


**Schneider
Electric**
Schneider Electric TM173O
Programmable Logic
Controller Module

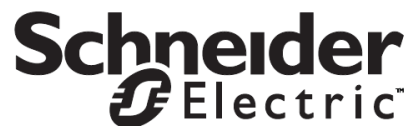


Schneider Electric TM173O Programmable Logic Controller Module Instruction Manual

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Schneider Electric TM173O Programmable Logic Controller Module



Specifications

- Reference: TM173O
- Display: Digital Outputs
- Digital Inputs: 6
- Analog Outputs: 5
- Analog Inputs: 6
- Communication Ports: CAN Expansion bus, USB (type C), RS-485 serial ports
- Supply: 24Vac/Vdc

Product Usage Instructions

Safety Instructions

Ensure all connections are secure before applying power to the unit. Use only the specified voltage for operation to avoid risks of electric shock, explosion, or arc flash.

Installation

Install the equipment following the guidelines provided in the appropriate hardware guide. Verify proper grounding and power connections before powering up.

Operation

Operate the equipment as per the specified voltage requirements. Ensure all devices are powered off before making any changes or maintenance.

Maintenance

Perform maintenance tasks only when the equipment is powered off and disconnected from any power source. Follow the manufacturer's recommendations for servicing.

FAQ

• **Q: What should I do if I encounter a regulatory incompatibility?**

- A: Ensure compliance with all national laws and regulations to prevent any risks of injury, equipment damage, or legal consequences.

• **Q: Who should install and service the electrical equipment?**

- A: Electrical equipment should only be installed, operated, serviced, and maintained by qualified personnel to ensure safety and proper functioning.

DANGER

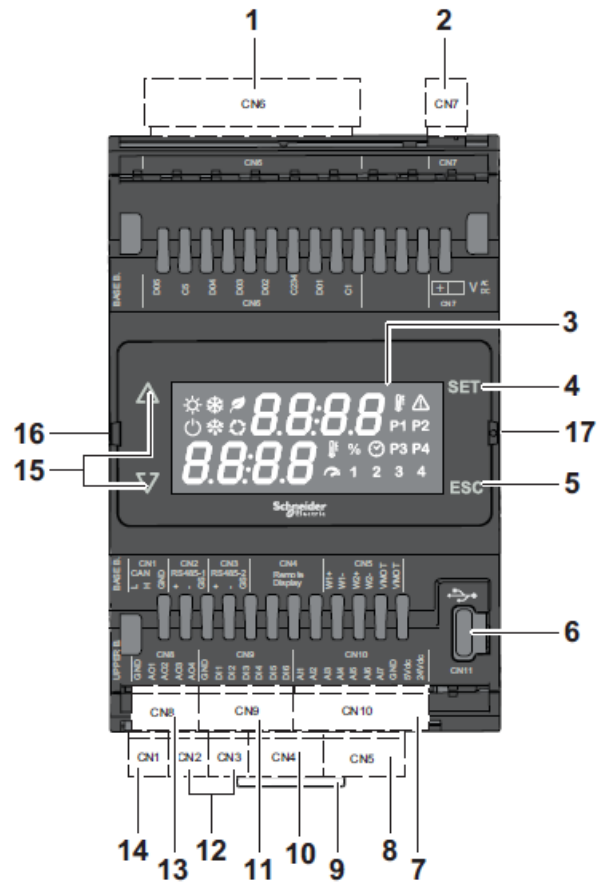
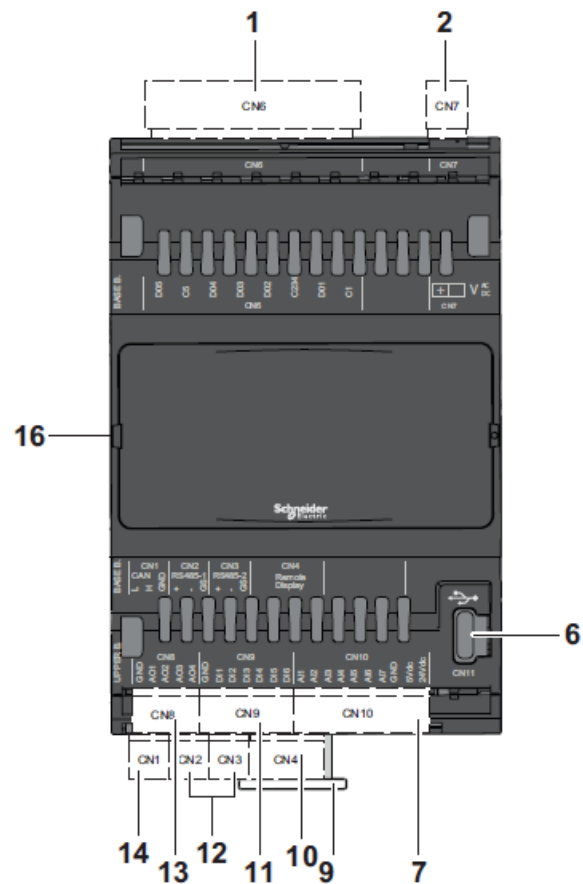
HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH

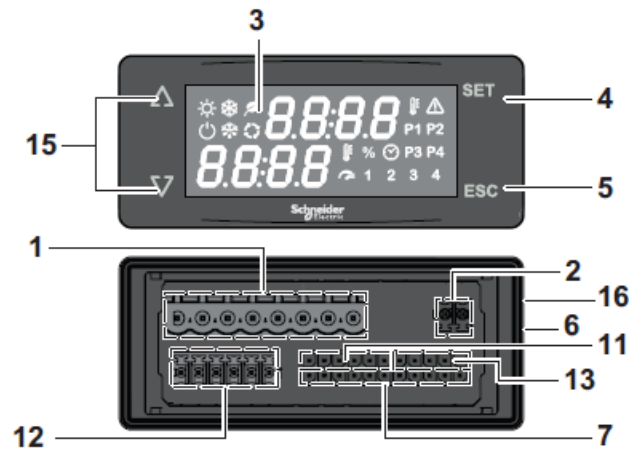
- Disconnect all power from all equipment including connected devices prior to removing any covers or doors, or installing or removing any accessories, hardware, cables, or wires except under the specific conditions specified in the appropriate hardware guide for this equipment.
- Always use a properly rated voltage sensing device to confirm the power is off where and when indicated.
- Replace and secure all covers, accessories, hardware, cables, and wires and confirm that a proper ground connection exists before applying power to the unit.
- Use only the specified voltage when operating this equipment and any associated products.
- Failure to follow these instructions will result in death or serious injury.

Reference	Description	Display	Digital Outputs	Digital Inputs	Analog Outputs	Analog Inputs	Communication Ports	Power Supply
TM173OBM 22R	M173 Optimized Blind 22 I/Os	No	5	6	4	7	CAN Expansion bus	24Vac/ Vdc
TM173ODM 22R	M173 Optimized Display 22 I/Os	Yes	5	6	4	7	USB (type C)	
TM173ODM 22S	M173 Optimized Display 22 I/Os, 2 SSR	Yes	3 + 2 SSR	6	4	7	RS-485 serial ports	
TM173ODE M22R(1)	M173 Optimized Display 22 I/Os, EVD	Yes	5	6	4	7	USB (type C)	
TM173OFM 22R (1)	M173 Optimized Flush mounting 22 I/Os	Yes	5	6	4	7	RS-485 serial ports	
TM173OFM 22S(1)	M173 Optimized Flush mounting 22 I/Os, 2 SSR	Yes	3 + 2 SSR	6	4	7	—	
TM173DLED(1)	M173 Optimized Remote Display LED	Yes	—	—	—	—	—	— *

Powered by the controller.

Available soon.

TM173OBM22R**TM173OBM22R****TM173OFM22R / TM173OFM22S / TM173DLED**



TM173OFM22R / TM173OFM2SS

Rear view



TM173DLED

Rear view

1. Digital outputs
2. Power supply
3. Display
4. Enter key
5. Escape key
6. USB (Type C)
7. Analog inputs
8. Valve driver output (only for TM173ODEM22R model)
9. Clip-on lock for 35-mm (1.38 in.) top hat section rail (DIN rail)
10. Connector for remote display
11. Digital inputs
12. Serial port RS-485
13. Analog outputs
14. CAN Expansion bus
15. Navigation keys
16. Connector to communication module
17. Battery backup socket connector (only for TM173ODEM22R model)

WARNING

UNINTENDED EQUIPMENT OPERATION

- Use appropriate safety interlocks where personnel and/or equipment hazards exist.
- Install and operate this equipment in an enclosure appropriately rated for its intended environment and secured by a keyed or toolled locking mechanism.
- Power line and output circuits must be wired and fused in compliance with local and national regulatory requirements for the rated current and voltage of the particular equipment.
- Do not disassemble, repair, or modify this equipment.
- Do not connect any wiring to reserved, unused connections, or to connections designated as No Connection (N.C.).

Failure to follow these instructions can result in death, serious injury, or equipment damage

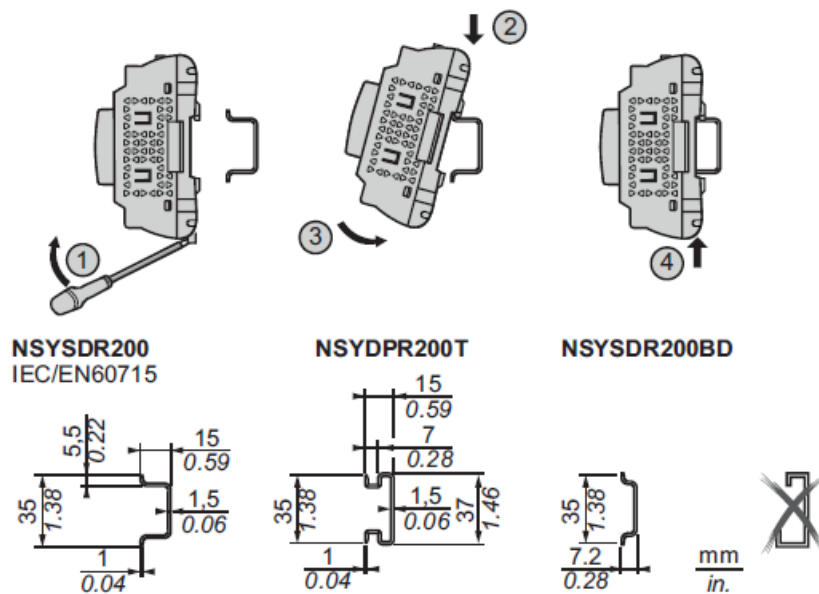
WARNING: This product can expose you to chemicals including lead and lead compounds which are known to the State of California to cause cancer and birth defects or other reproductive harm.

For more information go to: www.P65Warnings.ca.gov .

Mounting

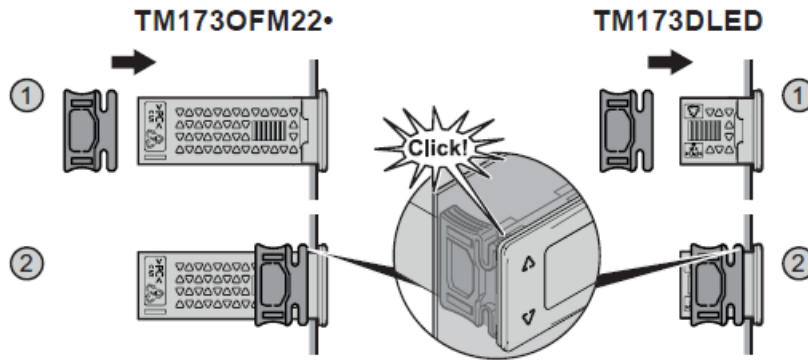
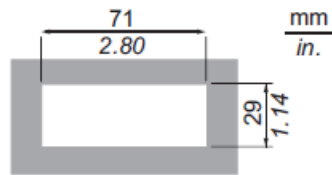
TM173OB.... / TM173OD.... DIN VERSION

Top hat section rail

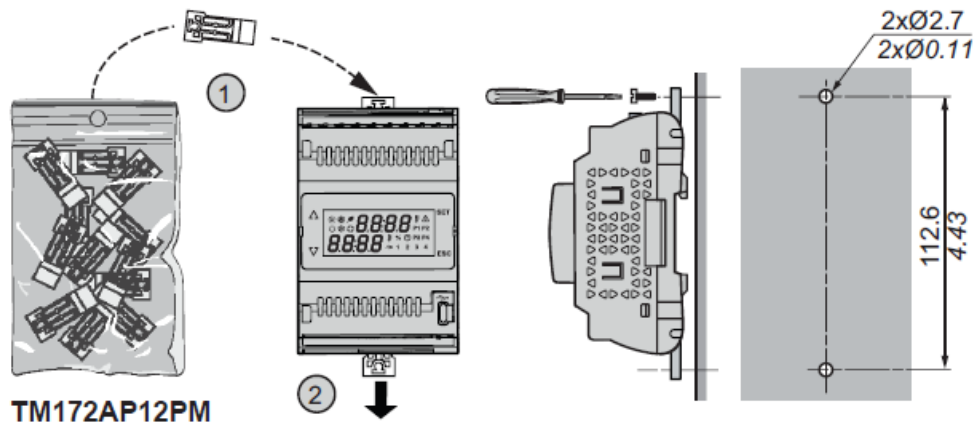


TM173OFM22• / TM173DLED FLUSH MOUNTING VERSION

Mounting on panel with the special brackets provided

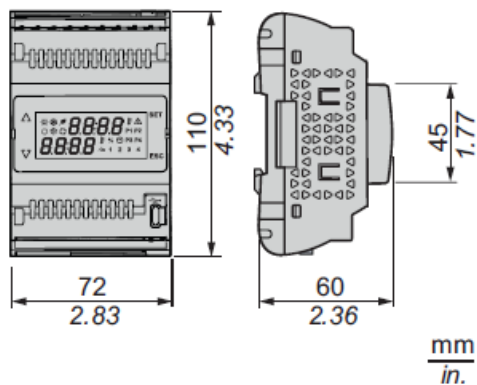


Panel

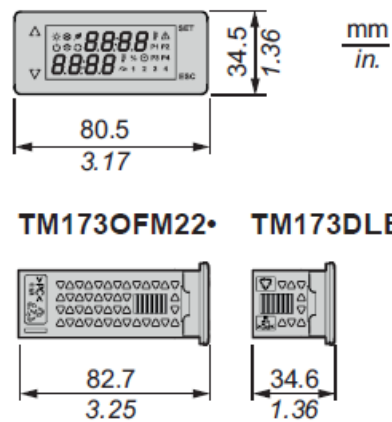


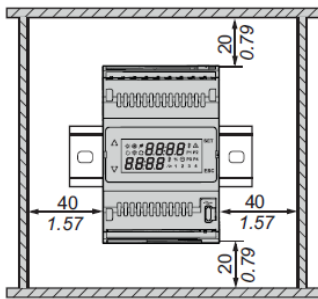
Dimensions

TM173OB.... / TM173OD.... DIN VERSION

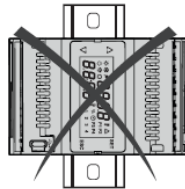


TM173OFM22• / TM173DLED FLUSH MOUNTING VERSION

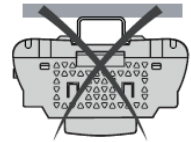
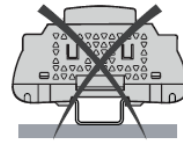
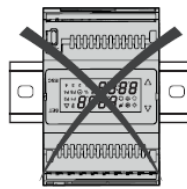




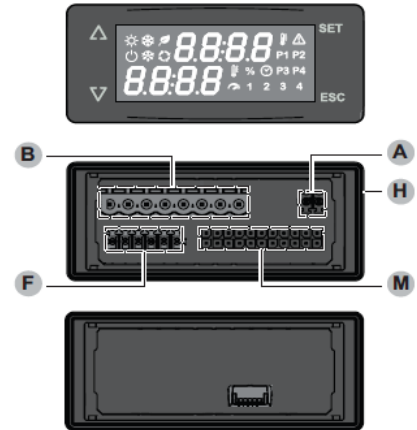
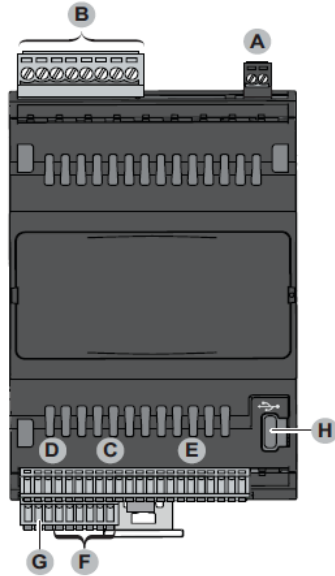
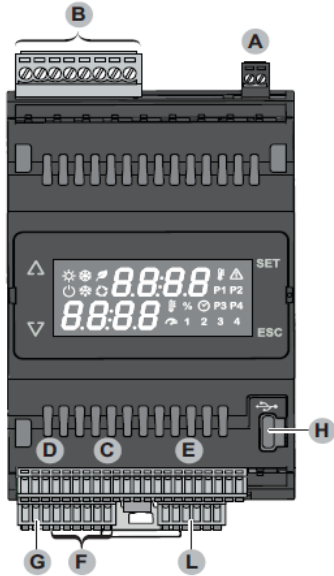
TM173ODM22R
TM173ODM22S
TM173ODEM22R



TM173OBM22R



TM173OFM22R
TM173OFM22S
TM173DLED



CN7

Pitch 3.50 mm (0.14 in.) or 3.81 mm (0.15 in.)

mm in.	9 0.35								
mm ²	0.14...1.5	0.14...1.5	0.25...1.5	0.25...0.5	2 x 0.08...0.5	2 x 0.08...0.75	2 x 0.25...0.34	2 x 0.5	
AWG	26...16	26...16	22...16	22...20	2 x 28...20	2 x 28...20	2 x 24...22	2 x 20	



Ø 2,5 mm (0.1 in.)	⌚ c
N•m	0.22...0.25
lb-in	1.95...2.21

Use copper conductors only.

CN6

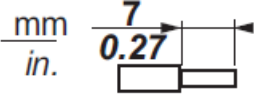




Pitch 5.08 mm (0.20 in.) or 5.00 mm (0.197 in.)

mm in.	7 0.28								
mm ²	0.2...2.5	0.2...2.5	0.25...2.5	0.25...2.5	2 x 0.2...1	2 x 0.2...1.5	2 x 0.25...1	2 x 0.5...1.5	
AWG	24...14	24...14	22...14	22...14	2 x 24...18	2 x 24...16	2 x 22...18	2 x 20...16	

 Ø 3,5 mm (0.14 in.)	 C
N•m	0.5...0.6
lb-in	4.42...5.31

Use copper conductors only.

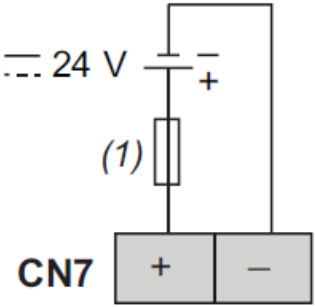
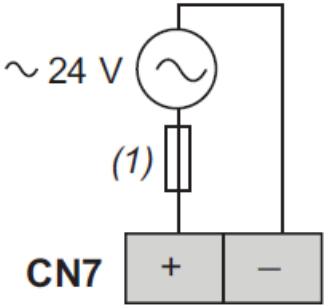
- CN9 D
- CNIO
- CN2,
- CNI
- CN5

				
mm ²	0.2...0.5	0.2...0.5	0.25...0.34	0.25...0.34
AWG	24...20	24...20	24...22	24...22

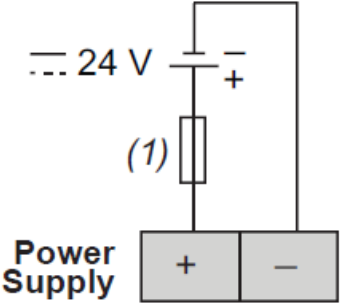
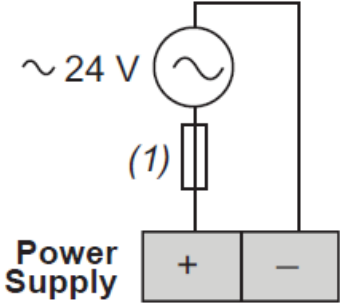
Use copper conductors only.

Power supply

TM173ODM22S
TM173ODM22R
TM173OBM22R
TM173ODEM22R



TM173OFM22R
TM173OFM22S



Type T fuse 1.25 A

WARNING

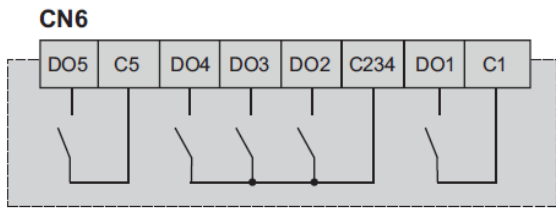
POTENTIAL OF OVERHEATING AND FIRE

- Do not connect the equipment directly to line voltage.
- Use only isolating SELV, Class 2 power suppliers/transformers to supply power to the equipment.
- Failure to follow these instructions can result in death, serious injury, or equipment damage.

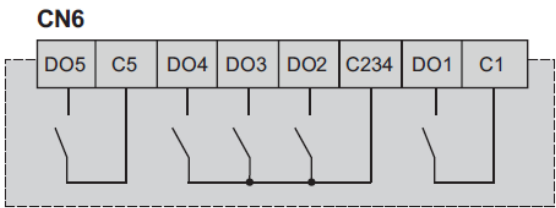
Wiring diagram

Digital Outputs

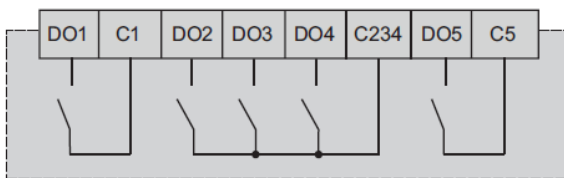
TM173OBM22R / TM173ODM22R / TM173ODEM22R



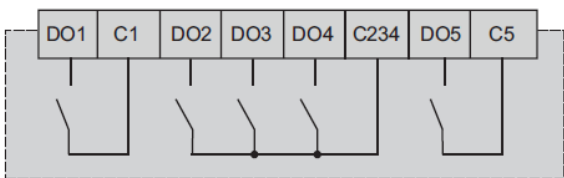
TM173ODM22S



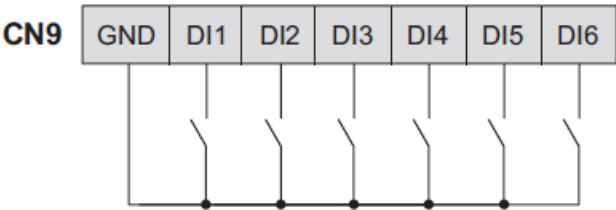
TM173OFM22R



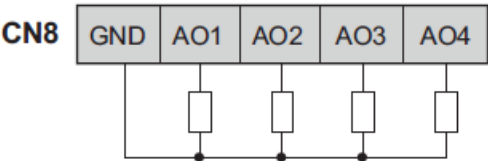
TM173OFM22S



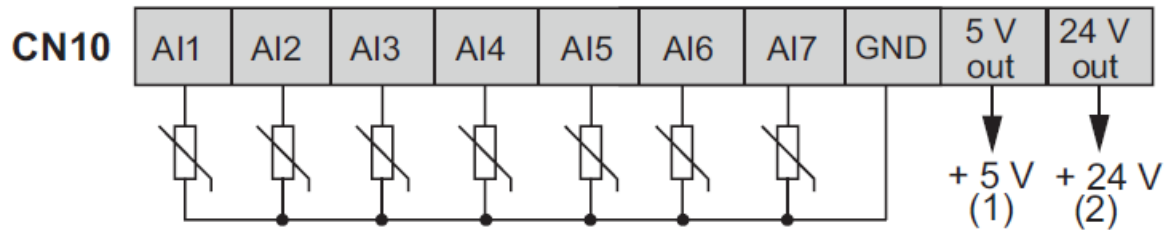
Digital inputs



Analog Outputs



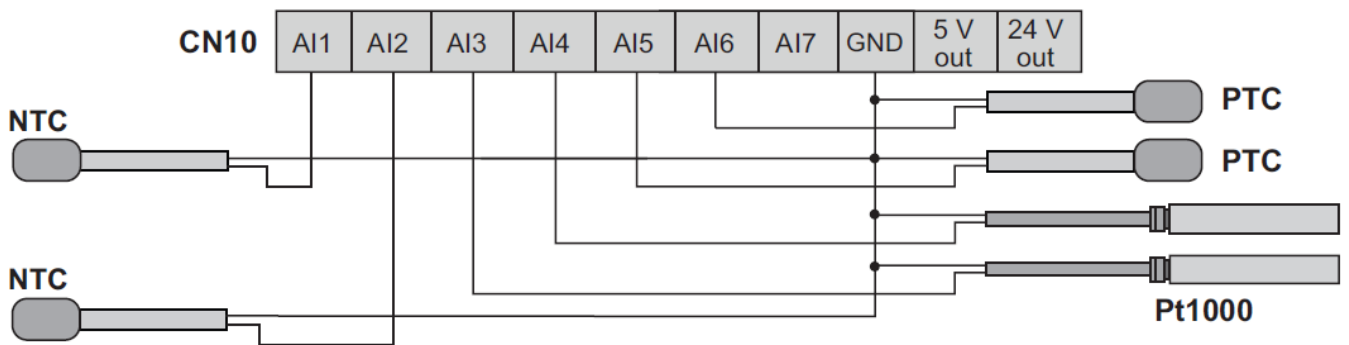
Analog inputs



1. **Max current:** 50 mA.
2. **Max current:** 125 mA.

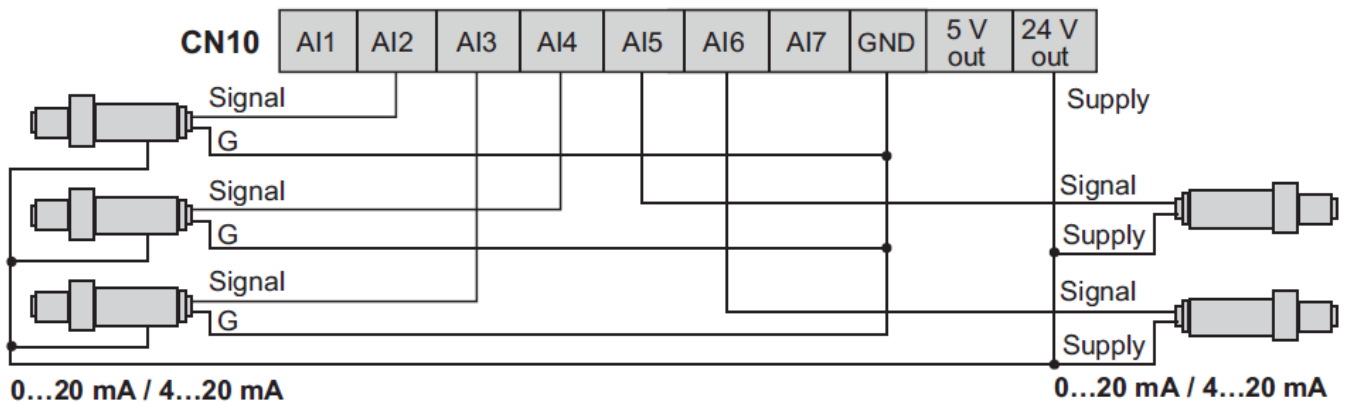
Example

NTC – PTC – Pt1000 probe connection

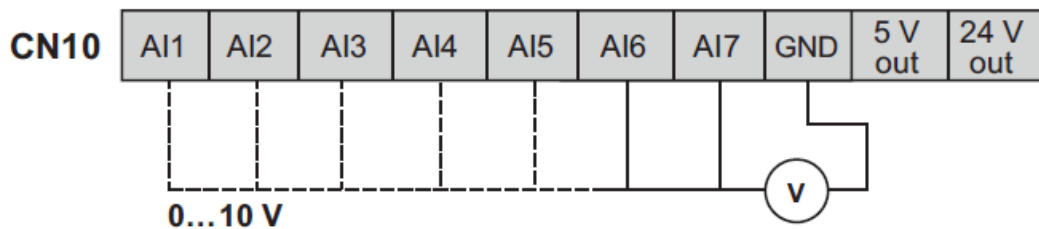


Example

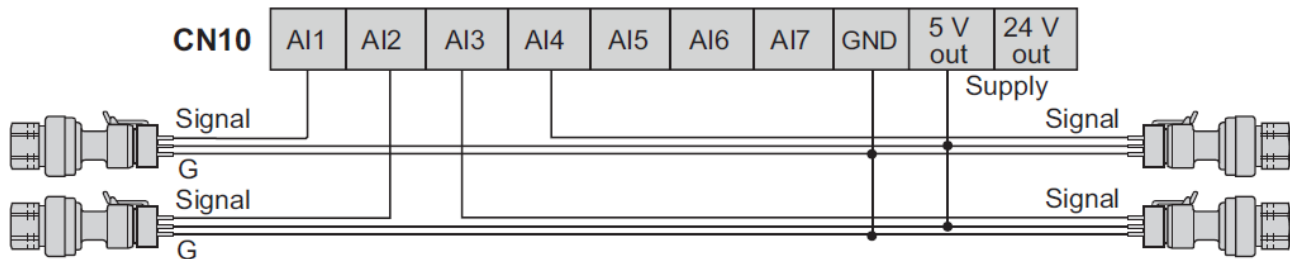
Transducer connection



- Signal
- Voltage 0...5 V ratiometric

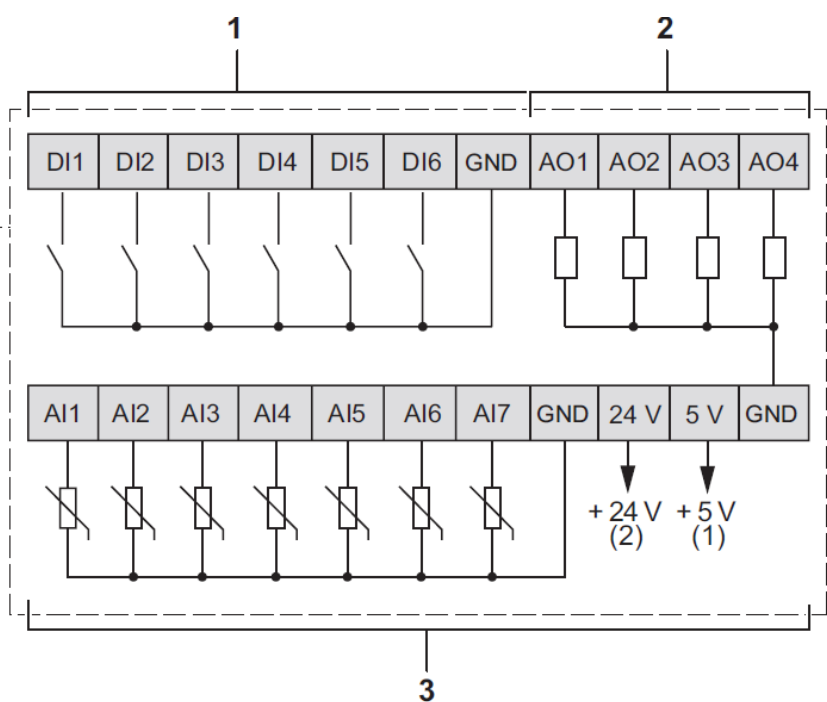
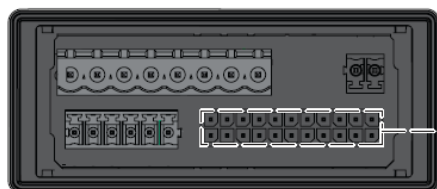


Voltage



Microfit connector

TM173OFM22•



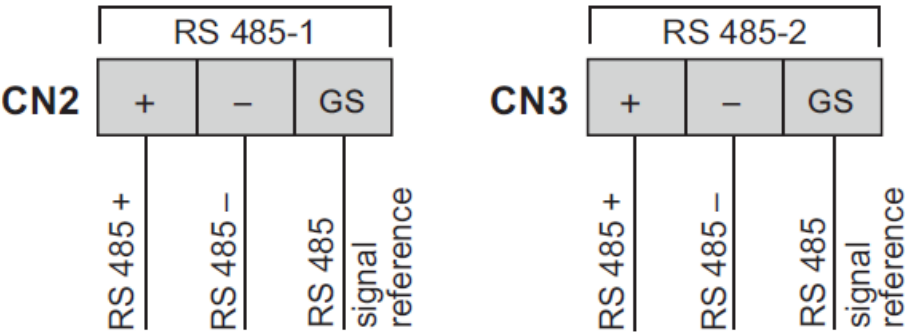
1. **Max current:** 50 mA.
2. **Max current:** 125 mA
 1. Digital inputs
 2. Analog outputs
 3. Analog inputs

RS-485-1 – Modbus SL

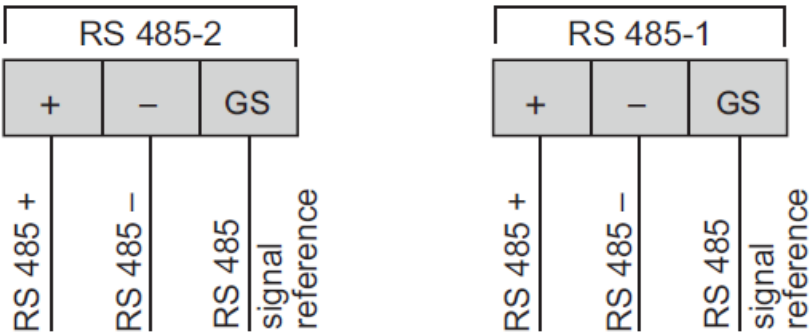
RS-485-2 – Modbus SL

Serial line port

TM173ODM22S
TM173ODM22R
TM173OBM22R
TM173ODEM22R



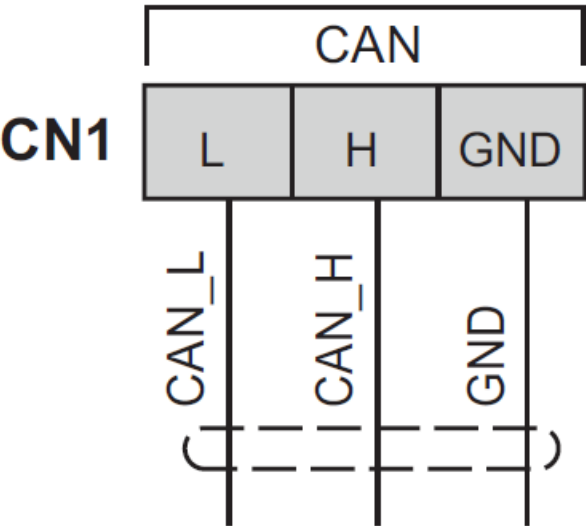
TM173OFM22R
TM173OFM22S



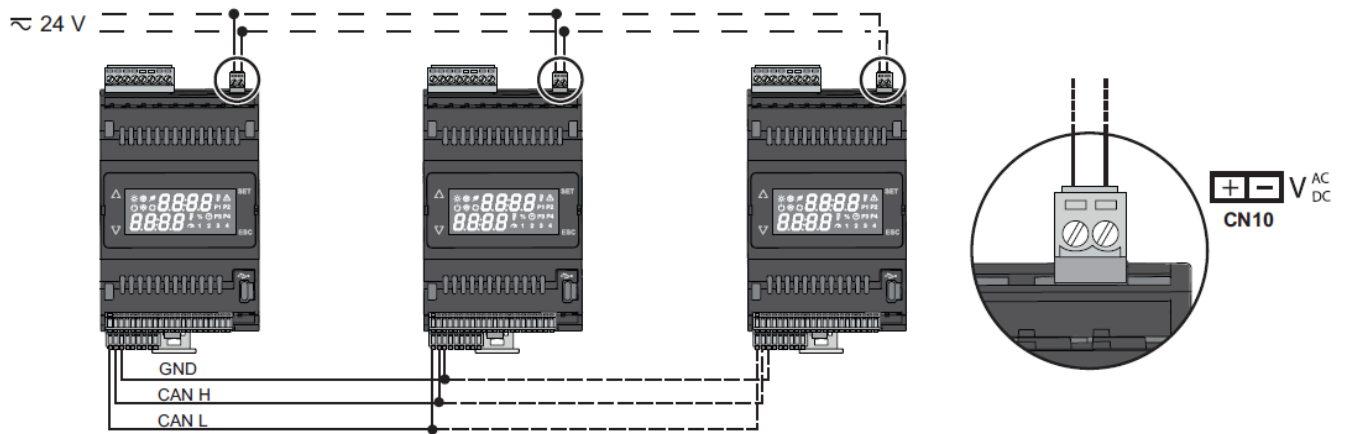
Apply 120 Ω terminal resistor. (if end device of the bus).

CAN Expansion bus

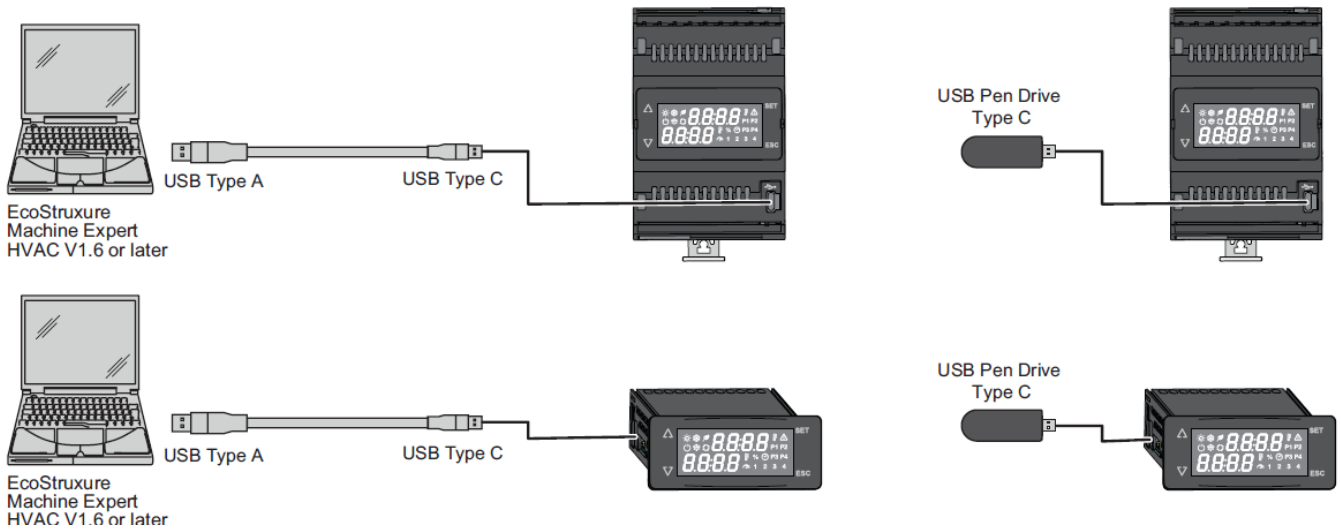
Apply 120 Ω terminal resistor (if end device of CAN expansion bus).



CAN connection example



USB connections

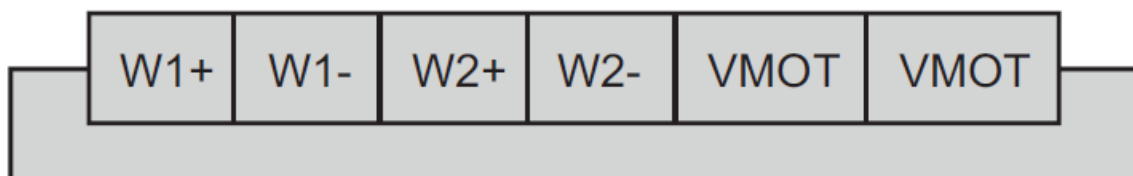


Valve Outputs

Build-in protection against overload (only TM173ODEM22R) and short-circuit

TM173ODEM22R

CN5



VMOT : 12Vdc / 800mA max

W•± : 400 mA max

First switch on

LED states and Operating Modes



LED states and Operating Modes

	Alarm	Red
	Heating	Green
	Cooling	
	Standby	
	Defrost	
	Economy	
	Edit Mode	

LED Unit of measure LED Unit of measure		Time	White
		Temperature	
		Pressure	
		RH% or % of analog output	
LED utilities LED utilities	P1	Function 1	White
	P2	Function 2	
	P3	Function 3	
	P4	Function 4	
	1, 2, 3, 4	Utilities	

Technical Data

The product complies with the following harmonized Standards

- **Construction of control** : Electronic automatic Incorporated Control
- **Purpose of control** : Operating control (non-safety related)
- Environmental front panel rating Open Type
- Degree of protection provided by enclosure IP20
- Method of mounting See page 4
- Type of action 1.B / 1.Y
- Pollution degree 2 (Normal)
- Overvoltage category II
- **TM173OB.... / TM173OD....** : Power supply 24 Vac ($\pm 10\%$) 50 / 60 Hz 20...38 Vdc
- **TM173OFM22•** : Power supply not isolated (RS-485 ISO)
- Ambient operating conditions
 - TM173OB....
 - TM173OD....
 - TM173OFM22• : -20...65 °C (-4 ...149 °F) 5...95 % (1)
 - TM173ODEM22R : -20...55 °C (-4 ...131 °F) 5...95 % (1)
- Transportation and storage conditions -30...70 °C (-22...158 °F) 5...95 % (1)
- Software class A



DISPOSAL: The equipment (or product) must be subjected to separate waste collection in compliance with the local legislation on waste disposal.

Part Name	- Hazardous Substances					
	(Pb)	(Hg)	(Cd)	(Cr (VI))	(PBB)	(PBDE)
Metal parts	X	O	O	O	O	O
Plastic parts	O	O	O	O	O	O
Electronic	X	O	O	O	O	O
Contacts	O	O	O	O	O	O
Cables & cabling accessories	O	O	O	O	O	O

This table is made according to SJ/T 11364.

- **O**: Indicates that the concentration of hazardous substance in all of the homogeneous materials for this part is below the limit as stipulated in GB/T 26572.
- **X**: Indicates that concentration of hazardous substance in at least one of the homogeneous materials used for this part is above the limit as stipulated in GB/T 26572.


INFORMATION

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- www.eliwell.com



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- United Kingdom

Documents / Resources

	<p>Schneider Electric TM1730 Programmable Logic Controller Module [pdf] Instruction Manual</p> <p>TM1730BM22R, TM1730, TM1730 Programmable Logic Controller Module, TM1730, Programmable Logic Controller Module, Logic Controller Module, Controller Module</p>
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References

- [Home | Eliwell by Schneider Electric](#)
- [P65Warnings.ca.gov](#)
- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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