FR NTC-1P3D

VM650900



[Model variant]

Digital controller suitable for managing static refrigeration units (i.e. without fans on the evaporator) operating at temperatures above 0 °C. The device can be connected to NTC thermistors.

General features

- The controller performs the functions of a thermometer, displaying the temperature, and an electronic thermostat, activating a compressor and solenoid valve to maintain the required temperature. It also provides automatic defrosting (Defrost) by forcibly switching off the compressor. The defrosting frequency and duration can be set.
- Parameter setting in digital mode:
  - Set-point
  - Differential
  - Output actuation times
  - Function and digital input delay time
  - Alarm delay time / Buzzer enable
  - Probe calibration OFFSET
  - Displayed resolution
  - Temperature unit of measurement
  - Measurement display filter (refresh rate)
  - Probe input type
  - Password
  - Defrost interval
  - Defrost duration
  - Continuous cycle duration
  - Duty cycle setting
  - Defrost parameters
- Control action of the Direct ON/OFF type
- Operating Modes
  - Defrost
  - Duty cycle
  - Continuous cycle
  - Digital input
- 2 probe inputs for temperature measurement: the first probe can be used for regulation and the second for displaying product storage temperature
- Digital input with configurable function:
  - External alarm
  - Probe selection
  - ON/OFF regulation
  - Defrost management
  - Night operation (with the contact closed the SET is modified by an OFFSET in degrees)
- Acoustic and visual alarm signalling for:
  - external alarm (digital input)
  - probe alarm (malfunction)

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- minimum or maximum alarm

Technical specifications

Power supply	
Power supply	12 ÷ 24 Vac/Vdc (-10% ÷ +10%)
Frequency	50 / 60 Hz
Absorption	3 VA
Measure	
Temperature display resolution	0.1 (for values in the range -9.9 ÷ 99.9) °C 1 (for values <-9,9 and > 99.9) °C
Temperature measurement accuracy	± 0.5 % of full scale value ± 1 digit °C
Functions	
Keypad lock function	✓
Probe alarm buzzer	✓
Functional characteristics	
Temperature display range	-40 ÷ 110 °C
Operating conditions	
Operating temperature range	0 ÷ 50 °C
Relative humidity	< 80% RH
Storage temperature range	-25 ÷ 70 °C
Storage humidity range	< 80% RH
Viewing	
Display	Red LEDs
Digits number	3
Display range	-40 ÷ 110 °C
Inputs	
Digital input	✓
No. digital inputs	1
Auxiliary input features	Configurable
Number of connectable probes	2
Type of connectable probes	NTC (10 kΩ at 25 °C)
Outputs	
Relay number	1
Relay type	Heat exchange
Relay capacity at 250 Vac	8 A

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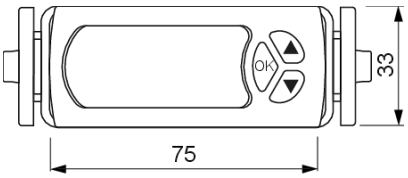
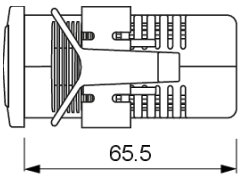
Mechanical features	
Protection degree	IP54 (on the front) IP20 (on terminals)
Overall dimensions	
Height (A)	33 mm
Width (B)	75 mm
Depth (C)	65.5 mm

Dimensions

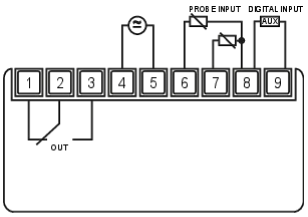
Front View



Side View



Wiring diagram



Probe input:

- NTC1
- NTC2

Product variants

FR NTC-4P3D

VM652500

Digital panel controller (33×75) connectable with NTC resistance thermometer probes, 12 ÷ 24 Vac/Vdc, digital input, and 4 relays

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Accessories compatible with the product

NTC C

VE123600

NTC C thermistor with a 2-wire NTC semiconductor sensor encased in eco-printed plastic for temperature detection, length 1.5 m

NTC BC

VE124400

NTC BC thermistor with a 2-wire NTC semiconductor sensor housed in eco-molded plastic and equipped with a cable, particularly suitable for measuring the temperature outside pipes; length: 1.5 m

NTC 3MT

VE152500

NTC RTD sensor, 2-wire, with NTC semiconductor for temperature measurement, 3 m length

NTC

VN870200

NTC RTD sensor, 2-wire, with NTC semiconductor for temperature measurement, 1.5 m length

TM3 230/12

VE256400

Transformer with 230 Vac terminals, 3 VA power and 12 V secondary voltage

TM3 115/12

VE257200

Transformer with 115 Vac terminals, 3 VA power and 12 V secondary voltage

TM3 230/24

VE258000

Transformer with 230 Vac terminals, 3 VA power and 24 V secondary voltage

TM3 115/24

VE259800

Transformer with 115 Vac terminals, 3 VA power and 24 V secondary voltage

TM6 230/12

VE260600

Transformer with 230 Vac terminals, 6 VA power and 12 V secondary voltage

TM6 230/24

VE261400

Transformer with 230 Vac terminals, 6 VA power and 24 V secondary voltage

Reference standards

Compliance with Community Directives:

• 2014/35/UE (LVD) • 2014/30/UE (EMCD) • 2011/65/UE e 2015/863/UE (ROHS)

is declared with reference to the following Standards:

• EN IEC 60730-2-9 • EN IEC 63000

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