

## Data Sheet for KM-RD52xx double temperature controller

Compact wall-mounted electronic double controller with FAT control algorithm, hybrid and wide-range technology



## Short Description

These are two independently operating controllers in one housing. With the completely newly developed temperature controller of the KM-RD52xx series, we have successfully combined an extremely durable hybrid technology switch element with ease of use - extended multilingual menu control with only a few setting parameters, **now new with password protection and other features**. The temperature controller uses FAT algorithm. FAT stands for Fast Adaptive Tuning, a completely innovative control algorithm that independently manages its control behaviour and continuously adapts it to the control system. Heating with different control behaviour is therefore always operated optimally. Setting parameters or initiating an auto-tuning process as with PID controllers are not required.

The temperature controller has a wide-range power supply and comfort functions like a partial automatic detection of connected temperature sensors. Through the multi-coloured LEDs, it is possible to view the thermostat's status even from afar.

## Technical Data

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| Casing:             | Polycarbonate with undetachable transparent cover UL 94-VO.<br>Manually operated hinge locks <input type="checkbox"/> Open without tools<br>Dimensions: 125 x 231 x 90mm (width x height x depth)  |
| Power Supply:       | Wide-Range 90V...250 VAC 50/60Hz   |
| Switching Current:  | For KM-RD5202R/T models up to 2x10 A ohmic load is secured across a built-in safety fuse<br>total max. 16A ohmic load  |
| Thermal Protection: | +85 °C (Electronic temperature, self-resetting)  |
| Sensor Inputs:      | R version 2x: PT100 (2, 3 or 4-wire), PT1000, Ni120 and NTC100K and NTC10K<br>T version 2x: thermocouples K, J, E and N models<br>All floating inputs with sensor short circuit protection (only R version) and sensor breakage protection |
| Set Point Range:    | depending on the sensor type for example Pt100 -120...+850°C   |
| Control Behaviour:  | FAT control algorithm (Fast Adaptive Tuning)   |
| Circuit Breaker:    | Hybrid relays (life span > 2,5 mio. cycle of operation) with safety-break-relay (break the heating circuit in fault)   |
| Display:            | illuminated multilingual LCD graphic display   |
| Operation:          | by keyboard with multilingual menu control<br>optional: via IR-Bedienteil 65502000 control unit  |

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|----------------------|--|
| Status Display:      | 4-coloured LED to represent the operating status<br>Flashing red = excessive temperature<br>Flashing blue = insufficient temperature (heating phase)<br>Green = target = actual temperature<br>Rapid yellow flashing = sensor error (probe break/short circuit)<br>Rapid red flashing = device error |
| Signal Output:       | Turnkey 2x 50mA max. 45V (floating)<br>Access by two cable glands  |
| Ambient Temperature: | -20°C...+50°C  |
| Relative humidity:   | < 90% noncondensing  |
| Protection Class:    | 1  |
| Protection Type:     | IP65 (cover closed)  |
| Weight:              | ca. 1,20 kg with flange receptacle   |

## Device Models:

Model KM-RD5202R/T Model No.: 65015202 = R and 65025202 =T  
Mains connection via 1.5 m cable with shock-proof plug (CEE 7/7)  
Heating connection via flange receptacle two  
6+PE switching current max. 2x 10 A  
Selectable resistance sensor (R) or thermocouple (T)

**Heating connections with other connector systems can be provided via appropriate adapter cables - see the corresponding Data sheet.**

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