Hardware Matrix
I/O Measurement Selections

One (1) input option may be selected per input connection.

TYPE	INPUT #1	INPUT #2	INPUT #3	INPUT #4	OUTPUT #1	OUTPUT #2
A P/N 6006 P/N 6206	4-20 mA 1-5 Volts RTD 4 wire	4-20 mA 1-5 Volts RTD 4 wire	4-20 mA 1-5 Volts Pulse	4-20 mA 1-5 Volts Pulse	4-20 mA	4-20 mA
B P/N 6006 P/N 6206	4-20 mA 1-5 Volts RTD 4 wire	4-20 mA 1-5 Volts RTD 4 wire	4-20 mA 1-5 Volts Pulse	Freq Density	4-20 mA	———
E P/N 6008 P/N 6208	4-20 mA 1-5 Volts RTD 4 wire	4-20 mA 1-5 Volts RTD 4 wire	Pulse Pulse Fidelity Double Chromometry	Pulse Pulse Fidelity Double Chromometry	4-20 mA	4-20 mA
E/D P/N 6008 P/N 6208	4-20 mA 1-5 Volts RTD 4 wire	4-20 mA 1-5 Volts RTD 4 wire	Freq Density	Freq Density	4-20 mA	4-20 mA
H or HV P/N 6004	Honeywell Digital Transmitter	Honeywell Digital Transmitter	Honeywell Digital Transmitter	Honeywell Digital Transmitter	4-20 mA	4-20 mA
SV P/N 6203	Rosemount 3095FB (2) Instromet Ultrasonics (2) Daniel Ultrasonics (2) FMC Ultrasonic (2) (Applies to 21/25 & 23/27)	———	———		6 x (4-20 mA)	
HT or HM P/N 6207-HT P/N 6207-HM	4 Hart Networks Per Module HT - Point to Point, Up to 4 HART Devices per Module HM - Multi-Drop or Multi-Variable, Up to 16 HART Devices per Module				4-20 mA	4-20 mA
S or SE Serial P/N 6205 Serial/Ethernet P/N 6209	P/N 6205 (Serial) I/O #1 RS-232/485 (Selectable) I/O #2 RS-232/485 (Selectable)			P/N 6209 (Serial Ethernet) I/O #1 Tristate RS-232/485(selectable) I/O #2 10BaseT Ethernet EIA568 Pigtail with RS-485 Repeater Port		
Digital D P/N 6211	12 Selectable I/O Channels					
PSU Universal Power Source P/N 6218	100-250 VAC / 24 VDC Universal Input					

**Specifications are subject to change by manufacturer without notice due to modifications or improvements*

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Model Guide for Omni Flow Computers

Omni 6000	1D	1S-1SE	1B-2E-1E/D-1SV	R20xx
Model Number	Digital I/O Modules	Serial/Ethernet I/O Modules	Combo Modules	Firmware Revision

MODEL NUMBER

The Omni 3000 is designed to accept two combo modules, one 12-channel digital I/O module and one dual-channel serial I/O module. The Omni 6000 can accept up to six combo modules, two 12-channel digital I/O modules and three dual channel serial I/O modules. If the number of combo modules required, including spare I/O, is greater than the Omni 3000 limits, select an Omni 6000. Remember to provide for sufficient spare I/O for your computer system. A minimum I/O system is not a manufacturer-recommended practice in important measurement applications.

COMBO MODULES REQUIRED

'A' modules provide four input channels, two selectable as analog only input channels. The third and fourth input channels are selectable analog or meter pulse. Two analog outputs are available.

'B' modules provide four input channels where the first three process inputs are identical to the 'A' module and the fourth channel is fixed to provide a periodic time density pulse input. One analog output is provided. The number of 'B' type combo modules required are equal to the number of digital pulse densitometers that are interfacing (see type 'E/D' below).

'E' modules provide two selectable analog inputs and either two single pulse inputs or one dual pulse input, when pulse fidelity checking is required. One double chronometry detector switch input and two analog outputs are also provided.

'E/D' modules provide four process inputs including two analogs and two periodic time density pulse inputs on the third and fourth channels. Two analog outputs are provided.

'H' denotes a four input digital module used solely with Honeywell Smartline™ 3000 transmitters. Two analog outputs are provided.

'HV' modules have four Honeywell DE™ digital protocol ports dedicated to Honeywell SMV 3000 transmitters. Two analog outputs are provided.

'SV' modules provide two RS-485 channels to be used with Rosemount 3095FB multivariable transmitters, Daniel, Instromet, FMC, Kongsberg, and SICK ultrasonic devices for Liquid Applications only*. There are six analog 4-20mA outputs provided.

'HT' modules provide four HART networks for use in a point-to-point configuration. Two analog outputs are provided.

'HM' modules provide four HART networks for use in a multi-drop configuration or for use with multi-variable transmitters. Two analog outputs are provided.

To determine the total number of combo modules (Types 'A' + 'B' + 'E' + 'E/D' + 'H' + 'HV' + 'SV' + 'HT' + 'HM') required, the number of temperatures, pressures, densitometers, gravitometers, differential pressures, turbine/PD meter pick-offs that will have interfacing connections should be added. Remember to provide for sufficient space for physical I/O. Round the number up to the nearest increment of four and divide that number by four. Please consult Omni when 'HV', 'SV', 'HT'/'HM' modules are required.

DIGITAL I/O MODULES REQUIRED

'1D' (12 digital I/O) is always used when specifying an Omni 3000. An Omni 6000 can use '2D'. To determine the number of digital I/O modules needed, the number of digital I/O points required must be added for the total. These include, but are not limited to prover detector inputs, sampler pulse outputs, control outputs, alarm outputs and control inputs.

SERIAL / ETHERNET I/O MODULES REQUIRED

The Omni 3000 is limited to one dual serial or Serial Ethernet I/O module. The Omni 6000 can accept up to three serial I/O modules of which 2 can be Serial ethernet. The first port can be configured for a printer or Modbus™. All six ports are Modbus-compatible slaves. Port #2 can be used as a Modbus master for redundant flow computer applications and communicating with slave devices. The SE Module provides three communication channels. Channel one is an RS-232/RS-485 serial channel, channel two is a 10BaseT Ethernet channel and Channel 3 is an rs485 repeatable port to connect to any modbus device.

The computer includes a universal input AC/DC power supply suitable for use with100-250 VAC or 24 VDC. When AC powered, the OMNI 3000/6000 provides a maximum of 900 MA at 22-26 VDC for powering the transducer loops. The OMNI 6000 provides a maximum of 750 MA 22-26 VDC

FIRMWARE REVISIONS

Application firmware revision numbers must be specified. Firmware is available either in metric or US customary measurement units for liquid or gas applications.

	US	Metric
Liquid: Turbine/PD/Ultrasonic/Coriolis Meters *w K Factor/Viscosity Linearization*	Revision 20	Revision 24
Liquid: Orifice/Differential Pressure Meters	Revision 21	Revision 25
Liquid: Turbine/PD Meters with Meter Factor Linearization	Revision 22	Revision 26
Gas: Orifice/Turbine/Ultrasonic Meters	Revision 23	Revision 27

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