



PID Controller, Thermal Processes Programmer. BT40:

- Stores 21 profiles, 15 segments each.
- 4 programmable digital output signals.
- 4..20ma and 0...10 V output.
- 4 PID parameters sets.
- Modbus RTU Communications
- Universal switching power supply, 85... 275 VAC.
- Service and 5 years guarantee.

General Description

PID controller designed for processes that involve heat treatments in time like the ones found in the metallurgical and of food industry . Incorporates particular functions such as " ramp and hold ", alarm of segment and repetitions.

Operation

The operator initiates a process simply selecting a stored heat treatment and pressing the start button.

A menu is made up of segments. Each segment is a straight line from an initial temperature to a end temperature in a time given in minutes. A processing can have up to 15 segments.

Programmed the menu, its execution begins pressing the button " STRT/STP ", then as the time passes, the control takes the temperature throughout the curve composed of segments. At any moment it is possible to stop and continue the process.

It is possible to construct programs of more than 15 segments simply repeating the final part several times (number of repetitions). This is useful in cycle process.

Also is possible to concatenate several profiles forming only one.

The Hold band allows to stop the advance of the curve when the temperature escapes of a band in degrees centered around the Set point in course. When occurring this condition, the program will not advance until the temperature returns to the band.

By means of the positioning menu it is possible to advance or to return back in the profile, changing to the segment in course and the time passed within the segment.

Control

P, PID, On/Off, 2On/Off, Limit contact (Lict), Limit comparator.
dOn/Off, dLcP, On/Off, 2On/Off, Lict, Lcp.
4 PID parameters sets for each segment.

Digital Communication

It has optional RS485 serial communications that allows to connect in network up to 32 instruments reporting to a PC computer or simply to send to a printer periodically.
Also it is possible to connect with PLC's by means of a BASIC module or other that can maintain the communication protocol in a serial port.

Power supply

The instrument has a current mode switching power supply that allows an ample rank of input voltages. Simultaneously makes the instrument extremely resistant to spikes and fluctuations of voltage network.

Technical Specifications.

Input	TC break protection:	It makes prefixed action and warning.
	Thermocouples (100 ohm max.):	J,K,T,R,S,B,N,E.,Platinel,C,D,G
	RTD:	PT100 (-136, 450) °C
	Adjustable:	4... 20 mA, 0... 20 mA, 0... 5 V, 1...5 V, 0...10 V, 0...50 mV
Control	Control 1:	P, PID, On/Off, 2On/Off, Limit contact (Lict), Limit comparator(LcP), dual PID and manual mode operation.
	Control 2:	dOn/Off, On/Off, 2On/Off, alarm modes : dLcP, Lict, Lcp and segment alarm.
	Set point:	Store 21 profiles of up to 15 segments each (500 minutes max. each segment), Hold Band , Repetitions and positioning menu.
Outputs	2 controls:	relays 250VAC/Á. or output of voltage for SSR.
	Communications: (optional).	RS485, modbus RTU
	Analogous: (optional).	0... 20mA, 4... 20mA, 0... 10 V Galvanically Isolated.
	Digital outputs	4 NPN open collectors
Power Supply	Switching, current mode.	
	Ac :	85... 275 Vac, 7 W, 45... 65 Hertz.
	Dc Option :	20... 50 Vdc, 7 W.
Construction	Aluminum and Polycarbonate	IP65
	Total Dimensions:	DIN 1/8; 96 x 48 x 175 mm.
	Panel cut:	92 x 45 mm.
	Weight	300 grams.
	Operation temperature:	0... 50 °C.

<i>CE directives</i>	2006/95/EC	(LVD) Low Voltage Directive
	2004/108/EC	(EMC) Electromagnetic compatibility directive
<i>Standards</i>	Safety:	IEC61010-1:2010
	EMC immunity:	EN61326-1:2006 Industrial locations.
	EMC emissions:	EN61326-1:2006 Class B.

PART CODES:

Model:

BT40-H
BT40-V

Horizontal mount (96mm width, 48mm height)
Vertical mount (48mm width, 96mm height)

Optional:

- 420AC
- 420LP
- 485
- DC

isolated 4..20mA and 0..10V active output
isolated 4..20mA passive output
RS485 serial communications.
20.. 60 Vdc power supply.

FOR MORE INFORMATION:

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