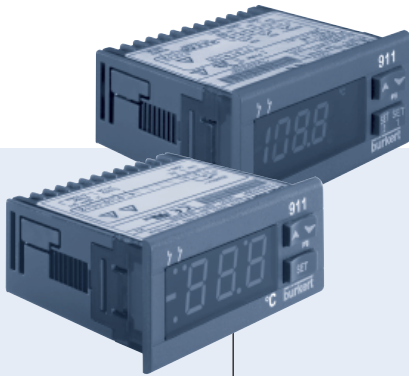


## Digital controller, 2-point, 3-point or PID-operation



- For all standard temperature sensors
- Parameter strings can be copied
- Simple handling
- 2 rocker switches for setting parameters

Type TAT002 can be combined with...

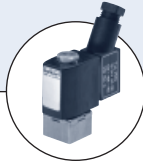


**PT 100**

Resistance thermometer/RTD

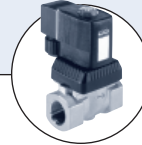


**PTC sensors**



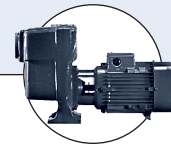
**Type 6011**

Solenoid valve



**Type 6213**

Solenoid valve



**Pumps**

The digital controllers work on a micro-controller basis and are primarily configured as temperature controllers by their inputs and outputs. A wide range of other applications, such as pressure control or level control, can, however, also be carried out by the units, which have a 4-20 mA; 0-10 V and 0-1 V current interface.

The programming of the user-specific parameters, which are stored in an EEPROM, is carried out using two rocker buttons. The parameter string can be very quickly and simply transmitted to other units using the separate memory module (HotKey).

The minimum and maximum values can also be called up on each unit, so that the user can gain an overview of the quality of its control and/or any possible error values.

Installation into a panel cut-out is quick and simple thanks to the lock-in clamping bracket.

The parameters can be protected from unauthorized changes by means of a code.

| Technical data                                  |   |
|---|---|
| <b>Operating voltage</b>                        | 12-24 V AC/DC; 230 V AC                 |
| <b>Nominal power</b>                            | 3 W                                     |
| <b>Sensor inputs</b>                            |   |
| PTC sensor <sup>1)</sup>                        | -50°C to +150°C                         |
| NTC sensor                                      | -40°C to +100°C                         |
| PT100 (RTD)                                     | -100°C to +500°C                        |
| <b>Thermocouple</b>                             |   |
| Type J (Fe-CuNi)                                | 0°C to +600°C                           |
| Type K (NiCr-Ni)                                | 0°C to +1200°C                          |
| Type S (PT10Rh-PT)                              | 0°C to +1400°C                          |
| <b>Normal signal inputs</b>                     |   |
| Voltage / Current                               | 0-1 V, 0-10 V / 4-20 mA                 |
| <b>Resolution</b>                               | 0.1 or 1 K                              |
| <b>Accuracy</b>                                 | 0.7% of full scale ± 1 digit            |
| <b>Relay outputs</b>                            |   |
| Changeover (NO)                                 |   |
| Load  | 8A (resistive), 3A (inductive)          |
| <b>Hysteresis for 2- and 3-point controller</b> | 0.1 – 25 K                              |
| <b>Display</b>                                  |   |
|   | •7 segments                             |
|   | •triple-digit 14 mm                     |
|   | •3 1/2-digit 12 mm                      |
|   | •LED; red                               |
| <b>Ambient temperature</b>                      | 0 to +50°C                              |
| <b>Electrical connection</b>                    | Terminal strip                          |
| <b>Body material</b>                            | Plastic (ABS)                           |
| <b>Dimensions [mm]</b>                          | Front B75 x H34, depth 63               |
| <b>Installation in panel cutout</b>             |   |
| Mounting  | Lock-in mounting strip                  |
| Plug-in opening                                 | B71 mm x H29 mm                         |
| <b>Protection class</b>                         | IP65 (from front), IP20 (from rear)     |
| <sup>1)</sup> Taking special types into account |   |
| Special PTC sensors <sup>1)</sup>               |   |
| <b>Reference resistance RT25</b>                | 980 Ω at +25°C                          |
| <b>Measurement range</b>                        | -55 to +140°C                           |
| <b>Installation sleeve</b>                      | Stainless steel V2A, 42 mm long, Ø 6 mm |
| <b>Standard cable length</b>                    | 1.5 m                                   |

<sup>1)</sup> The PTC inputs of the controller can only be operated with the special PTC sensors of Type KTY-81-121-B. These have the parameters shown.

## Handling

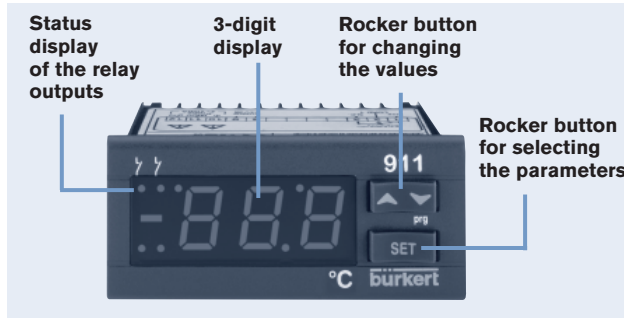
### Display

Thanks to the 3- or 3 1/2-digit, 7-segment LED display in red, good readability of the displayed values, parameters and errors is guaranteed.

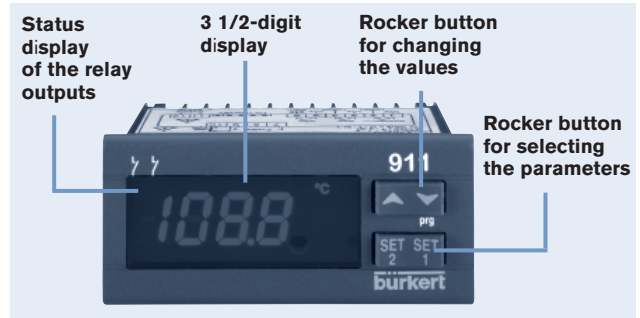
### Controller setting

The controller functions are based on an adjustable switching hysteresis, dead bands and PID algorithm. In addition, further parameters such as set value, auto zeroing, time delays and so on can be entered.

#### 3-digit display



#### 3 1/2-digit display

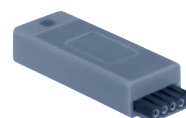


## Ordering chart for controllers

| Controller type   | Sensor input                 | Relay outputs                | Operating voltage in V | Item no. |
|---|------------------------------|------------------------------|------------------------|----------|
| <b>Display 3-digit 14 mm / without HotKey function</b>  |                              |                              |                        |          |
| 2-point   | PTC/NTC                      | 1 changeover                 | 24 AC/DC               | 787 649  |
|   | PTC/NTC                      | 1 changeover                 | 230 AC                 | 787 658  |
| <b>Display 3 1/2-digit 12 mm / with HotKey function</b> |                              |                              |                        |          |
| 2-point   | PTC/NTC; PT100; Type J, K, S | 2 changeover                 | 12-24 AC/DC            | 788 263  |
|   | 4-20 mA; 0-10 V; 0-1 V       | 2 changeover                 | 12-24 AC/DC            | 788 264  |
| 3-point   | PTC/NTC; PT100; Type J, K, S | 2 changeover                 | 230 AC                 | 788 265  |
|   | 4-20 mA; 0-10 V; 0-1 V       | 2 changeover                 | 230 AC                 | 788 266  |
|   | PTC/NTC; PT100; Type J, K, S | 2 N/O contact, 1 N/C contact | 12-24 AC/DC            | 788 267  |
| PID   | 4-20 mA; 0-10 V; 0-1 V       | 2 N/O contact, 1 N/C contact | 12-24 AC/DC            | 788 268  |
|   | PTC/NTC; PT100; Type J, K, S | 2 N/O contact, 1 N/C contact | 230 AC                 | 788 269  |
|   | 4-20 mA; 0-10 V; 0-1 V       | 2 N/O contact, 1 N/C contact | 230 AC                 | 788 270  |
|   | PTC/NTC; PT100; Type J, K, S | 2 N/O contact, 1 N/C contact | 12-24 AC/DC            | 788 271  |
|   | 4-20 mA; 0-10 V; 0-1 V       | 2 N/O contact, 1 N/C contact | 12-24 AC/DC            | 788 272  |
|   | PTC/NTC; PT100; Type J, K, S | 2 N/O contact, 1 N/C contact | 230 AC                 | 788 273  |
|   | 4-20 mA; 0-10 V; 0-1 V       | 2 N/O contact, 1 N/C contact | 230 AC                 | 788 274  |

## Ordering chart for accessories

| Item             | Features                         | Item no. |
|------------------|----------------------------------|----------|
| Protection cover | Transparent flexible plastic     | 787 937  |
| Trafo            | 230V/24V, 3VA                    | 787 938  |
| PTC sensor       | 1.5 m cable                      | 781 969  |
| HotKey           | for rapid parameter transmission | 788 260  |



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In case of special application conditions, please consult for advice.

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