:** Optional lock/seal on housing plus an internal keyboard program lockout switch.



## Data Sheet

# OMNI<sup>®</sup> 3000E & 6000E Flow Computer

### CPU, CALCULATIONS AND APPROVALS

**Type:** 32-bit, 150 MHz Maximum

**Flash:** 4 MB

**Fast RAM:** 4 MB

**RAM:** 2 MB Battery Backed – 1.5 MB minimum available for archive data

**Real Time Clock:** Battery backed-up, time of day; programmable interval down to 10 mS. Maintains time during power loss. Reports downtime on power-up.

**RAM Battery Backup:** 3.6 VDC NiMH

**Typical Memory Backup Period:** 60 – 120 days (*with power removed*).

**Typical battery life:** 5-7 years.

**Clock Accuracy:** Powered 0.05 seconds per day.

### Calculations

**Gas (Partial):** AGA3 (US and Metric), AGA5, AGA7, AGA8 (all years), AGA10, AGA11, modified-AGA-NX19, GPA 2172, ISO 5167 (All years), ISO 6976, ISO12213-3, S-GERG, NIST14, Steam NIST & ASME, Redlich-Kwong.

**Specialty Gases:** NIST 1048: Argon, Nitrogen, Oxygen, Hydrogen, Ethylene & Ethylene IUPAC

**Specialist Meters:** Cone Meters, Equimeter/Invensys Auto-Adjust Turbine (AAT).

### Liquid (Partial):

#### Crude Oil & Refined Products:

**ASTM D1250**(1952) Tables 5/6, 23/24,53/54,59/60; API MPMS Ch.11.1 (1980) & (2004-2007), API MPMS Ch. 11.2.1 (1983),11.2.2, 11.2.1M, 11.2.2 M, .

**LPGs, NGLs incl: Ethane's, Propane's, E/P Mixes:** GPA TP15, GPA TP27, API MPMS Ch 11.1 (2004-2007) table 23/24E & 53/54E

**Butadiene:** ASTM D1550.

**Aromatics:** ASTM D1555: Benzene, Cumene, Cyclohexane, Ethylbenzene, m-Xylene, o-Xylene, p-Xylene, Satyrene, Toluene, Aromatic hydrocarbon; 300-350 & 350-400F.

**Olefins:** Propylene API MPMS Ch.11.3.3.2, Ethylene IUPAC, Ethylene NIST1045, Ethylene API MPMS Ch.11.3.2

**Misc:** CO2PAC, WATER, Anhydrous Ammonia.

**Prover Types:** Unidirectional, Bi-directional Pipe, SVP/Compact (Daniel (Brooks), Honeywell (Calibron), FlowMD), Master Meter, Double Chronometry.

### Approvals and Compliances

UL, CSA,

Available with European CE Mark. MID, European Directive 2004/22/EC, OIML R117-1, OIML D031, EN12405 Part 1; WELMEC 7.2 & 8.8.

### Additional approvals for:

NMi (Netherlands Measurement Institute), Measurement Canada, INMETRO (Brazil), GOST (Russia), PAC (China), Indian W&M, LNE (France).

## Data Sheet

# OMNI<sup>®</sup> 3000E & 6000E Flow Computer

### INPUT SPECIFICATIONS

#### Analog Inputs

**Input Type:** 1-5 V or 4 - 20 mA

**Scan rate:** All channels read every 500ms

**Input Impedance:** 1 Meg Ohm when 1-5V, (250 Ohms when 4-20 mA. selected by installing shunt resistor)

**Resolution:** 14 Bits

**Accuracy:**  $\pm 0.025\%$  of reading  $\pm 2$  counts  
41°F to 122°F (+5°C to +50°C)

**Common Mode Voltage:**  $\pm 250$  VDC to chassis ground

#### Flowmeter Pulse Inputs

**Input Frequency:** DC to 15 kHz. Square Wave, DC to 12 kHz Sine Wave

**Type:** Dual Pulse or Single Pulse optically isolated.

**Signal Level:** Positive Going Trigger Threshold: +4.2 Volts  $\pm 0.2$  volts (Nominal @ 1kHz)

Negative Going Trigger Threshold: +3.2 Volts  $\pm 0.2$  volts (Nominal @ 1kHz)

**Input impedance:** 1 M Ohm (Nominal @ 1kHz)

**Common Mode Voltage:**  $\pm 250$  VDC to chassis ground

**Fidelity Checking:** API MPMS OL55 Level A.

#### Densitometer Pulse Inputs

**Densitometers:** Micro Motion (Solartron), Chandler (UGC), ThermoFisher (Sarasota).

**Positive Trigger Threshold:** +1.6 Volts  $\pm 0.2$  volts

**Negative Trigger Threshold:** +1.2 Volts  $\pm 0.2$  volts

### OUTPUT SPECIFICATIONS

#### Analog Outputs

**Resolution:** 12 Binary Bits

**Output:** Current source 4-20 mA (referenced to transducer power return terminal)

**Common Mode:**  $\pm 250$  Volts to chassis ground

**Max./Min. Working Loop Voltage:** 30 VDC to 18 VDC

**Loop Resistance:** 900 Ohm with 24 VDC Power, 1.2 k Ohm with 30 VDC Power

**Update Rate:** Each 500 milliseconds

**Signal Level:** 2 to 5 Volts Peak to Peak

**Frequency:** 250 Hz to 6.7KHz (4000 – 150 micro second period)

**Accuracy:** 10 ppm (Frequency)

#### RTD Inputs

**RTD Configuration:** 4-wire Bridge (strongly recommended for fiscal accuracy)

**RTD Resistance:** 100 Ohm @ 32°F (0°C)

**Excitation Current:** 3.45 mA Nominal ( $\pm 0.02$  mA)

**Maximum Field Wiring Resistance:** 1k Ohm per wire

**Resolution:** 0.008 Ohms

**Range:** -229°F to 293°F (-145°C to +145°C)

**Accuracy:**  $\pm 0.025\%$  of reading  $\pm 2$  counts  
41°F to 122°F (+5°C to +50°C)

**Common Mode Voltage:**  $\pm 250$  VDC to chassis ground

#### Detector Switch Inputs

(Non-Double Chronometry)

**Input Type:** Voltage

**Gating Transition:** Voltage toggle starts/stops prove counts.

**Minimum Time Pulse High:** 1 msec

**Minimum Time Pulse Low:**  $> 2$  seconds

**Input Impedance:** 4.7 k Ohms

**Input On Voltage:**  $> 10$  V On,  $< 4$  VDC+ Off (referenced to DC Power Return)

**Debounce:** 2 sec in Software

**Common Mode Voltage:**  $\pm 250$  VDC to chassis ground

**Accuracy:**  $\pm 0.05\%$  of reading  $\pm 2$  counts  
32°F to 122°F  
(+5°C to +50°C)

OMNI FLOW COMPUTERS, INC.

[www.omniflow.com](http://www.omniflow.com)

Page 10 of 13



## Data Sheet

# OMNI<sup>®</sup> 3000E & 6000E Flow Computer

### CONTROL OUTPUTS/STATUS INPUTS

(12 per module)

**Configuration:** Open emitter Darlington or FET transistor source (Referenced to transducer power return terminal)

(Configured as an Output)

**Current Capacity:** 200 mA max. per point, 500 mA per digital I/O module

**Output Voltage:** +DC – 1v nominal  
(Configured as an Input)

**Input Impedance:** 4.7 k Ohms in series with 2 LEDs

**Input Voltage:** Input voltages > 8 VDC to < DC+ will be recognized as on. Input voltages < +2 VDC will be recognized as off.

**LEDs:** Operating and Fuse open circuit indicators on each channel

**Common Mode:** ±250 Volts to chassis ground

**Scan Rate:** Outputs may be pulsed at 50Hz Maximum

## Data Sheet

# OMNI<sup>®</sup> 3000E & 6000E Flow Computer

### COMMUNICATION SPECIFICATION

#### RS-232 Mode

**Quantity:** Two ports per S module.

Maximum 6 ports in OMNI 6000, maximum 4 ports in OMNI 3000

**Serial Data Output Voltage:** ±7.5 Volts typical

**Recommended Load Impedance:** 1.5 k Ohm

**Short Circuit Current:** 10 mA limited

**Input Low Threshold:**  $V_L = -3.0$  Volts

**Input High Threshold:**  $V_H = +3.0$  Volts

**Baud Rate:** Software Selectable Range: 0.3, 0.6, 1.2, 2.4, 4.8, 9.6, 19.2, 38.4 kbps

**Common Mode Voltage:** ±250 Volts DC to chassis ground

**LEDs:** Indicator LEDs for each channel input, output and handshaking signals

#### RS-485

**Quantity:** Two ports per S module.

Maximum 6 ports in OMNI 6000, maximum 4 ports in OMNI 3000

**Serial Data Output Voltage:** 5 Volts differential driver

**Recommended Load Impedance:** 120 Ohm (located on module)

**Short Circuit Current:** 20 mA Limited

**Input Low Threshold:** 0.8 Volts

**Baud Rate:** Software selectable, Range 1.2, 2.4, 4.8, 9.6, 19.2, 38.4 k bps

**Common Mode Voltage:** ±250 Volts DC to chassis ground

**LEDs:** Indicator LEDs for each channel input, output and handshaking signals

#### Ethernet

**Quantity:** One port per SE module.

Maximum 2 ports in OMNI 6000, maximum 1 port in OMNI 3000

**Connections:** 8 simultaneous (Sockets) per port

**Physical:** 10Base-T

**Speed:** 10Mbits/Sec

**Protocols:** Modbus, Modbus/TCP, LPD, Syslog, Telnet, TCP, UDP

#### HART

**Physical:** FSK

**Networks:** 4 per Module – 16 Max

**Sensors:** 4 per Network – 64 Max per OMNI

## Data Sheet

# OMNI<sup>®</sup> 3000E & 6000E Flow Computer

*OMNI Flow Computers, Inc., pursuant to a policy of product development and improvement, may make any necessary changes to these specifications without notice.*

The OMNI Flow logo, "OMNI", "OMNICOM", "OMNIVIEW" and "Measure the Difference", are registered trademarks of OMNI Flow Computers, Inc., in the United States and other countries. All other trademarks are the property of their respective owners.

### **OMNI Flow Computers, Inc.**

12320 Cardinal Meadow Dr.  
Suite 180  
Sugar Land, Texas, 77478-6218, USA

Sales and Service: +1 281-240-6161

Facsimile: +1 281-240-6162

[sales@omniflow.com](mailto:sales@omniflow.com)

[helpdesk@omniflow.com](mailto:helpdesk@omniflow.com)

### **OMNI FLOW COMPUTERS, INC.**

[www.omniflow.com](http://www.omniflow.com)

Page 13 of 13

