

Data Sheet for KM-MICRO-DCx temperature controller

Compact electronic inline-thermostat for mounting on the heating hose or in series with the supply line.

FAT control algorithm and wide-range technology



Short Description

With the completely newly developed temperature controllers on the DC voltage segment of the series KM-MICRO-DCx, it was possible to integrate a long-lasting switching element in triac technology into a small housing and still achieve a correspondingly high switching capacity.

The wide-range technology allows the controller to operate in a wide voltage range.

With a separate IR control panel, the setpoint temperature can be set on-site.

The controller uses the FAT algorithm. FAT stands for Fast-Adaptive-Tuning, a completely new control algorithm that adapts the control behavior automatically and continuously to the controlled system. So the heaters are always operated optimally with a variety of control behavior. The usual setting of the parameters in PID controllers or the initiation of an autotuning process are eliminated. Due to the multicolored LED, the status of the controller can be viewed from a further distance.

Technical Data

Housing:	aluminium profile with hard end caps. Dimensions: 170 x 40 x 20 mm (L x W x H)
Power Supply:	Wide-Range 12 - 48VDC
Switching Current:	up to 20 A ohmic load is secured across a built-in safety fuse Nominal Output @ 12V – 240W Nominal Output @ 48V – 960W
Thermal Protection:	+85 °C (Electronic temperature, self-resetting)
Sensor Inputs:	R version: PT100 (2-wire) T version: thermocouple K All floating inputs with sensor short circuit protection (only R version) and sensor breakage protection
Set Point Range:	-120...850°C Pt100 -200...1350°C Typ K
Control Behaviour:	FAT control algorithm (Fast Adaptive Tuning)
Circuit Breaker:	with reverse-connection Protection
Signal Output:	Turnkey 50mA max. 45V (floating, potential free) Access by connection cable
Operation:	by IR-control panel Art-Nr: 65502000

Status Display: 4-coloured LED to represent the operating status
Flashing red = excessive temperature
Flashing blue = insufficient temperature (heating phase)
Green = target = actual temperature
Rapid yellow flashing = sensor error (probe break/short circuit)
Rapid red flashing = device error

Ambient Temperature: -20°C to +45°C

Protection Class: I

Protection Type: IP67

Weight: ca. 0.4kg

Device Models:

Model KM-MICRO-DCR/T Model No.: 69511012 = R and 69521012 =T
Mains connection via 1.5 m 5-pol cable without plug
incl. potential free signal cable
Heating connection via flange receptacle
4+PE switching current max. 20 A
Selectable Pt100 sensor (R) or Typ K thermocouple (T)
Other heating connections with corresponding adapter cables are available on request

equipment:

IR control panel for displaying and setting the setpoint and actual display Art-No: 65502000
2x mounting clips for KM-MICROx with 25cm Velcro tape for mounting on heating hoses up to max. NW 20 Art-No: 69500001
2x mounting clips for KM-MICROx with 50cm Velcro tape for mounting on heating hoses up to max. NW 50 Art-No: 69500002

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