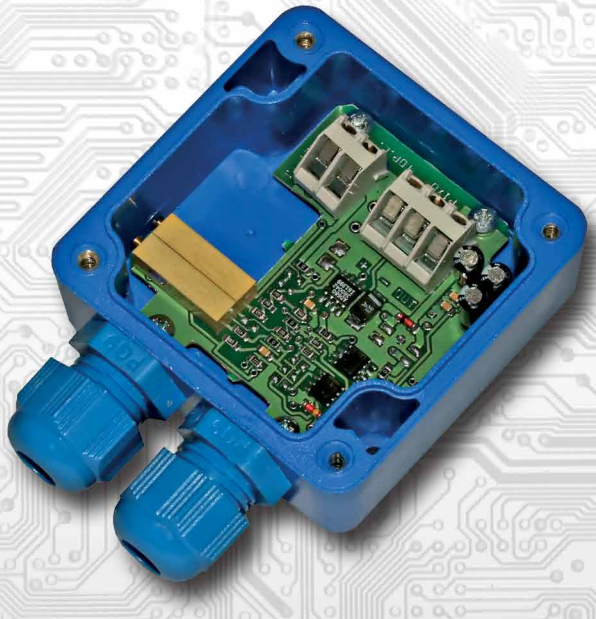
Transmitters temperature – current
Transmitters resistance – current



Series RNI…

The transmitters series RNI-… 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 current signal 4 to 20 mA. The output signal has got a linear temperature or resistance dependence. The transmitters are supplied by 24 Vdc. The transmitters are not equipped with galvanic separation between input and output signals.

TYPE	INPUT
RNI-P	Pt 100
RNI-PA	Pt 1000
RNI-L	Ni 1000/5000 ppm
RNI-S	Ni 1000/6180 ppm
RNI-J	Ni 891/6371 ppm
RNI-SA	Ni 10000/6180 ppm
RNI-RT	OV100 3-wire connection
RNI-RD	OV100 2-wire connection
RNI-RTA	OV105 3-wire connection
RNI-RDA	OV105 2-wire connection
RNI-U1	0 ÷ 10 V

Technical parameters

Transmitter type	RNI-P,PA	RNI-L ,-S,-J,-SA	RNI-Rx	RNI-U1
Power supply	11 ÷ 35 Vss	11 ÷ 35 Vss	11 ÷ 35 Vss	11 ÷ 35 Vss
Output signal I_z	4 ÷ 20 mA	4 ÷ 20 mA	4 ÷ 20 mA	4 ÷ 20 mA
Input signal measuring range	-30 ÷ 60 °C	-30 ÷ 60 °C	0 ÷ 100 Ω	0 ÷ 10 V
	0 ÷ 100 °C	0 ÷ 35 °C	for 1RT a 1RD	
	0 ÷ 200 °C	0 ÷ 50 °C		
	0 ÷ 400 °C	0 ÷ 100 °C	5 ÷ 105 Ω	
	0 ÷ 600 °C	0 ÷ 150 °C	for 1RTA a 1RDA	
	200 ÷ 600 °C	0 ÷ 250 °C		
Ambient temperature	-25 ÷ 60 °C	-25 ÷ 60 °C	-25 ÷ 60 °C	-25 ÷ 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%
Load resistance	< (Ucc-11)x50 [Ω]	< (Ucc-11)x50 [Ω]	< (Ucc-11)x50 [Ω]	< (Ucc-11)x50 [Ω]
Sensing element break	> 24 mA	> 24 mA	> 24 mA	> 24 mA
Sensing element short	< 3 mA	< 3 mA	< 3 mA	< 3 mA

2023/04

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 mm² 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 RI-2P.2 — i. e. transmitter for 2 x Pt100 input, measuring range 0 ÷ 100 °C

transmitter type — temperature range (order number)

Transmitter type	**RNI-P**	Order number	**RNI-L, …**	Order number
	-30 ÷ 60 °C	1	-30 ÷ 60 °C	1
	0 ÷ 100 °C	2	0 ÷ 35 °C	2
Temperature range	0 ÷ 200 °C	3	0 ÷ 50 °C	3
	0 ÷ 400 °C	4	0 ÷ 100 °C	4
	0 ÷ 600 °C	5	0 ÷ 150 °C	5
	200 ÷ 600 °C	6	0 ÷ 250 °C	6

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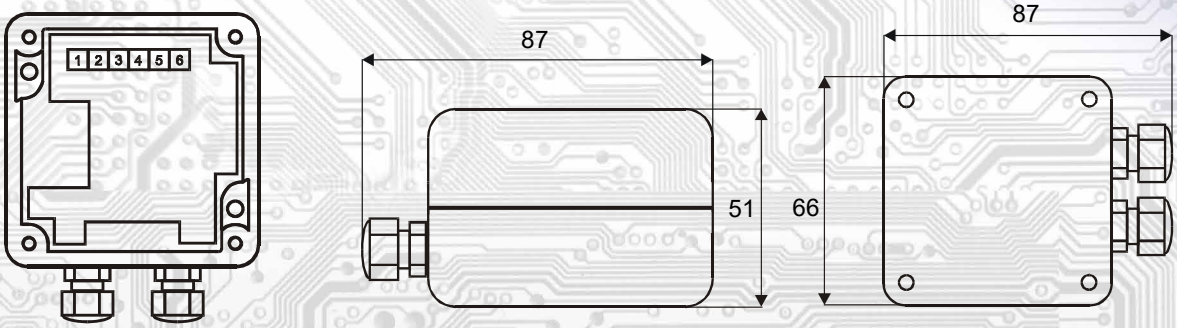
Transmitters temperature – current
Transmitters resistance – current

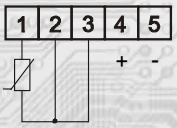
Dimensions



Wiring diagram

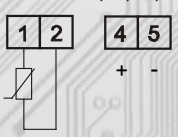
Output 4 ÷ 20 mA

RNI - P



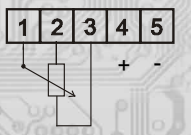
Current loop: 4,5 Arbitrary polarity

RNI - PA, L, S, J, SA



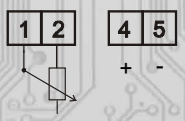
Current loop: 4,5 Arbitrary polarity

RNI - RT, RTA



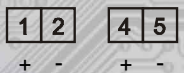
Current loop: 4,5 Arbitrary polarity

RNI - RD, RDA



Current loop: 4,5 Arbitrary polarity

RNI - U

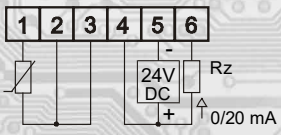


Current loop: 4,5 Arbitrary polarity

input signal: 1 Positive pole
2 Negative pole

Output 0 ÷ 20 mA

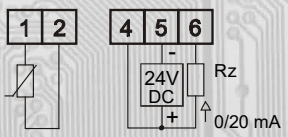
RNI - P - 0/20



Power supply : 4 Positive pole
5 GND

Current loop: 4 Positive pole
6 Negative pole

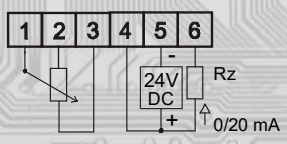
RNI - PA, L, S, J, SA - 0/20



Power supply : 4 Positive pole
5 GND

Current loop: 4 Positive pole
6 Negative pole

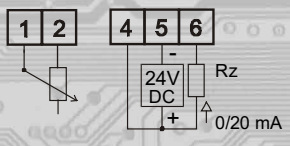
RNI - RT, RTA - 0/20



Power supply : 4 Positive pole
5 GND

Current loop: 4 Positive pole
6 Negative pole

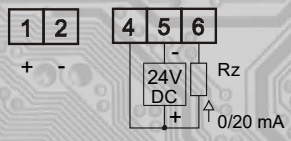
RNI - RD, RDA - 0/20



Power supply : 4 Positive pole
5 GND

Current loop: 4 Positive pole
6 Negative pole

RNI - U - 0/20



Power supply : 4 Positive pole
5 GND

Current loop: 4 Positive pole
6 Negative pole

input signal: 1 Positive pole
2 Negative pole

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