FR NTC-4P3D

VM652500



[Model variant]

Digital regulators suitable for managing ventilated refrigeration units, i.e. with a fan on the evaporator, operating at temperatures below 0 °C, requiring 'active' defrosting by means of electrical resistance or hot gas injection. The device can be connected to NTC thermistors.

General features

- In addition to its function as thermometer and thermostat, the regulator activates a compressor or solenoid valve to maintain the required temperature and manages the defrosting actuator. The defrosting frequency and duration can be set. The end of defrosting can occur either when the temperature is reached (by connecting a probe on the evaporator) and through timing
- The functions of the four relays are:
  - Relay 1: compressor management
  - Relay 2: defrost management
  - Relay 3: evaporator fan management
  - Relay 4: auxiliary or alarm channel
- 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 evaporator control
- Digital input with configurable function:
  - External alarm
  - Probe selection
  - ON/OFF regulation
  - Defrost management

Vemer S.p.A. declines all responsibility for the use of the products for purposes other than those for which they are intended, as indicated in the technical documentation. Vemer S.p.A. reserves the right to make, without prior notice, such changes as may, in its sole discretion, improve the technical and functional characteristics of the products and the related production logic. The technical characteristics and images of the products indicated are given for information only and are not binding in any way, since they may be modified without prior notice.

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- 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)
- minimum or maximum alarm

Technical specifications

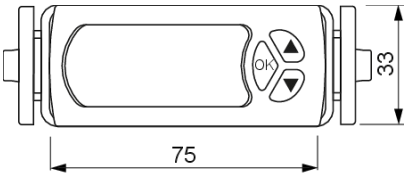
Power supply	
Power supply	12 ÷ 24 Vac/Vdc (-10% ÷ +10%)
Frequency	50 / 60 Hz
Absorption	3 VA
Measure	
Temperature display resolution	0.1 (for values in the range -9.9 ÷ 99.9) °C 1 (for values <-9,9 and > 99.9) °C
Temperature measurement accuracy	± 0.5 % of full scale value ± 1 digit °C
Functions	
Keypad 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
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	4
Relay type	Heat exchange

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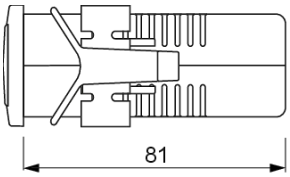
Outputs	
Relay capacity at 250 Vac	8 A
Mechanical features	
Protection degree	IP54 (on the front) IP20 (on terminals)
Overall dimensions	
Height (A)	33 mm
Width (B)	75 mm
Depth (C)	81 mm

Dimensions

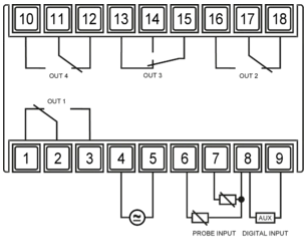
Front View



Side View



Wiring diagram



Probe input:

- NTC1
- NTC2

Product variants

FR NTC-1P3D

VM650900

Digital panel controller (33×75) connectable with NTC resistance thermometer probes, 12 ÷ 24 Vac/Vdc, digital input, and 1 relay

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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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