Product data sheet

Specifications

Controller, Modicon M171/M172/ M173, flush mounted, 22 IO, 2 RS485

TM173OFM22R

Main

Range of product	Modicon M171/M172/M173
Product or component type	Programmable controllers
Product specific application	HVAC and pumping solution
Variant	Programmable
Total inputs/outputs	22
Discrete input number	6
Discrete output number	3 for relay outputs SPST with same common 2 for relay outputs SPST with independent common
Discrete output current	3 A for relay SPST
Analogue input number	6 configurable by pair 1 configurable
Analogue output number	1 voltage/current, range: 0…10 V or 4…20 mA 3 voltage, range: 0...10 V or PWM (10Hz...2 kHz)

Complementary

Number of port	1 USB type C - screw terminal block 2 RS485 1 display port - screw terminal block (Modbus serial link) 1 communication module port - TTL connector
Input/output number	6 digital input(s) 5 digital output(s) 7 analog input(s) 4 analog output(s)
Discrete input logic	Sink or source (positive/negative)
Contacts usage	Volt-free contacts
Discrete input voltage	24 V AC/DC
Discrete input current	2.5 mA
Input impedance	20 kOhm
Analogue input type	NTC 103AT-2 Beta 3435 temperature probe - 50...100 °C - resolution: 0.1 °C at 10 kOhm Pt 1000 temperature probe - 50...400 °C - resolution: 0.1 °C at 2 kOhm voltage 0...10 V - resolution: 0.001 V at > 10 kOhm voltage 0...5 V - resolution: 0.001 V at 110 kOhm current 4...20 mA - resolution: 13 bits at 100 Ohm direct input at > 10 kOhm

Measurement accuracy	NTC NK103 Beta 3977 - 40...+110 °C +/- 1 °C NTC NK103 Beta 3977 110...137 °C +/- 1.9 °C NTC 103AT-2 Beta 3435 - 50…110 °C +/- 1 °C PTC - 55...155 °C +/- 1.1 °C Pt 1000 - 100...-50 °C +/- 5 °C Pt 1000 - 50...100 °C +/- 1 °C Pt 1000 100…400 °C +/- 5 °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...1500 hOhm +/- 8.5 hOhm DaOhm 0...300 daOhm +/- 2.5 daOhm
Sensor power supply	5 V DC at 50 mA supplied by the controller 24 V DC at 125 mA supplied by the controller
[Us] rated supply voltage	24 V +/- 10 % AC 20...38 V DC
Power consumption in W	10 W at 24 V AC/DC
Realtime clock	Built-in clock, clock drift <= 30 s/month at -20…65 °C
Memory type	1 MB flash 380 kB RAM
Overvoltage category	II
Local signalling	1 LED (green) for USB pendrive download status
Mounting support	Panel mounting with accessory DIN rail
Width	80.5 mm
Height	34.5 mm
Depth	82.7 mm
Product weight	0.106 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 (pending) CE cURus CSA RCM (pending)
Ambient air temperature for operation	-20…65 °C conforming to UL 60730-1 conforming to EN 60730-1 conforming to EN 60730-2-9
Ambient air temperature for storage	-30…70 °C
Relative humidity	5…95 % non-condensing

IP degree of protection	IP65 conforming to EN/IEC 60730
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	7.000 cm
Package 1 Width	9.300 cm
Package 1 Length	13.200 cm
Package 1 Weight	165.000 g
Unit Type of Package 2	S02
Number of Units in Package 2	15
Package 2 Height	15.000 cm
Package 2 Width	30.000 cm
Package 2 Length	40.000 cm
Package 2 Weight	2.808 kg

Contractual warranty

Warranty (in months)	18

Environmental Data

Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

Environmental Data explained >

How we assess product sustainability >

Environmental footprint

Total lifecycle Carbon footprint	**255 kg CO2 eq.**
Carbon footprint of the manufacturing phase [A1 to A3]	**16 kg CO2 eq.**
Carbon footprint of the distribution phase [A4]	**0.1 kg CO2 eq.**
Carbon footprint of the installation phase [A5]	**0 kg CO2 eq.**
Carbon footprint of the use phase [B2, B3, B4, B6]	**238 kg CO2 eq.**
Carbon footprint of the end-of-life phase [C1 to C4]	**0.5 kg CO2 eq.**

Use Better

Materials and Substances

Packaging made with recycled cardboard	**Yes**
SCIP Number	**C0378ce4-b3e0-4a4f-94f6-542ab54156c7**
EU RoHS Directive	**Compliant By Exemption**
REACh Regulation	**Reference contains Substances of Very High Concern above the threshold**
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**

Use Longer

Lifetime extension

Repair	**No**
Updatability	**Yes**

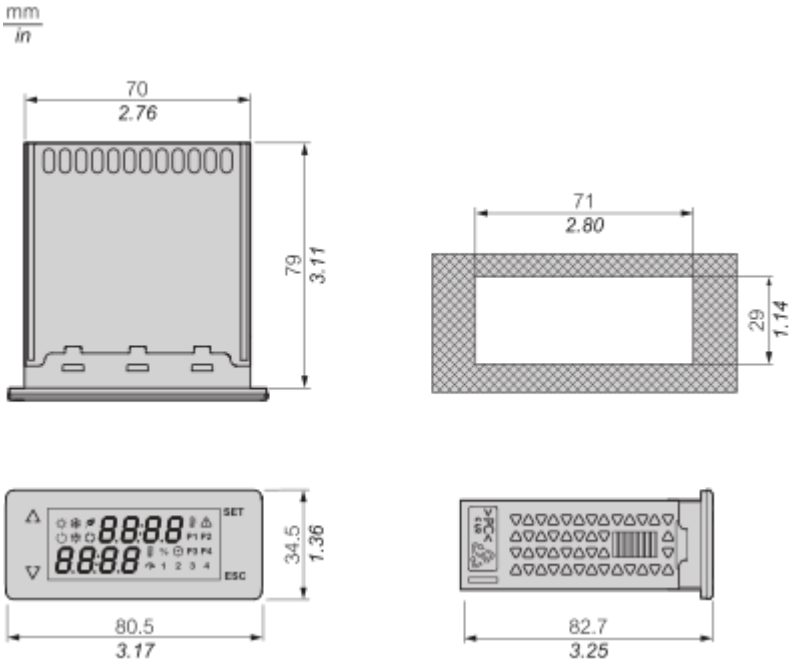
Use Again

Repack and remanufacture

Recyclability potential, in %	**0**
End of life manual availability	**End of Life Information**
Take-back	**No**
WEEE Label	**The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins**

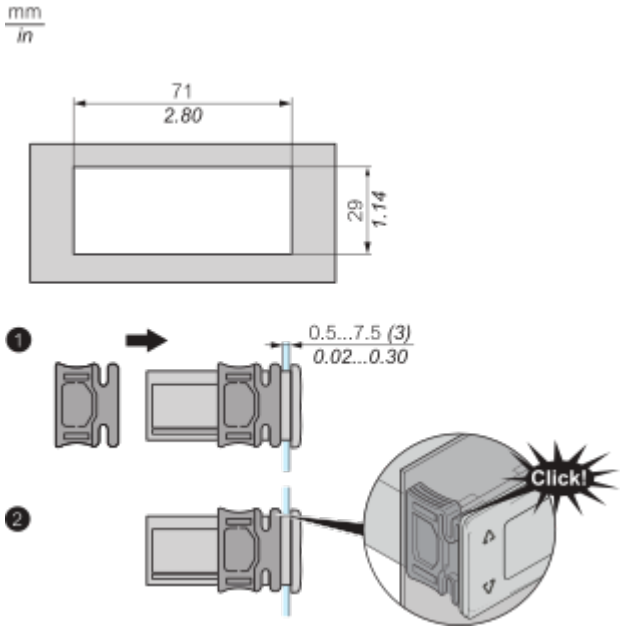
Dimensions Drawings

Dimensions



Mounting and Clearance

Mounting

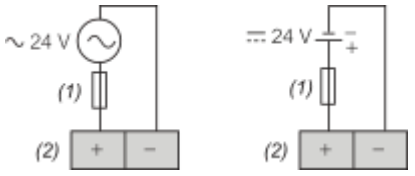


(1) Insert the device
(2) Secure it with the special brackets provided
(3) Front panel only (tested in accordance with EN 60529 with a steel sheet 2 mm (0.08 in.) thick ±10 %)

Connections and Schema

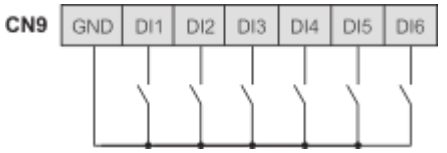
Wiring

Power supply

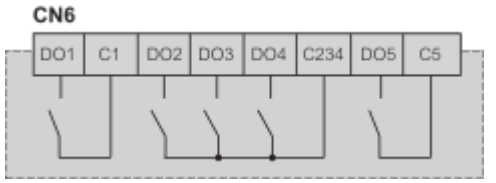


(1) Type T fuse 1.25 A
(2) Power Supply

Digital input

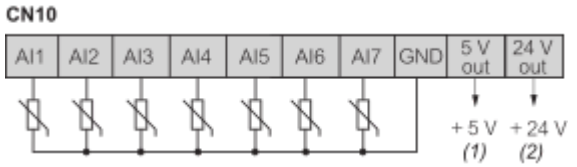


Digital output



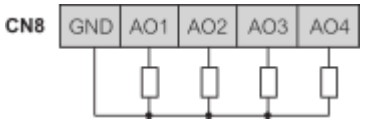
DO1, DO2, DO3, DO4, DO5: relay SPST 3 A 250 Vac

Analog inputs

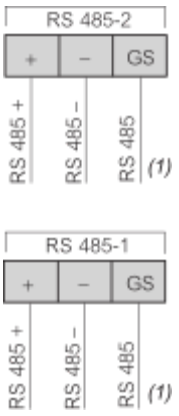


(1) Max. current : 50 mA.
(2) Max. current : 125 mA.

Analog Output



RS 485 port



(1) Signal Reference

Technical Illustration

Dimensions

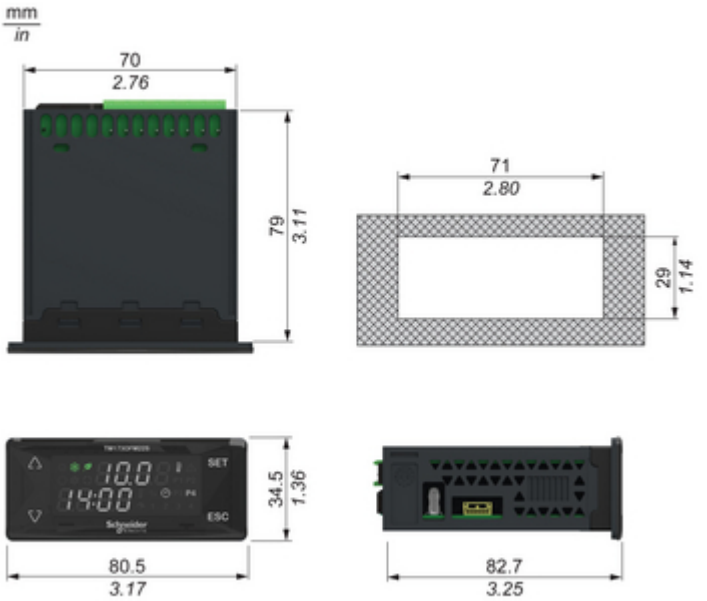
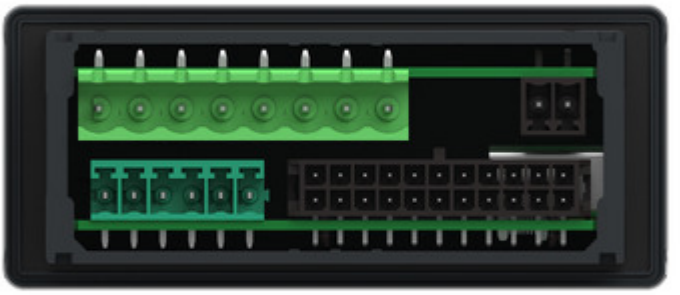
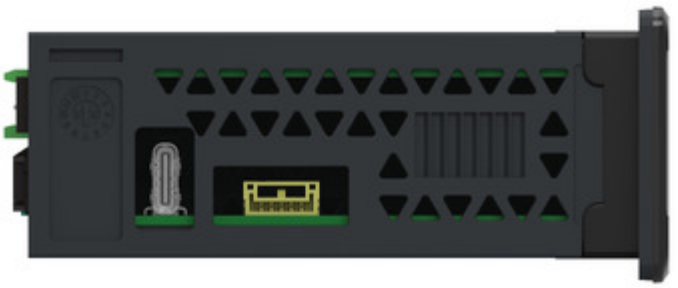
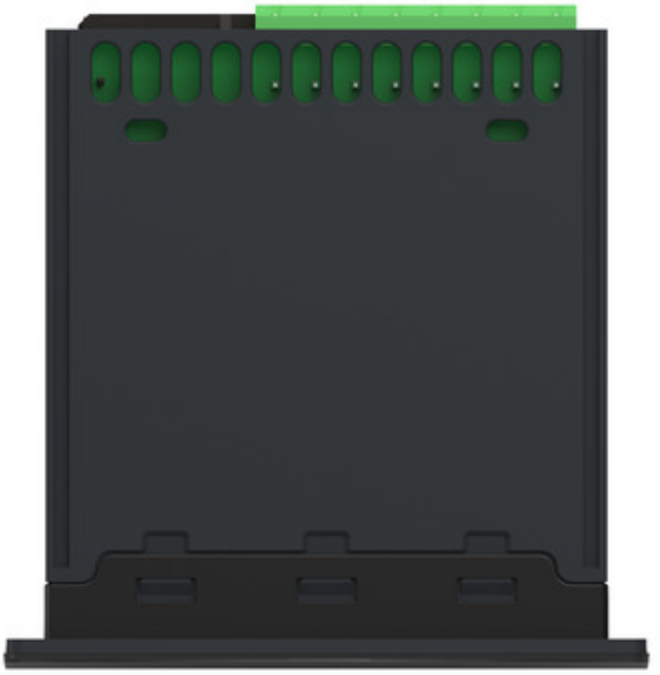


Image of product / Alternate images

Alternative








TM173OFM22R
10.0
14:00
SET
ESC
P1 P2
P3 P4
1 2 3 4
Schneider Electric