Product data sheet
Characteristics

TM172PDG42RI
Controller, Modicon M171/M172/M173, performance, display, 42 IO, Ethernet, isolated



Main

Range of product	Modicon M171/M172
Product or component type	Programmable controllers
Product specific application	HVAC control
Variant	Programmable
Number of inputs/outputs	42
Discrete input number	12
Discrete output number	2 for relay outputs SPDT with independent common 3 for relay outputs SPST with same common 5 for relay outputs SPST with same common 2 for relay outputs SPST with independent common
Discrete output current	3 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	10 kOhm
Analogue input type	Impedance 0...1500 hOhm - resolution: 1 hOhm at 10 kOhm Impedance 0...300 daOhm - resolution: 1 daOhm at 2 kOhm NTC 103AT-2 Beta 3435 temperature probe - 50...110 °C - resolution: 0.1 °C at 10 kOhm Voltage 0...10 V - resolution: 1 digit at > 10 kOhm NTC NK103 Beta 3977 temperature probe - 40...137 °C - resolution: 0.1 °C at 10 kOhm (exten Current 0...20 mA/4...20 mA - resolution: 1 digit at < 150 Ohm PTC temperature probe - 55...150 °C - resolution: 0.1 °C at 2 kOhm Voltage 0...5 V - resolution: 1 digit at > 20 kOhm (absolute or ratiometric) Pt 1000 temperature probe - 200...850 °C - resolution: 0.1 °C at 2 kOhm direct input at > 10 kOhm
Measurement accuracy	NTC NK103 Beta 3977 - 40...+110 °C +/- 1 °C[RETURN] NTC NK103 Beta 3977 110...137 °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	24 V +/- 10 % AC 20...38 V DC
Power consumption in W	14 W at 24 V AC/DC
Realtime clock	Built-in clock, clock drift <= 30 s/month at -20…65 °C
Display type	Backlit LCD - 128 x 64 pixels
Overvoltage category	II
Local signalling	1 LED (red) for programmable 1 LED (yellow) for programmable 1 LED (green) for programmable 1 LED (green) for power
Mounting support	Panel mounting with accessory DIN rail
Width	144 Mm
Height	110 Mm
Depth	60.5 Mm
Net weight	0.385 Kg

Environment

Directives	2014/30/EU - electromagnetic compatibility 2014/35/EU - low voltage directive
Standards	CAN/CSA-E60730-1 CSA E60730-2-9 EN 60068-2-27 EN 60068-2-6 Fc EN 60730-1 EN 60730-2-9 UL 60730-1 UL 60730-2-9 IEC 61000-4-2 IEC 61000-4-3 IEC 61000-4-4 IEC 61000-4-5 IEC 61000-4-6 IEC 61000-4-11 UL94 (material V0)
Product certifications	EAC[RETURN]CE[RETURN]cURus[RETURN]CSA[RETURN]RCM
Ambient air temperature for operation	-20…65 °C conforming to UL 60730-1 -20…60 °C horizontal 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
Operating altitude	0...2000 m

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	13.200 Cm
Package 1 Width	9.000 Cm
Package 1 Length	18.700 Cm
Package 1 Weight	444.000 G
Unit Type of Package 2	S02
Number of Units in Package 2	6
Package 2 Height	15.000 Cm
Package 2 Width	30.000 Cm
Package 2 Length	40.000 Cm
Package 2 Weight	2.868 Kg
Unit Type of Package 3	P06
Number of Units in Package 3	96
Package 3 Height	75.000 Cm
Package 3 Width	60.000 Cm

Package 3 Length	80.000 Cm
Package 3 Weight	57.360 Kg

Offer Sustainability

Recyclability potential, in %	0
Total lifecycle Carbon footprint	621 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	39.61821127573768
Carbon footprint of the manufacturing phase [A1 to A3]	40 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.16725778770648872
Carbon footprint of the distribution phase [A4]	0.2 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.03185462722665127
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	580.288796655941
Carbon footprint of the use phase [B2, B3, B4, B6]	580 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	No
Carbon footprint of the end-of-life phase [C1 to C4]	1.1098492678067609
Carbon footprint of the end-of-life phase [C1 to C4]	1 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	621
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	8f4c3df8-131d-4e1b-95f3-4db4a374d0c1
REACh Regulation	Reference contains Substances of Very High Concern above the threshold
EU RoHS Directive	Compliant By Exemption
California proposition 65	WARNING: This product can expose you to chemicals including: Lead and lead compounds, w
Updatability	Yes
End of life manual availability	End Of Life Information
Removable battery	Yes
Take-back	No
WEEE Label	The product must be disposed on European Union markets following specific waste collection a

Contractual warranty

Warranty (in months)	18

Product Life Status : Commercialised