PAC End Point I/O
Remote I/O Data Monitoring Solution

The PAC End Point Remote I/O Monitoring with integrated SenseLink™ software provides monitoring and alarm capabilities ensuring factory process control and product quality. The PAC End Point system has flexible I/O features and is compact enough to be mounted close to any data source, making remote monitoring, alarm control and real-time data streaming to factory servers simple. All configuration is easily done via a user-friendly web browser interface.

This device is ideal for acquiring analog and digital I/O data without needing a local computer. Each signal is acquired and stored locally and is available to download via the web interface. Local operations include signal scaling, sampling, alarming and optional control tasks. Alarms can be customized for specific process steps. The web browser-based user interface allows users graphical access to critical process data using Java based charting tools. Users can also select time frames of interest and download process data to their local PC in text and CSV formats.

Product Features

- Supports serial tool communication with a web-based monitor and control interface

- Instant data monitoring; connect and collect sampling rate up to 100 Hz

- Data downloadable via a web browser with local data storage capability

- Analog, digital and dry contact combination of I/O points in a compact form factor

- DIN-rail mounting simplifies mounting and integration

- Customizable for specific end point control applications

Key Benefits

- Connect non-networked facility equipment quickly and easily to facilitate process control

- All data is logged per I/O to improve process and equipment troubleshooting

- Alarms can be customized and monitored remotely for difficult to access or restricted access areas

- Ethernet and web-based user interface makes accessing critical data simple

Mounting and Connecting

PAC End Point Remote I/O is a Linux based controller with integrated I/O and peripherals. It contains a terminal block connector for I/O connectivity as well as RS232 serial port as an option for interfacing with host PC. In addition, it also features a serial diagnostics port for unit diagnostics. Features a standard DIN rail for mounting. Package size is only 4.921 x 2.066 x 3.633 inches (125 x 52.5 x 92.3 mm).
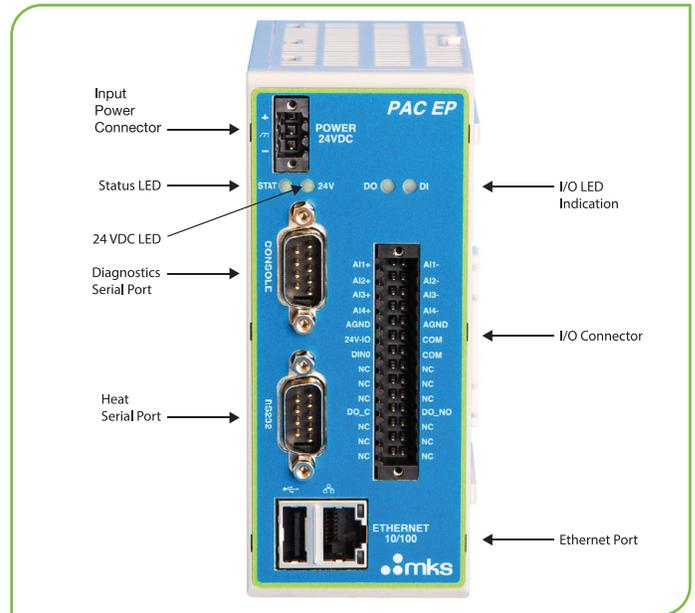
Module Features

3 Position Terminal Block Header, Male Pins	
Pin	**Signal**
1	+24V_Input
2	Chassis GND
3	24V_GND

Power Connector PinOut

Description	Distributor	Part Number
I/O - Pluggable Terminal Block, 3.5 mm, 28 Positions, 28 AWG, 16 AWG, Tension Clamp	Newark	1748280000
Power - Pluggable Terminal Block, 3.5 mm, 3 Positions, 26 AWG, 14 AWG, Tension Clamp	Newark	13C9347

Mating Connectors

Pin	Label	Description	Pin	Label	Description
1	AI1(+)	Analog Input 1 (positive input)	2	AI1(–)	Analog Input 1 (negative input)
3	AI2(+)	Analog Input 2 (positive input)	4	AI2(–)	Analog Input 2 (negative input)
5	AI3(+)	Analog Input 3 (positive input)	6	AI3(–)	Analog Input 3 (negative input)
7	AI4(+)	Analog Input 4 (positive input)	8	AI4(–)	Analog Input 4 (negative input)
9	AGND	Analog Ground	10	AGND	Analog Ground
11	24V_IN	+24 VDC Input	12	COM	24 VDC common
13	DI	Digital Input 1 (sinking, active low)	14	COM	24 VDC common
15	N/C	No Connection	16	N/C	No Connection
17	N/C	No Connection	18	N/C	No Connection
19	N/C	No Connection	20	N/C	No Connection
21	DO_COM	Digital Output Dry Contact (relay common)	22	DO_NO	Digital Output Dry Contact (relay contact N.O.)
23	N/C	No Connection	24	N/C	No Connection
25	N/C	No Connection	26	N/C	No Connection
27	N/C	No Connection	28	N/C	No Connection

I/O Connector PinOut

Specifications

Network

Protocols Supported	• Ethernet (10/100Mbits/s), RS232
Dimensions (HxWxD)	• 4.921 x 2.066 x 3.633 inches (125 x 52.5 x 92.3 mm)
Weight	• 0.661 lb (300 g)

Environmental

Operating Temperature	• 0 to +50°C
Storage Temperature	• -40 to +85°C
Humidity	• 5 to 95% non-condensing

Front Panel Indicators

Digital Input/Output Points	• DO On/Off Status (Green), DI On/Off Status (Green)
System Status	• System Status (Green), 24VDC Health (Green)

Power

Device	• 24 VDC, ±10%, 0.5A (max), 0.3A (typical)
AIO Power	• Internally powered; No external power required.

Digital Input

Number of DI	• 1
Input Voltage	• Active low, internal pull-up to 24 VDC
ON current level	• >2mA
OFF voltage level	• <1mA
Minimum ON voltage	• 6 VDC
Maximum OFF voltage	• 18 VDC
Max Current	• 30 mA

Digital Output

Number of DO	• 1
Type	• Dry contact relay, 1A max

Analog Input Points (AI)

Number of Inputs	• 4 – Differential analog inputs
Input Range	• 0 to +10V
Resolution	• 16-bit
Impedance	• 70 MΩ

Connectors

Power	• 3 Pin with polarity and locking (mating connector provided)
I/O	• Terminal type block (mating connector provided)
Network	• 10/100BaseT, RJ45 connector with EMI filter, LED indicators
RS232 Port	• TXD, RXD, RTS, CTS signals; DB9 connector
Serial Baud Rates	• 300bps to 115kbs

Core

Processor	• i.mx6 Solo single-core ARM A9, 1 GHz, 2400 DMIPS
OS	• Yocto Linux
Internal RAM	• 512 MB DDR3
Internal Storage	• 2GB Internal MicroSD card, not user-accessible

Description	Part Number
SenseLink™ PAC EP	AS11990G-12

Please contact your local MKS office for price and availability information.