Improve your machine performance

Modicon M258
Performance Logic controller
Imagine what total flexibility can do for your business...

The Modicon™ M258 Logic controller is a compact, high-performance, and fully expandable PLC. It is a part of our Flexible Machine Control approach, a key component of our MachineStruxure™ solution which offers you maximum flexibility and optimized control of your machines. With features such as speed control, counting, axis control, and communication functions, the Modicon M258 Logic Controller is developed specifically for machine builders (OEMs) in the packaging, conveying/storage, textile, and woodworking machine industries.

- **Compact I/O Modules**: From 20 to 42 I/O, digital and/or analog
- **Compact I/O**: From 2 to 12 I/O, digital, analog, export
- **Compact I/O**: From 2 to 12 I/O, digital, analog, export
- **Compact I/O**: From 2 to 12 I/O, digital, analog, export
- **Remote/distributed flexibility**: Expansion I/O bus and/or CANopen bus for performance everywhere
- **Remote I/O synchronized with local I/O**: Flexible configuration: distributed I/O stands via the CANopen bus or remote I/O islands via the MTS expansion bus
- **Homogeneous Modicon TM5/ IP 20 modular I/O system and Modicon TM7 IP 67 modular I/O system** ranges can be used in rack or in remote I/O
- **Transparent and quick diagnostics with SoMachine software**

**30% The savings you can achieve in assembly, wiring and, commissioning**

- **Integrated machine flexibility**
  - High-speed counting: 8 integrated high-speed counters at 200 kHz each
  - A complete range of counting expansion modules
  - Inverter control: Through built-in Modbus serial line
  - Positioning:
    - Through built-in CANopen Master
    - CANopen application protocol
  - Temperature control:
    - Through built-in Modbus serial line
    - CANopen application protocol
  - Integrated regulation function blocks
  - Through a wide range of temperature modules and integrated regulation function blocks

- **Local flexibility**
  - The cost of a compact controller:
    - The flexibility of a modular controller
    - Module: compact controller
    - A complete range of counting expansion modules
    - Inverter control: Through built-in Modbus serial line
    - Positioning:
      - Through built-in CANopen Master
      - CANopen application protocol
    - Temperature control:
      - Through built-in Modbus serial line
      - CANopen application protocol
    - Integrated regulation function blocks
    - Through a wide range of temperature modules and integrated regulation function blocks

- **Remote/distributed flexibility**
  - Expansion I/O bus and/or CANopen bus for performance everywhere
  - Remote I/O synchronized with local I/O
  - Flexible configuration: distributed I/O stands via the CANopen bus or remote I/O islands via the MTS expansion bus
  - Homogeneous Modicon TM5/ IP 20 modular I/O system and Modicon TM7 IP 67 modular I/O system** ranges can be used in rack or in remote I/O
  - Transparent and quick diagnostics with SoMachine software

**Speed up machine performance**
- **Basic processing time**: 22 ns/inst
- **Program memory**: 128 K instructions
- **RAM**: 64 Mb
- **Flash memory**: 128 Mb
- **Capacity**: 128 Mb
- **Performance**: Basic processing time: 22 ns/inst

- **Integrated regulation function blocks**
  - Through a wide range of temperature modules and integrated regulation function blocks

- **Embedded Ethernet: Performance and openness**
  - 10/100 Mb available protocols:
    - Ethernet TCP Modbus
    - SoMachine protocol
  - CANopen® configurator integrated in SoMachine software
  - PLCopen motion software integrated in SoMachine

- **Ethernet Network**
  - RS485
  - RS422
  - RS232
  - USB-A port for memory transfer
data files and, key for programme transfer

- **Cordset for Data Terminal Equipment (DTE)**
  - Up to 40 modules
  - Up to 2500 meters
  - Up to 25 islands
  - Up to 2500 meters

- **Remote I/O**
  - Up to 62.5 mm long

- **Compact I/O Modules**
  - From 20 to 42 I/O, digital and/or analog
  - From 2 to 12 I/O, digital, analog, export

- **Remote/Remote I/O**
  - Up to 62.5 mm long
  - Up to 12.5 mm long

**Openness thanks to two expansion buses**
- Expansion I/O bus and/or CANopen bus for performance everywhere

**Remote I/O synchronized with local I/O**
- Flexible configuration: distributed I/O stands via the CANopen bus or remote I/O islands via the MTS expansion bus
- Homogeneous Modicon TM5/ IP 20 modular I/O system and Modicon TM7 IP 67 modular I/O system** ranges can be used in rack or in remote I/O
- Transparent and quick diagnostics with SoMachine software
## Modicon M258 selection guide

**Logic controller compact bases**

<table>
<thead>
<tr>
<th>Power supply</th>
<th>24 VDC</th>
<th>24 VDC</th>
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<th>24 VDC</th>
<th>24 VDC</th>
<th>24 VDC</th>
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</tbody>
</table>

**Ethernet**

| CANopen Master | - | - | - | - | - | - |
| Serial link | - | - | - | - | - | - |
| USB ports (USB A - USB mini B) | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 | 1:1 |
| PCI slots | 0 | 2 | 0 | 2 | 0 | 2 |

**Digital inputs**

<table>
<thead>
<tr>
<th>Digital outputs</th>
<th>26/24 VDC - 8/200 kHz</th>
<th>26/24 VDC - 8/200 kHz</th>
<th>26/24 VDC - 8/200 kHz</th>
<th>26/24 VDC - 8/200 kHz</th>
<th>26/24 VDC - 8/200 kHz</th>
<th>26/24 VDC - 8/200 kHz</th>
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</thead>
<tbody>
<tr>
<td>16 Trans 0.5A</td>
<td>16 Trans 0.5A</td>
<td>16 Trans 0.5A</td>
<td>4 trans 0.5A / 12 Rdys</td>
<td>16 Trans 0.5A</td>
<td>26 Trans 0.5A</td>
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</tr>
</tbody>
</table>

**Analog inputs**

| Analog outputs | - | - | - | - | - | - |
| Number of expansions | 250 | 250 | 250 | 250 | 250 | 250 |

**References**

<table>
<thead>
<tr>
<th>TM258LD42DT</th>
<th>TM258LD42DT4L</th>
<th>TM258LF42DT</th>
<th>TM258LF42DT4L</th>
<th>TM258LF66DT4L</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Channels</td>
<td>4 Channels</td>
<td>6 Channels</td>
<td>8 Channels</td>
<td>12 Channels</td>
</tr>
<tr>
<td>Removable spring terminal block</td>
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</tbody>
</table>

**Digital I/O expansion modules**

<table>
<thead>
<tr>
<th>Connections</th>
<th>24 VDC sink/source inputs</th>
<th>100-240 VAC inputs</th>
<th>100-120 VAC inputs</th>
<th>0.5A Source transistor outputs</th>
<th>2A Source transistor outputs</th>
<th>300VDC/230VAC relay outputs + 0.5A relay</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-240 VAC inputs</td>
<td>4 Inputs / 0-20mA / -10V/+10V</td>
<td>4 Channels</td>
<td>-</td>
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<tr>
<td>12 Relays outputs - 0.5A</td>
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</tr>
<tr>
<td>6 Channels</td>
<td>8 Channels</td>
<td>12 Channels</td>
<td>8 Inputs / 4 Outputs</td>
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</table>

**Analog expansion modules**

<table>
<thead>
<tr>
<th>Connections</th>
<th>Number of inputs and/or outputs</th>
<th>±10V/0-20mA</th>
<th>±10V/0-20mA/4-20mA</th>
<th>±10V/0-20mA</th>
<th>±10V/0-20mA/4-20mA</th>
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<td>-</td>
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</tr>
</tbody>
</table>

**Expert modules**

<table>
<thead>
<tr>
<th>Number of counter channels/frequency</th>
<th>1 Channel / 100 kHz</th>
<th>1 Channel / 250 kHz</th>
<th>1 Channel / 50 kHz</th>
<th>2 Channels / 100 kHz</th>
<th>2 Channels / 50 kHz</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 x 24 DC auxiliary inputs 24V DC encoder power supply</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>TM5SE1C10502</td>
</tr>
<tr>
<td>2 x 24 DC auxiliary inputs 5V DC encoder power supply</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>TM5SE1C10502</td>
</tr>
</tbody>
</table>

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