

Improve your machine performance

Modicon M258
Performance Logic controller



SoMachine™

> 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.

- Core 1 User Logic
 - Core 2 Comm
 - RAM 64Mb
 - Flash 128Mb
- Ethernet
CANopen
MODBUS

> Improve your machine performance

- > Basic processing time: 22 ns/Inst
- > Programme memory: 128 K instructions
- > RAM: 64 Mb
- > Flash memory: 128 Mb
- > 8 embedded high-speed counters (200 kHz each)

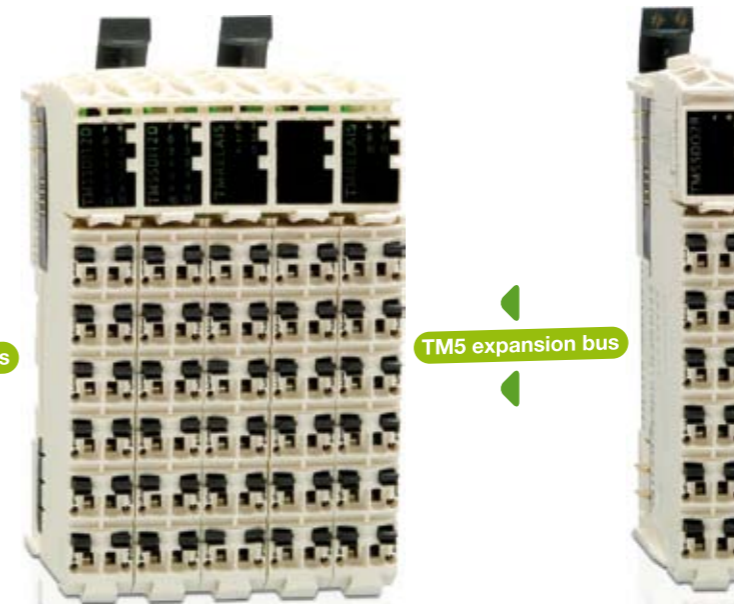


- Speed up machine design**
 - > SoMachine™ software:
 - 6 Programming Languages (IEC 1131-3)
 - Function blocks
 - Tested, validated, documented architectures
 - Maximize operation and reduce maintenance
 - Diagnosis through transparency and remote access
- Embedded Ethernet: Performance and openness**
 - > 10/100 Mb Available protocols:
 - Ethernet IP device
 - Ethernet TCP Modbus
 - SoMachine protocol
 - +
 - Embedded FTP server
 - Embedded web server
- Embedded CANopen Master**
 - > Flexibility for your distributed architectures:
 - Up to 32 slaves
 - Up to 1 Mb
 - > Speed up machine design:
 - CANopen® configurator integrated in SoMachine software
 - PLCopen motion libraries
- Save time in programming and commissioning**
 - > Thanks to our two standard USB ports:
 - Mini-USB B port for SoMachine programming software
 - USB-A port for memory key for programme, firmware, data files transfer
 - > Speed: 480 Mbits/s
- Openness through Modbus serial network**
 - > Openness thanks to two standard protocols:
 - Modbus Master/slave
 - Character RS232 or RS485
 - > Data Terminal Equipment (DTE: printer, bar code scanner...)
 - > Cordset for Data Communication Equipment (DCE: modem, converter...)



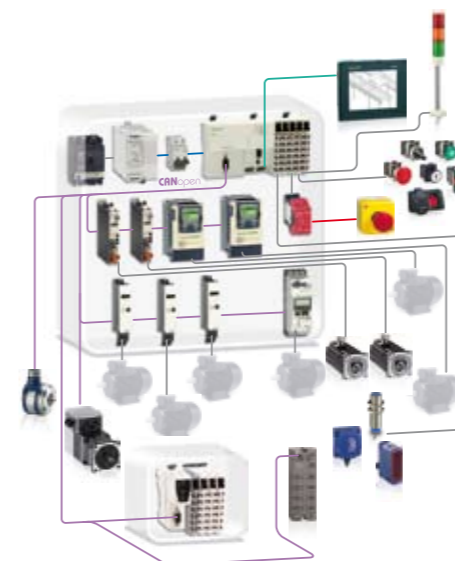
- > **Compact I/O Modules**
 - From 20 to 42 I/O
 - Digital and/or analog
- > **Saving space**
 - 62.5 mm long

- > **Slice I/O Modules**
 - From 2 to 12 I/O
 - Digital, Analog, Expert
- > **Saving space**
 - 12.5 mm long



> 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
 - Through built-in CANopen Master
- > Positioning
 - Through built-in CANopen Master and PLCopen function blocks
- > Temperature control
 - Through a wide range of temperature modules and integrated regulation function blocks



> Local flexibility

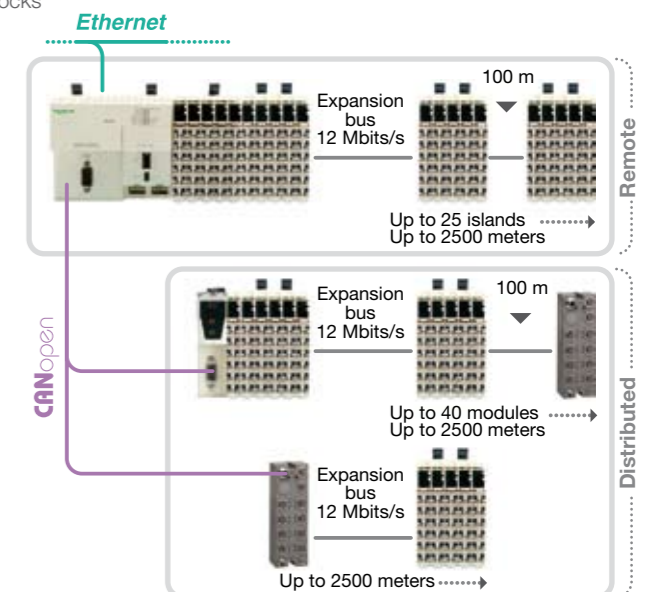
The cost of a compact controller The flexibility of a modular controller

- > Compact I/O modules:
 - Low cost
 - High density
- > Slice I/O modules:
 - Fine tuning
 - Hot swap
 - Modularity from 2 to 12 channels
- > Removable terminal blocks
- > Spring terminals

> 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 islands via the CANopen bus or remote I/O islands via the TM5 expansion bus
- > Homogenous: 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
- > Transparency and quick diagnostics with SoMachine software



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

> Modicon M258 selection guide

Logic controller compact bases

Power supply	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC	24 VDC
Ethernet ¹	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)
CANopen Master	-	-	1 (Sub-D9)	1 (Sub-D9)	1 (Sub-D9)	1 (Sub-D9)
Serial link	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)	1 (RJ45)
USB Ports (USB A- USB mini B)	1-1	1-1	1-1	1-1	1-1	1-1
PCI slots ²	0	2	0	2	2	2
Digital inputs	26/24 VDC - 8/200 kHz	26/24 VDC - 8/200 kHz	26/24 VDC - 8/200 kHz	26/24 VDC - 8/200 kHz	26/24 VDC - 8/200 kHz	38/24 VDC - 8/200 kHz
Digital outputs	16 Trans 0.5A	16 Trans 0.5A	16 Trans 0.5A	4 trans 0.5A / 12 Relays	16 Trans 0.5A	28 Trans 0.5A
Analog inputs	-	4 Inputs / 0-20mA / 4-20mA / -10V/+10V	-	-	4 Inputs / 0-20mA / 4-20mA / -10V/+10V	4 Inputs / 0-20mA / 4-20mA / -10V/+10V
Max. number of expansions	250	250	250	250	250	250
References	TM258LD42DT	TM258LD42DT4L	TM258LF42DT	TM258LF42DR	TM258LF42DT4L	TM258LF66DT4L

(1) TCP Modbus - Ethernet-IP Device - Server Web/FTP - (2) Optional Communication modules: 1 (RS232); TM5PCRS2 / 1 (RS485); TM5PCRS4

Compact I/O expansion modules

Power supply	24 VDC	24 VDC	24 VDC	24 VDC
Digital inputs	12 Inputs - 24 VDC	24 Inputs - 24 VDC	24 Inputs - 24 VDC	12 Inputs - 24 VDC
Digital and relays outputs	8 Outputs - Trans 0.5A	12 Relays outputs - 0.5A	18 Outputs - Trans 0.5A	6 Outputs - Trans 0.5A
Analog inputs	-	-	-	4 Inputs / 0-20mA / 4-20mA / -10V/+10V
Analog outputs	-	-	-	2 Outputs / 0-20mA / -10V/+10V
References	TM5C12D8T	TM5C24D12R	TM5C24D18T	TM5C12D6T6L

Digital I/O expansion modules

Number of digital inputs and/or outputs	2 Channels	4 Channels	6 Channels	8 Channels	12 Channels	8 Inputs / 4 Outputs
Connections	Removable spring terminal block	Removable spring terminal block	Removable spring terminal block	Removable spring terminal block	Removable spring terminal block	Removable spring terminal block
24 VDC sink/source inputs	TM5SDI2D	TM5SDI4D	TM5SDI6D	-	TM5SDI12D	-
100-240 VAC inputs	TM5SDI2A	TM5SDI4A	-	-	-	-
100-120 VAC inputs	-	-	TM5SDI6U	-	-	-
0.5A Source transistor outputs	TM5SDO2T	TM5SDO4T	TM5SDO6T	-	TM5SDO12T	-
2A Source transistor outputs	-	TM5SDO4TA	-	TM5SDO8TA	-	-
30VDC/230VAC relay outputs + 5A relay	TM5SDO2R	TM5SDO4R	-	-	-	-
24 VDC sink/source inputs + 0.5A relay outputs	-	-	-	-	-	TM5SDM12DT
100-240 VAC outputs 1.0 A coded 3 wires (1 Amp)	TM5SDO2S	-	-	-	-	-

Analog expansion modules

Number of inputs and/or outputs	2 Inputs	4 Inputs	6 Inputs	2 Outputs	4 Outputs
Connections	Removable spring terminal block	Removable spring terminal block	Removable spring terminal block	Removable spring terminal block	Removable spring terminal block
±10V/0-20mA/4-20mA inputs - 12 bits	TM5SAI2L	TM5SAI4L	-	-	-
±10V/0-20mA/4-20mA inputs - 16 bits	TM5SAI2H	TM5SAI4H	-	-	-
±10V/0-20mA outputs - 12 bits	-	-	-	TM5SAO2L	TM5SAO4L
±10V/0-20mA outputs - 16 bits	-	-	-	TM5SAO2H	TM5SAO4H
J/K/S/N thermo-couple inputs-16 bits	TM5SAI2TH	-	TM5SAI6TH	-	-
PT100/1000 inputs - 16 bits	TM5SAI2PH	TM5SAI4PH	-	-	-

Expert modules

Number of counter channels/frequency	1 Channel / 100 kHz	1 Channel / 250 kHz	1 Channel / SSI 1 Mb	2 Channels / 100 kHz	2 Channels / 50 kHz
Event counting interval measurement	-	-	-	-	TM5SDI2DF
2 x 24V DC auxiliary inputs 24V DC encoder power supply	TM5SE1IC01024	-	-	TM5SE2IC01024	-
2 x 24V DC auxiliary inputs 5V DC encoder power supply	-	TM5SE1I02505	TM5SE1SC10005	-	-

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