

Microprocessor-Based Portable Datalogger

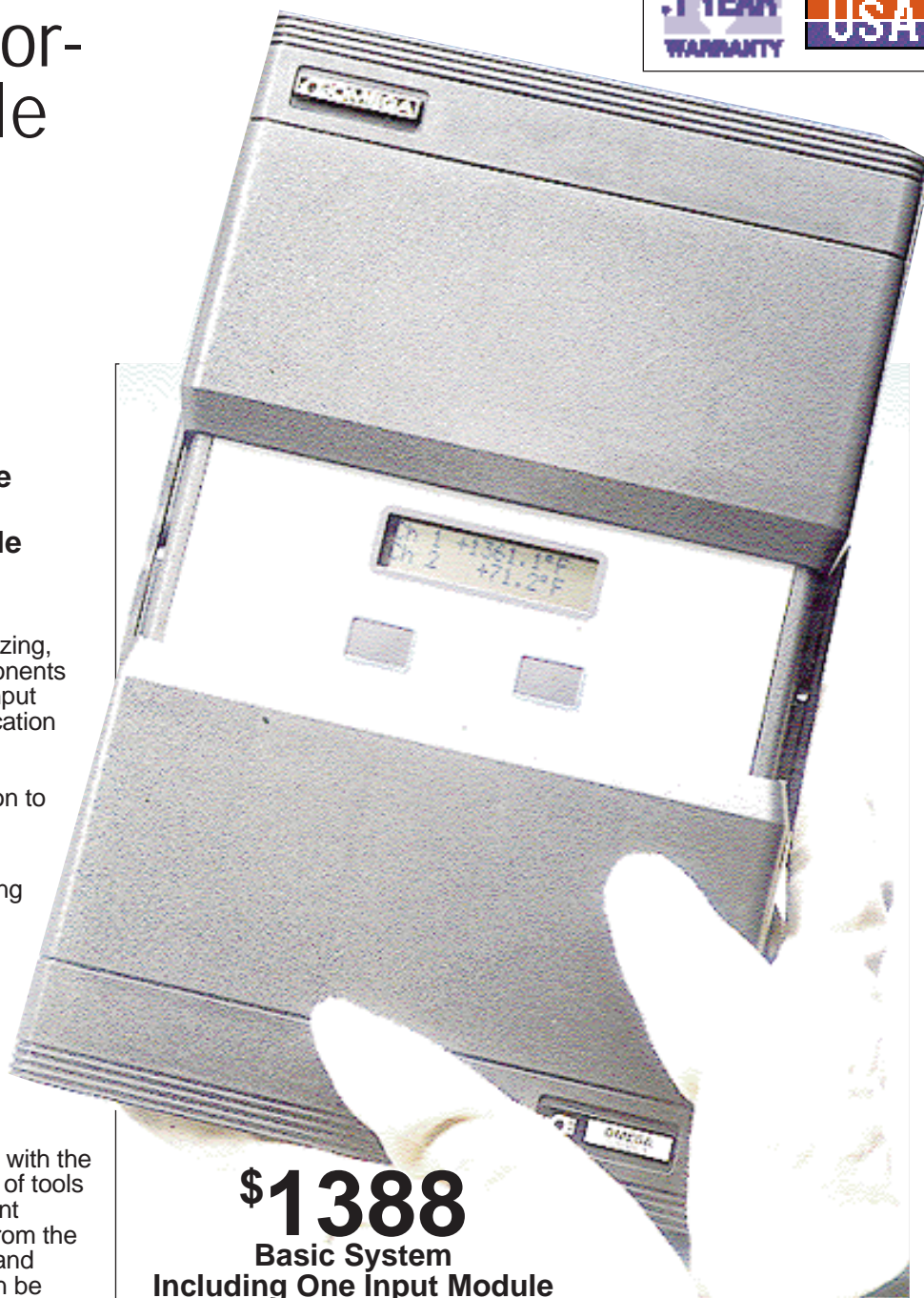
- ✓ Up to 8 Inputs from a Wide Variety of Modules
- ✓ Rugged, Compact, Battery Powered
- ✓ Five Data Storage Modes
- ✓ RS-232 or Printer Interface
- ✓ Graphics/Analysis Software Included
- ✓ Up to 1MB Storage Available

The OMEGA OM-170 is an advanced, microprocessor-based recording, analyzing, and reporting system. The basic components of the system include the datalogger, input signal conditioning modules, communication modules, configuration modules and applications software. All modules automatically communicate their function to the datalogger, thus eliminating unnecessary programming.

The OM-170 offers five modes for storing data: Adaptive Store and Point Store, provided in the basic unit, and Enhanced Point Store, Store on Alarm, and Manual Store, available through use of any configuration module. A variety of input, configuration, and communications modules provide application-specific solutions to your datalogging needs.

The DOS application software included with the OM-170 provides a comprehensive set of tools that will plot, annotate, analyze, and print reports from the information collected from the datalogger. The software runs on IBM and compatible computers. All functions can be implemented quickly with minimal number of key strokes in a logical, straightforward fashion.

New extended RAM models OM-171, OM-172, OM-173 and OM-174 have all the features of the older OM-170 and OM-170E plus several new features: (1) built-in front panel serial port (no separate COM-502 module required), (2) flash prom upgrade capability (firmware can be reprogrammed through the serial port), and (3) auto-restart feature (active recording session will stop if battery voltage falls below safe level and then auto-restart when battery voltage returns to safe level). Optional Windows software (SWD-PRONTO-WIN) is also available for these new models.



\$1388

**Basic System
Including One Input Module**

Specifications

- Inputs:** up to 8 inputs (through 4 ports)
Four Internal Math Channels: A*B, min., max., A-B, slope, square root, filler, A*Constant
Analog Input: ± 2.5 Vdc (range dictated by input modules)
Analog Conversion: 16 bits
Analog Accuracy: $\pm 0.05\%$ of full scale
Resolution: 0.1 mV dc
Linearity: $\pm 0.03\%$ of full scale
Drift: Less than 0.01% change per 10°C

Noise Rejection: 50 Hz/60 Hz (programmable)
Input Impedance: 10¹² ohms each channel
Cross Talk: -50 db typical channel to channel
Digital Input Span: 0 to 6 MHz
Digital Accuracy: ±0.01% of full scale
Digital Input Thresholds: High +3.5 Vdc minimum;
 Low +1.0 Vdc maximum

Clock Accuracy: 10 ppm typical (6 minutes/year, worst case)

Operating Temperature: 14 to 122°F (-10 to 60°C); 5 to 90% relative humidity, non-condensing

Storage Temperature: -4 to 156°F (-20 to 70°C)

Power: 3.2 to 4.5 Vdc from internal batteries

Batteries: 4.4 Ahr NiCad, 3.8 Vdc typical; provide minimum of 60 days from full charge at 25°C

Battery Charge: minimum 32-hour charge time from full discharge to 100%

Adaptive Recording Rate: 0.5, 1 or 2 sec, depending on recording length, selectable from 1 sec to 999 days

Point Store Rate: 250 mS (for 10 min) to 12 hr. (for 999 days)

Memory Backup: 100 mAhr NiCad (provides 1 year protection after main batteries fully discharged)

User Interface: Two-button membrane switch panel with 2 line x 16 character LCD display

External Interface: RS-232 port capable of 300 to 19200 baud.

I/O Description: J1-J4: 10-pin connectors for input modules; J5, J6: 12-pin connectors for I/O modules; J7: 3-pin connector for battery charger

RAM Storage: From 128KB to 1MB, depends on model

Enclosure: Lexan® polycarbonate

Dimensions: 11.88L x 7.6W x 1.87"H (30.18 x 19.3 x 4.76 cm)

Weight: 2.5 lb (1.13 kg)

Ordering Example

OM-170	Datalogger	\$1095
OM-170-RR2-120	120 Vac recharger unit	68
OM-170-POD-376	Input module, isolated 4-20 mA	195
OM-170-POD-425/424	Input module, isolated type-K	195
OM-170-COM-502-9F	Serial module and cable	65
OM-170-RR2-120	Recharger unit, 120 VAC	68
		Total: \$1686

Note: OM-171, 172, 173 and 174 do not need serial module

Standard Loggers (*do not have enhanced features*)

Model No.	Price	Description
OM-170*	\$1095	Datalogger with 64k RAM
OM-170E*	1585	Datalogger with 256k RAM

Requires at least one input module (4 max), OM-170-COM-502-9F serial module and cable and OM-170-RR2-120 recharger. See first page for differences between enhanced feature models.

Input Modules

General Purpose dc Voltage/Current

Model No.	Price	Description
OM-170-POD-395/392	\$215	Isolated multirange: 100 mV, 2 V, 5 V, 10 Vdc
OM-170-POD-375	195	Isolated 0 to 100 mA dc
OM-170-POD-222	92	Non-isolated bipolar ±1 Vdc
OM-170-POD-220	92	Non-isolated 0 to 2 Vdc
OM-170-POD-217	95	Non-isolated potentiometric 10 kΩ, 0-100%

Process dc

Model No.	Price	Description
OM-170-POD-383	\$195	Isolated 1 to 5 Vdc
OM-170-POD-376	195	Isolated 4 to 20 mA
OM-170-POD-197	92	Non-isolated 4 to 20 mA

ac Voltage/Current

Model No.	Price	Description
OM-170-POD-371	\$195	Isolated 0 to 60 Vac
OM-170-POD-367	195	Isolated 0 to 600 Vac
OM-170-POD-363	149	Isolated 0 to 1000 A ac (1000:1)

Thermocouple

Model No.	Price	Description
OM-170-POD-431/430	\$195	Isolated J t/c -200 to 760°C (-300 to 1400°F)
OM-170-POD-425/424	195	Isolated K t/c -200 to 1200°C (-300 to 2200°F)
OM-170-POD-331/330	110	Non-isolated J t/c -200 to 760°C (-300 to 1400°F)
OM-170-POD-319/318	110	Non-isolated K t/c -200 to 1200°C (-300 to 2200°F)
OM-170-POD-307/306	110	Non-isolated T t/c -200 to 400°C (-300 to 750°F)
OM-170-POD-291/290	110	Non-isolated N t/c 0 to 1300°C (32 to 2312°F)

To Order (*Specify Model Number*)

Model No.	Price	Description
OM-171	\$1195	Handheld datalogger with 128kb RAM*
OM-172	1585	Handheld datalogger with 256kb RAM*
OM-173	1720	Handheld datalogger with 512kb RAM*
OM-174	1840	Handheld datalogger with 1MB RAM*

Models OM-171, OM-172, OM-173 and OM-174 come complete with RS-232 cable (RJ11 jack on logger end, DB9F connector on PC end), standard DOS software and complete operator's manual. Requires at least one input module (4 max), and OM-170-RR2-120 recharger. Modules labeled "DUAL CHANNEL" have two inputs, all others have one input. A total of eight inputs can be recorded when all 4 modules are dual inputs. Dual and single modules may be mixed. SWD-PRONTO-WIN is optional.



E



OM-170 Series Portable Datalogger

Pulse Counting/Event Trigger

Model No.	Price	Description
OM-170-POD-165	92	Non-isolated pulse count, 0 to 800 kHz
OM-170-POD-164	92	Non-isolated 0 to 59,999 RPM
OM-170-POD-163	92	Non-isolated count and dump, 0 to 59,999 pulses
OM-170-POD-162	92	Non-isolated accumulate, 0 to 59,999 pulses
OM-170-POD-123/122	92	Non-isolated trigger/event (contact closure or TTL)
OM-170-POD-273	145	Non-isolated dual event
OM-170-POD-216	110	Strain gage

Configuration Modules

Model No.	Price	Description
OM-170-CFG-580	\$195	User configuration module, 32k RAM
OM-170-CFG-712	199	Advanced storage modes/power math measurements**
OM-170-CFG-714	199	Advanced storage modes/sampling 62.5 & 125 ms

** Enhanced mathematic capabilities:

Real power (kW) Ch A Ch B
 Cos Ø / 1000
 Power factor Cos Ø
 Relative power (VAR) Ch A Ch B
 Sin Ø / 1000

These math functions are based on measurement of ac voltage and current.

Dual Channel-Analog/Analog Non-Isolated

Model No.	Price	Description
OM-170-POD-253	289	ac volt/amp; 0-600 Vac; 0-1000 Aac (1000:5)
OM-170-POD-250	289	ac volt/amp; 0-600 Vac, 0-1000 Aac (1000:1)
OM-170-POD-249	155	dc volt; 0 to 2 Vdc
OM-170-POD-248	155	Bipolar ac volt, ±150 Vac
OM-170-POD-247	155	Bipolar dc volt, ±5 Vdc
OM-170-POD-246	155	Bipolar dc voltage, ±10 Vdc
OM-170-POD-245	155	dc voltage, 0 to 100 mVdc
OM-170-POD-243	155	dc current, 4 to 20 mA
OM-170-POD-241/240	201	J t/c, -200 to 760°C (-300 to 1400°F)
OM-170-POD-239/238	201	K t/c, -200 to 1200°C (-300 to 2200°F)
OM-170-POD-237/236	201	T t/c, -200 to 400°C (-300 to 750°F)
OM-170-POD-215/214	201	R t/c, 0 to 1500°C (32 to 2700°F)
OM-170-POD-233/232	201	S t/c, 0 to 1500°C (32 to 2700°F)
OM-170-POD-235/234	201	Thermistor, -40 to 110°C (-40 to 230°F) using 2252 ohm thermistor
OM-170-POD-231/230	567	RH/temperature (thermistor); OM-170-RR2-252 probe included; 0 to 100% RH, -40 to 110°C (-30 to 130°F)
OM-170-POD-203/202	201	Dual 4 to 20 mA with low cutoff
OM-170-POD-195	155	Dual RTD, -200 to 800°C

Note: These modules have two inputs each, and are not isolated. You may have up to 4 modules installed in the datalogger, for a total of 8 inputs. All other modules are single input only. Single and dual modules may be mixed.

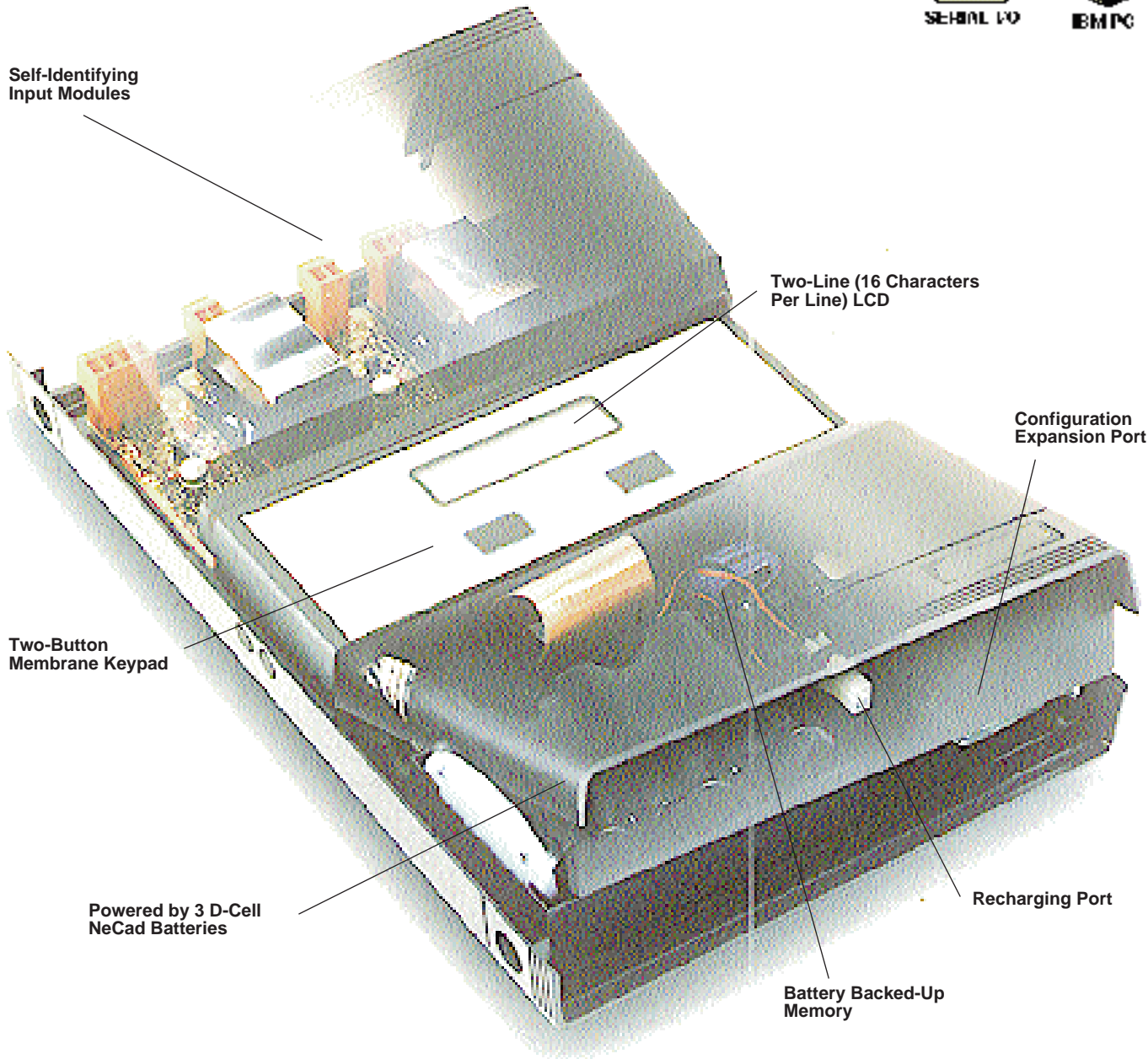
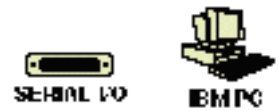
Communication Modules

Model No.	Price	Description
OM-170-COM-502-9F	65	Serial computer interface, module & 4' cable
OM-170-COM-550	120	Alarm output module (8 TTL level outputs)
OM-170-DPK-566	495	Memory pack, 256k
OM-170-COM-504	298	Modem controller
OM-180-RR2-261	395	Memory pack reader/writer

Note: Memory pack can extend memory of any OM-170 series logger. However, it requires a logger to download data. The OM-170-RR2-261 can also be used. You may disconnect the memory pack and bring it to the reader/writer or another OM-170 and download data.

Accessories

Model No.	Price	Description
OM-170-RR2-120	\$68	Recharger unit, 120 Vac, 60 Hz
OM-170-RR2-220	88	Recharger unit, 240 Vac, 50 Hz
OM-170-RR2-240	242	Carrying case
OM-170-RR2-251/250	185	Clamp-on CT, 0 to 40 Aac/0 to 10 Aac; requires OM-170-POD-359/358
OM-170-RR2-252	440	RH/temp probe with 20' cable; for use with OM-170-POD-231/230
OM-170-RR2-207	245	Current probe, 0-1000 Aac, 1 amp output
OM-170-RR2-209	195	Current probe, 0-10 Aac, 1 Vac output
OM-170-RR2-208	245	Current probe, 0-1000 Aac, 1 Vac output
OM-170-RR2-122	79	Rechargeable 120V, 60 Hz trickle charger



Self-Identifying Input Modules

Two-Line (16 Characters Per Line) LCD

Configuration Expansion Port

Two-Button Membrane Keypad

Powered by 3 D-Cell NeCad Batteries

Recharging Port

Battery Backed-Up Memory

Software (Included with OM-170)

- ✓ Menu driven with pull down windows
- ✓ On screen help messages
- ✓ Allows up to 9 plots on screen at one time: superimposed, stacked, or scattered
- ✓ Plot utilities: zoom, screen position, statistical analysis
- ✓ Notebook function: reports vital statistics, provides a note writing pad
- ✓ Data list functions

System Requirements: IBM compatible computer, minimum 512K RAM, DOS 2.1 or later, Microsoft compatible mouse

EASY PROGRAMMING

Self identifying input modules allow automatic configuration of the number and type of channels. A two button programming system with a two line, 16 character/line LCD allows for quick set-up of application parameters such as engineering units, alarms, mathematical operations.

RTD Modules

Model No.	Price	Description
OM-170-POD-413-412	\$195	Isolated -200 to +800°C/ -300 to 1450°F
OM-170-POD-289-288	110	Non-isolated -200 to +800°C/ -300 to 1450°F
OM-170-POD-285-284	225	Non-isolated 10Ω copper

