

# Counter, timer, controller BTR4

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BTR4 is an unparalleled device consisting of three of the most usable instruments in automation – controller, timer and counter. Its main features are:

#### - Easy to set-up and configure

The device offers a two 4-digits display which depict the value of analog input and the value of timer or counter. The set-up of parameters is made by a system of menus. All parameters are stored in non-volatile EEPROM memory.

#### - ON/OFF algorithm

The controller utilizes simple ON/OFF algorithm. The set value and hysteresis are programmed via front panel keyboard. Possible types of analog input are thermocouple, RTD, standard voltage or current.

#### - timer with 3 spans and 2 modes of operation

The timer may work in two modes: ON/OFF or single shot impulse. The time interval begins with leading edge of pulse on digital input. The timers range are: 0.01 – 99.99s, 1 – 9999s and 1 – 9999min. The output is relay with NO/NC contacts.

#### - 4-digit counter

The 4-digit counter has two digital inputs and one output. Depending of modes of operation the digital inputs may have different functions (counter, reset, direction). The output turns on when it reaches the earlier set value. The counter maybe reset from the keyboard.

#### - universal power supply

The switch-mode power supply works over a wide range of input voltage and is protected from short-duration industrial peaks.

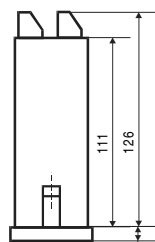
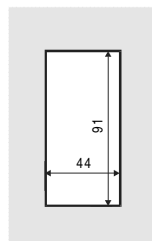
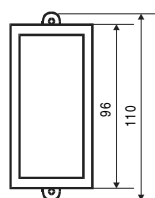
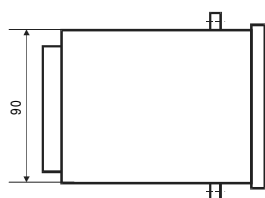
#### - custom offered mode of operations

The customer may be offered any mode of operation of timer or counter with no additional cost. The only limit is the number of inputs and outputs – 3 digital inputs and 2 digital outputs for timer and counter.

#### - low cost

The assembling of all these devices in one package allows BTR4 to be very inexpensive. The BTR4 is suitable for automation of packing machines, machines for chemical and feeding industries and others.

## Dimension



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## Technical specification

### Main characteristics:

Power supply	100 – 250 VAC / 5 VA
Dimensions (ш, в, д)	48x96x110 мм
Mounting hole	43x91 мм ±1мм
Protections:	
- Front panel	IP54
- Other parts	IP40
Operating conditions	0 – 60 °C / 0 – 70 % RH no humidity
Storage conditions	-20 – 80 °C / 0 – 95 % RH

### Controller:

#### Input:

Thermocouple type “E”	0 – 800 °C
Thermocouple type “J”	0 – 1200 °C
Thermocouple type “K”	0 – 1200 °C
Thermocouple type “R”	0 – 1700 °C
Thermocouple type “S”	0 – 1700 °C
Thermocouple type “T”	0 – 400 °C
RTD Pt100	-100 – 650 °C
Linear voltage	-50 +50 mV
Linear voltage or current	0 +50 mV or 0 – 20 mA
Linear current (with external resistor 2,5 Ω)	0(4) – 20 mA

#### Output:

NPN open collector	40mA / 30VDC
Electromechanical relay NO	5A / 220VAC / 30VDC
Triac with zero-crossing	0.5A / 220VAC

#### Control:

Algorithm	ON/OFF
Hysteresis	1-999 °C

#### Counter:

Range	0-9999
Inputs: counter and reset or direction	24 VDC/ 5mA
Relay output	NO/NC - 5A/250VAC/30VDC
Modes	1. Up-down Counter with inputs "up" and "down". 2. Up-down Counter with inputs "count" and "direction". 3. Up Counter with inputs "count" and "reset".

#### Timer:

Display	4 digits
Time base	0.01 s; 1 s; 1 min
Input "start"	24 VDC/ 5mA
Relay output	NO/NC - 5A/250VAC/30VDC
Modes	1. On from "start" input 2. On from power supply 3. On for T1 off for T2

## Ordering info

BTR4 -    
          1    2

#### 1. Analog input type:

- E - thermocouple type E
- J - thermocouple type J
- K - thermocouple type K
- R - thermocouple type R
- S - thermocouple type S
- T - thermocouple type T
- P - RTD Pt100
- V - voltage
- C - current 4-20 mA

#### 2. Controller output:

- D - NPN transistor;
- R - relay;
- A - triac.