

Architectural Energy Corporation (AEC) stocks signal conditioning modules for use with a wide array of AEC-supplied or third-party sensors. These different signal conditioning modules allow the MicroDataLogger® unit to connect to nearly any sensor or meter on the market based on the sensor or meter output signal. Each separate sensor or meter to be used with the MicroDataLogger® data acquisition system will require a module to connect to the MicroDataLogger® unit to the sensor. It is important to note that AEC carries a number of sensors that are pre-wired to modules for your use: temperature, humidity, occupancy and lite level.

GENERAL SIGNAL MEASUREMENT MODULES

A variety of plug-in modules are available for interfacing the MDL to a range of sensor and transducer output signals. Most third-party sensors and transducers – including those carried by AEC – can be used with the MicroDataLogger® unit. The DataManager™ software enables the user to scale the signal being read and assign an appropriate engineering unit of measure. Sensor or field wiring is connected to the modules via a 4-circuit, plug-in, screw type terminal block. Current can be measured directly using the 20 mA DC module. *(Note: The 20 mA DC signal conditioning module, model ADC-33-3, can be damaged by transient voltages if it is connected to the current loop circuit while the circuit is energized.)* Signal conditioning modules for full-scale ranges above 5 volts use a precision resistor divider to attenuate the input signal.

<u>Part Number</u>	<u>Signal Read</u>	<u>Commonly Used With:</u>
ADC-33-3	4-20 mA DC	Third-party flow meters
VAC-17-3	333 mV RMS	AEC's current transformers and potential transformers
VDC-19-3	5 Volt DC	AEC's pressure sensors
VDC-29-3	10 Volt DC	Third-party sensors and transducers



All modules appear like the one shown above. Each is clearly labeled for easy reference and identification.

DIGITAL MEASUREMENT MODULES

<u>Part Number</u>	<u>Signal Read</u>	<u>Specifications</u>
COUNT-80-3	Pulses	Maximum Input Range: 20 pulses per second Minimum OFF Time or On Time After Contact Bounce: 10 mS Maximum Count: 130,432 Accuracy: +/- 1 count or 0.02%, whichever is greater Power Consumption: < 50 uA

Microprocessor-based pulse-counting module accepts a “dry” contact (or open collector or TTL logic) output from pulse-initiating transducers such as watt-hour, gas, or flow meters.

<u>Part Number</u>	<u>Signal Read</u>	<u>Specifications</u>
STATUS-81-3	AC/DC Voltage	Range: 6 to 300 volts AC or DC Accuracy: +/-0.1 second per storage interval Maximum On/Off Rate: 10 times per second Minimum On Voltage: 6 volts AC or DC Maximum Off Voltage: 3 volts AC or DC Power Consumption: <50 uA

Microprocessor-based, optically isolated voltage status module used to measure the percent “OM” time (run time) of lights, motors, heaters, natural gas valves, etc. The percent “ON” time during each storage interval is recorded (0 to 100%) in memory at the end of the interval and the timer is reset to zero before the beginning of the next interval.

SCREW DESIGNATIONS FOR WIRING

<u>Part/Module Number</u>	Pin
ADC-33-3 (4-20mA)	1 – Signal Input
VDC-19-3 (5V)	2 + Signal Input
VDC-29-3 (10V)	3 – 12 Vdc Return
	4 + 12 Vdc Power Out

<u>Part/Module Number</u>	Pin
VAC-17-3 (333mV)	1 n/c
	2 mV Input Low
	3 mV Input Hi
	4 n/c

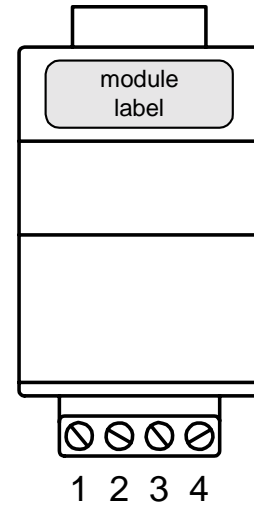
<u>Part/Module Number</u>	Pin
COUNT-80-3 (pulse)	1 Switch (-)
	2 Switch (+)
	3 n/c
	4 n/c

<u>Part/Module Number</u>	Pin
STATUS-81-3 (AC/DC)	1 n/c
	2 n/c
	3 Voltage Low
	4 Voltage Hi

Discontinued Models -- Listed For Reference

<u>Part/Module Number</u>	Pin
ADC-16-3 (4-20mA)	1 – Signal and –12 Vdc common
VDC-21-3 (5V)	2 + Signal Input
VDC-31-3 (10V)	3 n/c
RH-25-3 (humidity)	4 + 12 Vdc Power Out

n/c signifies no connection



terminal block numbered left to right