

Digital heat regulators

FHT / FHT NTC

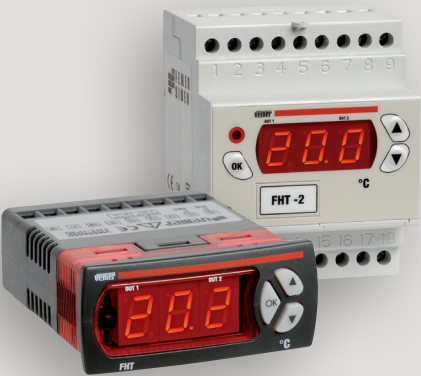
- Heat regulators with LED display with 3 digits, 7 segments and decimal point with relay intervention signalling LED
- Display range: -99 ÷ +999 °C (depending on the probe connected)
- Display resolution: 0.1 °C (-9.9 ÷ +99.9 °C) and 1 °C (< -9.9 °C and > +99.9 °C)
- Precision: ± 0.5 % of the full scale value ±1 digit
- Possibility to select the type of probe between Thermocouples, Thermo-resistances and Linear sensors
- Password to protect the setting
- Parameters setting with digital mode:
 - Set-point
 - Differential
 - Neutral zone
 - Output triggering timing
 - Digital input delay time and function
 - Alarm delay time
 - Probe gauging OFFSET
 - Resolution displayed
 - Temperature unit of measurement
 - Measurement display filter (updating speed)
 - Probe input type

- Operating modes (regulation):
- Heating or cooling ON/OFF (with or without Neutral Zone)
 - Direct action, Reverse and Neutral Zone PWM
 - ALARM
 - Refrigeration mode
 - Special mode
- Output: 1 or 2 relays with change-over contact 8 A / 250 V AC1
 - Digital input: 1 with configurable function: external alarm, ON/OFF regulation, probe display selection, Set-point switching, Direct/Reverse switching
 - Visual and acoustic alarm signalling for: external alarm (from digital input), probe alarm (fault), minimum or maximum alarm
 - Analog output: 0 ÷ 10 V, 4 ÷ 20 mA, 0 ÷ 20mA
 - Output for the optoisolated RS 485 serial communication (MODBUS communication protocol)
 - Infrared receiver with RC-5 protocol (excluding version FHT NTC-2DA) for Remote control unit (accessory available seperately for remote programming)

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FHT



FHT NTC



TECHNICAL INFORMATION

GENERAL CHARACTERISTICS

Model			FHT - ..P3D FHT NTC -2P3D	FHT - ..DA FHT NTC -2DA
Dimensions			Rear-panel 33x75 mm	4 DIN Modular
Power supply voltage in AC	A 50/60 Hz	V	12 ÷ 24	24 / 230
Power supply voltage in DC		V	12 ÷ 24	-
Power supply voltage tolerance		%	± 10	± 10
Absorption		VA	3	4.5
Relay outputs				
capacity with change-over contact	at 250 V AC1	A	8	8
maximum breakaway starting current		A	10	10
maximum switchable power in AC		VA	2000	2000
maximum switchable resistive load	at 230 V	W	1760	1760
single-phase motor capacity		HP	1/4	1/4
maximum switchable voltage		V	250	250
Precision	at ambient temperature = 23 °C		± 0.5% of the full scale value ± 1 digit	± 0.5% of the full scale value ± 1 digit
Display range			-99 + 999 °C*	-99 + 999 °C*
Display resolution			0.1 °C (-9.9 ÷ +99.9 °C) 1 °C (< -9.9 °C and > +99.9 °C)	0.1 °C (-9.9 ÷ +99.9 °C) 1 °C (< -9.9 °C and > +99.9 °C)
Sampling time		s	0.5	0.5

* Depending on the selected probe

TECHNICAL INFORMATION

GENERAL CHARACTERISTICS

Model			FHT - ..P3D FHT NTC -2P3D	FHT - ..DA FHT NTC -2DA
Front protection degree			IP54	IP40
Terminals protection degree			IP20	IP20
Display			3 digits LED 7 segments and dec. point	3 digits LED 7 segments and dec. point
Active probes power supply	in DC	V	9 (max30 mA) (1)	9 (max30 mA) (1)
Probe alarm signalling buzzer			■	■
Infrared receiver for remote control unit			■	■ (2)
Digital input			■	■
Analog output			■ (1)	■ (1)
Serial interface output			■	■
Operating temperature		°C	0 ÷ +50	0 ÷ +50
Operating humidity		RH	< 80%	< 80%
Storage temperature		°C	-10 ÷ +70	-10 ÷ +70

(1) excluding FHT NTC-... (2) excluding FHT NTC-2DA

REFERENCE STANDARDS

Compliance with Community Directives: 73/23/EEC mod. from 93/68/EEC (Low Voltage) 89/336/EEC mod. from 92/31/EEC and 93/68/EEC (E.M.C.) is declared with reference to the following standards: • For safety: EN 60730-2-9 • For E.M. compatibility: EN 55014-1 / EN 55014-2 / EN 61000-6-2 / EN 61000-6-4

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- Connectable probes:
 - NTC (10 kΩ at 25 °C)
- 2 probes inputs to measure two temperatures (one probe for the regulation and the other for the display)
- T2 temperature display indication LED (available in the modular version)
- RS 485 serial output with MODBUS communication protocol

! To complement the product the suitable probes must be ordered separately.



THERMOREGULATORS FOR THERMO-RESISTANCES

Code	Model	Version	Power supply	no. of relays
VM668100	FHT NTC-2P3D	Rear-panel 33x75 *	12/24 V AC/DC	2
VM671500	FHT NTC-2DA	4 DIN Modular **	24/230 V AC	2

* Analog output not available
** Analog output and infrared receiver for remote control unit not available



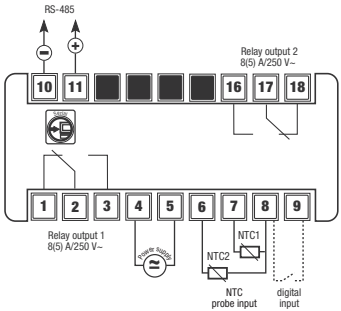
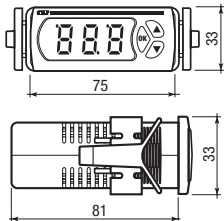
DIMENSIONS (mm)

CONNECTION DIAGRAM

Front view / Side view

Diagram

FHT NTC-2P3D



FHT NTC-2DA

