

AUTOMATION & CONTROL SOLUTIONS

FOR INDUSTRIAL AUTOMATION PROCESSES



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MKS has the critical building blocks and experience to deliver the latest technologies for distributed automation control and process monitoring. We offer a complete Automation Platform Solution along with a suite of automation control hardware and software configurable modules that help to better automate processes via computer-controlled automation, while seamlessly integrating with existing MKS products to provide a complete solution for semiconductor and industrial manufacturing.

- Offers suite of automation control hardware and software modules with seamless integration
- Provides complete solution for semiconductor and industrial manufacturing
- Delivers technologies for automation control and process monitoring
- Delivers reliable performance and operation



MKS Automation Platform

- Seamless interface to MKS subsystems and instrumentation
- Advanced SenseLink™ analytics for improved process tuning, optimization, monitoring, troubleshooting, & fault detection
- Scalable and expandable with support for many fieldbuses and control networks
- Lowest total cost of ownership, compared to standard off-the-shelf programmable automation controllers
- Supports industry 4.0 and Internet of Things (IoT) environments
- MKS advanced services for recipe & logic development, integrated testing, & training

PAC 100 Programmable Automation Controllers

- Fully programmable controller supports standard IEC 61131-3 environment
- Program template library supports common process applications, significantly reducing time to market
- ARM Cortex-M4, 100 MHz processor
- Function block library supports various MKS devices for 'plug & play' implementation
- Open standards support, interoperability with other devices & components

Communication & Fieldbus Coupler Modules

- Interfaces with MKS controls workbench, for process monitoring & remote control
- Supports fieldbuses & control networks like EtherCAT, Modbus TCP/IP, Ethernet/IP
- Scalable to any number of MKS I/O slices to create a distributed I/O support for hundreds of channels
- Compact footprint
- Interface with LabVIEW

MultiTherm™ 2000 Temperature Controllers

- Fully programmable
- High accuracy, high stability sensing supporting TC's and RTD's
- Fast acting, dynamic outputs using phase-fire and zero crossing methods
- Independent PID loops or coordinated loops using Model Based Control (MBC)
- Supports custom control algorithms without disclosure of source code
- Hardware & software-based Safety Interlocks, custom power distribution with protection and heater health monitoring

MKS Custom Automation Solutions

MKS provides customized automation and control solutions to leading tool manufactures in Semiconductor, Life Sciences, and other Advanced Markets. With over 20 years of experience in I/O and control solutions design, our innovative team will design a robust solution to meet your form, fit, and function requirements. Based on cutting edge platforms, leveraging future technology and long-term tested building blocks, the solutions we provide have the highest levels of quality and reliability.



an easy-to-use GUI interface to make safety interlock modifications on-the-fly without changing hardware, shortening the update cycle, and eliminating the logistical costs of managing excess and obsolete material. The safety interlock logic meets industry standards and safety requirements and functions independently from communication with other systems and networks.

Smart Factory Solutions

MKS provides a variety of Smart Factory hardware and software solutions to improve manufacturing process efficiency. Combined with state-of-the-art predictive analytics, our robust solutions help to increase production while decreasing expensive downtime. Areas such as Process and Equipment Analytics, Tool Connectivity, and Internet of Things (IIoT) enable us to provide highly integrated, precise, and seamless communication between equipment and factory systems.



Programmable Safety

MKS' TÜV certified programmable safety software, when combined with a custom I/O controller, provides users with the ability to create interlock logic across multiple distributed controllers, increasing design flexibility and ensuring high level safety. Users have access to



MicroNode™ Compact Networked I/O

- Built-in cLogic™ compiler allows low level sequence execution, I/O ramping and limited filtering
- A mixture of digital and analog I/O makes selection of a cost-effective product easy
- Package design and options makes installation flexible
- IP 61 rated for use in harsh industrial environments
- Embedded web servers provide a graphical user interface for setup and diagnostics with a web browser

HyperPAC Programmable Industrial PC

- Ease of fieldbus protocols integration with IIoT solution
- Compact form factor
- Flexible configuration
- Front access diagnostics
- Easy installation design for expand slot
- EtherCAT®/DeviceNet™ master capability

Compact PCI & VME I/O Cards

- Compact PCI I/O cards available in analog, digital, power supply, DeviceNet and serial communications
- VME I/O cards with bi-directional, isolated digital channels
- Built in over current and over temperature protection
- Multi range inputs and outputs
- Suitable for high capacitive loads
- Safety compliant

WHY MKS?

CRITICAL TECHNOLOGIES

World-class technology and development capabilities for leading-edge processes



PROVEN PARTNER

Recognized leader delivering innovative, reliable solutions for our customers' most complex problems



OPERATIONAL EXCELLENCE

Consistent execution across all aspects of our business



COMPREHENSIVE PORTFOLIO

Extensive offering of products and services for the markets we serve



MKS Automation & Control Solutions

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MKS INSTRUMENTS, INC. enables technologies that transform our world. We deliver foundational technology solutions to leading edge semiconductor manufacturing, electronics and packaging, and specialty industrial applications.

We apply our broad science and engineering capabilities to create instruments, subsystems, systems, process control solutions and specialty chemicals technology that improve process performance, optimize productivity and enable unique innovations for many of the world's leading technology and industrial companies.

Our solutions are critical to addressing the challenges of miniaturization and complexity in advanced device manufacturing by enabling increased power, speed, feature enhancement, and optimized connectivity. Our solutions are also critical to addressing ever-increasing performance requirements across a wide array of specialty industrial applications.

Additional information can be found at www.MKS.com.

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