Logic controllers

Modicon Easy M200

2-axis motion control, for simple machines up to 188 I/O

Catalog

January 2015

Schneider Electric

Contents

Modicon™ Easy M200 logic controllers

Modicon Easy M200 logic controllers

Introduction, applications
A user-oriented range of products

Compatibility of offers

Modicon Easy M200 logic controllers

> Modicon TM3 expansion modules

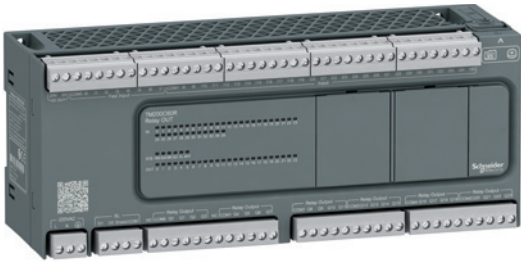
> Modicon TM2 expansion modules

> SoMachine Basic EL software

16 I/O channels
110 x 70 x 90 mm (W x H x D)
(*4.33 x 2.76 x 3.55 in.*)

24 I/O channels and Ethernet port
130 x 70 x 90 mm (W x H x D)
(*5.12 x 2.76 x 3.55 in.*)

40 I/O channels and Ethernet port
175 x 70 x 90 mm (W x H x D)
(6.89 *x 2.76 x 3.55 in.*)



60 I/O channels
225 x 70 x 90 mm (W x H x D)
(8.86 *x 2.76 x 3.55 in.*)

Introduction

The new range of Modicon™ Easy M200 logic controllers comprises:
- ■ 6 logic controllers for 110...220 V ∿ power supply:
  - □ one model with 16 I/O
  - □ two models with 24 I/O (with or without Ethernet port)
  - □ two models with 40 I/O (with or without Ethernet port)
  - □ one model with 60 I/O
- ■ 10 logic controllers for 24 V ⎓ power supply:
  - □ two models with 16 I/O
  - □ four models with 24 I/O (with or without Ethernet port)
  - □ four models with 40 I/O (with or without Ethernet port)

This range is completed by optional (analog and digital) I/O and communication cartridges and by a complete set of I/O expansion modules (Modicon TM3 range).

A user-oriented range of products

The Modicon Easy M200 range of logic controllers has been designed to meet various customer requirements, specifically on the 4 following key points:

Fit for purpose

- ■ The right level of flexibility to suit your scalable needs without frills: the range embeds the attributes that a user might expect of a small PLC; the values of those attributes are limited to the “just enough”.

Easy throughout the whole life cycle

- ■ Easy to order thanks to the “just enough” number of references
- ■ Easy to mount and wire up
- ■ Easy to set up and program thanks to SoMachine Basic EL software
- ■ Easy to test and debug thanks to the standard USB port and removable terminal blocks
- ■ Easy to duplicate without special skills using the Micro SD memory card
- ■ Easy to maintain and update with its removable terminal block, USB downloading without mains power, and Micro SD memory card

Robustness

- ■ Inputs monitored to help protect against overvoltage
- ■ Transistor outputs monitored to help protect against short-circuits
- ■ DC power supply monitored to help protect against reverse polarity
- ■ Coated electronics for enhanced robustness in polluted environments

Widely available everywhere

- ■ Fast delivery through a large distribution network
- ■ Fast access to information and support through the Partner Relationship Management tool and a dedicated network of engineers

Applications

Designed for simple machines, the particularly small dimensions of Modicon Easy **M200** logic controllers are ideal for fitting in wall-mounted and floor-standing control system enclosures.

- ■ The Modicon Easy M200 (TM200C●●●● references) offer provides excellent connection capacity and customization options using I/O or communication cartridges without increasing the controller size.
- ■ **M200** controllers have an embedded Ethernet port meaning they can easily be integrated into control system architectures, for remote control and maintenance of machines by means of applications for tablets and PCs.
- ■ The functions embedded in M200 controllers minimize the cost of the machine: Modbus serial link, USB port dedicated to programming, and simple position control functions (high-speed counters and pulse train outputs with trapezoidal profile and S curve).
- ■ SoMachine Basic’s programming software is intuitive, making it quick to create applications.

Description: page 6 | References: page 7 | Ethernet Modbus/TCP network: page 9 | Compatibility: page 10

Modicon Easy M200 logic controllers
Control architecture for standalone machines

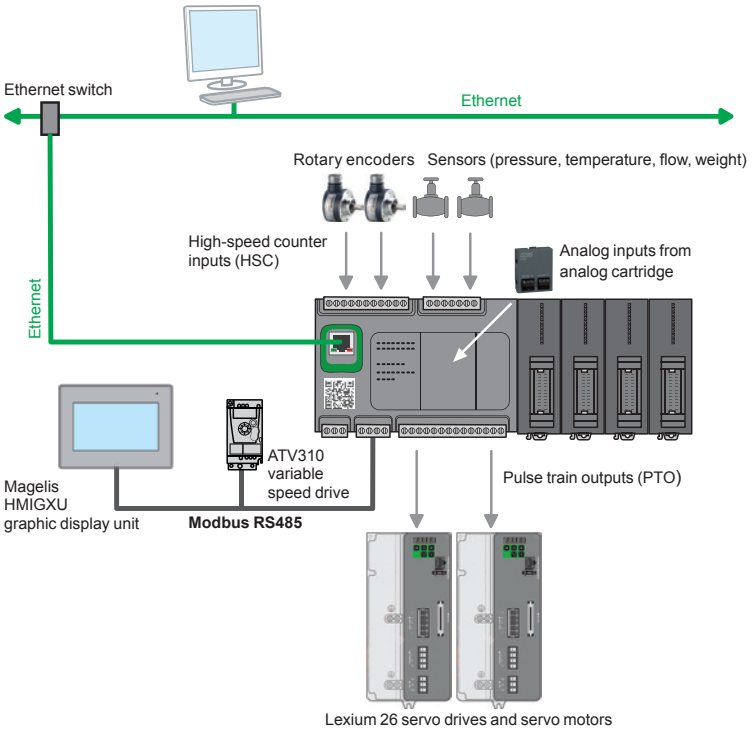
Control architecture for standalone machines

Typical applications: repetitive machines

The M200 logic controller has been designed to be used in the following sectors and for the following repetitive machines:

- ■ Textiles
  - □ Feeding machine
  - □ Ring machine
  - □ Blending machine
- ■ Machine tools
  - □ Grinding machine
  - □ Punching machine
  - □ Draw bench
- ■ Packaging
  - □ Vertical or horizontal form fill seal machines (VFFS or HFFS)
  - □ Labeling machine
- ■ HVAC
  - □ Exchange station
  - □ Air cooling system
  - □ Water-cooling screw machine
- ■ Pumping
  - □ Pumping station
  - □ Pressure filter machine
- ■ Plastic & rubber
  - □ Extruder
  - □ Plastic pipe cutting machine
  - □ Mold cutting machine

Control architecture with Modicon Easy M200 logic controller



Modicon Easy M200 logic controllers
Main features
Embedded communication

Main features *(1)*

Processing power

- Execution speed: 0.2 µs/Boolean instruction
- Program: 10 K list instructions
- Number of words: 8,000%MW
- Number of internal bits: 1024%M
- Permanent memory: 3,000 words (%MW0 to %MW2999)
- Application structure:
  - master task: 1 task configurable as freewheeling or cyclic
  - auxiliary task: 1 task configurable as timer cycle interrupt
  - interrupt task: 4 external tasks tripped by fast inputs and 4 high-speed counters

Supply characteristics

- Two power supplies are available (depending on the model):
  24 V ⎓ or 100...220 V ∿
- Voltage limit (ripple included): 20.4...28.8 V ⎓/85...264 V ∿
- Max. consumption:
  - 61-74 VA for AC power supply
  - 18 W for DC power supply

Connection of the embedded I/O

On removable screw terminal blocks at intervals of 5.08 mm /*0.2 in.*; 24 V DC sensor power output provided by the controller (TM200C●●R models only):

- 250 mA for 16 and 24 I/O
- 300 mA for 40 and 60 I/O

Programming

Modicon Easy M200 controllers are programmed with SoMachine Basic software. SoMachine Basic EL is an integral component of SoMachine software and is available as a free download from our website www.schneider-electric.com.

Environmental characteristics

- Degree of protection: IP 20 with protective cover in place

Product certification and conformity to standards

- CE certification
- Conformity to the main national and international standards concerning electronic industrial control devices (IEC/EN 61131-2, UL 508, and IEC/EN 61010-2-201)

Embedded communication

M200 logic controllers have 3 types of integrated communication port:

- Ethernet (depending on the model)
- RS 485 embedded serial link
- Mini-USB programming port

Communication on Ethernet network

TM200CE●●● controllers have an embedded RJ 45 Ethernet port (10/100 Mbps, MDI/MDIX) with Modbus TCP (8 servers/1 client).
As well as the default address based on the MAC address, a controller IP address can be assigned via a DHCP server or via a BOOTP server.

- The Ethernet port also offers application uploading, updating, and debugging functions when the controller is supplied with power.
- The integrity of applications is maintained by cybersecurity functions.
- A firewall allows each communication protocol to be locked.

SoMachine Basic software

Serial links

Each TM200C●●● controller has an embedded RS 485 serial link. This serial link also provides the functionality for loading, updating and development when the controller is powered up. The two main commercially-available protocols are embedded in this link:

- Modbus ASCII/RTU Master or Slave
- Character string (ASCII)

Software programming with power off charging function

The programming port, equipped with a USB mini-B connector, is embedded in each M200 controller; it is used to communicate with a PC equipped with SoMachine Basic EL for programming, debugging, and maintenance.
In addition, it offers the ability to upload an application program or update the firmware without the controller being powered by another source.

(1) For more information on our range of products, please visit our site: www.schneider-electric.com.

Description: page 6 | References: page 7 | Ethernet Modbus/TCP network: page 9 | Compatibility: page 10

Modicon Easy M200 logic controllers

Options for Modicon Easy M200 logic controllers I/O expansion with Modicon TM3 expansion modules

Digital cartridge

Analog I/O cartridges

Communication cartridges

M200 logic controller

Options for Modicon Easy M200 logic controllers

Cartridges

Depending on the controller size, one or two cartridges can be inserted on the front of Modicon Easy M200 controllers without increasing the dimensions:
- ☐ 1 cartridge for controllers with 16 and 24 I/O
- ☐ 2 cartridges for controllers with 40 and 60 I/O

3 types of cartridges are offered:
- ■ Digital I/O cartridges
- ☐ **TMCR2DM4U** for 2 digital inputs and 2 transistor sink outputs

- ■ Analog I/O cartridges
- ☐ **TMCR2AI2** for 2 analog inputs that can be configured as voltage or current
- ☐ **TMCR2TI2** for 2 temperature inputs
- ☐ **TMCR2AQ2V** for 2 voltage analog outputs
- ☐ **TMCR2AQ2C** for 2 current analog outputs
- ☐ **TMCR2AM3** for 2 analog inputs and 1 analog output

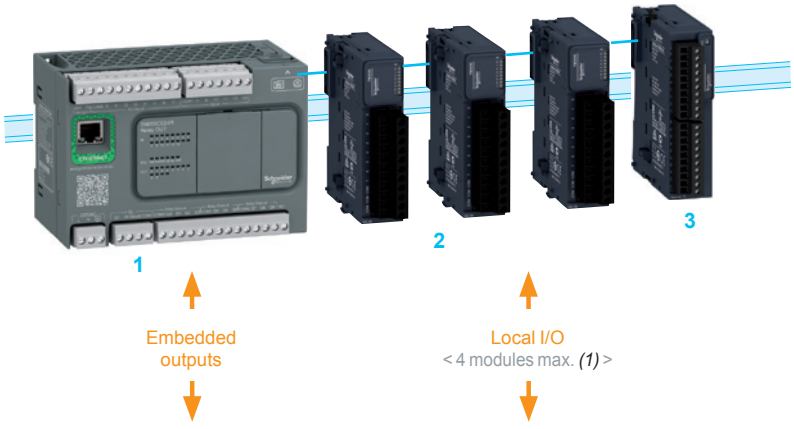
- ■ Communication cartridges
- ☐ **TMCR2SL1** cartridge providing additional serial port terminals for connection of a printer, barcode reader, etc.
- ☐ **TMCR2SL1A** cartridge providing additional isolated serial link
- ☐ Each controller can support one TMCR2SL1 or TMCR2SL1A serial link maximum.

I/O expansion with Modicon TM3 expansion modules

Modicon TM3 expansion modules

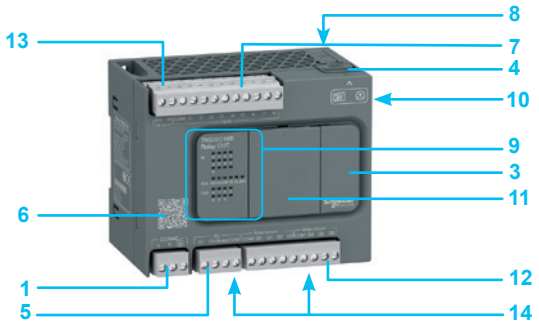
The capacity of M200 logic controllers can be enhanced with the Modicon TM3 expansion module offer:
- ☐ Digital I/O modules can be used to create configurations with up to 188 digital I/O. These modules are available with the same connections as the controllers.

- ☐ Analog I/O modules can be used to create configurations with up to 32 analog I/O and are designed to receive, amongst other things, position, temperature, and speed sensor signals. They are also capable of controlling variable speed drives or any other device equipped with a current or voltage input.

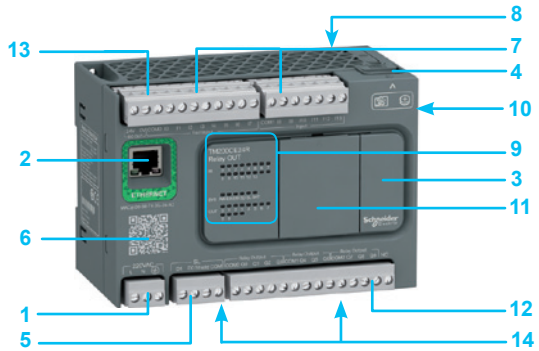


1 Modicon Easy M200 logic controller
2 Modicon TM3 digital I/O modules
3 Modicon TM3 analog I/O modules *(2)*

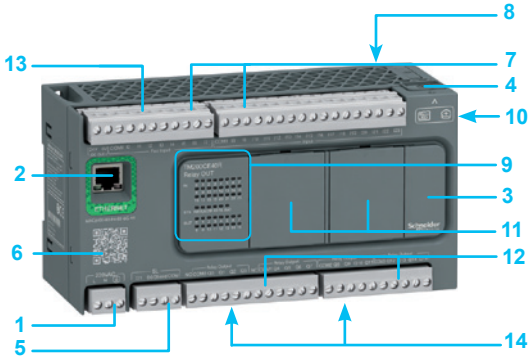
(1) Depending on type of TM3 module used (see page 10).
(2) Compatibility of expansion module offers: the majority of Modicon TM2 expansion modules can be used with M200 logic controllers. However, adding a Modicon TM2 expansion module to a configuration can increase expansion module execution times by a few milliseconds. The compatibility between Modicon TM2 expansion modules and each M200 logic controller is specified on page 10.



M200: 16 I/O



M200: 24 I/O and Ethernet port



M200: 40 I/O and Ethernet port

Description

M200 logic controllers (TM200C●●●)

1 Removable screw terminal block, 3 terminals for connecting the 24 V ⎓ or the 110...220 V ∿ power supply (depending on the model)

2 On TM200CE●●● controllers: RJ45 connector for Ethernet network, with exchange rate and activity LED

3 Behind the removable cover:
- USB mini-B connector for connecting a PC equipped with the SoMachine Basic software
- Run/Stop switch

4 Slot for Micro SD memory card

5 Serial link (RS 485): connector on removable screw terminal block

6 Controller technical documentation QR code

7 Connection of 24 V ⎓ digital inputs on removable screw terminal blocks

8 On top of the controller: slot for RTC battery

9 LED display block showing:
- the status of the controller and its components (battery, Micro SD memory card)
- serial link status
- I/O status

10 On the side of the controller: TM3 bus connector for the link with a Modicon TM3 expansion module

11 Slot(s) for I/O cartridge(s) or communication cartridge:
- one on M200 controllers with 16 and 24 I/O
- two on M200 controllers with 40 and 60 I/O

12 Connection of relay or transistor (depending on the model) digital outputs: on removable screw terminal blocks

13 Sensor power supply 24 V ⎓ output (TM200C●●●R models only)

14 Clip for locking on 35 mm/*1.38 in*. DIN rail

Modicon Easy M200 logic controllers

PF142035

TM200C16R

PF142039

TM200CE24R

PF142046

TM200C60R

PF142040

TM200C24U

PF142046

TM200C40U

PF142017

TM200CE40T

Modicon Easy M200 logic controllers (1)

Number of digital I/O	W x H x D (mm/*in.*)	Digital inputs	Digital outputs	Embedded communication ports (2)		Reference	Weight kg / *lb*
				Ethernet (RJ 45)	Serial link		
110...220 V ∿ power supply							
16 I/O	110 x 70 x 90/ *4.33 x 2.76 x 3.55*	9 sink/source 24 V ⎓ inputs, inc. 4 high-speed inputs for HSC and 4 fast inputs for FC	7 relay outputs	–	1	**TM200C16R**	0.359 / *0.791*
24 I/O	130 x 70 x 90/ *5.12 x 2.76 x 3.55*	14 sink/source 24 V ⎓ inputs, inc. 4 high-speed inputs for HSC and 4 fast inputs for FC	10 relay outputs	–	1	**TM200C24R**	0.405 / *0.893*
				1	1	**TM200CE24R**	0.413 / *0.911*
40 I/O	175 x 70 x 90/ *6.89 x 2.76 x 3.55*	24 sink/source 24 V ⎓ inputs, inc. 4 high-speed inputs for HSC and 4 fast inputs for FC	16 relay outputs	–	1	**TM200C40R**	0.504 / *1.111*
				1	1	**TM200CE40R**	0.512 / *1.129*
60 I/O	225 x 70 x 90/ *8.86 x 2.76 x 3.55*	36 sink/source 24 V ⎓ inputs, inc. 4 high-speed inputs for HSC and 4 fast inputs for FC	24 relay outputs	–	1	**TM200C60R**	0.700 / *1.543*
24 V ⎓ power supply							
16 I/O	110 x 70 x 90/ *4.33 x 2.76 x 3.55*	9 sink/source 24 V ⎓ inputs, inc. 4 high-speed inputs for HSC and 4 fast inputs for FC	7 sink outputs, inc. 5 regular transistor outputs and 2 fast outputs (PWM/PLS/PTO)	–	1	**TM200C16U**	0.339 / *0.747*
			7 source outputs, inc. 5 regular transistor outputs and 2 fast outputs (PWM/PLS/PTO)	–	1	**TM200C16T**	0.365 / *0.805*
24 I/O	130 x 70 x 90/ *5.12 x 2.76 x 3.55*	14 sink/source 4 V ⎓ inputs, inc. 4 high-speed inputs for HSC and 4 fast inputs for FC	10 sink outputs, inc. 8 regular transistor outputs and 2 fast outputs (PWM/PLS/PTO)	–	1	**TM200C24U**	0.382 / *0.842*
				1	1	**TM200CE24U**	0.391 / *0.862*
			10 source outputs, inc. 8 regular transistor outputs and 2 fast outputs (PWM/PLS/PTO)	–	1	**TM200C24T**	0.416 / *0.917*
				1	1	**TM200CE24T**	0.424 / *0.935*
40 I/O	175 x 70 x 90/ *6.89 x 2.76 x 3.55*	24 sink/source 24 V ⎓ inputs, inc. 4 high-speed inputs for HSC and 4 fast inputs for FC	16 sink outputs inc. 14 regular transistor outputs and 2 fast outputs (PWM/PLS/PTO)	–	1	**TM200C40U**	0.468 / *1.032*
				1	1	**TM200CE40U**	0.483 / *1.065*
			16 source outputs, inc. 14 regular transistor outputs and 2 fast outputs (PWM/PLS/PTO)	–	1	**TM200C40T**	0.522 / *1.151*
				1	1	**TM200CE40T**	0.523 / *1.153*

(1) M200 controllers are supplied with:
- *removable screw terminal blocks for connecting the I/O*
- *a removable screw terminal block for connecting the power supply*
- *a removable screw terminal block for the serial link*

(2) Each M200 logic controller has an embedded USB mini-B programming port.

Presentation: page 2 | Description: page 6 | Ethernet Modbus/TCP network: page 9 | Compatibility: page 10

Modicon Easy M200 logic controllers
Options, separate parts and replacement parts
Programming software and expansion modules

PF142029

TMCR2DM4U

PF142024

TMCR2AI2

PF142025

TMCR2TI2

PF142026

TMCR2AQ2V

PF142027

TMCR2AQ2C

PF142028

TMCR2SL1

SoMachine Basic software

Programming software

Description	Details	Unit reference	Weight kg *lb*
Digital I/O cartridges	2 digital inputs 2 transistor sink outputs Connection via screw terminal block	**TMCR2DM4U**	0.023 *0.051*
Analog I/O cartridges	2 analog inputs (12-bit resolution) configurable as: - 0…10 V voltage - 0…20 mA/4…20 mA current Connection via screw terminal block	**TMCR2AI2**	0.025 *0.055*
	2 analog inputs (12-bit resolution) 0…10V/ 0…5V/ 0…20mA / 4…20mA 1 analog output (12-bit resolution) 0…10V/ 0…5V/ 0…20mA / 4…20mA Connection via screw terminal block	**TMCR2AM3**	0.024 *0.053*
	2 temperature inputs (12 or 14-bit resolution depending on input signal) type K, J, R, S, B, E, T, N, C, PT100, PT1000, NI100, NI1000 Connection via screw terminal block	**TMCR2TI2**	0.025 *0.055*
	2 analog outputs (12-bit resolution) 0…10 V voltage Connection via screw terminal block	**TMCR2AQ2V**	0.025 *0.055*
	2 analog outputs (12-bit resolution) 4…20 mA current Connection via screw terminal block	**TMCR2AQ2C**	0.025 *0.055*
Communication cartridges	1 additional RS485 serial link on screw terminal block	**TMCR2SL1**	0.025 *0.055*
	1 additional isolated RS485 serial link on screw terminal block	**TMCR2SL1A**	0.014 *0.031*

Separate parts for Modicon Easy M200 logic controllers

Description	Details	Sold in lots of	Unit reference	Weight kg *lb*
Cartridge cover	Allows IP 20 protection	4	**TMARCOVER**	–
RTC battery	–	1	**TMARBAT1**	–

Separate parts for Modicon Easy M200 logic controllers

Description	Details	Sold in lots of	Unit reference	Weight kg *lb*
Set of terminal blocks for connecting the I/O on M200 controllers	3-way terminal block for power supply connection	5	**TMARTB3**	–
	4-way terminal block for serial link connection	5	**TMARTB4**	–

Programming software

Description	For use with	Reference
SoMachine Basic EL	Modicon Easy M200 logic controllers. PC should be equipped with Windows XP SP3 or Windows 7 or 8 (32-bit or 64-bit)	*(2)*

Expansion modules

Description	For use with	Reference
Modicon TM3 expansion modules	Modicon Easy M200 logic controllers	*(3)*
Modicon TM2 expansion modules	Modicon Easy M200 logic controllers	*(3)*

(1) One cartridge for controllers with 16 and 24 I/O. Two cartridges maximum for controllers with 40 and 60 I/O, only one of which can be a communication cartridge.
(2) To download this software, visit our web site www.schneider-electric.com.
(3) See our list of compatible expansion modules on pages 10 and 11.

Presentation: page 2 | Description: page 6 | Ethernet Modbus/TCP network: page 9 | Compatibility: page 10

Modicon Easy M200 logic controllers
Ethernet Modbus/TCP network

Presentation

Modicon Easy M200 controllers can easily be integrated in typical architectures:
- **machine to devices** (variable speed drives, remote I/O modules, operator dialog terminals) with the I/O Scanner function *(1)*
- **machine to supervision** with the Modbus Client/Server function

Ethernet also brings transparency to the factory, in particular - thanks to the firewall functions - making it possible from any point on the network to:
- program or monitor a controller, or download an application
- access device parameters (variable speed drives for example)

The Modicon Easy M200 range of logic controllers has been designed to meet various customer requirements, specifically on the 4 following key points:

The Modbus/TCP protocol

Modbus has been the industry communication standard since 1979.
During the internet revolution, Modbus was combined with Ethernet Modbus/TCP to form Modbus/TCP, a completely open Ethernet protocol. The development of a connection to Modbus/TCP does not require any proprietary component, nor the purchase of a licence.
This protocol can easily be combined with any product supporting a standard Modbus/TCP communication stack.
The specifications can be downloaded free of charge from the following address: www.modbus.org.

Modbus/TCP, simple and open
- The Modbus application layer is simple and universally familiar with its 9 million installed connections.
- Thousands of manufacturers have already implemented this protocol. Many have already developed a Modbus/TCP connection and numerous products are currently available.
- The simplicity of Modbus/TCP enables any fieldbus device, such as an I/O module, to communicate on Ethernet without the need for a powerful microprocessor or a lot of internal memory.

Modbus/TCP, high performance
Thanks to the simplicity of its protocol and fast speed of 100 Mbps, the performance of Modbus/TCP is excellent. This type of network can therefore be used in realtime applications such as I/O digitization.

Modbus/TCP, a standard
- The application protocol is identical on Modbus serial link and Modbus/TCP: messages can be routed from one network to the other without converting the protocol.
- Since Modbus operates on the TCP higher layer, users benefit from IP routing, thus enabling devices located anywhere in the world to communicate without worrying about the distance between them.

Modbus and Modbus/TCP are recognized as a fieldbus by the international standard IEC/EN 61158. They also comply with the Chinese national standard managed by ITEI.

(1) Not available before Q2 2015.

Transparent Ready class and functions

	Logic controllers
	TM200CE●●●
Transparent Ready class	A10
Internet protocol version	IP V4
Ethernet services	
Programming, downloading, monitoring	■
Client and server Modbus TCP	■
Slave Modbus TCP	■
Client DHCP dynamic configuration	■

■ function created

Modicon Easy M200 logic controllers

Expansion modules

Compatibility of Modicon expansion modules with Modicon M200 logic controllers

Compatibility

Modicon TM3 expansion modules		Number and type of inputs	Number and type of outputs	M200 logic controllers
Digital modules	TM3DI8	8 x 24 V ⎓ sink/source inputs		
	TM3DI16	16 x 24 V ⎓ sink/source inputs		
	TM3DI32K	32 x 24 V ⎓ sink/source inputs		
	TM3DQ8R		8 x 24 V ⎓/240 V ∿ relay outputs	
	TM3DQ8T		8 x 24 V ⎓ source transistor outputs	
	TM3DQ8U		8 x 24 V ⎓ sink transistor outputs	
	TM3DQ16R		16 x 24 V ⎓/240 V ∿ relay outputs	
	TM3DQ16T		16 x 24 V ⎓ source transistor outputs	
	TM3DQ16U		16 x 24 V ⎓ sink transistor outputs	
	TM3DQ32TK		32 x 24 V ⎓ source transistor outputs	
	TM3DQ32UK		32 x 24 V ⎓ sink transistor outputs	
	TM3DM8R	4 x 24 V ⎓ sink/source inputs	4 x 24 V ⎓/240 V ∿ relay outputs	
	TM3DM24R	16 x 24 V ⎓ sink/source inputs	8 x 24 V ⎓/240 V ∿ relay outputs	
	TM3RDM16R *(1)*	8 x 24 V ⎓ sink/source inputs	8 x 24 V ⎓/240 V ∿ relay outputs	
	TM3RDM32R *(1)*	16 x 24 V ⎓ sink/source inputs	16 x 24 V ⎓/240 V ∿ relay outputs	
Analog modules	TM3AI2H	2 voltage/current inputs		
	TM3AI4	4 voltage/current inputs		
	TM3TI4	4 voltage/current or temperature inputs		
	TM3AI8	8 voltage/current inputs		
	TM3TI8T	8 temperature inputs		
	TM3AQ2		2 voltage/current outputs	
	TM3AQ4		4 voltage/current outputs	
	TM3TM3	2 voltage/current or temperature inputs	1 voltage/current output	
	TM3AM6	4 voltage/current inputs	2 voltage/current outputs	
Modicon TM2 expansion modules		**Number and type of inputs**	**Number and type of outputs**	**M200 logic controllers**
Digital modules	TM2DAI8DT	8 x 120 V ∿ inputs		
	TM2DDI8DT	8 x 24 V ⎓ inputs		
	TM2DDI16DT	16 x 24 V ⎓ inputs		
	TM2DDI16DK	16 x 24 V ⎓ inputs (by HE10 connector)		
	TM2DDI32DK	32 x 24 V ⎓ inputs (by HE10 connector)		
	TM2DDO8TT		8 x 24 V ⎓ outputs	
	TM2DDO8UT		8 x 24 V ⎓ outputs	
	TM2DRA8RT		8 relay outputs	
	TM2DDO16TK		16 x 24 V ⎓ source transistor outputs	
	TM2DDO16UK		16 x 24 V ⎓ sink transistor outputs	
	TM2DRA16RT		16 relay outputs	
	TM2DDO32TK		32 x 24 V ⎓ source transistor outputs	
	TM2DDO32UK		32 x 24 V ⎓ sink transistor outputs	
	TM2DMM8DRT	4 x 24 V ⎓ inputs	4 relay outputs	
	TM2DMM24DRF	16 x 24 V ⎓ inputs (spring type)	8 relay outputs	
Analog modules	TM2AMI2HT	2 voltage/current inputs		
	TM2AMI2LT	2 thermocouple inputs		
	TM2AMI4LT	4 voltage/current + temperature probe inputs		
	TM2AMI8HT	8 voltage/current inputs		
	TM2ARI8LRJ	8 temperature probe inputs		
	TM2ARI8LT	8 temperature probe inputs		
	TM2ARI8HT	8 temperature probe inputs		
	TM2AMO1HT		1 voltage/current output	
	TM2AVO2HT		2 voltage outputs	
	TM2AMM3HT	2 voltage/current inputs	1 voltage/current output	
	TM2ALM3LT	2 thermocouple/temperature probe inputs	1 voltage/current output	
	TM2AMM6HT	4 voltage/current inputs	2 voltage/current outputs	

(1) TM3RDM16R and TM3RDM32R are only designed for M200 logic controllers. They can not be supported by other controllers.

Compatible

Configuration

Modicon TM3 or TM2 digital I/O modules connect to Modicon M200 logic controllers with a maximum of 4 local I/O modules.

Note:

- The maximum number of Modicon TM3/TM2 expansion modules can be reduced by the number of transistor outputs or relay outputs used (see the table below).
- For more information on TM3/TM2 expansion modules, please visit our website www.schneider-electric.com.

Configuration limits	Logic controllers									
	TM200 C16R	TM200 C16T	TM200 C16U	TM200 C24R CE24R	TM200 C24T CE24T	TM200 C24U CE24U	TM200 C40R CE40R	TM200 C40T CE40T	TM200 C40U CE40U	TM200 C60R
Maximum number of transistor outputs directly connected to the logic controller	128	135	135	128	138	138	128	144	144	128
Maximum number of relay outputs directly connected to the logic controller	71	64	64	74	64	64	80	64	64	88

Product reference index

Schneider Electric Industries SAS

Head Office
35, rue Joseph Monier
F-92500 Rueil-Malmaison
France

www.schneider-electric.com

Design: Schneider Electric
Photos: Schneider Electric

DIA3ED2140906EN

January 2015 - V2.0