

OMNI 3000/6000 FLOW COMPUTERS

ADVANCED 32-BIT PROCESSOR

MODULAR MULTI-RUN DESIGN

PHOTO-OPTICAL ISOLATION OF EACH
I/O POINT

HART AND SMART TRANSMITTER
INTERFACES

US OR METRIC ENGINEERING UNITS

ONLINE CONFIGURATION SOFTWARE

STORED REPORTS AND DATA
ARCHIVING

CONFIGURABLE DISPLAYS AND
REPORTS

FOUR FLOW AND PRESSURE
CONTROL LOOPS

SOFTWARE CALIBRATION

MULTIPLE RS232C/RS485C SERIAL
PORTS TO 38.4 KBAUD

SERIAL INTERFACES WITH GAS
CHROMATOGRAPHS, MASS AND
ULTRASONIC METERS

MODBUS, ALLEN-BRADLEY, HONEYWELL DE,
HART AND INSTROMET PROTOCOLS

ETHERNET WITH MULTIPLE
CONNECTIONS PER INTERFACE



THE OMNI 3000 AND OMNI 6000 FLOW COMPUTERS ARE RELIABLE, EASY TO USE, AND UNIQUELY VERSATILE FLOW MEASUREMENT INSTRUMENTS. THEY ARE USER-CONFIGURABLE FOR SINGLE OR MULTI-RUN OIL AND GAS APPLICATIONS. TYPICAL PRODUCTS MEASURED INCLUDE: CRUDE OILS, REFINED PRODUCTS, NGLS, LPGS, ETHYLENE, PROPYLENE, NATURAL GAS, AND SPECIALTY GASES, SUCH AS O₂, N₂, H₂, H₂O, AND CO₂.

THE COMPACT, RUGGED DESIGN, EASE OF OPERATION AND MULTI-FUNCTION CAPABILITIES ACHIEVED BY THE OMNI HAVE EVOLVED BASED ON MANY USER-REQUESTED FEATURES. IN TURN, THESE ENHANCEMENTS HAVE REDUCED OR ELIMINATED ADDITIONAL REQUIREMENTS FOR OTHER AUXILIARY EQUIPMENT.

THE OMNI 3000 AND 6000 FLOW COMPUTERS ARE IN SERVICE WITH LEADING OIL AND GAS COMPANIES WORLDWIDE. ALL RELEVANT API, IP, AGA AND ISO MEASUREMENT STANDARDS HAVE BEEN IMPLEMENTED FOR US AND SI CUSTOMARY UNITS OF MEASURE. THE MODULAR EXPANDABLE DESIGN PROVIDES A FLEXIBLE INTERFACE FOR VARIOUS METERING SYSTEMS. THESE UNITS ALSO INTERFACE DIRECTLY WITH MASS AND ULTRASONIC METERS, GAS CHROMATOGRAPHS AND DIGITAL TRANSMITTERS.

FLOW COMPUTER TECHNICAL SPECIFICATIONS

DIMENSIONS

PANEL CUT-OUT

8.25 IN X 4.75 IN (210MM X 121MM)

BEHIND PANEL

8.75 IN*/15.50 IN (222MM*/394MM)

FRONT PANEL BEZEL

9 IN X 5 IN (229MM X 127MM)

WEIGHT

9* LBS/16.0 LBS (4.08*KG/7.26 KG)

ENVIRONMENTAL

OPERATING TEMPERATURE

-10° TO +60°C (+14° TO +140°F)

STORAGE TEMPERATURE

-20° TO +70°C (-4° TO +158°F)

RELATIVE HUMIDITY 90% NON-CONDENSING

LCD DISPLAY

OPERATING TEMPERATURE 0° TO 50°C (32° TO 122°F)

SUPPLY VOLTAGE

100-250 VAC OR 22-26 VDC

10-20 WATTS (EXCLUDING TRANSDUCER LOOPS)

10-35 WATTS (INCLUDING TRANSDUCER LOOPS)

BATTERY BACK-UP

DATA AND TOTALS ARE RETAINED FOR A MINIMUM OF 120 DAYS IN A CONTROLLED ENVIRONMENT. POWER MUST BE APPLIED PERIODICALLY TO RECHARGE BATTERIES IF EQUIPMENT IS NOT INSTALLED IMMEDIATELY.

POWER/FUSE

AC RECEPTICAL IS STANDARD, BUT DC CONNECTIONS ARE AVAILABLE. BOTH POWER CONNECTIONS AND PRIMARY SYSTEM FUSES ARE LOCATED ON BACK PANEL.

TRANSIENT/OVER-VOLTAGE PROTECTION

CROWBAR AND TRANSORBS ON POWER SUPPLY. POWER SUPPLY INCORPORATES SELF-RESETTING FUSES, WHICH DISCONNECT TO PROTECT COMPUTER.

CPU/MEMORY

32-BIT ADVANCED PROCESSOR, 100 MHZ OPERATION, TEMPERATURE COMPENSATED REAL-TIME CLOCK, FIELD PROGRAMMABLE FLASH MEMORY, RAM BATTERY BACKUP, 4 MB FLASH, 2 MB BATTERY RAM AND 4 MB FAST RAM

ETHERNET

8 SIMULTANEOUS CONNECTIONS PER INTERFACE. NETWORK PRINTING. SECURITY FEATURES.

MODULAR I/O

4*/10 PLUG-IN SLOTS FOR ANY CONFIGURATION OF I/O MODULES FOR MEASUREMENT, CONTROL, PID, SEQUENCING, RTU, OR AS A COMMUNICATIONS SUB-MASTER.

I/O WIRING CONNECTIONS

4*/10 12-POSITION SCREW TERMINAL STRIPS ARE VERTICALLY MOUNTED ON THE BACK PANEL.

OPTICAL ISOLATION

EACH INPUT AND OUTPUT IS PHOTO-OPTICALLY ISOLATED, WITH A MAXIMUM COMMON MODE REJECTION ON INPUTS/OUTPUTS OF +/- 250VDC TO CHASSIS GROUND.

ANALOG INPUTS

NUMBER	MAX 4 PER COMBO MODULE
PRECISION	14 BINARY BITS
ACCURACY	±0.025% OF READING ± 2 COUNTS (23°C ± 5°C)**
TYPE	4-20MA OR 1-5VOLTS DIFFERENTIAL INPUTS OR 100 OHMS 4-WIRE RTD (ON 2 CHANNELS ONLY).

SMART DIGITAL TRANSMITTERS

HONEYWELL ST3000 & SMV FAMILY
ROSEMOUNT 3095FB

HART TRANSMITTERS

SINGLE AND MULTI-VARIABLE, POINT-TO-POINT AND MULTI-DROP. UP TO 64 PROCESS VARIABLE

PULSE INPUTS

NUMBER	MAX. 2 PER COMBO MODULE
INPUT FREQUENCY	DC TO 16 KHZ
CONFIGURATION	DIFFERENTIAL INPUT

PIPE PROVER DETECTOR SWITCH INPUT

APPLICATION OF 12-24VDC (RISING OR FALLING EDGE).

PULSE INTERPOLATION DETECTOR INPUTS

CONTACT CLOSURE OR OPEN COLLECTOR TRANSISTOR.

STATUS INPUTS/CONTROL ALARM OUTPUTS

SELECTABLE IN ANY CONFIGURATION OF INPUTS OR OUTPUTS 1*/2 12-CH DIGITAL I/O MODULES.

ANALOG OUTPUTS

MAX. 8*/18 DEPENDING ON NUMBER AND TYPE OF COMBO MODULES (2*/6).

MULTI-BUS RS-232-C/485-C SERIAL I/O

NUMBER	2 PER SERIAL I/O MODULE
BAUD RATE	SOFTWARE SELECTABLE 1.2-38.4KBAUD

*INDICATES SPECIFICATION FOR OMNI 3000

SPECIFICATIONS ARE SUBJECT TO CHANGE BY MANUFACTURER WITHOUT NOTICE DUE TO MODIFICATIONS OR IMPROVEMENTS

**SEE MANUAL FOR FULL TEMPERATURE SPECS

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