

### Series RNU...

The transmitters series RNU... are proposed for signal conversion from resistive temperature sensors Pt100, Pt500, Pt1000, Ni1000, Ni10000 and resistive sensors OV100 and OV105 to the standard voltage signal 0...10 V. The output signal has got a linear temperature or resistance dependence. The transmitters are according to the type variant supplied by 24 V DC or AC. The transmitters are not equipped with galvanic separation between input and output signals.

### Main technical parameters

| Transmitter type             | RNU-P, -PA                   | RNU-L, -S, -J, -SA | RNU-Rx         | RNU-I1         |
|------------------------------|------------------------------|--------------------|----------------|----------------|
| Power supply                 | 18 - 30 V DC                 | 18 - 30 V DC       | 18 - 30 V DC   | 18 - 30 V DC   |
| Output signal $U_z$          | 0 to 10 V                    | 0 to 10 V          | 0 to 10 V      | 0 to 10 V      |
| Input signal measuring range | -30 to 60 °C                 | -30 to 60 °C       | 0 to 100 Ω     | 4 to 20 mA     |
|                              | 0 to 100 °C                  | 0 to 35 °C         | for RT a RD    |                |
|                              | 0 to 200 °C                  | 0 to 100 °C        | 5 to 105 Ω     |                |
|                              | 0 to 400 °C                  | 0 to 150 °C        |                |                |
|                              | 0 to 600 °C<br>200 to 600 °C | 0 to 250 °C        | for RTA a RDA  |                |
| Ambient temperature          | - 25 to 60 °C                | - 25 to 60 °C      | - 25 to 60 °C  | - 25 to 60 °C  |
| Relative humidity            | < 80 %                       | < 80 %             | < 80 %         | < 80 %         |
| Degree of protection         | IP65                         | IP65               | IP65           | IP65           |
| Measurement error            | < 0,8%                       | < 0,8%             | < 0,8%         | < 0,8%         |
| Current consumption          | < 10 mA                      | < 10 mA            | < 10 mA        | < 10 mA        |
| Load resistance              | > 50 kΩ                      | > 50 kΩ            | > 50 kΩ        | > 50 kΩ        |
| Sensing element break        | $U_v > 14$ V                 | $U_v > 14$ 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 | $U_v \sim 0$ V |

| TYPE    | INPUT                   |
|---------|-------------------------|
| RNU-P   | Pt 100                  |
| RNU-PA  | Pt 1000                 |
| RNU-L   | Ni 1000/5000 ppm        |
| RNU-S   | Ni 1000/6180 ppm        |
| RNU-J   | Ni 891/6371 ppm         |
| RNU-SA  | Ni 10000/6180 ppm       |
| RNU-RT  | OV100 3-wire connection |
| RNU-RD  | OV100 2-wire connection |
| RNU-RTA | OV105 3-wire connection |
| RNU-RDA | OV105 2-wire connection |
| RNU-I1  | 4 to 20 mA              |

### Mounting and putting into service

Screw out the small screws and remove the head cover. Transmitter attach to operational place using two wood screws through the hole. Connect the lead-in cable of the recommended cross section from 0,35 to 2 mm<sup>2</sup> and of out diameter 4 to 8 mm to the terminal board through the bushing. Once the cover is replaced onto the head and the small screw screwed in, the mounting is terminated and the transmitter is ready for operation.

## 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 transmitter RNU-P.2**

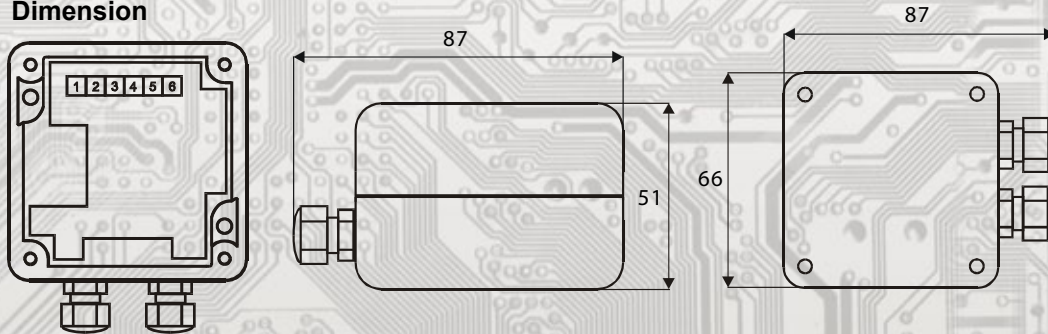
i. e. transmitter for Pt100 input,  
measuring range 0 to 100 °C

transmitter type

temperature range (order number)

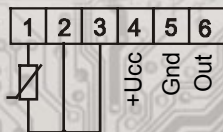
| Transmitter type  | RNU-P         | Order number | RNU-L, ...  | Oder number |
|-------------------|---------------|--------------|-------------|-------------|
| Temperature range | -30 to 60 °C  | 1            | -30 to 60°C | 1           |
|                   | 0 to 100 °C   | 2            | 0 to 35 °C  | 2           |
|                   | 0 to 200 °C   | 3            | 0 to 50 °C  | 3           |
|                   | 0 to 400 °C   | 4            | 0 to 100 °C | 4           |
|                   | 0 to 600 °C   | 5            | 0 to 150 °C | 5           |
|                   | 200 to 600 °C | 6            | 0 to 250 °C | 6           |

## Dimension

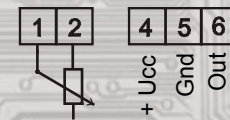


## Wiring diagram

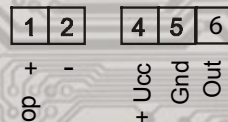
RNU - P



RNU - RD, RDA

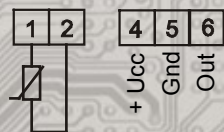


RNU - I1



current loop  
4-20mA

RNU - PA, L, S, J, SA



RNU - RT, RTA

