

## Digital heat regulators

- 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 (HT NTC excluded)
- Password to protect the setting
- Parameter 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

## HT NiPt / HT NTC / HT JK

- 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 (excluding versions HT NiPt-P7A, HT NTC-P7A, HT JK-P7A) 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
  - Infrared receiver with RC-5 protocol (excluding versions HT NTC-1DA, HT NTC-2DA) for remote control unit (accessory available separately for remote programming)

## Digital heat regulators

## HT NiPt / HT NTC / HT JK

HT NiPt



HT NTC



HT JK



### TECHNICAL INFORMATION

#### GENERAL CHARACTERISTICS

Model	HT NiPt - P7A		HT NiPt - P3A		HT NiPt - ..P3D		HT NiPt - ..DA	
	HT NTC - P7A		HT NTC - P3A		HT NTC - P3D		HT NTC - ..DA	
	HT JK - P7A		HT JK - P3A		HT JK - P3D		HT NTC - ..DA	
Dimensions	Rear-panel 72x72 mm		Rear-panel 33x75 mm		Rear-panel 33x75 mm		4 DIN Modular	
Power supply voltage in AC	A 50/60 Hz	V	24 / 230	230	12 ÷ 24	24 / 230		
Power supply voltage in DC		V	-	-	12 ÷ 24	-		
Power supply voltage tolerance		%	± 10	± 15	± 10	± 10		
Absorption		VA	4,5	3	3	4,5		
Relay outputs (change-over contact) capacity	at 250 V AC1	A	8	8	8	8		
maximum breakaway starting current		A	10	10	10	10		
maximum switchable power in AC		VA	2000	2000	2000	2000		
maximum switchable resistive load	at 230 V	W	1760	1760	1760	1760		
single-phase motor capacity		HP	1/4	1/4	1/4	1/4		
maximum switchable voltage		V	250	250	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	± 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 *	-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)	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)		

\* Depending on the selected probe

### TECHNICAL INFORMATION

#### GENERAL CHARACTERISTICS

Model	HT NiPt - P7A		HT NiPt - P3A		HT NiPt - ..P3D		HT NiPt - ..DA	
	HT NTC - P7A		HT NTC - P3A		HT NTC - P3D		HT NTC - ..DA	
	HT JK - P7A		HT JK - P3A		HT JK - P3D		HT NTC - ..DA	
Sampling time	s	0.5	0.5	0.5	0.5	0.5		
Front protection degree		IP54	IP54	IP54	IP54	IP40		
Terminal protection degree		IP20	IP20	IP20	IP20	IP20		
Display		3 digits LED 7 segments and dec. point	3 digits LED 7 segments and dec. point	3 digits LED 7 segments and dec. point	3 digits LED 7 segments and dec. point	3 digits LED 7 segments and dec. point		
Probe alarm signalling buzzer		■	■	■	■	■		
Infrared receiver for remote control unit		■	■	■	■	■ (1)		
Digital input			■	■	■	■		
Operating temperature	°C	0 ÷ +50	0 ÷ +50	0 ÷ +50	0 ÷ +50	0 ÷ +50		
Operating humidity	RH	< 80%	< 80%	< 80%	< 80%	< 80%		
Storage temperature	°C	-10 ÷ +70	-10 ÷ +70	-10 ÷ +70	-10 ÷ +70	-10 ÷ +70		

(1) excluding HT NTC-...DA

## HEAT REGULATION

# Digital heat regulators

Digital heat regulators to regulate the temperature both when heating and cooling in applications such as ovens and burners.



## HEAT REGULATORS FOR THERMOCOUPLES



Code	Model	Version	Power supply	no. of relays
VM639200	HT JK-1P7A	Rear-panel 72x72 *	24/230 V AC	1
VM640000	HT JK-2P7A	Rear-panel 72x72 *	24/230 V AC	2
VM641800	HT JK-1P3D	Rear-panel 33x75	12 ÷ 24 V AC/DC	1
VM642600	HT JK-1P3A	Rear-panel 33x75	230 V AC	1
VE348900	HT JK-2P3A	Rear-panel 33x75	230 V AC	2
VM643400	HT JK-2P3D	Rear-panel 33x75	12 ÷ 24 V AC/DC	2
VM644200	HT JK-1DA	4 DIN Modular	24/230 V AC	1
VM645900	HT JK-2DA	4 DIN Modular	24/230 V AC	2

\* This version does not have a digital input

## 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

# HT JK

## HT JK

- Connectable probes:
  - J (Fe-CuNi)
  - K (NiCr-Ni)
  - L (Fe-CuNi)
  - R (Pt13Rh-Pt)
  - S (Pt10Rh-Pt)
  - T (Cu-CuNi)
  - E (NiCr-CuNi)
  - N (NiCrSi-NiSi)
- Probes inputs: 1
- Automatic compensation of the cold joint

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

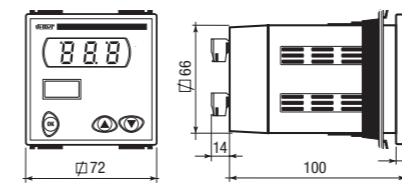
# Digital heat regulators

# HT JK

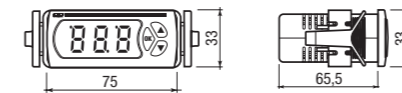
## DIMENSIONS (mm)

### Front view / Side view

HT JK-1P7A  
HT JK-2P7A



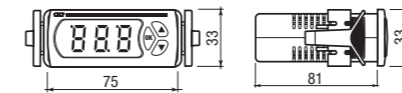
HT JK-1P3D



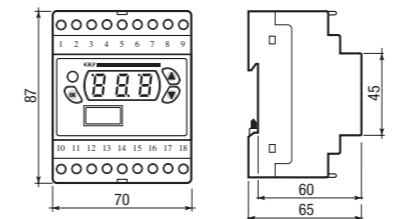
HT JK-2P3D



HT JK-1P3A  
HT JK-2P3A



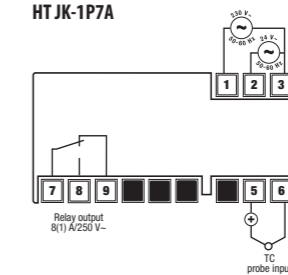
HT JK-1DA  
HT JK-2DA



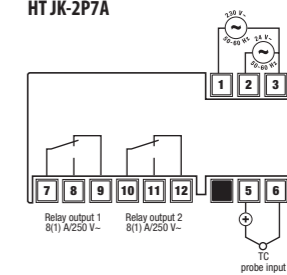
## CONNECTION DIAGRAM

### Diagram

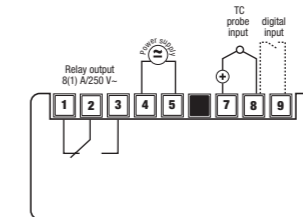
HT JK-1P7A



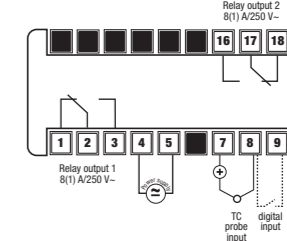
HT JK-2P7A



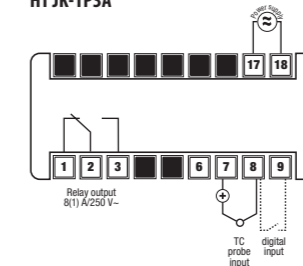
HT JK-1P3D



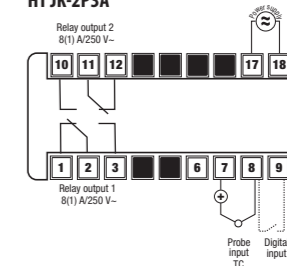
HT JK-2P3D



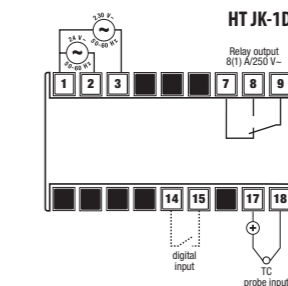
HT JK-1P3A



HT JK-2P3A



HT JK-1DA



HT JK-2DA

