

The new UNIPLEX III RS

The **UNIPLEX-III-RS** is the new heating controller for the top-hat rail for controlling and monitoring trace heating systems.

It consists of the following modules:

- Temperature controller
- current controller
- Safety temperature limiter (STB)

The new UNIPLEX-III-RS now combines the proven UNIPLEX heating control concept in a compact top-hat rail housing. The new housing architecture enables very simple integration directly on the top-hat rail (EN 50022) in the control cabinet. Installation, maintenance or even replacement of this electronic module is made considerably easier.

The temperature controller can be configured with both PI and 2-point behavior. Simultaneous operation is also possible.

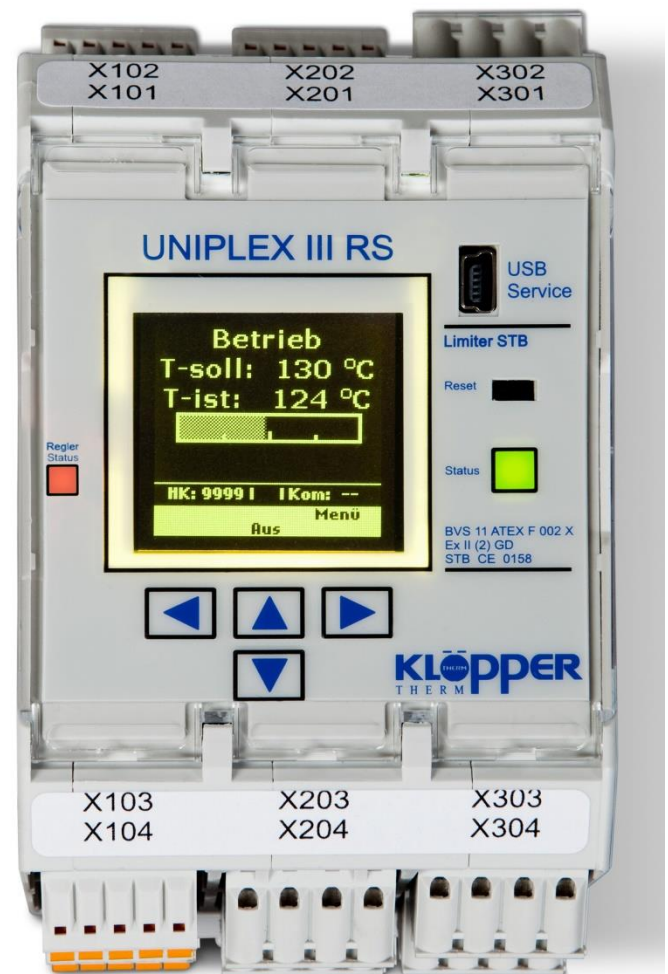
An integrated current controller is connected downstream which, in conjunction with an additional electronic load relay (ELR) solid state relay, SSR, allows adaptation to different operating situations.

The current is adapted to the corresponding power requirement using pulse width modulation (PWM) and monitored.

A temperature limiter is used to reliably prevent excess temperatures. This is ATEX-certified for use on heating circuits in potentially explosive atmospheres and meets the SIL2 safety level (safety integrated level). The heating circuit is electrically isolated from the mains using an external power contactor. It can be reset using a tool or by entering a code.

There is a 5-pin rail connector on the underside for power supply, collective alarm signaling and with a serial RS485 interface for coupling to higher-level control systems. Corresponding PC software is available. An Ethernet connection is also available as an option. There is a USB port at the front for diagnostics and updates.

The new UNIPLEX-III-RS on top-hat rail is of course fully compatible with our UNIPLEX III heating controller (19" plug-in card), which has been successfully used on the market for many years.



Technical data

Ambient conditions

- Ambient temperature 0 .. 50 °C operation, -20 ... +70 °C stock
- relative humidity <95 % at 30 °C, not condensating

Power supply

Power is supplied via a switching regulator with transformer, which ensures galvanic decoupling of the module from the power supply.

- Power supply 24 VDC \pm 20%, ripple max. 1 V_{SS}
- Power consumption typical 3 W
- Power failure bridging > 20ms, otherwise automatic reset

Input for temperature sensor Pt100 in 3- wire circuit

- Measurement range -200 ... +650 °C
- Resolution 1 K in the range from -200 ... +650 °C
- Measurement tolerance \pm 1 K bis 300 °C, \pm 3K bis 650 °C
- Sensor current 1 mA (kept constant via current source)

Input for current transformer

The input is galvanically decoupled by a magnetic measuring transformer.

- Measuring range 0 ... 100 mA
- Conversion factor 1 : 10 ... 1 : 1000 freely adjustable
- Input resistance (load) 50 Ohm
- Maximum permissible input voltage \pm 7 V_{SS}
- True-RMS Measurement ca. 1000 Samples/s

Control output for heating contactor and electronic load relay

- Switched output voltage 24 VDC against GND
- Maximum current load ca. 1000 mA, self- limiting

Relay outputs for software- selectable messages

- 1- pole NO contact, closed- circuit current principle
- Switching capacity 24 VDC, 1 A, 30 W resp. 24 VAC, 1A, 30 VA

Floating inputs for software- selectable signals

External voltage signal, voltage present= input active

- max. permissible input voltage 24 VDC
- min. required input current 10 mA

Dimensions, weight

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|---------------------------------------------------------------------------------------|-----------|--------------------------|
| • Controller module (WHD) 67,5 x 99 x 114,5 mm,
viewed from the top of the housing | Packaging | 165 x 120 x 165 mm |
| • Weight ca. 410 g | | with packaging ca. 500 g |