

New Standards in Performance & Flexibility

EtherCAT® Product Selection Guide



AUTOMATION & CONTROL



PAC 100

Programmable Automation Controller

ETG.5003.2060

- Modular, scalable, and configurable programmable control solution
- Supports standard IEC 61131-3 environment
- Seamless interface with HMI, supporting OPC UA



MultiTherm™ 2000

Modular Temperature Controller

ETG.5003.2060

- Easily configured for single zone or multi-zone temperature control (48+)
- Ideal for dynamic control applications requiring tight temperature stability
- Precision sensor input channels, accepting RTDs, all thermocouple types, voltage and current inputs
- PID or external Model-Based Control down to 10ms



CM

Communication Fieldbus Coupler Module

ETG.5003.2060

- Compact, customizable solution for standalone manual control, data logging, or distributed I/O, or ECAT gateway
- Scalable to any number of MKS I/O slices to create a distributed I/O support for up to hundreds of I/O channels



Analog IO

Analog Input/Output Module

ETG.5003.1

- Compact and high density solution for a variety of input and output ranges
- Each AIO module supports 8 analog inputs and 4 analog outputs
- Supporting voltage inputs and outputs are configurable: 0-5V, 0-10V, ±5V, ±10V, 0-20mA, 4-20mA (ranges)

AUTOMATION & CONTROL



Digital IO

Digital Input/Output Module

ETG.5003.1

- Integrates digital input and output channels with MKS PAC or CM modules
- Each DIO module supports 12 digital inputs and outputs



MicroNode™ Combo

Programmable Automation Controller

ETG.5003.1

- Each MicroNode module supports 8 DIO
- Each module supports 16-bit, 8 analog inputs, 4 analog outputs, $\pm 10V$



HyperPAC

Programmable Industrial PC

ETG.5003.1

- Ease of fieldbus protocols integration with IIoT solution
- Compact form factor
- Robust IPC
- Flexible configuration

FLOW/GAS DELIVERY



G Series

Mass Flow Controllers and Meters

ETG.5003.2020

- Full Scale flow rates from 5 sccm to 300 slm
- Proven, patented thermal sensor and mechanical design
- Multi-range/multi-gas capability; 1% of set point accuracy



G Series

Pressure Controllers

ETG.5003.2025

- Pressure control for Full Scale from 500 Torr to 100 psia
- Thermally stable pressure sensor for 1% of set point accuracy
- Digital flow control algorithm for fast response to set point



P Series

Pressure Controllers

ETG.5003.2025

- Pressure control for Full Scale from 10 to 1000 Torr
- Thermally stable pressure sensor for 1% of set point accuracy
- Flow meter option for backside wafer pressure control applications



DELTA™

Flow Ratio Controllers

- Accurate and repeatable flow ratio control for better process optimization
- For use in cascade configurations
- Operates to temperatures up to 60°C ambient

ETG profile: in Definition Stage

FLOW/GAS DELIVERY



HA-MFV

High Accuracy In-Situ Mass Flow Verifier

- Flow rates up to 3000 sccm
- External volume insensitivity
- Reading measurement accuracy of 1.0% or better

ETG profile: MKS-specific

PLASMA SOURCES



Paragon[®]

Remote Plasma Sources

ETG.5003.201x

- For high gas dissociation rates (>98%) of NF_3
- Gas flows up to 8 slm and pressures up to 10 Torr
- Compatible with O_2 and NF_3 mixed gases



R*evolution[®]

Remote Plasma Sources

ETG.5003.201x

- Integrated, self-contained unit for on-chamber installation
- Quartz plasma applicator, high density for oxygen species
- Up to 6 kW of plasma power

PRESSURE/VACUUM MEASUREMENT

DA02A

Baratron® Capacitance Manometer

[ETG.5003.2080](#)

- Unheated or temperature-controlled at 45°C, 80°C, 100°C
- Industry-leading accuracy and repeatability
- Inconel®-based sensor offers superior corrosion resistance to common process gases


DA03B

Baratron® Capacitance Manometer

[ETG.5003.2080](#)

- High temperature-controlled at 150°C to 200°C
- Optional internally-mounted solid state process relays
- Compact design


901P

Load Lock Transducer

[ETG.5003.2080](#)

- Designed specifically for semiconductor load lock applications
- Providing medium vacuum measurement and atmospheric switching
- Fast and accurate pressure measurement for improved cycle time and particle reduction


925 MicroPirani™

Vacuum Transducer

[ETG.5003.2080](#)

- MEMS-based technologies, including MicroPirani™ technology
- Applicable for foreline and general vacuum measurement applications
- Fast and accurate pressure measurement

PRESSURE/VACUUM MEASUREMENT



972B DualMag™
Cold Cathode Transducer

ETG.5003.2080

- Single transducer with wide pressure measurement range from atmosphere to ultra-high vacuum
- MEMS-based MicroPirani technology combined with cold cathode ionization technology
- Small footprint design provides a compact transducer solution, saving tool real estate

VALVES



T2B
Exhaust Throttle Valve

ETG.5003.2030

- Advanced model-based pressure control algorithm
- High-speed configurations available (<250 msec. open to close)
- Selectable high torque drives with soft-sealing available



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