

# Performance and accuracy for your applications...

Modicon LMC058

Intelligence integrated in a motion controller



SoMachine

**Schneider**  
Electric

# > A motion controller and a logic controller in one product

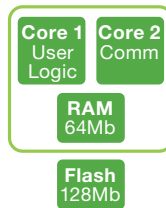
Modicon LMC058 is the newest compact and expandable programmable automation controller from Schneider Electric. Based on the flexible machine control platform by Schneider Electric, the LMC058 motion controller was developed for machine builders (OEMs) who design machines for packaging, conveying and/or storage, textile, and woodworking by offering them motion control for synchronized axis, speed control, high-speed counting, and communication networks.

The Modicon LMC058 motion controller is ideal for OEMs that require performance, simplicity in installation, and evolution.



## Improve your machine performance

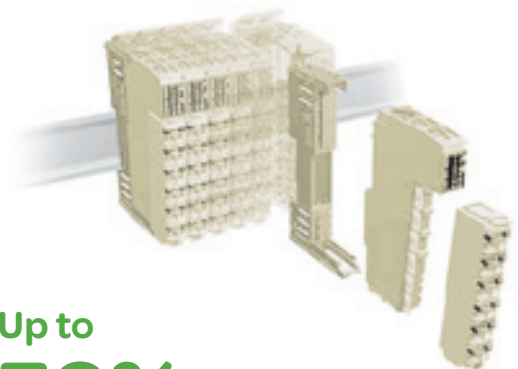
- > 4 synchronized axis in 2ms
- > Up to 8 synchronized axis
- > CANmotion bus master embedded
- > CANopen bus master embedded
- > Encoder master Input embedded
- > 8 high-speed counters embedded (200kHz each)



- > **Compact IO modules**  
From 20 to 42 I/O digital and/or analog
- > **Slice IO Modules**  
From 2 to 12 I/O digital, analog, expert
- > **Saving space**  
62.5 mm larger for 42 I/O
- > **Saving space**  
12.5 mm larger for 12 I/O

## Standard and advanced motion control functions

- > Relative and absolute positioning
- > Velocity control
- > Homing
- > Virtual axis
- > CAM profiles
- > Electronic gear
- > Interpolation
- > Shift compensation



Up to  
**30%**  
faster in  
assembly,  
wiring, and  
commissioning

1

### Speed up machine design

SoMachine software motion and logic program in:

- 6 programming languages (IEC 1131-3)
- Function blocks
- Came profile editor
- Commissioning tools such as trace, oscilloscope

2

### Ethernet-embedded: performance & openness

10/100 Mbps/s available protocols:

- Ethernet IP device
- Ethernet TCP modbus
- SoMachine Protocol

+

- FTP server embedded
- Web server embedded

3

### CANopen master embedded

Flexibility for your distributed architectures:

- Up to 63 slaves
- Up to 1 Mbps/s

Speed up machine design:

- CANopen configurator integrated in SoMachine software
- PLC open motion libraries

4

### Save time in programming and commissioning

Standard USB ports:

- Mini-USB B port for SoMachine programming software
- USB-A port for memory key for program, firmware, data files transfer

Speed: 480 Mbps/s

5

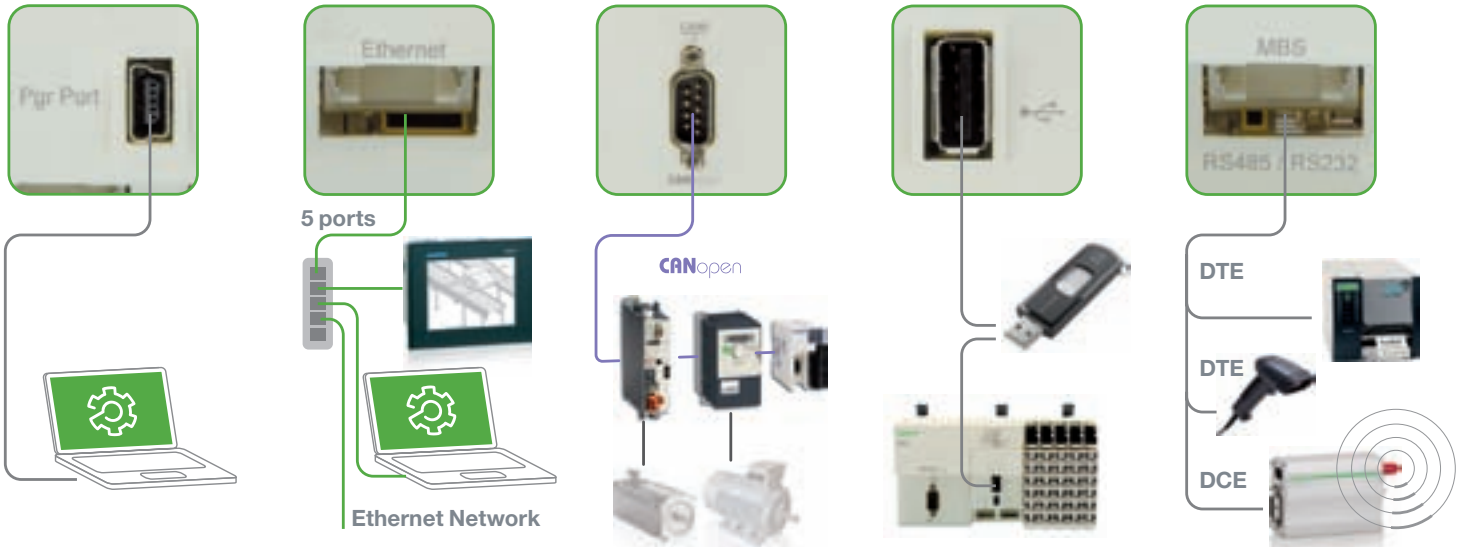
### Serial line embedded

Two standards protocols:

- Modbus master/slave
- Character RS232 or RS485

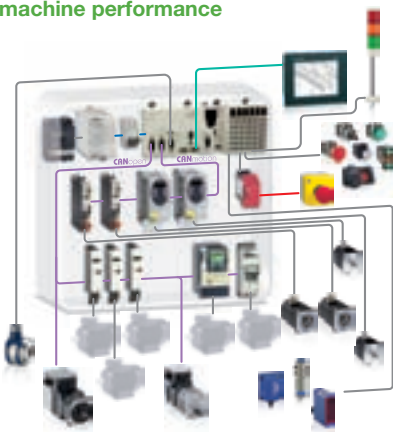
Data terminal equipment (DTE: printer, bar code scanner...)

Cordset for data communication equipment (DCE: modem, converter...)



## > Built-in motion bus

CANmotion and CANopen masters ready to use for machine performance



## > Local flexibility

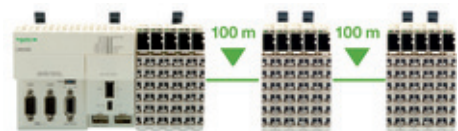
The **COST** of a compact controller, the **FLEXIBILITY** of a modular controller

- Compact IO modules:
  - Low cost
  - High density
- Slice IO modules:
  - Hot swap
  - Modularity from 2 to 12 channels
- Removable terminal blocks
- Spring terminals
- Hot swap
- Daisy chain on LEXIUM 32 ServoDrives

## > Remote flexibility

TM5 I/O BUS because performance must be everywhere

- Baudrate: 12 MBit/s
- Modules max : 250 Modules
- Distance max. entre 2 stations : 100 m
- Minimum cycle time: 100 µs
- Remote IOs synchronized with local IOs



**Ethernet, CANopen, CANmotion**

For simplicity, efficiency, integration



SoMachine



Packaging



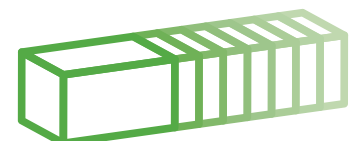
Conveying

90



80

158



Up to 250 I/O modules

# > Modicon LMC058 selection guide

## Logic controller compact bases

Power supply	24 VDC	24 VDC
Ethernet <sup>1</sup>	1 (RJ45)	1 (RJ45)
CANmotion master	1 (Sub-D9)	1 (Sub-D9)
Encoder master	1 (Sub-D15)	1 (Sub-D15)
CANopen master	1 (Sub-D9)	1 (Sub-D9)
Serial link	1 (RJ45)	1 (RJ45)
USB Ports (USB A - USB mini-B)	1-1	1-1
PCI slots <sup>2</sup>	0	2
Digital inputs	26/24 VDC - 8/200 KHz	26/24 VDC - 8/200 KHz
Digital outputs	16 Trans 0.5A	16 Trans 0.5A
Analog inputs	-	4 Inputs / 0-20mA / 4-20mA / -10V/+10V
Max. number of expansions	250	250
References	<b>LMC058LF42S0</b>	<b>LMC058LF42S0</b>

(1) TCP Modbus - Ethernet-IP device - Server WEB / FTP - (2) Option communication module

## 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 outputs	8S Trans 0.5A	16S Trans 0.5A	18S Trans 0.5A	6S Trans 0.5A
Analog inputs	-	-	-	4 Inputs / 0-20mA / 4-20mA / -10V/+10V
Analog outputs	-	-	-	2 Outputs / 0-20mA / -10V/+10V
References	<b>TM5C12D8T</b>	<b>TM5C24D12R</b>	<b>TM5C24D18T</b>	<b>TM5C12D6T6L</b>

## 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	<b>TM5SDI2D</b>	<b>TM5SDI4D</b>	<b>TM5SDI6D</b>	-	<b>TM5SDI12D</b>	-
100-240 VAC inputs	<b>TM5SDI2A</b>	<b>TM5SDI4A</b>	-	-	-	-
100-120 VAC inputs	-	-	<b>TM5SDI6U</b>	-	-	-
0.5A source transistor outputs	<b>TM5SDO2T</b>	<b>TM5SDO4T</b>	<b>TM5SDO6T</b>	-	<b>TM5SDO12T</b>	-
2A source transistor outputs	-	<b>TM5SDO4TA</b>	-	<b>TM5SDO8TA</b>	-	-
30VDC/230VAC relay outputs + 5A relay	<b>TM5SDO2R</b>	<b>TM5SDO4R</b>	-	-	-	-
24 VDC sink/source inputs + .5A relay outputs	-	-	-	-	-	<b>TM5SDM12DT</b>

## 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	<b>TM5SAI2L</b>	<b>TM5SAI4L</b>	-	-	-
±10V/0-20mA/4-20mA inputs - 16 Bits	<b>TM5SAI2H</b>	<b>TM5SAI4H</b>	-	-	-
±10V/0-20mA outputs - 12 Bits	-	-	-	<b>TM5SAO2L</b>	<b>TM5SAO4L</b>
±10V/0-20mA outputs - 16 Bits	-	-	-	<b>TM5SAO2H</b>	<b>TM5SAO4H</b>
J/K/S/N Thermo-couple inputs-16 bits	<b>TM5SAI2TH</b>	-	<b>TM5SAI6TH</b>	-	-
PT100/1000 inputs - 16 bits	<b>TM5SAI2PH</b>	<b>TM5SAI4PH</b>	-	-	-

## Communication PCI modules

Serial link	1 (RS232)	1 (RS485)	-
Profibus DP	-	-	1 (Slave)
References	<b>TM5PCRS2</b>	<b>TM5PCRS4</b>	<b>TM5PCDPS</b>

### Schneider Electric Industries SAS

Schneider Electric USA, Inc.  
1415 S. Roselle Road  
Palatine, IL 60067  
Phone: 847-397-2600  
Fax: 847-925-7500

Schneider Electric Canada  
19 Waterman Avenue  
Toronto, ON M4B 1Y2  
Tel: 1-800-565-6699

www.schneider-electric.us

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