

MMIG

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Contents

Medium PLC

MX600 Series
MC8000 Series*
MC6000 Series
MC5000 Series

Small PLC

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MC100 Series

Remote I/O Module

MR400 Series
MC5000S Series

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MTCE Series
MCAS Series
MDT Series

Cable List

Cable List

HMI

MZ800 Series

MX600 series intelligent controller breaks through the 256-axis μ s-level synchronous control, supports EtherCAT, EtherNET / IP, ProfiNet and other bus protocols, and the redundant architecture ensures 99.999 % extreme condition stability. It covers high-precision scenarios such as lithium battery winding, semiconductor, photovoltaic, etc., and synchronously meets the ms-level sequential control requirements of 3C assembly, five-axis machining and high-speed packaging.

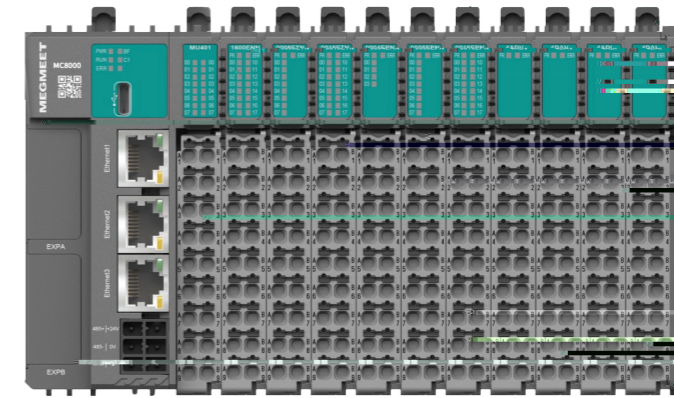
Product Feature



- Support 16-axis/250us, 64-axis/500us and 256-axis/2ms sync cycles, and 20us jitter to ensure high-precision control.



MC8000 series product is a new generation of high-performance and cost-effective medium PLC based on the mOPAX platform of MEGMEET. It is fully compatible with the IEC61131-3 programming specification and supports LD, ST, SFC, CFC, FBD, and IL programming languages; adopts the blade-type module design, and supports multi-core processor. Based on multi-bus protocols such as EtherCAT and Profinet, a multi-axis motion control system is constructed, to meet the high-speed response requirements of intelligent devices.



Product Feature

Strong expansion & networking

- Expand up to 32 modules, support the expansion of digital, analog, CAN, RS485, RS232, etc.
- Full protocol compatibility, support Modbus/EtherCAT/EtherNet IP/Profinet and others.

Reliably excellent performance

- Four-core A55 processor, communication, logic and algorithm are completely independent.
- 8*200K high-speed input, 8*200K pulse output (single pulse, pulse + direction, AB phase, FWD+REV, etc.)

Precise Multi-axis control

- 1ms/16-axis sync, support 16/32/64-axis EtherCAT control

Flexible & convenient operation

- 12mm machine body, saving space
- PUSH In terminal, easily wiring and replacing without tools

Ultra-large capacity

- Support 10M program capacity, 20M data capacity, 512KB retention, for complex logic and data processing

E-gear and other control function, to achieve high-speed operation and efficient communication, flexible configuration and



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- Communication port: 1*EtherCAT+2*EtherNet,

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- significantly improved based on ARM+FPGA
- Support 8-channel 200K high-speed pulse output and single-phase pulse count, or 4-channel 100K AB-phase, CW/CCW, pulse+direction
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MU200 new generation of small PLC uses ARM+FPGA dual-core processor for the powerful processing function,



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- significantly improved based on ARM+FPGA
- Support up to 12-channel 200K high-speed pulse output
-

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- Convenient hardware configuration
-
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※MC280-specific function



Technical Specifications

- Program capacity: 12K

- Input voltage: 230V AC

Features

- Input filter protection and power loss protection

- Overvoltage protection

Applications

- Industrial automation

Dimensions

- Width: 100mm

- Height: 40mm

- Depth: 100mm

Weight

- Weight: 0.5kg

- Net weight: 0.4kg

- Gross weight: 0.5kg

| Parameter | Value | Unit |
|--------------------------|---------|--------|
| Input Voltage | 230V AC | V |
| Output Voltage | 5V DC | V |
| Output Current | 1.2A | A |
| Power | 6W | W |
| Efficiency | 85% | % |
| Regulation | ±1% | % |
| Load Regulation | ±1% | % |
| Line Regulation | ±1% | % |
| Temperature Coefficient | ±1% | % |
| Response Time | 10ms | ms |
| Hold-up Time | 20ms | ms |
| Overvoltage Protection | 120% | % |
| Overcurrent Protection | 150% | % |
| Short-Circuit Protection | Yes | Yes/No |
| Power Factor | 0.95 | PF |
| EMC Class | CE | Class |
| RoHS | Yes | Yes/No |
| Lead-Free | Yes | Yes/No |
| Warranty | 3 Years | Years |

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| EMC Class | CE | Class |
| RoHS | Yes | Yes/No |
| Lead-Free | Yes | Yes/No |
| Warranty | 3 Years | Years |



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modules flexibly and integrating internal intelligent PID algorithm; it has the advantages of cascade, high precision,



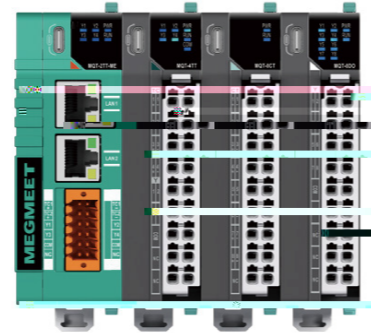
High precision:

High performance:

Strong function:

Simple installation:

Complete module:



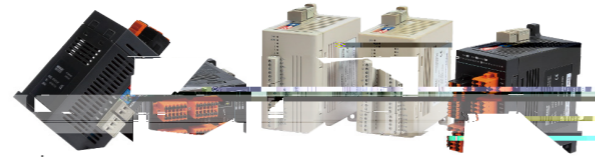
| Item | Description | |
|---------------------|--|--|
| Power supply | 24VDC -15% ~ 20% | |
| Signal input | Input type | Thermocouple K J E N T R B For all channel |
| | | Thermal resistance Pt100 JPt100 Cu100 Ni120 For all channel |
| | Precision | Thermocouple 0.15% Full scale + cold compensation |
| | | Thermal resistance 0.3% Full scale |
| Sampling cycle | 25ms/channel 100ms/8channels 100ms/4 channels | |
| Control output | Output form | Transistor output (SSR drive output), relay output, current output, voltage output |
| | Control action | Manual, ON / OFF, single PID, heating & cooling PID, position proportional PID |
| Alarm output | Alarm form | 14 alarms, such as upper and lower limit alarm, deviation alarm and so on. |
| | Output form | Transistor and relay output (output state can be directly controlled by writing registers) |
| | Output channel | 8 channels |
| Digital input | Input form | Transistor input |
| | Input channel | 4 channels |
| Control cycle | 0.1s - 10s or 1s - 100s | |
| Acquisition channel | 4 channels and 8 channels | |
| Isolation | Exist between power and communication, power and channel, communication and channel, channel and channel | |
| Communication port | RS485/Modbus-TCP/EtherNet/EtherCAT/Profinet | |
| Generals | Ambient temperature | Working: -20 ~ 60 °C, storage: -40 ~ 70 °C |
| | Ambient humidity | Working: 10 ~ 90% RH (no condensation), keeping: 5 ~ 95% RH (no condensation) |
| | Altitude | Below 2000m |
| | Protection level | IP20 |
| C & S | Conform to IEC/EN 61326-1 For use in industrial locations CE | |

| Model | Acquisition channel | Temperature control output | Alarm output | Input type |
|----------------------------|---------------------|---|------------------|---------------------|
| Communication module | | | | |
| MQT-2TT-ME | 2-CH | Modbus TCP/IP/Ethernet | Transistor(4-CH) | TC |
| MQT-2RT-ME | 2-CH | Modbus TCP/IP/Ethernet | Transistor(4-CH) | RTD |
| MQT-2TT-ET | 2-CH | EtherCAT | Transistor(4-CH) | TC |
| MQT-2RT-ET | 2-CH | EtherCAT | Transistor(4-CH) | RTD |
| MQT-2TT-RS | 2-CH | Modbus RS485 | Transistor(4-CH) | TC |
| MQT-2RT-RS | 2-CH | Modbus RS485 | Transistor(4-CH) | RTD |
| MQT-2TT-PN | 2-CH | Profinet | Transistor(4-CH) | TC |
| MQT-2RT-PN | 2-CH | Profinet | Transistor(4-CH) | RTD |
| Temperature control module | | | | |
| MQT-4TT | 4-CH | Modbus RS485 | Transistor(4-CH) | TC |
| MQT-4TA | 4-CH | Modbus RS485 | Analog(4-CH) | TC |
| MQT-4TR | 4-CH | Modbus RS485 | Relay(4-CH) | TC |
| MQT-4RT | 4-CH | Modbus RS485 | Transistor(4-CH) | RTD |
| MQT-4RA | 4-CH | Modbus RS485 | Analog(4-CH) | RTD |
| MQT-4RR | 4-CH | Modbus RS485 | Relay(4-CH) | RTD |
| Expansion module | | | | |
| MQT-8DI | 8-CH | 8-channel digital input | - | Digital (8-CH) |
| MQT-8DO | 8-CH | 8-channel digital output | Digital (8-CH) | - |
| MQT-8CT | 8-CH | 8-channel current detection | - | Transformer current |
| MQT-8DM | 8-CH | 4-channel digital input, 4-channel digital output | Digital (4-CH) | Digital (4-CH) |
| MQT-8AI | 8-CH | 8-channel analog current input | - | Analog (8-CH) |
| MQT-8AV | 8-CH | 8-channel analog voltage input | - | Analog (8-CH) |
| MQT-8AO | 8-CH | 8-channel analog output | Analog (8-CH) | - |

MTC/MTCW/MTCV series products are multi-channel and high-precision temperature controllers, which are suitable for various occasions of temperature control. Its main feature is compatible with TC and RTD, high measure accuracy; high integration (one module supports up to 12 channels of temperature control and 16 channels of measurement), space saving, easy data exchange, remote monitoring, and high cost performance.



- Dedicated software:** Provide special software - MtcCompanion
- Dual-PID function:** Heating&cooling dual-PID control function, 14 alarms like upper and lower limits, deviation, etc
- High precision:** Intelligent self-tuning and multi-stage temperature setting functions to achieve high-precision temperature control
- Multi-way control:** Integrated multi-channel temperature control to centralize data management
- Easy exchange:** Data exchange easily between thermostat and PLC, thermostat and HMI, thermostat and computer through Ethernet and serial port



| Item | Description | |
|---------------------|--|---|
| Power supply | 24VDC -15% ~ 20% | |
| Signal input | Input type | Thermocouple K J E N T R B For all channel Thermal resistance Pt100 JPt100 Cu100 Ni120 For all channel |
| | Precision | Thermocouple 0.2% Full scale + cold compensation Thermal resistance 0.3% Full scale) |
| | Sampling cycle | 25ms/channel 100ms/8 channels 100ms/4 channels |
| | Output form | Transistor output (SSR drive output), relay output, current output, voltage output |
| Control output | Control action | Manual, ON / OFF, single PID, heating & cooling PID, position proportional PID |
| | Alarm form | 14 alarms, such as upper and lower limit alarm, deviation alarm and so on. |
| Alarm output | Output form | Transistor and relay output (output state can be directly controlled by writing registers) |
| | Output channel | 8 channels |
| IO input | Input form | Transistor input |
| | Input channel | 4 channels |
| Control cycle | 0.1s - 10s or 1s - 100s | |
| Acquisition channel | 4 channels and 8 channels | |
| Isolation | Exist between power and communication, power and channel, communication and channel, (MTCV)channel and channel | |
| Communication port | MTC/MTCV: One isolated RS485 serial port; support MODBUS slave and MCBUS slave protocol MTCW: One isolated + one non-isolated RS485 serial port, one Ethernet port; support MODBUS slave protocol | |
| Generals | Ambient temperature | Working: -20 ~ 60 °C, storage: -40 ~ 70 °C |
| | Ambient humidity | Working: 10 ~ 90% RH (no condensation), keeping: 5 ~ 95% RH (no condensation) |
| | Altitude | Below 2000m |
| | Protection level | IP20 |
| C & S | Conform to IEC/EN 61326-1 For use in industrial locations UL61010-1 CE UL | |

MTC series

| Model | Acquisition channel | Temu A | | |
|------------|---------------------|--|----------------------------|---------|
| MTC-04-NT | 4-CH | Transistor (4-CH) | Flag bit | TC, RTD |
| MTC-08-NT | 8-CH | Transistor (8-CH) | Flag bit | TC, RTD |
| MTC-04-NTT | 4-CH | Transistor (4-CH) | Transistor(8-CH), flag bit | TC, RTD |
| MTC-04-NTR | 4-CH | Transistor (4-CH) Relay (8-CH) | Relay(8-CH), flag bit | TC, RTD |
| MTC-04-NVT | 4-CH | Transistor (4-CH) Current(8-CH 0-20mA or 4-20mA) Voltage(8-CH 0-1V 0-5V 0-10V or 1-5V) | Transistor (4-CH) | TC, RTD |

MTCW series (Ethernet 2*RS485)

| | | | | |
|-------------|-------|---|-----------------------------|---------------------------------------|
| MTCW-04-NTT | 4-CH | Transistor (4-CH) | Transistor (4-CH), flag bit | TC, RTD |
| MTCW-04-NI | 4-CH | Current (4-CH 0-20mA or 4-20mA) | Flag bit | TC, RTD |
| MTCW-04-NV | 4-CH | Voltage (4-CH 0-1V 0-5V 0-10V or 1-5V) | Flag bit | TC, RTD |
| MTCW-08-NN | 8-CH | - | Flag bit | TC, RTD |
| MTCW-08-NI | 8-CH | Current (8-CH 0-20mA or 4-20mA) | Flag bit | TC, RTD |
| MTCW-08-NV | 8-CH | Voltage(8-CH 0-1V 0-5V 0-10V or 1-5V) | Flag bit | TC, RTD |
| MTCW-08-NTT | 8-CH | Transistor (8-CH) | Transistor (8-CH), flag bit | TC, RTD |
| MTCW-12-NT | 12-CH | Transistor (12-CH) | Flag bit | TC, RTD |
| MTCW-16-NN | 16-CH | - | Flag bit | TC, RTD |
| MTCW-08-CT | 8-CH | Transistor (8-CH) | Flag bit | Current transformer (8-CH) TC, RTD |
| MTCW-08-NTD | 8-CH | Transistor (8-CH heating, 8-CH cooling) | - | TC, RTD |

MTCV series (Channel isolation RS485)

| | | | | |
|------------|-------|--------------------|----------|---------|
| MTCV-16-NT | 16-CH | Transistor (16-CH) | Flag bit | TC, RTD |
| MTCV-08-NT | 8-CH | Transistor (8-CH) | Flag bit | TC, RTD |

MTCE series product, as a multi-channel high-precision EtherCAT temperature controller, are adapted to various mainstream master stations. Its main feature is compatible with thermocouples and thermal resistors, high measurement accuracy, feature-rich, user-friendly. It has the characteristics of high integration, space saving, easy data exchange, remote monitoring, and high cost performance.



Networking capacity EtherCAT

High precision Measure accuracy: full scale of $\pm 0.15\%$; control accuracy: $\pm 0.2^\circ\text{C}$

High performance 0.1s sampling cycle, and 1ms synchronization cycle; a single module can operate PID control and simple logic operation, and monitor analog value



| Item | Description | |
|---------------------|--|---|
| Power supply | 24VDC -15% ~ 20% | |
| Signal input | Input type | Thermocouple K J E N T R B For all channel |
| | | Thermal resistance Pt100 JPt100 Cu100 Ni120 For all channel |
| | Precision | Thermocouple 0.15% Full scale + cold compensation |
| | | Thermal resistance 0.3% Full scale |
| Sampling cycle | 25ms/channel 100ms/8channels 100ms/4 channels | |
| Control output | Output form | Transistor output (SSR drive output) |
| | Output channel | 10 channels |
| | Control action | Manual, ON /OFF, single PID, heating & cooling PID, position proportional PID |
| Alarm output | Alarm form | 14 alarms, such as upper and lower limit alarm, deviation alarm and so on. |
| | Output form | Transistor output (SSR drive output) |
| | Output channel | 10 channels |
| Control cycle | 0.1s - 10s or 1s - 100s | |
| Acquisition channel | 10 channels | |
| Isolation | Exist between power and communication, power and channel, communication and channel, channel and channel | |
| Communication port | EtherCAT | |
| Generals | Ambient temperature | Working: -20 ~ 60°C, storage: -40 ~ 70°C |
| | Ambient humidity | Working: 10 ~ 90% RH (no condensation), keeping: 5 ~ 95% RH (no condensation) |
| | Altitude | Below 2000m |
| | Protection level | IP20 |
| C & S | Conform to IEC/EN 61326-1 For use in industrial locations CE | |

| Mdel | Acquisition channel | Temperature control output | Alarm output | Input type |
|-------------|---------------------|----------------------------|--------------|------------|
| MTCE-10T-NT | 10-CH | Transistor | Flag bit | TC |
| MTCE-10R-NT | 10-CH | Transistor | Flag bit | RTD |

MCAS series temperature controller takes the lead in realizing the self-tuning PID and calibration parameters of cascade control in the industry based on the advanced self-tuning and self-learning control algorithm, which greatly simplifies the debugging of complex cascade control.



Cascade control A single module supports 4-channel cascade temperature control

High performance 0.1s sampling cycle

High precision Measure accuracy: full scale of $\pm 0.15\%$; cascade control accuracy: ± 0.5



| Item | Description | |
|---------------------|--|---|
| Power supply | 24VDC -15% ~ 20% | |
| Signal input | Input type | Thermocouple K J E N T R B For all channel |
| | | Thermal resistance Pt100 JPt100 Cu100 Ni120 For all channel |
| | Precision | TC 0.15% Full scale + cold compensation RTD 0.3% Full scale |
| Sampling cycle | 25ms/channel 100ms/8channels 100ms/4 channels | |
| Control output | Output form | Transistor output (SSR drive output) |
| | Output channel | 4/8 channels |
| | Control action | Manual, ON /OFF, single PID, heating & cooling PID, position proportional PID |
| Alarm output | Alarm form | 14 alarms, such as upper and lower limit alarm, deviation alarm and so on. |
| | Output form | Transistor output (SSR drive output) |
| | Output channel | 4/8 channels (Transistor) |
| Control cycle | 0.1s - 10s or 1s - 100s | |
| Acquisition channel | 6/8 channels | |
| Isolation | Exist between power and communication, power and channel, communication and channel, channel and channel | |
| Communication port | One isolated + one non-isolated RS485 serial port, one Ethernet port; support MODBUS slave protocol | |
| Generals | Ambient temperature | Working: -20 ~ 60°C, storage: -40 ~ 70°C |
| | Ambient humidity | Working: 10 ~ 90% RH (no condensation), keeping: 5 ~ 95% RH (no condensation) |
| | Altitude | Below 2000m |
| | Protection level | IP20 |
| C & S | Conform to IEC/EN 61326-1 For use in industrial locations UL61010-1 CE UL | |

| Model | Acquisition channel | Temperature control output | Alarm output | Input type |
|-------------|---------------------|--|-----------------------------|------------|
| MCAS-06-NI | 6-CH | Current (6-CH 0-20mA or 4-20mA) | Flag bit | TC, RTD |
| MCAS-06-NV | 6-CH | Voltage (6-CH 0-1V 0-5V 0-10V or 1-5V) | Flag bit | TC, RTD |
| MCAS-08-NI | 8-CH | Current (6-CH 0-20mA or 4-20mA) | Flag bit | TC, RTD |
| MCAS-08-NV | 8-CH | Voltage (8-CH 0-1V 0-5V 0-10V or 1-5V) | Flag bit | TC, RTD |
| MCAS-08-NTT | 8-CH | Transistor (8-CH) | Transistor (8-CH), flag bit | TC, RTD |

