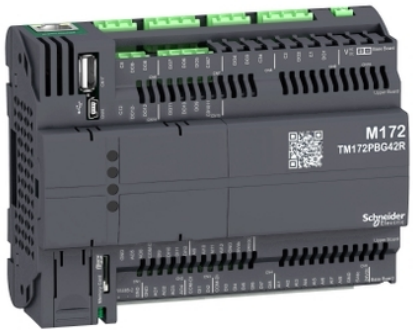
Product data sheet
Characteristics

TM172PBG42R
Modicon M172 Performance Blind 42 I/Os, Ethernet, Modbus



Main

Range of product	Modicon M171/M172
Product or component type	Programmable controllers
Product specific application	HVAC and pumping solution
Variant	Programmable
Total inputs/outputs	42
Discrete input number	12
Discrete output number	2 relay outputs SPST with same common 2 relay outputs SPST with independent common 2 relay outputs SPDT with same common 3 relay outputs SPST with independent common
Discrete output current	1 A relay SPDT 3 A relay SPST
Analogue input number	12 configurable by pair
Analogue output number	4 voltage 0...10 V 2 voltage/current 4...20 mA or 0...10 V or PWM (2 kHz)

Complementary

Number of port	1 CAN port - screw terminal block 1 USB type A - USB type A female 1 USB type mini B - USB device port Mini-B 2 RS485 - screw terminal block Modbus serial link or BACnet MS/TP) 1 Ethernet - RJ45 Modbus TCP and BACnet IP with webserver)
Input/output number	12 analog input 6 analog output 12 digital input 12 digital output
Discrete input logic	Sink or source (positive/negative)
Discrete input voltage	24 V AC/DC
Discrete input current	2.5 mA
Input impedance	20 kOhm
Analogue input type	Impedance 0...1500 hOhm Impedance 0...300 daOhm Direct input NTC temperature probe - 50...110 °C 0.1 °C extended) Voltage 0...10 V NTC temperature probe - 40...150 °C 0.1 °C Current 0...20 mA/4...20 mA PTC temperature probe - 55...150 °C 0.1 °C Voltage 0...5 V absolute or ratiometric) Pt 1000 temperature probe - 200...850 °C 0.1 °C
Sensor power supply	5 V DC 50 mA supplied by the controller 24 V DC 150 mA supplied by the controller
[Us] rated supply voltage	24 V +/- 10 % AC 20...38 V DC
Power consumption in W	15 W 24 V AC/DC
Realtime clock	Built-in -4…140 °F (-20…60 °C)
Display type	Without Display
Overvoltage category	II
Local signalling	Programmable 1 LED red) Programmable 1 LED yellow) Programmable 1 LED green) Power 1 LED green)

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein.
This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.
It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof.
Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Mounting support	Panel mounting with accessory DIN rail
Maximum Width	5.67 in (144 mm)
Height	4.33 in (110 mm)
Depth	2.38 in (60.5 mm)
Net Weight	0.85 lb(US) (0.385 kg)

Environment

Directives	1907/2006/EC - REACH directive 2011/65/EU - RoHS directive 2006/95/EC - low voltage directive 86/188/EEC - physical agents (noise) directive
Standards	EN/IEC 60730
Product certifications	EAC (pending) CURus (pending) CE CSA (pending)
Ambient air temperature for operation	-4…140 °F (-20…60 °C) UL 60730-1 -4…149 °F (-20…65 °C) with derating UL 60730-1
Ambient air temperature for storage	-22…158 °F (-30…70 °C)
Relative humidity	5…95 % non-condensing
IP degree of protection	IP20
Pollution degree	2

Ordering and shipping details

Category	22537 - M171 / M172 HVAC CONTROLLERS
Discount Schedule	PC12
GTIN	00785901502098
Nbr. of units in pkg.	1
Package weight(Lbs)	0.94 lb(US) (0.43 kg)
Returnability	No
Country of origin	IT

Packing Units

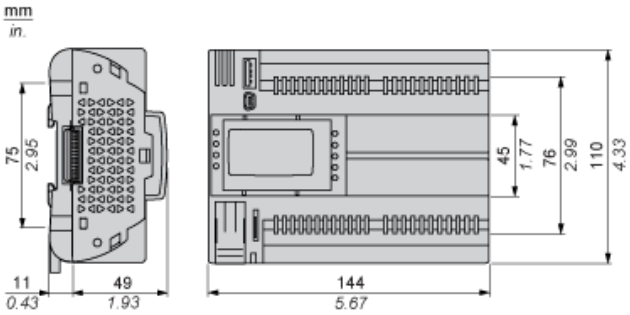
Package 1 Height	1.300 dm
Package 1 width	0.910 dm
Package 1 Length	1.850 dm

Offer Sustainability

Sustainable offer status	Green Premium product
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov
REACh Regulation	REACh Declaration
EU RoHS Directive	Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration
Mercury free	Yes
RoHS exemption information	Yes
China RoHS Regulation	China RoHS Declaration
Environmental Disclosure	Product Environmental Profile
Circularity Profile	End Of Life Information
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.

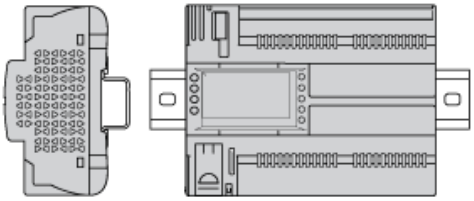
TM172PBG42R

Dimensions



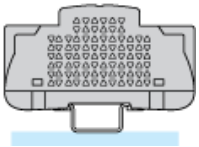
Mounting Positions

Correct Mounting Position

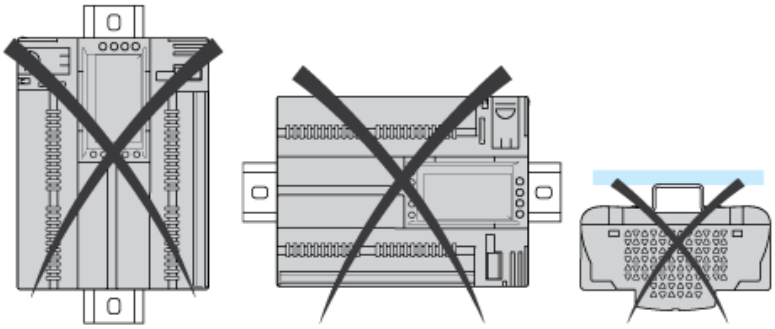


Acceptable Mounting Position

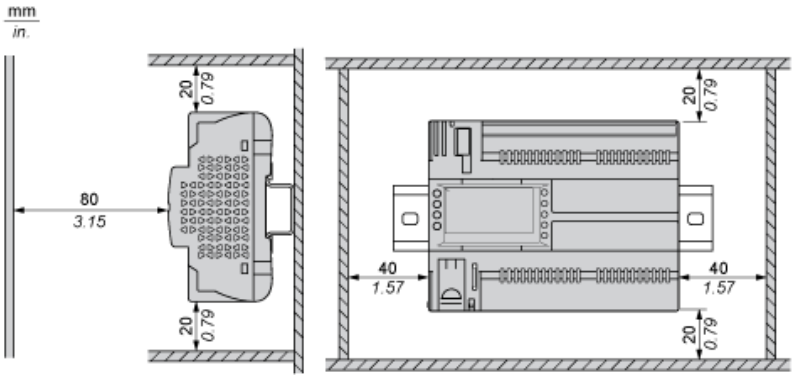
Controller can be mounted horizontally upward with a temperature derating (maximum ambient temperature: 60 °C (140 °F)).



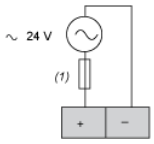
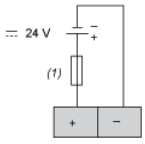
Incorrect Mounting Position



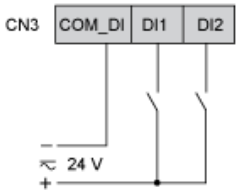
Clearance



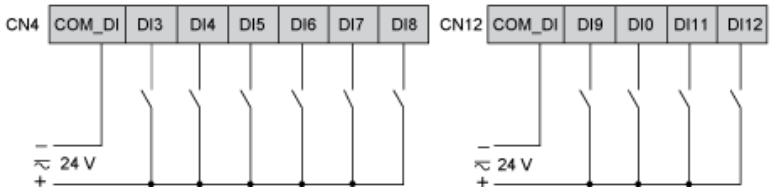
Power Supply

24 Vac	24 Vdc
	

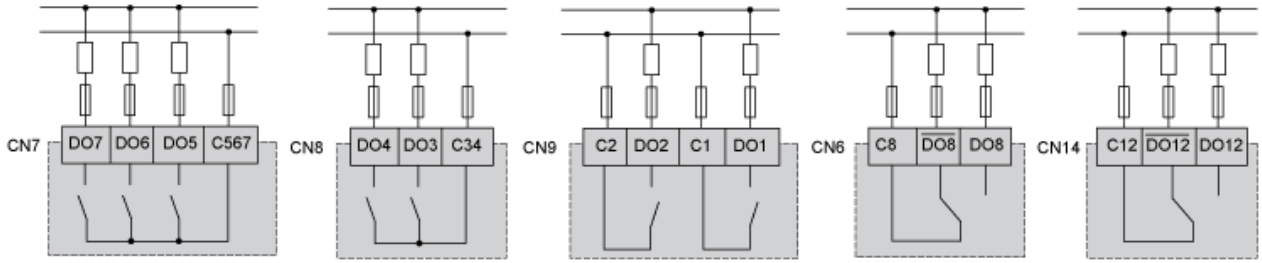
CN3 Fast Digital Inputs



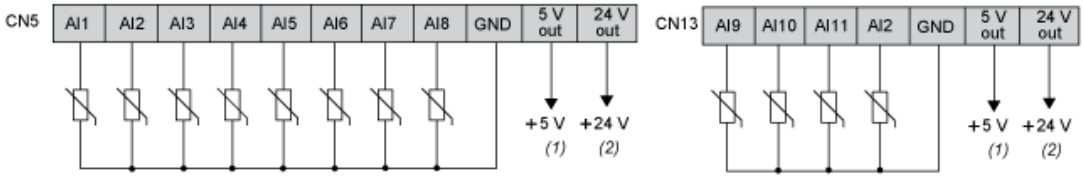
CN4, CN12 Digital Inputs



CN7, CN8, CN9, CN6, CN14 High Voltage Relay SPST Digital Output



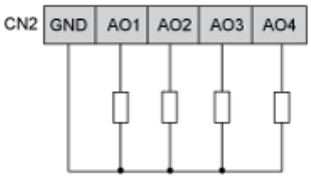
CN5, CN13 Analog Inputs



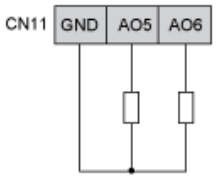
(1) (CN5 + CN13) Max. current : 50 mA.

(2) (CN5 + CN13) Max. current : 150 mA.

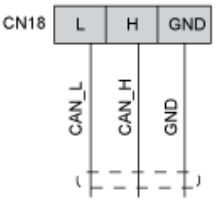
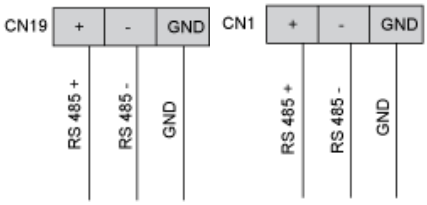
CN2, CN11 Analog Outputs



AO3, AO4 can be used also as PWM generator, up to 2kHz.



CN18 CAN Expansion Bus Port



CN19, CN1 CAN Expansion Bus Port