



## **POLONIX E-Series Programmable Logic Controllers**

### **Data Sheet**

#### **Polonix E-Series PLCs provides:**

- Modular, expandable architecture
- Extensive communications options
- A fully-featured low cost alternative to more expensive systems
- Easy, snap-together assembly
- Distributed control

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### **E-Series PLC**

The Polonix E-Series is a modular, expandable, and cost effective family of Programmable Logic Controller (PLC) devices. A complete PLC can be built by simply snapping together CPU, Power Supply, and Input/Output modules; no chassis hardware or tools are needed. E-Series' standard communication options allow for connecting multiple PLCs together with existing SCADA networks for a distributed control solution. The E-Series outperforms similarly priced PLCs while offering features only seen on more expensive units.

#### **Flexible I/O Configuration**

Modules can be mounted directly on a DIN rail without having to purchase an I/O chassis. E-Series' inter-module communications are handled by electronics in the modules themselves, eliminating the usual finite number of I/O slots available in chassis systems. This also leads to Remote I/O applications without special "scanner" cards: the internal communications bus can be extended up to 4000ft to remote locations that have either a Power Supply module with local I/O, or I/O modules only.

#### **Broad Communication Possibilities**

The E-Series has a wide array of communication capabilities. Unlike many other PLCs, 10BaseT Ethernet comes standard on every processor. Also, each processor incorporates a GSM/GPRS radio for sending and receiving messages wirelessly, such as sending a text message to a maintenance person's cell phone when an alarm is raised. For mobile applications, the processor can be shipped with an optional integrated GPS receiver for Global Positioning by Satellite.



At the core of the E06M CPU module is a 120MHz RISC microprocessor connected to 1MB SRAM and 4MB FLASH memory. The CPU features an RJ45 10BaseT Ethernet port, 2 RS232 ports (one with RS232/422/485), and a SIM card slot for the GSM/GPRS radio. Programming for the CPU can be done either by an RS232 or an Ethernet connection.



### **E06M PWR**

E06M PWR supplies the +12V and +5V internal voltages for the CPU and I/O modules. Power can be supplied to the module either from a +24VDC source, or from a 12V battery. E06M PWR can switch to battery backup in the event of power failure on the 24VDC line. The module measures the input and output voltages and makes the information available to the CPU. Internal alarms can be raised based on voltage operating ranges.



### **E06M DIN**

The E06M DIN module is an 8-point, optically isolated input card for 24VDC digital signals. Each input features independent 2-lead connections, reverse polarity protection, and an LED indicator.



### **E06M AIN**

The E06M AIN module is an 8-point single-ended, or 4-point differential analog voltage input card. On each scan of the inputs, both the absolute value of each input and the difference between pairs of inputs are measured. This allows for combining single-ended and differential inputs on the same card. Each card can be configured for 0 to 10V, 0 to 5V, -10 to +10V, and -5 to +5V ranges. With the addition of a high accuracy 250Ω resistor, 0 to 20mA current measurement can be realized.



### **E06M DOUT**

The E06M DOUT module is an 8-point relay output card. Each output features independent 2-lead connections, a jumper (and software) selectable NO or NC output, and an LED indicator.

<b>PRODUCT</b>	<b>DESCRIPTION</b>	<b>CODE</b>
E06M CPU	E-Series CPU Module with Ethernet, GSM/GPRS Radio, & GPS Option	2101-CP1 EWG
E06M PWR	E-Series Power Supply Module, 24VDC Input	2101-PS 24DC
E06M DIN	E-Series Digital Input Module, 8 Sinking DC Inputs	2101-I 8DCK
E06M AIN	E-Series Analog Input Module, 8 Single (4 Differential) Voltage Inputs	2101-IA 8V
E06M DOUT	E-Series Digital Output Module, 8 Isolated SPST Relay Outputs	2101-O 8SRL