

Temperature and Process Controllers

- Provide simple reliable and economic control of industrial processes.
- Complete range of controllers adapted to most industrial applications.
- Quick and exact operation as result of PID action improved with FUZZY logic.
- Permit calculation of the most efficient parameters thanks to the AUTOTUNING function.
- ModBus RS485 Communication.

INDUSTRIES AND APPLICATIONS

- Chemical Industries
- Plastics treatment industries
- Paper processing industries
- Welding equipment
- Oven manufacturing
- Other types of industries and applications...

PROCESSES

- Control of temperature, pressure, flow, level, volume processes, etc...
- Industrial equipment control
- Valve positioners control
- Servo operation and speed variators control
- Process limit values control
- Other types of processes...

TP 720



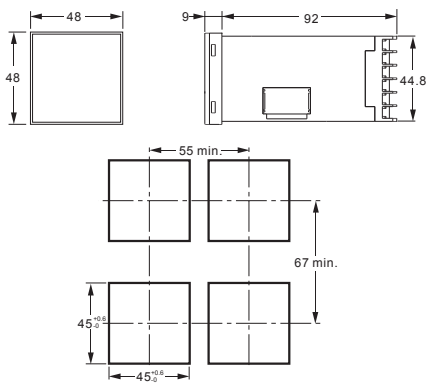
TP 731



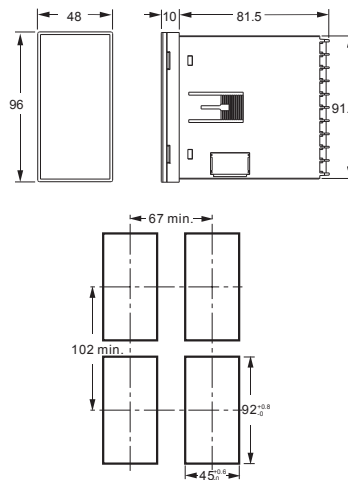
TP 750



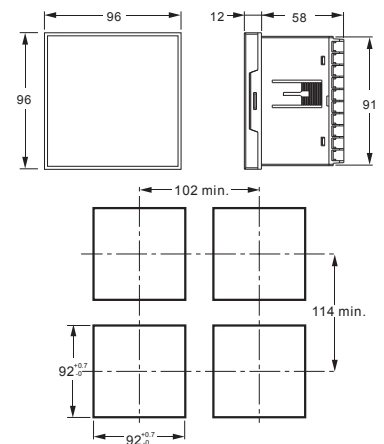
DIMENSIONS TP 720 RELAY (mm)



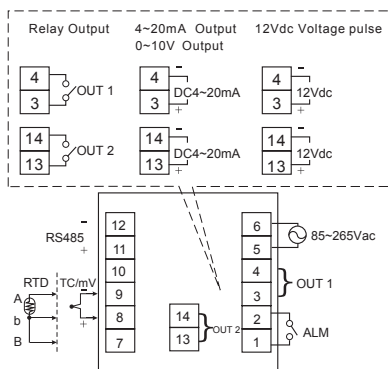
DIMENSIONS TP 731 RELAY (mm)



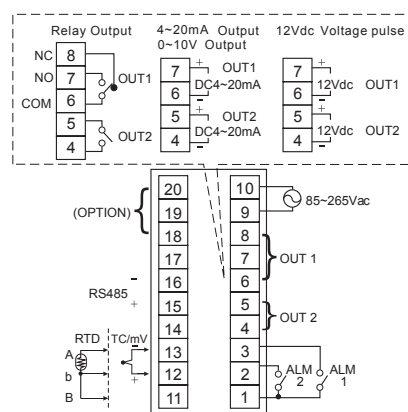
DIMENSIONS TP 750 RELAY (mm)



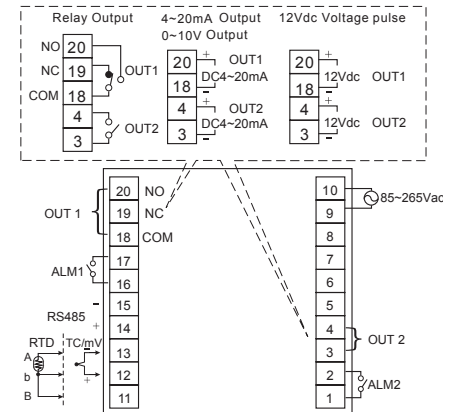
WIRING DIAGRAM TP 720



WIRING DIAGRAM TP 731



WIRING DIAGRAM TP 750



SPECIFICATIONS	
Power Supply	85~265 Vac, 50/60 Hz
Power Consumption	7 VA
Input resistance	> 1 MΩ
Input compensation	-1999~9999
Digital filtering	10~100 Times
Settings range	-1999~9999

INPUT SIGNAL	RANGE	ACCURACY
Thermocouple		
K	-200 ~ 1270 °C	0,3 % ± 1 digit
J	-210 ~ 1200 °C	0,3 % ± 1 digit
R (1)	-50 ~ 1760 °C	0,3 % ± 1 digit
S (1)	-50 ~ 1760 °C	0,3 % ± 1 digit
B (2)	250 ~ 1820 °C	± 8°C ± 1 digit
E	-200 ~ 1000 °C	0,3 % ± 1 digit
N	-200 ~ 1300 °C	0,3 % ± 1 digit
T	-200 ~ 400 °C	± 2°C ± 1 digit
RTD		
PT100	-200 ~ 850 °C	0,3 % ± 1 digit
JPT100	-200 ~ 850 °C	0,3 % ± 1 digit
Analogue signal		
mV	0 ~ 350 mV	0,3 % ± 1 digit
mA(3)	4~20 mA	

(1) R & S, accuracy ± 19°C when the range is 0~500°C
 (2) B does not guarantee accuracy for the range 0~400°C
 (3) mA only for TP 720

ALARM FUNCTION	
Types of alarm	Absolute value alarm Discrepancy alarm Area alarm
Set value	0 ~ 99 s
Alarm Output	SPST NA, 5A/250Vac (TP 720 3A)
Method of action	Alarm activation Deactivation delay
Output signal	Alarm relay output

OTHER FUNCTIONS	
Sensor break detection	Indication on front (TP 720)
Irregularities detection at heater supply	Alarm when there is no current or the set value is reached (TP 720)
Remote setting	Capacity to change adjustment
Parameters lock	3 access levels which permit:
Level 1	Input signal, alarm adjustment, adjustment values, control type
Level 2	Alarm adjustment, adjustment values, control type
Level 3	Total lock

MARK	EN 61010, EN 61000, EN 55011
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CONTROL FUNCTIONS	
Control method	ON/OFF PID + Autotuning PID + FUZZY + Autotuning
Fraction value	0~9999
Integral time	0~9999
Differential time	0~9999
Hysteresis Alarm setting	0~9999
Sampling interval	0,2 s
Output control cycle	0,1~999,9 s

OUTPUT SIGNAL			
Main control	TP 720	TP 731	TP 750
Relay	SPST NO 3A/250Vac	SPDT NO-NC 5A/250Vac	SPDT NO-NC 5A/250Vac
Pulse (SSR)	0/12 Vdc (NPN) ; Max. 20 mA		
Analogue (Retransmission)	4~20 mA 0~10 Vcc Max. 600 Ω		
Secondary Control	TP 720	TP 731	TP 750
Relay	SPST NO 3A/250Vac	SPST NO 5A/250Vac	SPST NO 5A/250Vac
Pulse (SSR)	0/12 Vdc (NPN) ; Max. 20 mA		
Analogue (Retransmission)	4~20 mA 0~10 Vdc Max. 600 Ω		

STRUCTURE			
Models	TP 720	TP 731	TP 750
Assembly	On panel	On panel	On panel
IP Protection	IP 65	IP 56	IP65

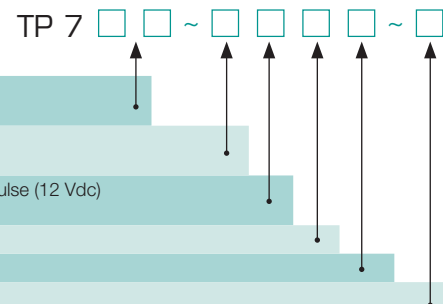
COMMUNICATIONS	
Interface	RS485
Protocol	ModBus RTU or ASCII
Data Format	8 bits, Bit Check: odd/even/none Stop Bit: 1 or 2 bits
Speed (bauds)	600, 1200, 2400, 4800, 9600, 19200, 38000
Address	000~255
Memory	EEPROM

LED'S			
Models	TP 720	TP 731	TP 750
Output	x 1	x 2	x 2
Alarm	x 1	x 2	x 2
Celsius			x 1
Fahrenheit			x 1

7 SEGMENT DISPLAY			
Models	TP 720	TP 731	TP 750
Red PV	0,36"	0,36"	0,56"
Green SV	0,28"	0,36"	0,36"

TP 7 MODEL LIST

Dimensions	20 · 48 x 48 mm 31 · 48 x 96 mm	50 · 96 x 96 mm	
Control Output 1	1 · Output relay 2 · Output 4~20 mA	3 · Output 0~10 Vdc 4 · Voltage pulse (12 Vdc)	
Control Output 2	0 · None 1 · Output relay	2 · Output 4~20 mA 3 · Output 0~10 Vdc	4 · Voltage pulse (12 Vdc)
Alarm Output	1 · 1 set	2 · 2 sets	
Retransmission	0 · None	1 · 4~20 mA DC	
Communications	0 · None 1 · RS485	2 · Heater break detection (only TP 720)	



Other options, configurations or sizes, please consult