

Product Information

Resistance Transmitter RT500



- Measuring range 0..50 Ω up to 100 k Ω
- 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 k Ω . 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 $^{\circ}\text{C}$
CE-conformity : EN 61326-1:2013; EN 60664-1:2007

Input

Measuring range : $R_{\max}$: 50 Ω ..100 k Ω ,
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

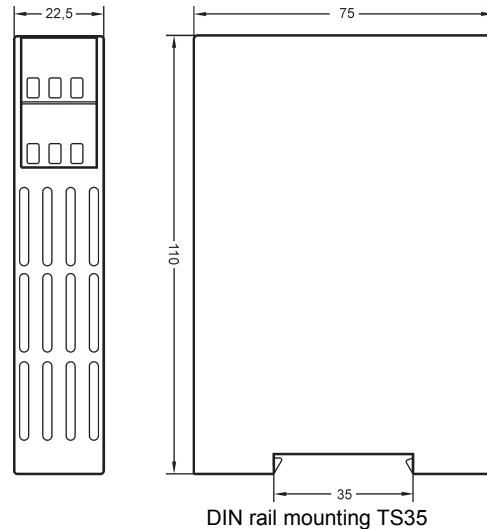
Current : 0/4..20 mA, selectable, burden ≤ 1 k Ω
Voltage : 0/2..10 V, selectable, load max. 15 mA
short-circuit-proof
(parallel with current output max. 5 mA)

Attention! No isolation between in- and output.

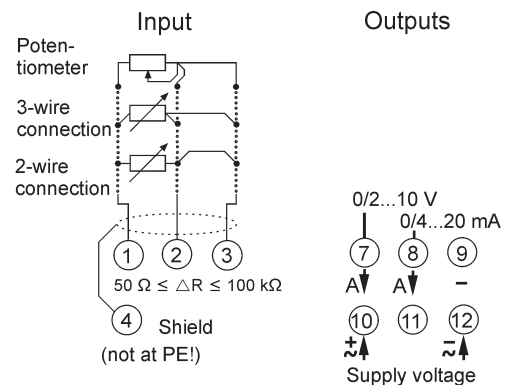
Rise time (T_{90}) : < 8 ms
Accuracy : ± 0.2 % of the measuring range
Case : Polycarbonate, UL94V-0
TS 35 acc. to DIN EN 60715:2001-09
Weight : approx. 200 g
Connection : screw terminals, max. 2.5 mm²

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 k Ω 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 $R_{\max}$