

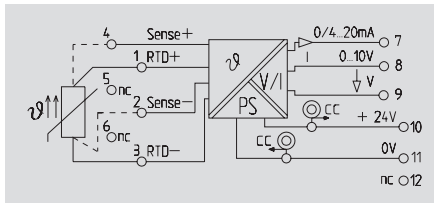
# PT100 / RTD - signal isolator/converter

## RTD, signal disconnecter converter

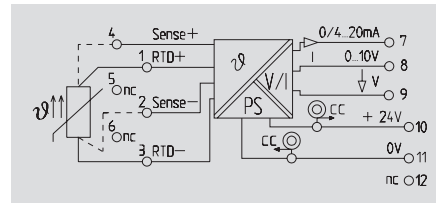
- Universal adjustable via DIP-switch
- 3-way isolation
- Linearization
- Power supply can be cross connected via plug-in jumper



## PRO RTD



## PRO RTD 1000



## Technical data

<b>Input</b>	
Sensor	PT100/2-/3-/4-cond.; Ni100/2-/3-/4-cond.; potentiometer:
Temperature input range	min. 0...100Ω, max. 0...100kΩ; resistance: 0...450Ω
<b>Output</b>	
Output current/Output voltage	0(4)...20 mA/0...10 V
Offset current/Offset voltage	max. 100 μA/max. 0.05 V
Load resistance voltage/Current	>= 1 kΩ/<= 600 Ω
Step response time	fast: 1.2 s/ slow: 2.2 s
Line resistance in measuring circuit	50 Ω
Influence of cable resistance	max. + 0.25°C at 50 Ω cond. resistance
Wire break detection	LED flashes (output value > 20mA, > 10V)
Fine adjustment	>= +/-5%, Version 1: >=12.5% / Poti:12.5%...25%
Status indicator	active: LED on/cond. broken: LED flashing/Error: LED off
<b>General data</b>	
Supply voltage	24 Vdc +/- 25%
Power consumption	830...880...980mW at Iout=20mA
Current-carrying cap. of cross-connect.	<= 2 A
Operation temperature	0 °C...+55 °C
Storage temperature	-20 °C...+85 °C
Default settings	PT100/3-cond./ 0...100°C / 4...20mA / man. adjustment: off /
Approvals	slow step response
<b>Insulation coordinates</b>	
Standards	GL / CE / cURus
EMC standards	EN 50178, EN 60751, IEC 751, DIN 43760
Rated voltage	EN 50081, EN50082, EN55011
Impulse withstand voltage	300 V
Isolation voltage Input, output	4 kV
Overvoltage category	2 kVeff / 5s
Pollution severity	III
Clearance & creepage path	2
	>= 3 mm
<b>Dimensions</b>	
Clamping range (rating- / min. / max.)	mm <sup>2</sup>
Length x width x height	mm
<b>Information</b>	
Tu=23°C, single module	

<b>Input</b>	
Sensor	PT100/2-/3-/4-cond.; Ni100/2-/3-/4-cond.; potentiometer:
Temperature input range	min. 0...100Ω, max. 0...100kΩ; resistance: 0...450Ω
<b>Output</b>	
Output current/Output voltage	0(4)...20 mA/0...10 V
Offset current/Offset voltage	max. 100 μA/max. 0.05 V
Load resistance voltage/Current	>= 1 kΩ/<= 600 Ω
Step response time	fast: 1.2 s/ slow: 2.2 s
Line resistance in measuring circuit	50 Ω
Influence of cable resistance	max. + 0.25°C at 50 Ω cond. resistance
Wire break detection	LED flashes (output value > 20mA, > 10V)
Fine adjustment	>= +/-5%, Version 1: >=12.5% / Poti:12.5%...25%
Status indicator	active: LED on/cond. broken: LED flashing/Error: LED off
<b>General data</b>	
Supply voltage	24 Vdc +/- 25%
Power consumption	830...880...980mW at Iout=20mA
Current-carrying cap. of cross-connect.	<= 2 A
Operation temperature	0 °C...+55 °C
Storage temperature	-20 °C...+85 °C
Default settings	PT100/3-cond./ 0...100°C / 4...20mA / man. adjustment: off /
Approvals	slow step response
<b>Insulation coordinates</b>	
Standards	GL / CE / cURus
EMC standards	EN 50178, EN 60751, IEC 751, DIN 43760
Rated voltage	EN 50081, EN50082, EN55011
Impulse withstand voltage	300 V
Isolation voltage Input, output	4 kV
Overvoltage category	2 kVeff / 5s
Pollution severity	III
Clearance & creepage path	2
	>= 3 mm
<b>Dimensions</b>	
Clamping range (rating- / min. / max.)	mm <sup>2</sup>
Length x width x height	mm
<b>Information</b>	
Tu=23°C, single module	

<b>Input</b>	
Sensor	PT1000/2-/3-/4-cond.; Ni1000/2-/3-/4-cond.; potentiometer:
Temperature input range	min. 0-1kΩ, max. 0-100kΩ; resistance: 0-4,5kΩ
<b>Output</b>	
Output current/Output voltage	0(4)...20 mA/0...10 V
Offset current/Offset voltage	max. 100 μA/max. 0.05 V
Load resistance voltage/Current	>= 1 kΩ/<= 600 Ω
Step response time	fast/slow:2-/3-/4-cond.: 1.2s/2.3s; Poti: 0.5s/1.2s
Line resistance in measuring circuit	50 Ω for 3- and 4-conductor
Influence of cable resistance	max. + 0.25°C at 50 Ω cond. resistance
Wire break detection	LED flashes (output value > 20mA, > 10V)
Fine adjustment	>= +/- 12.5%; Poti: +/- 12.5% ... +/-25%
Status indicator	active: LED on/cond. broken: LED flashing/Error: LED off
<b>General data</b>	
Supply voltage	24 Vdc +/- 25%
Power consumption	830...880...980mW at Iout=20mA
Current-carrying cap. of cross-connect.	<= 2 A
Operation temperature	0 °C...+55 °C
Storage temperature	-20 °C...+85 °C
Default settings	PT1000/3-cond./ 0...100°C / 4...20mA / man. adjustment: off /
Approvals	slow step response
<b>Insulation coordinates</b>	
Standards	GL / CE / cURus
EMC standards	EN 50178, EN 60751, IEC 751, DIN 43760
Rated voltage	EN 50081, EN50082, EN55011
Impulse withstand voltage	300 V
Isolation voltage Input, output	4 kV
Overvoltage category	2 kVeff / 5s
Pollution severity	III
Clearance & creepage path	2
	>= 3 mm
<b>Dimensions</b>	
Clamping range (rating- / min. / max.)	mm <sup>2</sup>
Length x width x height	mm
<b>Information</b>	
Tu=23°C, single module	

## Ordering data

<b>Type of connection</b>	
Screw connection	
Tension clamp c.	
<b>Information</b>	
<b>Accessories</b>	
<b>Information</b>	
Voltage supply 24V and 0V with ZQV 2.5N/2 cross-connection	

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
WAS5 PRO RTD	1	8560700000
WAZ5 PRO RTD	1	8560710000
<b>Information</b>		
<b>Accessories</b>		
<b>Information</b>		
Voltage supply 24V and 0V with ZQV 2.5N/2 cross-connection		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
WAS5 PRO RTD 1000	1	8679490000
WAZ5 PRO RTD 1000	1	on demand
<b>Information</b>		
<b>Accessories</b>		
<b>Information</b>		
Voltage supply 24V and 0V with ZQV 2.5N/2 cross-connection		

Articles with coloured order number are kept permanently in stock at the central warehouse in Germany. Delivery times see page X.2

# DC/DC signal converter – configurable

**WAVEANALOG PRO RTD**
**WAVEANALOG PRO RTD 1000**
**Switch positions/possible settings**

Input	Switch 1		
	1	2	3
PT100 2-conductor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PT100 3-conductor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PT100 4-conductor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R 2-conductor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ni100 2-conductor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ni100 3-conductor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ni100 4-conductor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Potentiometer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 = on  
 = off

**Switch positions/possible settings**

Input	Switch 1		
	1	2	3
PT1000 2-conductor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PT1000 3-conductor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
PT1000 4-conductor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
R 2-conductor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Ni1000 2-conductor	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ni1000 3-conductor	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ni1000 4-conductor	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Potentiometer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

 = on  
 = off

Output	Switch 2		Switching on the manual adjustment	
	6	7	manual adjustment	S.1
0...10V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	on	<input checked="" type="checkbox"/>
0...20mA	<input type="checkbox"/>	<input type="checkbox"/>	off	<input type="checkbox"/>
4...20mA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	on	<input checked="" type="checkbox"/>

step response	S.2
	step response
slow	<input checked="" type="checkbox"/>
fast	<input type="checkbox"/>

Selection of minimum input size						
$\vartheta_{\min}$	$R_{\min}$	Poti <sub>min</sub>	Switch 1			
			4	5	6	7
0°C	0 Ω	0%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-10°C	10 Ω	10%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-20°C	20 Ω	20%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-25°C	20 Ω	25%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-30°C	30 Ω	30%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-40°C	40 Ω	40%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-50°C	50 Ω	50%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-60°C	60 Ω	60%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-70°C	70 Ω	70%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-80°C	80 Ω	80%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-90°C	90 Ω	80%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-100°C	100 Ω	80%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-150°C	150 Ω	80%	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-200°C	200 Ω	80%	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Special range			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Selection of minimum input size						
$\vartheta_{\min}$	$R_{\min}$	Poti <sub>min</sub>	Switch 1			
			4	5	6	7
0°C	0 Ω	0%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-10°C	100 Ω	10%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-20°C	200 Ω	20%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-25°C	200 Ω	25%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-30°C	300 Ω	30%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-40°C	400 Ω	40%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-50°C	500 Ω	50%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-60°C	600 Ω	60%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-70°C	700 Ω	70%	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-80°C	800 Ω	80%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
-90°C	900 Ω	80%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
-100°C	1000 Ω	80%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-150°C	1500 Ω	80%	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
-200°C	2000 Ω	80%	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Special range			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Accuracy, slow/fast step response**

PT 100, Ni100: 0.3% of measuring range 0.8%

Measuring range:

Potentiometer: 0.2% of final value / 0.3%

Resistance: 0.2% of final value / 0.3%

**Temperature coefficient**

 Measuring range  $\geq 200$  K  $\leq 200$  ppm / °C

 100 K  $\leq$  Measuring range  $< 200$  K  $\leq 250$  ppm / °C

 40 K  $\leq$  Measuring range  $< 100$  K  $\leq 400$  ppm / °C

Choice of measuring range						
T	R	Potentiometer	Switch 2			
			1	2	3	4
40K	20Ω	20%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
50K	25Ω	25%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60K	30Ω	30%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70K	35Ω	35%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80K	40Ω	40%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
90K	45Ω	45%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100K	50Ω	50%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
110K	55Ω	55%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120K	60Ω	60%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
125K	62,5Ω	62,5%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
130K	65Ω	65%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140K	70Ω	70%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150K	75Ω	75%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
160K	80Ω	80%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
170K	85Ω	85%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
180K	90Ω	90%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
190K	95Ω	95%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
200K	100Ω	100%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
250K	125Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
300K	150Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
350K	175Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
400K	200Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
450K	225Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
500K	250Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
550K	275Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
600K	300Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
650K	325Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
700K	350Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
750K	375Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
800K	400Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
850K	425Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
900K	450Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Choice of measuring range						
T	R	Potentiometer	Switch 2			
			1	2	3	4
40K	200Ω	20%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
50K	250Ω	25%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
60K	300Ω	30%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70K	350Ω	35%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80K	400Ω	40%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
90K	450Ω	45%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
100K	500Ω	50%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
110K	550Ω	55%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
120K	600Ω	60%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
125K	625Ω	62,5%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
130K	650Ω	65%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
140K	700Ω	70%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
150K	750Ω	75%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
160K	800Ω	80%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
170K	850Ω	85%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
180K	900Ω	90%	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
190K	950Ω	95%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
200K	1000Ω	100%	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
250K	1250Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
300K	1500Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
350K	1750Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
400K	2000Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
450K	2250Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
500K	2500Ω	---	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
550K	2750Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
600K	3000Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
650K	3250Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
700K	3500Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
750K	3750Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
800K	4000Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
850K	4250Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
900K	4500Ω	---	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

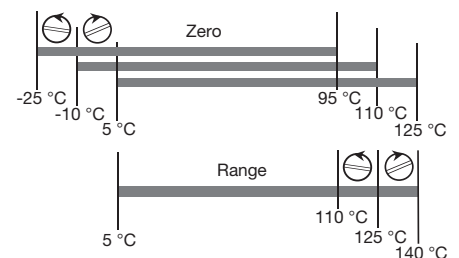
**Examples for setting zero and range**
**Temperature setting:**

Output 4...20 mA

DIP switch -10 °C...+110 °C

Range 75...110 °C

Range 120 °C

 Range adjustment  $\pm 12,5$  %

**Setting aid WAVEtool**

The service tool is used for fast, uncomplicated configuration of WAVEANALOGUE PRO.

Download from the internet:

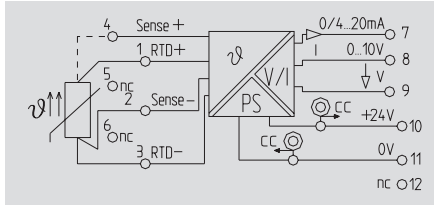
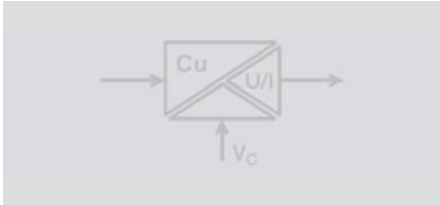
<http://www.weidmueller.com>

# PT100 / RTD - signal isolator/converter

## RTD, signal disconnecter converter

- Universally adjustable via DIP-switch
- 3-way isolation
- Linearization
- Power supply can be cross connected via plug-in jumper

## PRO RTD Cu



Connection	Switch 1		Selection of sensor		
	1	2	Type	2	3
3-wire	■		Cu 10	■	■
4-wire	□		Cu 25	■	□
			Cu 50	□	■
			Cu 100	□	□

θ <sub>min</sub>	Switch 1			
	4	5	6	7
- 0 °C	■	■	■	■
-10 °C	■	■	■	□
-20 °C	■	■	□	■
-25 °C	■	■	□	□
-30 °C	■	□	■	■
-40 °C	■	□	■	□
-50 °C	■	□	□	■
-60 °C	■	□	□	□
-70 °C	□	■	■	■
-80 °C	□	■	■	□
-90 °C	□	■	□	■
-100 °C	□	■	□	□
-150 °C	□	□	■	■
-200 °C	□	□	■	□
special range	□	□	□	□

Span	Switch 2				
	1	2	3	4	5
40 K	■	■	■	■	■
50 K	■	■	■	■	□
60 K	■	■	■	□	■
70 K	■	■	■	□	□
80 K	■	■	□	■	■
90 K	■	■	□	■	□
100 K	■	■	□	□	■
110 K	■	■	□	□	□
120 K	■	□	■	■	■
125 K	■	□	■	■	□
130 K	■	□	■	□	■
140 K	■	□	■	□	□
150 K	■	□	□	■	■
160 K	■	□	□	■	□
170 K	■	□	□	□	■
180 K	■	□	□	□	□
190 K	□	■	■	■	■
200 K	□	■	■	■	□
210 K	□	■	■	□	■
220 K	□	■	■	□	□
230 K	□	■	□	■	■
240 K	□	■	□	■	□
250 K	□	■	□	□	■
260 K	□	■	□	□	□
270 K	□	□	■	■	■
280 K	□	□	■	■	□
290 K	□	□	■	□	■
300 K	□	□	■	□	□
350 K	□	□	□	■	■
400 K	□	□	□	■	□
450 K	□	□	□	□	■
460 K	□	□	□	□	□

Output	Switch 2		Switching on the manual fine adjustment	
	6	7	man. adj.	Switch 1 8
0...10 V	■	□	man. adj.	□
0...20 mA	□	□	off	□
4...20 mA	□	■	on	■

Time of step response	Schalter 2	
	8	
slow	■	■ = on
fast	□	□ = off

## Technical data

Input	Sensor Temperature input range	Cu 10, Cu 25, Cu 50, Cu 100; 3-/4-cond. adjustable -200...+260 °C
Output	Output current/Output voltage Offset current/Offset voltage Load resistance voltage/Current Step response time Line resistance in measuring circuit Influence of cable resistance Wire break detection Fine adjustment Status indicator	0(4)...20 mA/0...10 V max. 100 µA/max. 0.05 V >= 1 kΩ/< = 600 Ω fast: 1.2 s/ slow: 2.2 s 5 Ω Cu 10; 15 Ω Cu 25; 25 Ω Cu 50; 50 Ω Cu 100 max. + 0.25°C at max. cond. resistance LED flashes (output value > 20mA, > 10V) >= +/- 12.5 % active: LED on/cond. broken: LED flashing/Error: LED off
General data	Supply voltage Power consumption Current-carrying cap. of cross-connect. Operation temperature Storage temperature Default settings Approvals	24 Vdc +/- 25 % 880...980...1030mW at Iout=20mA <= 2 A 0 °C...+55 °C -20 °C...+85 °C CU 10/3-cond.; 0...100°C; 4...20mA; no filter, manual adjustment off; slow step response
Insulation coordinates	Standards EMC standards Rated voltage Impulse withstand voltage Isolation voltage Input, output Overvoltage category Pollution severity Clearance & creepage path	GL / CE / ESD / cURus EN 50178 EN 50081, EN50082, EN55011 300 V 4 kV 2 kVeff / 5s III 2 >= 3 mm

Dimensions	Screw connection	Tension clamp c.
Clamping range (rating- / min. / max.)	2.50 / 0.50 / 2.50	1.50 / 0.50 / 2.50
Length x width x height	92.4 x 17.5 x 112.4	92.4 x 17.5 x 112.4

Information	Tu=23°C, single module
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## Ordering data

Type of connection	Type	Qty.	Order No.
Screw connection	WAS5 PRO RTD Cu	1	8638950000
Tension clamp c.	WAZ5 PRO RTD Cu	1	on demand

Information	
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## Accessories

Information	Voltage supply 24V and 0V with ZQV 2.5N/2 cross-connection
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Articles with coloured order number are kept permanently in stock at the central warehouse in Germany. Delivery times see page X.2