Product data sheet
Characteristics

TM172E28R
Expansion module, Modicon M172/M172/ M173, optimized and performance, 28 IO



Main

Range of product	Modicon M171/M172
Product or component type	Additional I/O module
Product specific application	HVAC control
Number of inputs/outputs	28
Discrete input number	2 4
Discrete output number	3 for relay outputs SPST with same common 2 for relay outputs SPST with same common
Discrete output current	3 A for relay SPST
Analogue input number	10 configurable by pair
Analogue output number	2 programmable

Complementary

Number of port	1 CAN port - screw terminal block
Input/output number	2 analog output(s) 6 digital input(s) 10 analog input(s) 10 digital output(s)
Discrete input logic	2 positive logic (sink) up to 2 kHz 4 positive logic (sink)
Discrete input voltage	24 V AC/DC
Discrete input current	2.5 MA AC/DC
Input impedance	20 kOhm
Analogue input type	NTC NK103 Beta 3977 temperature probe - 40...137 °C - resolution: 0.1 °C at 10 kOhm (at 25 ° NTC 103AT-2 Beta 3435 temperature probe - 50...110 °C - resolution: 0.1 °C at 10 kOhm (at 2 Current 0...20 mA - resolution: 1 digit at < 150 Ohm Current 4...20 mA - resolution: 1 digit at < 150 Ohm Voltage 0...10 V - resolution: 1 digit at > 10 kOhm Voltage 0...5 V - resolution: 1 digit at > 20 kOhm (absolute or ratiometric) Impedance 0...1500 hOhm - resolution: 1 hOhm at 10 kOhm Impedance 0...300 daOhm - resolution: 1 daOhm at 2 kOhm Direct input - resolution: 1 digit (Dry contact) PTC - 55...150 °C - resolution: 0.1 °C at 2 kOhm Pt 1000 temperature probe - 200...850 °C - resolution: 0.1 °C at 2 kOhm

Measurement accuracy	NTC NK103 - 40...+110 °C +/- 1 °C NTC NK103 110...137 °C +/- 1.9 °C NTC 103AT-2 - 50…110 °C +/- 1 °C PTC - 55...+135 °C +/- 1.1 °C PTC - 150…135 °C +/- 3.1 °C Pt 1000 - 200...-100 °C +/- 5 °C Pt 1000 - 100...-50 °C +/- 3 °C Pt 1000 - 50...+200 °C +/- 1.5 °C Pt 1000 200...600 °C +/- 15 °C Pt 1000 600...850 °C +/- 30 °C 0...20 mA 0...4 mA +/- 2 % of full scale +/- 1 digit 0...20 mA 4...20 mA +/- 1 % of full scale +/- 1 digit 4...20 mA +/- 1 % of full scale +/- 1 digit 0...10 V +/- 1 % of full scale +/- 1 digit 0...5 V +/- 1 % of full scale +/- 1 digit HOhm 0...700 hOhm +/- 10 hOhm HOhm 700 hOhm...1200 hOhm +/- 25 hOhm HOhm 1200 hOhm...1500 hOhm +/- 60 hOhm DaOhm 0...300 daOhm +/- 2.5 daOhm
Sensor power supply	5 V DC at 50 mA 24 V DC at 125 mA
[Us] rated supply voltage	24 V +/- 10 % AC 20...38 V DC
Power consumption in W	24 VA at 24 V AC 15 W at 24 V DC
Realtime clock	Without clock
Display type	Without display
Overvoltage category	II
Mounting support	DIN rail Panel mounting with accessory
Width	72 Mm
Height	110 Mm
Depth	59 Mm
Net weight	0.19 Kg

Environment

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

Packing Units

Unit Type of Package 1	PCE
Number of Units in Package 1	1
Package 1 Height	13.500 Cm
Package 1 Width	9.000 Cm
Package 1 Length	12.700 Cm
Package 1 Weight	258.000 G
Unit Type of Package 2	S02

Number of Units in Package 2	8
Package 2 Height	15.000 Cm
Package 2 Width	30.000 Cm
Package 2 Length	40.000 Cm
Package 2 Weight	2.124 Kg
Unit Type of Package 3	P06
Number of Units in Package 3	128
Package 3 Height	75.000 Cm
Package 3 Width	60.000 Cm
Package 3 Length	80.000 Cm
Package 3 Weight	45.500 Kg

Offer Sustainability

Recyclability potential, in %	0
Total lifecycle Carbon footprint	660 kg CO2 eq.
Carbon footprint of the manufacturing phase [A1 to A3]	37.02101742543932
Carbon footprint of the manufacturing phase [A1 to A3]	37 kg CO2 eq.
Carbon footprint of the distribution phase [A4]	0.1562931105123967
Carbon footprint of the distribution phase [A4]	0.2 kg CO2 eq.
Carbon footprint of the installation phase [A5]	0.02976637944179302
Carbon footprint of the installation phase [A5]	0 kg CO2 eq.
Carbon footprint of the use phase [B2, B3, B4, B6]	621.7379964170797
Carbon footprint of the use phase [B2, B3, B4, B6]	622 kg CO2 eq.
Mercury free	Yes
Sustainable packaging	No
Carbon footprint of the end-of-life phase [C1 to C4]	1.037092482472762
Carbon footprint of the end-of-life phase [C1 to C4]	1 kg CO2 eq.
Environmental Disclosure	Product Environmental Profile
Total lifecycle Carbon footprint	660
Packaging made with recycled cardboard	Yes
Packaging without single use plastic	No
SCIP Number	C981d9d1-5c5e-4fce-a187-e9df4380d5df
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