

# SRI .../ 16 T

Voltage controller



### Characteristics

- Effective value display
- Constant current output
- Easy installation

The voltage controller provides power adjustment of heatings as well as determination and monitoring of the effective current. The device consists of two completely separate functional units:

Power controller:

Temperature compensated time-relay control (full-wave control)
On and off switch via optocoupler
Galvanically isolated from the rest of the device

Measuring transducer alternating current in direct current:

Real effective value creator. When operated without current transformer, the continuous current components are also measured.
Any desired shape of curve
Time base when switching 2 seconds
Effective value display in % with regard to 1A - display with exchangeable scale
Constant current output 0...20 mA
Measuring range changeover switch 1:3
Min. and max. - switching stage, setting range 0... 100%
Signalling conditions for the monitoring stages next to the settings

### TECHNICAL DATA

Nominal voltage	220 V~ (380 V~)
Nominal current	0,3 - 16 A
Max. pulse current	40 A
Setpoint adjustment	0 - 100%
Switching capacity	220 V ~ 4 (3) A
Ambient temperature range short-time	0 - 70°C
Ambient temperature range longtime	0 - 60°C
Male multipoint connector	32 - pole DIN 41612, Form F
Dimensions	
Width / Height	18 TE / 3 HE
Board	160 x 100
Time base	ca. 2 sec
ED	3 - 100%
Adjustment stability	≤ ± 1 solid shaft
Measuring range	0 - 1 A → 0 - 100%
Measuring output	0 - 20 mA, Ri = 400 Ω

\* wenn 4 mA nicht 0 V entspricht, ist für die Heizung eine entsprechende Abschaltung vorzusehen.

### TYPE CODE

SRI 

1

 / 16 T

1	220	Nominal voltage 220 V ~
	380	Nominal voltage 380 V ~

Example: Nominal voltage 220 V

SRI 

220
1

 / 16 T

### Adjusting aid:

#### Minimum resistance of the heating

220 V~ ≥ 5,5 Ω  
380 V~ ≥ 9,5 Ω

$$I_{\text{eff}} = I_k \times \sqrt{ED} / 100 \quad (I_k = \text{Short circuit current given by supply voltage divided by heating conductor resistance})$$

#### Indication in %

$$\% = I_k \times 100 / U \times \sqrt{ED} / 100 \quad \ddot{U} = \text{transformation ratio of the current transformer, pri./ sec.}$$

#### Output current 0 - 20 mA

$$I = I_k \times 20 / \ddot{U} \times \sqrt{ED} / 100 \quad I = \text{output current in mA}$$

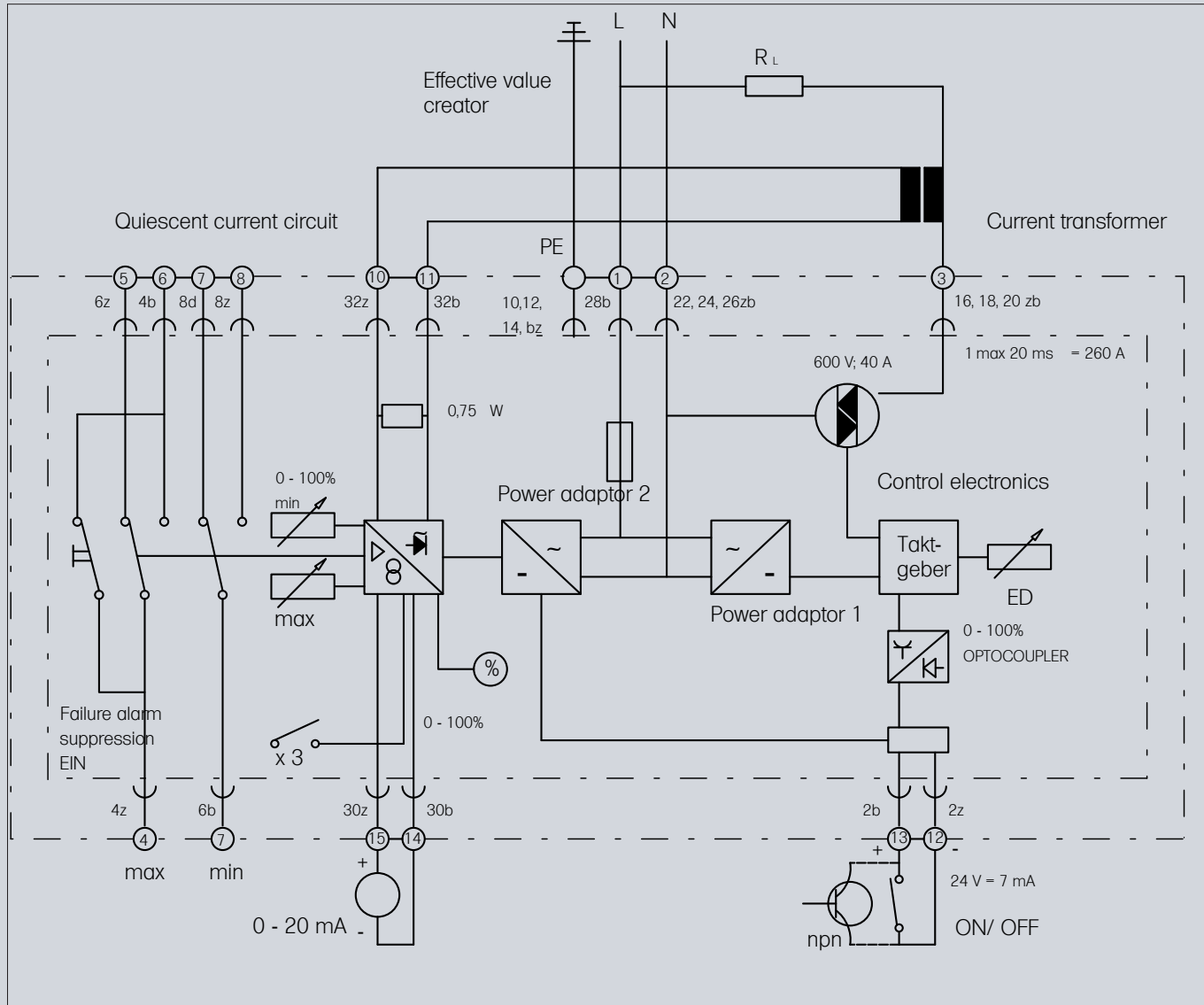
#### Nominal load of the heating cable per meter

$$n = I_n^2 \times ED / 100 \times r_1 \quad r_1 = \text{resistance of the heat conductor in } \Omega/\text{m}$$

$$ED = n \times 100 / I_k^2 \times r_1 \quad n = \text{capacity in W/m}$$

Adjustment values below 10 % ED are not recommendable for limited current values (e.g.: for 3 % ED, error at +/- 1 solid shaft, 15 % current or rather capacity changes by 33 %)

# CONNECTION DIAGRAM



Please take further information from the operating manual.  
 Download on [www.erich-ott.de](http://www.erich-ott.de)