

Flexibility for your applications...

Modicon M238

Intelligence integrated in the «Logic controller»



SoMachine

> A power center at the service of your machines...

Do you need power and flexibility in your small automation systems? The Modicon M238 programmable controllers and the SoMachine software provides simple and intelligent solutions to meet all your business needs.

+ intelligence



> Simplify machine programming...

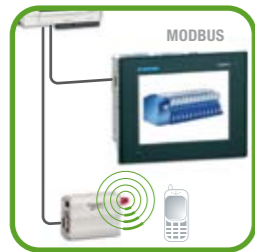
> **SoMachine**
Program your M238 Modicon controllers easily with the SoMachine software integrating 6 programming languages, ready-to-use automation system function libraries, powerful memory management, powerful debugging functions and preset debugging screens.

+ communication



> Pilot control equipment...

> Opt for fast exchanges with **CANopen**. Its openness also provides access to efficient and fast communication with numerous products.



> Exchange data easily...

> Communicate with your automation equipment such as XBT graphic terminals, ATV variable speed controllers or monitor your equipment remotely via integrated communication ports.



+ integration



> Closer to your core business...

> Pilot your servo motor or synchronous motors efficiently using integrated business functions, application function blocks, motion function blocks and dedicated function blocks (fast counting HSC, PTO Pulse Train Output, PWM Pulse Width Modulation).

The compact logic controller solution can also be used for extensive cabling flexibility with input/output extension modules. A number of connection possibilities are offered such as removable screw block terminals, spring terminal blocks and HE 10 type connectors for simple, fast and secure cabling.

Discrete extension module



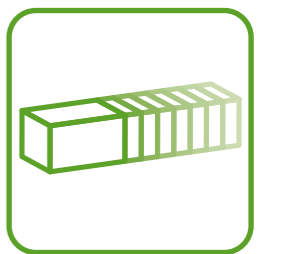
Digital extension module



Fast counting Extension module



+ upgradeable



> up to 7 extension modules...

> Adapt your configuration to perfectly suit your needs with powerful, efficient and economical extension modules

- Discrete I/O
- Analog I/O for measurement values for:
 - PT 100/PT 1000 temperature
 - current
 - voltage
- Fast I/O counting for measurement values for:
 - frequency
 - speed...

> Easy to integrate:

- Intuitive software and offline debugging
- Ready-to-use and customizable business functions

> Powerful:

- Fast counting and integrated PWM/PTO control
- Complex calculations
- Extended memory

> Open and communicative:

- 1 USB port
- 2 serial links
- 1 integrated field bus
- Link to the upper level via gateways

> Compact and economical:

- Minimum volume
- Removable connection
- Adapts perfectly to needs

> Flexible and modular:

- 15 discrete modules and 12 extension analog modules
- Motion control and remote outputs/inputs by field bus



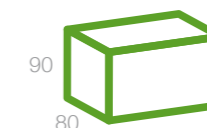
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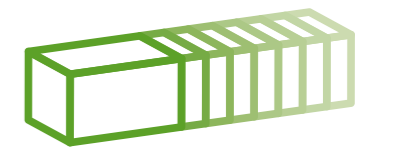
Packaging



Conveying



90
80
158



Up to 7 extension modules

> Modicon M238 selection guide

Logic controller compact bases

Max. number of expansions	7	7
Power supply	24 VDC	24 VDC
Serial link	1	2
CANopen master	-	1
Inputs	14 / 24VDC - 8/100kHz	14 / 24VDC - 8/100kHz
Outputs	10 trans.0.5A 4/100kHz	10 trans.0.5A 4/100kHz
References	TM238LDD24DT	TM238LDFC24DT

Fast counting extension module

Number of modules per controller	3 max.	3 max.
Number of channels	2	2
Number of inputs per channel	6 / 60 kHz	6 / 60 kHz
Number of outputs per channel	2 (reflex actions)	2 (reflex actions)
Connection	Removable screw terminal block	Removable spring terminal block
Reference	TM200HSC206DT	TM200HSC206DF

Network/ bus communication

Ethernet	499TWD01100 ⁽¹⁾
Net Device	LUF9 ⁽¹⁾
DP Profibus	LUF7 ⁽¹⁾

(1) Logic controller Modicon M238 connection by cable VW348306R.. to order separately.

Analog extension module*

Number of inputs and/or outputs	2 I	8 I	4 I	2 I / 10	1 O	2 O
Connections	Removable screw terminal block					
Inputs	range	0 ... 10 V 4 ... 20 mA ⁽¹⁾	0 ... 10 V 0 ... 20 mA ⁽¹⁾	0 ... 10 V 0 ... 20 mA ⁽¹⁾ Pt100/1000 Ni100/1000	0 ... 10 V 4 ... 20 mA ⁽¹⁾	-
	resolution	12 bits (4096 points)	10 bits (1024 points)	12 bits (4096 points)	12 ou 11 bits + signe (4096 points)	-
Outputs	range	-	-	-	0 ... 10 V 4 ... 20 mA ⁽¹⁾	+ou-10 V
	resolution	-	-	-	12 bits (4096 points)	12 bits (4096 points) 11 bits + signe (2048 points)
Measurement precision	0,2 % PE					
Power supply voltage	24 VDC					
Dimensions L x D x H	23.5 x 70 x 90 mm					
References	TM2AMI2HT	TM2AMI8HT	TM2AMI4LT	TM2AMM3HT	TM2AMO1HT	TM2AV02HT

* Other references are available, see the TM2 catalogue...

(1)Non-differential

Discrete I/O extension module

Number of discrete inputs/outputs	8	16		32	4 I / 4 O	16 I / 8 O
Connections	Removable screw terminal block	Removable screw terminal block	HE10 connectors	HE10 connectors	Removable screw terminal block	Fixed spring terminal block
Ref: 24 VDC sink/source inputs	TM2DDI8DT	TM2DDI16DT	TM2DDI16DK	TM2DDI32DK	-	-
120 VAC inputs	TM2DAI8DT	-	-	-	-	-
2 A relay outputs	TM2DRA8RT	TM2DRA16RT	-	-	-	-
0.1 A source transistor outputs	TM2DDO8TT ⁽¹⁾	-	TM2DDO16TK ⁽¹⁾	TM2DDO32TK ⁽¹⁾	-	-
24 VDC sink/source inputs + 2 A relay outputs	-	-	-	-	TM2DMM8DRT	TM2DMM24DRF

(1) Also comes in version: sink transistor outputs (TM2DDO8UT, TM2DDO16UK and TM2DDO32UK)

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