Product datasheet
Characteristics

TM172PDG42R

Modicon M172 Performance Display 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
Number of inputs/outputs	42
Discrete input number	12
Discrete output number	2 for relay outputs SPST with same common 2 for relay outputs SPST with independent common 2 for relay outputs SPDT with same common 3 for relay outputs SPST with independent common
Discrete output current	1 A for relay SPDT 3 A for relay SPST
Analogue input number	12 configurable by pair
Analogue output number	4 voltage, range: 0...10 V 2 voltage/current, range: 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(s) 6 analog output(s) 12 digital input(s) 12 digital output(s)
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	Voltage 0...10 V Current 0...20 mA/4...20 mA Direct input Impedance 0...1500 hOhm Impedance 0...300 daOhm Voltage 0...5 V (absolute or ratiometric) PTC temperature probe - 55...150 °C - res.: 0.1 °C NTC temperature probe - 50...110 °C - res.: 0.1 °C (extended) NTC temperature probe - 40...150 °C - res.: 0.1 °C Pt 1000 temperature probe - 200...850 °C - res.: 0.1 °C
Sensor power supply	5 V DC at 50 mA (supplied by the controller) 24 V DC at 150 mA (supplied by the controller)
[Us] rated supply voltage	20...38 V DC 24 V +/- 10 % AC
Power consumption in W	15 W at 24 V AC/DC
Realtime clock	Built-in realtime clock at -20...60 °C
Display type	Backlit LCD - 128 x 64 pixels
Overvoltage category	II
Local signalling	1 LED red programmable 1 LED yellow programmable 1 LED green programmable

	1 LED green power
Mounting support	DIN rail Panel mounting with accessory
Width	144 mm
Height	110 mm
Depth	60.5 mm
Product weight	0.385 kg

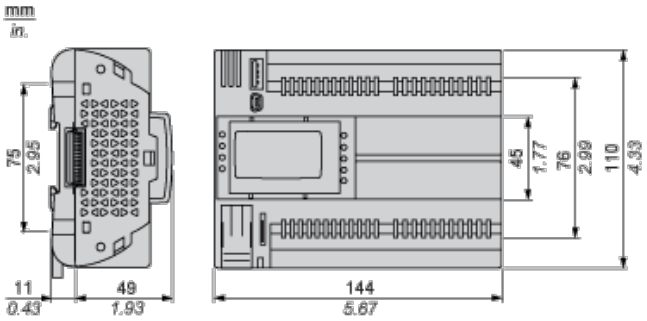
Environment

directives	2006/95/EC - low voltage directive 86/188/EEC - physical agents (noise) directive 2011/65/EU - RoHS directive 1907/2006/EC - REACH directive
standards	EN/IEC 60730
product certifications	CE CSA (pending) EAC (pending) CURus (pending)
ambient air temperature for operation	-20...60 °C conforming to UL 60730-1 -20...65 °C with derating conforming to UL 60730-1
ambient air temperature for storage	-30...70 °C
relative humidity	5...95 % non-condensing
IP degree of protection	IP20
pollution degree	2

Offer Sustainability

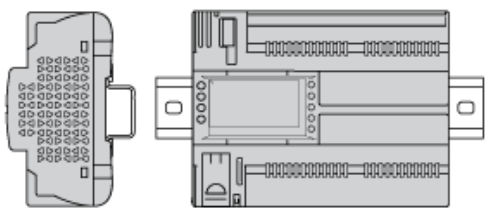
Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 1529 - Schneider Electric declaration of conformity
REACh	Reference not containing SVHC above the threshold
Product environmental profile	Available
Product end of life instructions	Available

Dimensions



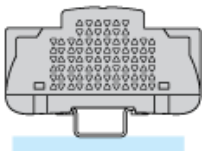
Mounting Positions

Correct Mounting Position

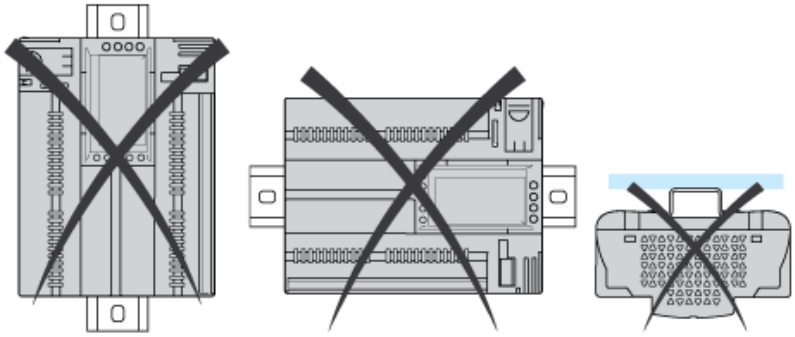


Acceptable Mounting Position

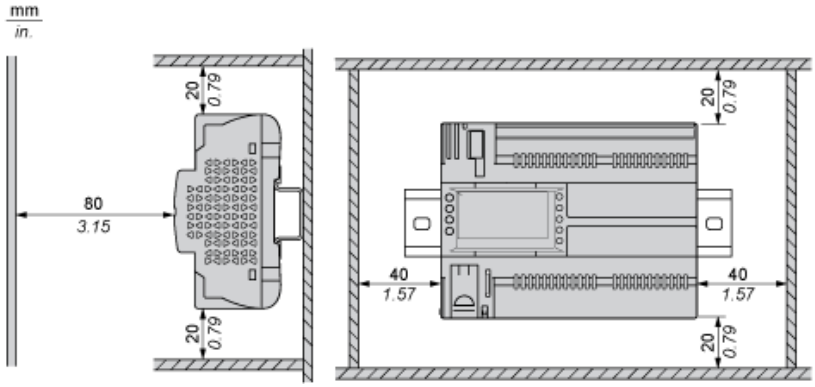
Controller can be mounted horizontally upward with a temperature derating (maximum ambient temperature: 60 °C (140 °F)).



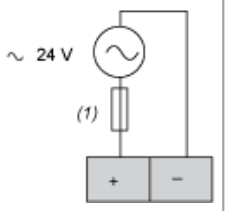
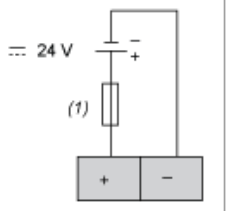
Incorrect Mounting Position



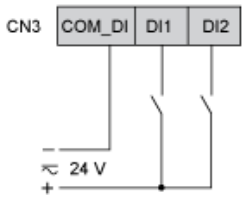
Clearance



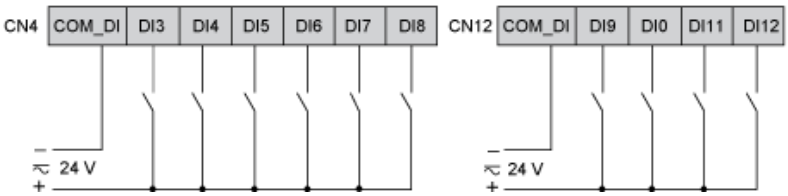
Power Supply

24 Vac	24 Vdc
	

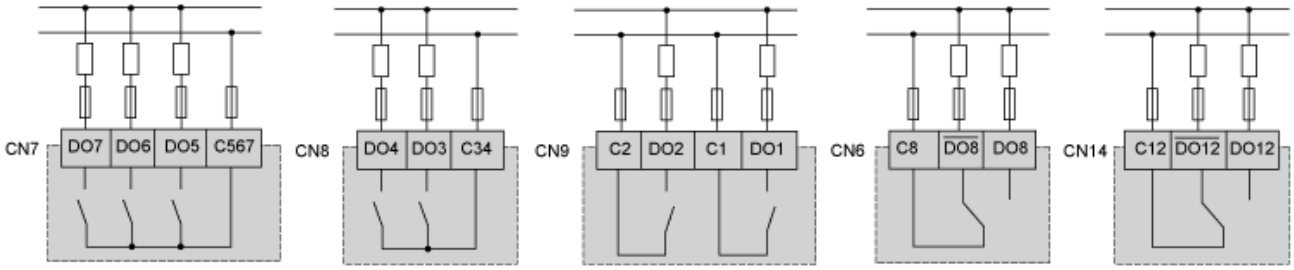
CN3 Fast Digital Inputs



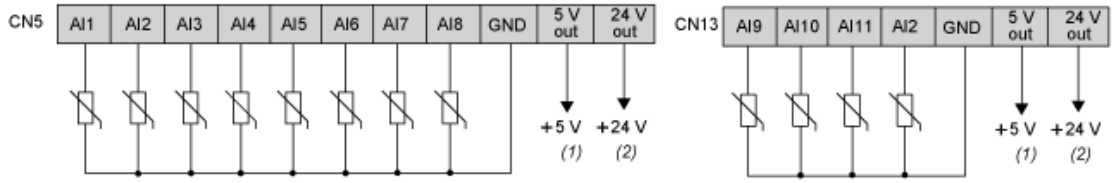
CN4, CN12 Digital Inputs



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



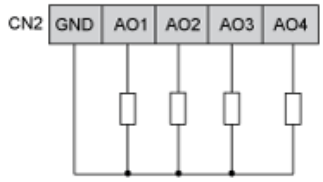
CN5, CN13 Analog Inputs



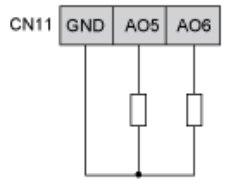
(1) (CN5 + CN13) Max. current : 50 mA.

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

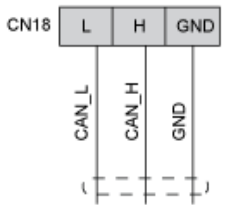
CN2, CN11 Analog Outputs



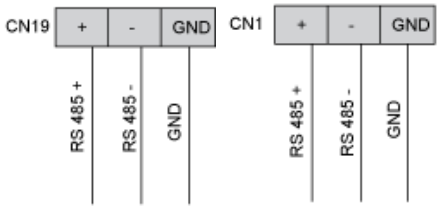
AO3, AO4 can be used also as PWM generator, up to 2kHz.



CN18 CAN Expansion Bus Port



CN19, CN1 CAN Expansion Bus Port


CN19
+
-
GND
RS 485 +
RS 485 -
GND
CN1
+
-
GND
RS 485 +
RS 485 -
GND