

Presentation

The **M171 optimized** logic controllers comprise 10 models that can be used to control from 14 up to 22 embedded I/Os (digital and analog).

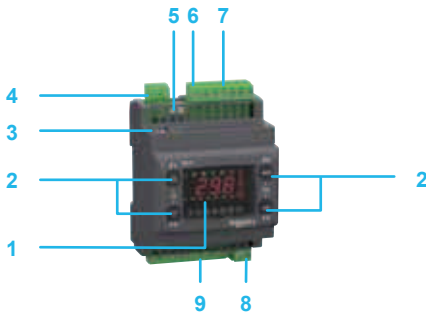
- 2 types of power supply are available:
 - ~ 100-240 V
 - ~ 12-24 V or = 24 V
- 2 types of housing:
 - with built-in display
 - with remote display that can be added through the LAN expansion bus.
- 2 types of mounting:
 - Flush mounting: controllers to be mounted on a cabinet door
 - 35 mm/1.38 in. rail mounting: controllers to be mounted inside a cabinet
- Optimized logic controllers embed up to 2 communication ports (depending on the model):
 - 1 optional Modbus SL bus
 - 1 LAN expansion bus
- The **M171 optimized logic controllers** are certified CE, cURus, CSA, EAC.

Description

35 mm/1.38 in. rail mounting optimized controllers

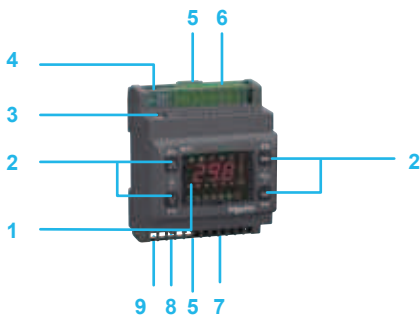
TM171O●14R optimized logic controllers (1)

- 1 Display
- 2 4 navigation keys for setting controller parameters
- 3 Programming port (TTL)
- 4 Removable terminal block for RS 485 serial port (TM171O●M14R)
- 5 Wired connector for LAN expansion bus
- 6 Mounting clip for 35 mm/1.38 in. rail mounting
- 7 Removable terminal block for digital outputs
- 8 Removable terminal block for ~ 100...240 V power supply
- 9 Removable terminal block for I/Os



TM171O●22R● optimized logic controllers (1)

- 1 Display
- 2 4 navigation keys for setting controller parameters
- 3 Programming port (TTL)
- 4 Wired connector for RS 485 serial port (TM171O●M14R)
- 5 Mounting clip for 35 mm/1.38 in. rail mounting
- 6 Removable terminal block for outputs
- 7 Wired connector for ~ 12-24 V or = 24 V power supply, and for low voltage I/Os
- 8 Wired connector for analog output
- 9 Wired connector for LAN expansion bus



Flush mounting controllers

TM171OF●22R● optimized logic controllers (1)

- 1 Display
- 2 4 navigation keys for setting controller parameters
- 3 Wired connector for RS 485 serial port (TM171OF●M22R)
- 4 Wired connector for analog outputs
- 5 Wired connector for LAN expansion bus
- 6 Programming port (TTL)



(1) Connectors to be ordered separately, see page 3/15.

Hardware control platform

Modicon M171/M172 logic controllers

M171 optimized logic controllers



TM171OBM14R



TM171OD14R



TM171ODM14R



TM171OB22R



TM171OBM22R



TM171OD22R



TM171ODM22R



TM171ODM22S



TM171OF22R



TM171OFM22R

M171 optimized logic controllers

Power supply: ~ 100-240 V

35 mm/1.38 in. rail mounting optimized controllers

No. of I/Os	Number and type of channels	Display	Embedded communication	Reference	Weight kg/lb
14	2 digital inputs: 2 open collector or digital inputs (1)	Remote display (optional)	<input type="checkbox"/> 1 wired connector for Modbus SL (master/slave) <input type="checkbox"/> 1 wired connector for LAN expansion bus	TM171OBM14R	0.190/ 0.420
	4 digital outputs: <input type="checkbox"/> 3 SPST (2 A, ~ 230 V) with the same common <input type="checkbox"/> 1 SPDT (2 A, ~ 230 V)				
	5 configurable analog inputs: <input type="checkbox"/> 2 NTC, PT1000, or digital inputs <input type="checkbox"/> 2 NTC, 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, 0-1 V, or digital inputs <input type="checkbox"/> 1 NTC, PT1000, 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, 0-1 V, or digital inputs	Built-in display	<input type="checkbox"/> 1 wired connector for LAN expansion bus <input type="checkbox"/> 1 wired connector for Modbus SL (master/slave) <input type="checkbox"/> 1 wired connector for LAN expansion bus	TM171OD14R	0.190/ 0.420
	5 analog outputs: <input type="checkbox"/> 2 open collector (1) for 12 V PWM/PPM or digital inputs <input type="checkbox"/> 2x 0-10 V <input type="checkbox"/> 1x 4-20 mA				

Power supply: ~ 12-24 V or ~ 24 V (2)

35 mm/1.38 in. rail mounting optimized controllers

22	6 digital inputs: <input type="checkbox"/> 6 volt-free in 1 group	Remote display (optional)	<input type="checkbox"/> 1 wired connector for LAN expansion bus <input type="checkbox"/> 1 wired connector for Modbus SL (master/slave) <input type="checkbox"/> 1 wired connector for LAN expansion bus	TM171OB22R	0.190/ 0.420
	5 configurable analog inputs: <input type="checkbox"/> 3 NTC or digital inputs <input type="checkbox"/> 2 NTC, 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, 0-1 V, or digital inputs				
	6 digital outputs: <input type="checkbox"/> 3 SPST (2 A, ~ 230 V) with the same common <input type="checkbox"/> 2 SPST (2 A, ~ 230 V) with independent common <input type="checkbox"/> 1 open collector	Built-in display	<input type="checkbox"/> 1 wired connector for LAN expansion bus <input type="checkbox"/> 1 wired connector for Modbus SL (master/slave) <input type="checkbox"/> 1 wired connector for LAN expansion bus	TM171OBM22R	0.190/ 0.420
	5 analog outputs: <input type="checkbox"/> 2 open collector for 12 V PWM/PPM <input type="checkbox"/> 3x 0-10 V				
	6 digital inputs: <input type="checkbox"/> 6 volt-free in 1 group	Built-in display	<input type="checkbox"/> 1 wired connector for Modbus SL (master/slave) <input type="checkbox"/> 1 wired connector for LAN expansion bus	TM171OD22R	0.190/ 0.420
	5 configurable analog inputs: <input type="checkbox"/> 3 NTC or digital input <input type="checkbox"/> 2 NTC, 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, 0-1 V, or digital inputs				
	6 digital outputs: <input type="checkbox"/> 3 SPST (2 A, ~ 230 V) with the same common <input type="checkbox"/> 2 SSR (3 A, ~ 230 V) <input type="checkbox"/> 1 open collector	Built-in display	<input type="checkbox"/> 1 wired connector for Modbus SL (master/slave) <input type="checkbox"/> 1 wired connector for LAN expansion bus	TM171ODM22R	0.190/ 0.420
	5 analog outputs: <input type="checkbox"/> 2 open collector for 12 V PWM/PPM <input type="checkbox"/> 3x 0-10 V				

Flush mounting optimized controllers

22	6 digital inputs: <input type="checkbox"/> 6 volt-free in 1 group	Built-in display	1 wired connector for LAN expansion bus	TM171OF22R	0.164/ 0.360
	5 configurable analog inputs: <input type="checkbox"/> 3 NTC or digital input <input type="checkbox"/> 2 NTC, 0-20 mA, 4-20 mA, 0-10 V, 0-5 V, 0-1 V, or digital inputs				
	6 digital outputs: <input type="checkbox"/> 3 SPST (2 A, ~ 230 V) with the same common <input type="checkbox"/> 2 SPST (2 A, ~ 230 V) with independent common <input type="checkbox"/> 1 open collector	Built-in display	<input type="checkbox"/> 1 wired connector for Modbus SL (master/slave) <input type="checkbox"/> 1 wired connector for LAN expansion bus	TM171OFM22R	0.164/ 0.360
	5 analog outputs: <input type="checkbox"/> 2 open collector for 12 V PWM/PPM <input type="checkbox"/> 3x 0-10 V				

Remote display for M171 optimized logic controllers

Remote displays see page 3/15

Wall thermostats see page 3/15

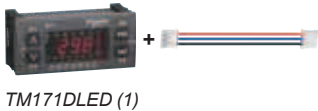
Connection accessories for M171 optimized logic controllers

See page 3/15

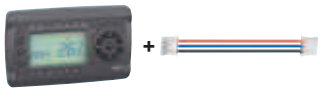
(1) The 2 I/Os are the same. On the same channel: 2 digital inputs or 2 analog outputs (depending on the configuration).

(2) Except for for TM171ODM22S: ~ 12-24 V

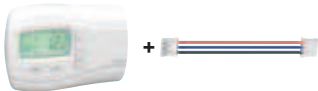
3



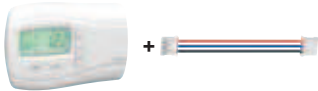
TM171DLED (1)



TM171DLCD2U



TM171DWAL2U



TM171DWAL2L

Remote display for M171 optimized logic controllers

The two available remote displays for the M171 optimized logic controllers offer, are distinguished by technology and mounting.

- Technology: LED display or LCD display
- Mounting: flush mounting – can be mounted on a cabinet door

The remote displays are connected to the LAN expansion bus which provides the power supply.

Reference

Type	Description	Reference	Weight kg/lb
Remote displays With realtime clock	<ul style="list-style-type: none"> ■ LED display: 4 digits, 7 segments ■ Keyboard: 4 buttons ■ Flush mounting ■ Communication port: 1 for LAN expansion bus – with wired connector (1) or screw terminal blocks 	TM171DLED	0.042/ 0.090
	<ul style="list-style-type: none"> ■ LCD display (with segments) ■ Keyboard: 7 buttons ■ Flush mounting ■ Communication port: 1 for LAN expansion bus – with screw terminal blocks ■ 2 analog inputs <ul style="list-style-type: none"> <input type="checkbox"/> 1 NTC or digital input <input type="checkbox"/> 1 NTC or 4-20 mA or digital input 	TM171DLCD2U	0.170/ 0.370

Wall thermostats for M171 optimized logic controllers

The two types of electronic wall thermostats available for the M171 optimized logic controllers offer are delivered with or without backlight.

The wall thermostats have a realtime clock.

Reference

Type	Description	Reference	Weight kg/lb
Wall thermostats	Without backlight	TM171DWAL2U	0.143/ 0.320
	With backlight	TM171DWAL2L	0.143/ 0.320

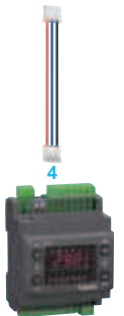
(1) Supplied with LAN expansion bus connector **TM171ACB40LAN**



Connection accessories (1) for M171 optimized logic controller (rail mounting):
TM171OB22R, TM171OBM22R,
TM171OD22R, TM171ODM22R, and
TM171ODM22S



Connection accessories (1) for M171 optimized logic controller (flush mounting):
TM171OF22R, and TM171OFM22R



Connection accessories (1) for M171 optimized logic controller (rail mounting):
TM171OBM14R, TM171OD14R,
TM171ODM14R

Nota: terminal blocks are supplied with
TM171OBM14R, TM171OD14R, and
TM171ODM14R

Connection accessories for M171 optimized logic controllers

To be ordered separately

Type	Item	Description	Cable length (m/ft.)	Unit reference	Weight kg/lb
Low voltage connector Sold in lots of 5	1	Screw terminal block and a cordset equipped with a 20-pin connector on one end	1/3.3	TM171ACB4OI1M	0.575/ 1.270
			2/6.6	TM171ACB4OI2M	1.120/ 2.470
analog output connector (0-10 V outputs) Sold in lots of 5	2	Cordset equipped with a 4-pin connector on one end	1/3.3	TM171ACB4OAO1M	0.075/ 0.170
			2/6.6	TM171ACB4OAO2M	0.125/ 0.280
Modbus SL connector Sold in lots of 5	3	Cordset equipped with a 3-pin connector on one end	1/3.3	TM171ACB4ORS485	0.052/ 0.110
LAN expansion bus connector Sold in lots of 5	4	Cordset equipped with a 3-pin connector at each end	2/6.6	TM171ACB4OLAN	0.060/ 0.130

(1) Minimum set for operating controllers.

