

The transmitters series **RU-1...**, and **RUI-2...** in single or double version are proposed for signal conversion from resistive temperature sensors Pt100, Pt500, Pt1000, Ni1000, Ni10000 and resistive sensors OV100 (0 to 100 Ω), OV105 (5 to 105 Ω) and OV1000 (0 to 1000 Ω) to the standard voltage signal 0 to 10V. The output signal has got a linear temperature or resistance dependence. The transmitters are according to the type variant supplied by 24 VDC or 24 VAC. The transmitters are not equipped with galvanic separation between input and output signals. The given degree of ingress protection and possibility of fitting on the mounting bar DIN TS 35 de-terminate the transmitters for use in the distribution cases, boards and panels.

### Summary of types

TYPE	INPUT	TYPE	INPUT
RU-1P-DC	Pt100	RU-2P-DC	2xPt100
RU-1P A-DC	Pt1000	RU-2P A-DC	2xPt1000
RU-1PB-DC	Pt500	RU-2PB-DC	2xPt500
RU-1L-DC	Ni1000/5000 ppm	RU-2L-DC	2xNi1000/5000 ppm
RU-1S-DC	Ni1000/6180 ppm	RU-2S-DC	2xNi1000/6180 ppm
RU-1J-DC	Ni891/6371 ppm	RU-2J-DC	2xNi891/6371 ppm
RU-1SA-DC	Ni10000/6180 ppm	RU-2SA-DC	2xNi10000/6180 ppm
RU-1RT-DC	OV100 three-wire	RU-2RT-DC	2xOV100 three-wire
RU-1RD-DC	OV100 two-wire	RU-2RD-DC	2xOV100 two-wire
RU-1RTA-DC	OV105 three-wire	RU-2RTA-DC	2xOV105 three-wire
RU-1RDA-DC	OV105 two-wire	RU-2RDA-DC	2xOV105 two-wire
RU-1P-AC	Pt100	RU-2P-AC	2xPt100
RU-1P A-AC	Pt1000	RU-2P A-AC	2xPt1000
RU-1PB-AC	Pt500	RU-2PB-AC	2xPt500
RU-1L-AC	Ni1000/5000 ppm	RU-2L-AC	2xNi1000/5000 ppm
RU-1S-AC	Ni1000/6180 ppm	RU-2S-AC	2xNi1000/6180 ppm
RU-1J-AC	Ni891/6371 ppm	RU-2J-AC	2xNi891/6371 ppm
RU-1SA-AC	Ni10000/6180 ppm	RU-2SA-AC	2xNi10000/6180 ppm
RU-1RT-AC	OV100 three-wire	RU-2RT-AC	2xOV100 three-wire
RU-1RD-AC	OV100 two-wire	RU-2RD-AC	2xOV100 two-wire
RU-1RTA-AC	OV105 three-wire	RU-2RTA-AC	2x OV105 three-wire
RU-1RDA-AC	OV105 two-wire	RU-2RDA-AC	2x OV105 two-wire

### Main technical parameters

Transmitter type	RU-xP ...; RU-xPA ...; RU-xPB ...;	RU-xL ; RU-xS; RU-xJ	RU-1R...; RU-2R...;
Output signal $U_v$	1 or 2 x (0 ± 10 V)	1 or 2 x (0 ± 10 V)	1 or 2 x (0 ± 10 V)
Input signal measuring range	-30 ± 60°C 0 ± 100°C 0 ± 200°C 0 ± 400°C 0 ± 600°C 200 ± 600°C	-30 ± 60°C 0 ± 35°C 0 ± 100°C 0 ± 150°C 0 ± 250°C	0 ± 100 Ω for RT a RD 5 ± 105 Ω for RTA a RDA
Ambient temperature	-25 ± 60°C	-25 ± 60°C	-25 ± 60°C
Relative humidity	< 80 %	< 80 %	< 80 %
Measurement error	< 0,8 %	< 0,8 %	< 0,8 %
Current consumption	< 10 mA	< 10 mA	< 10 mA
Load resistance	> 50 kΩ	> 50 kΩ	> 50 kΩ
Sensing element break	$U_v > 14 V$	$U_v > 14 V$	$U_v > 14 V$
Sensing element short	$U_v \sim 0 V$	$U_v \sim 0 V$	$U_v \sim 0 V$

## Mounting and putting into service

The transmitter has to be fastened with the help of a holder on the mounting bar DIN TS 35. First we set the upper mandrel of transmitter box holder on the upper bar edge and with the help of a screwdriver push out the lower arrestment mandrel lock. We pull the lower box part to the bar and then free the lock. The transmitter is fastened now. We connect the inputs, outputs and power supply into the respective clamps. We recommend the connecting cable with the wires cross section  $0,35 \pm 2 \text{ mm}^2$ , for the active signals with the screening mantle.

## How to order the transmitter

There have to be given the number of pieces and the type of temperature or resistance transmitter in the order.

E. g: 5 pieces transmitters RU-2P.2-DC

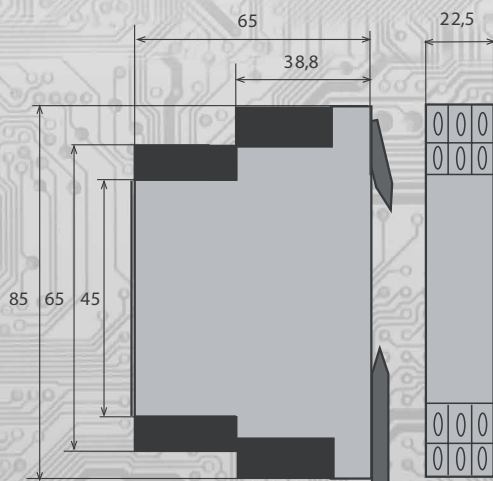
transmitter type      temperature range  
 (order number)

i. e. transmitter for 2x Pt100 input,  
 measuring range  $0 \pm 100^\circ\text{C}$ , with DC power supply.

Transmitter type	RU-xP, RU-xP A, RU-xPB	Order number	RU-xL, RU-xS, RU-xJ	Order number
Temperature range	$-30 \pm 60^\circ\text{C}$	1	$-30 \pm 60^\circ\text{C}$	1
	$0 \pm 100^\circ\text{C}$	2	$0 \pm 35^\circ\text{C}$	2
	$0 \pm 200^\circ\text{C}$	3	$0 \pm 100^\circ\text{C}$	3
	$0 \pm 400^\circ\text{C}$	4	$0 \pm 150^\circ\text{C}$	4
	$0 \pm 600^\circ\text{C}$	5	$0 \pm 250^\circ\text{C}$	5
	$200 \pm 600^\circ\text{C}$	6		

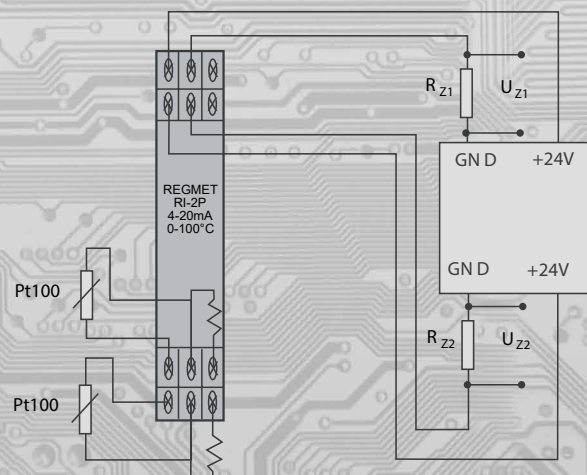
Single or double version - RU-1..., RU-2...

## Dimensions



## Transmitter connection into the circuit

This holds for the RU-2P-DC; connection with a compensation loop



## Remark

1) Transmitters with the supply 24 VAC - terminal board number 5 is connect with GND.