

# Resistance Transmitter RT500



- Measuring range 0..50 Ω up to 100 kΩ
- Processor technology with 12 Bit AD/DA-converter
- Teach-in programming for start- and end-value
- Increase or decrease output characteristic programmable
- Operation mode indicated by use of a 2-color LED

## Characteristics

RT500 transmitter converts a resistance- or potentiometer signal into industry standard signals. Initial and final value may be in the range of 0..100 kOhm. Easy programming by means of Teach-in. The measuring range will be selected automatically. The input circuit is designed in 3-wire technology and can provide compensation of the line resistance. The linear output signal is generated between minimum and maximum input resistance.

## Technical data

### Power supply

Supply voltage : 85..265 V AC or 10..30 V AC/DC  
Frequency : 47..63 Hz  
Power consumption : < 3 VA  
Operating temperature : -10..+50 °C  
CE-conformity : EN 61326-1:2013; EN 60664-1:2007

### Input

Measuring range :  $R_{max}$ : 50 Ω..100 kΩ,  
*Condition:*  $\Delta R \geq 0.5 R_{max}$   
characteristic curve increasing or decreasing  
Solution : 600..3000 Digit  
(depends on measuring range)  
Sampling frequency : 250 Hz real-time processing  
Line resistance : max. 10 Ω, line compensation  
in 3-wire-circuits

### Outputs

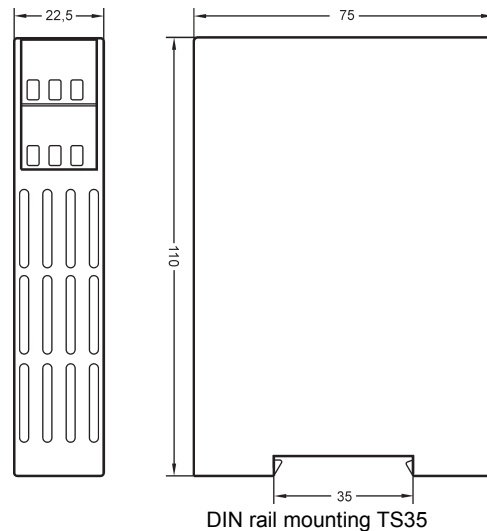
Current : 0/4..20 mA, selectable, burden  $\leq 1$  kΩ  
Voltage : 0/2..10 V, selectable, load max. 15 mA  
short-circuit-proof  
(parallel with current output max. 5 mA)

**Attention! No isolation between in- and output.**

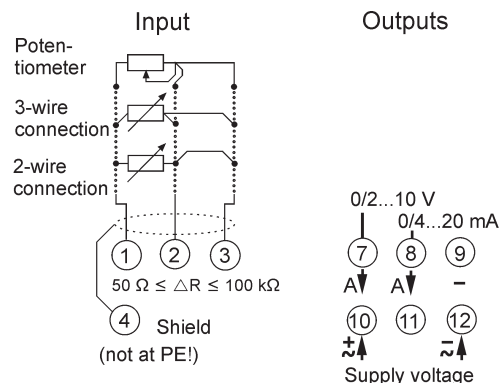
Rise time ( $T_{90}$ ) : < 8 ms  
Accuracy :  $\pm 0.2$  % of the measuring range  
**Case** : Polycarbonate, UL94V-0  
TS 35 acc. to DIN EN 60715:2001-09  
Weight : approx. 200 g  
Connection : screw terminals, max. 2.5 mm<sup>2</sup>

Protection class : case IP30,  
terminals IP20 acc. to BGV A3

## Dimensions



## Connection diagram



## Ordering code

RT500 -  1. -  2.

1. Measuring range	
40	$R_{max}$ in range 50 Ω up to 100 kΩ programmable (see examples)
2. Supply voltage	
0	85..265 V AC
5	10..30 V AC/DC

Examples:

- 1.) Range 15..90 Ω
- 2.) Range 0..1000 Ω
- 3.) Range 100..200 Ω

Attention!  
Minimal span 0.5 x  $R_{max}$