

WAS5 PRO RTD 1000

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



RTD temperature signal converters for connecting resistance temperature sensors and analogue DC current or voltage outputs.

A variety of resistance thermometers (e.g., PT100) are used to measure temperature in an industrial environment. These are used with 2-, 3-, or 4-wire technology.

We distinguish here between PTC and NTC thermistors. For an exact temperature measurement, the resistance value must be logged, linearised and converted into an analogue signal proportional to the temperature. Signal isolating converters carry out these important functions. They isolate signals between the harsh industrial environments and the downstream electronics. Furthermore, they compensate for potential differences caused by long cable lengths. Sensor-related inadequacies such as cold joints and linearity errors are also minimised.

General ordering data

Version	RTD isolating transformer, Input : Temperature, PT1000, Output : 0(4)-20 mA, 0-10 V
Order No.	8679490000
Type	WAS5 PRO RTD 1000
GTIN (EAN)	4032248813094
Qty.	1 pc(s).
Delivery status	This article will no longer be available in the future.
Available until	2019-12-31
Alternative product	2448100000

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Technical data

Dimensions and weights

Depth	112.4 mm	Depth (inches)	4.425 inch
Length	92.4 mm	Length (inches)	3.638 inch
Net weight	103.3 g	Weight	100 g
Width	17.5 mm	Width (inches)	0.689 inch

Temperatures

Storage temperature	-20 °C...85 °C	Operating temperature	0 °C...55 °C
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Probability of failure

MTTF	267 Years
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Input

Line resistance in measuring circuit	50 Ω for 3- and 4-conductor	Number of inputs	1
Sensor	Ni 1000/2-/3-/4-wire, Potentiometer: min. 0-1kΩ, max. 0-100kΩ, PT1000/2-/3-/4-wire, Resistance: 0-4.5kΩ	Temperature input range	Configurable, PT1000: -200°C...850 °C, NI1000: -60°C...+250 °C

Output

Fine adjustment	± 12.5 % of FSR; potentiometer: ± 12.5 % ... ± 25 %	Load impedance current	≤ 600 Ω
Number of outputs	1	Offset current	max. 100 µA
Offset voltage	max. 0.05 V	Output current	0...20 mA, 4...20 mA
Output voltage, note	0...10 V	Status indicator	Module active: LED on/ wire breakage: LED flashing/Error: LED off
Wire break detection	LED flashing (output value: > 20 mA, >10 V)	load impedance voltage	≥ 1 kΩ

General data

Accuracy	< 0.3 % of measured value	Configuration	DIP switch, Potentiometer
Current-carrying capacity of cross-connect.	≤ 2 A	Galvanic isolation	3-way isolator
Input/Output	configurable	Linearity	Yes
Power consumption	830...880...980 mW at I _{OUT} = 20 mA	Rail	TS 35
Step response time	Fast/slow:2-/3-/4-conductor: 1.2s/2.3s; potentiometer: 0.5s/1.2s	Temperature coefficient	Measuring range ≥ 200K and resistant measurement: ≤= 200 ppm/K of measuring range; 100< = measuring range < 200K: < = 250ppm vo
Type of connection	Screw connection	Voltage supply	24 V DC ± 20 %

Creation date March 29, 2021 11:03:20 PM CEST

Catalogue status 12.03.2021 / We reserve the right to make technical changes.

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Insulation coordination

Clearance & creepage distances	≥ 3 mm	EMC standards	EN 55011, EN 61000-6
Galvanic isolation	3-way isolator	Impulse withstand voltage	4 kV
Insulation voltage	2 kV _{eff} / 5 s	Insulation voltage input or output/rail	4 kV _{eff} / 1 min.
Insulation voltage input or output/supply	2 kV _{eff} / 5 s	Pollution severity	2
Rated voltage	300 V	Surge voltage category	III

Connection data

Type of connection	Screw connection	Stripping length, rated connection	7 mm
Tightening torque, min.	0.4 Nm	Tightening torque, max.	0.5 Nm
Clamping range, rated connection	2.5 mm ²	Clamping range, min.	0.5 mm ²
Clamping range, max.	2.5 mm ²		

Classifications

ETIM 6.0	EC002919	ETIM 7.0	EC002919
ECLASS 9.0	27-21-01-29	ECLASS 9.1	27-21-01-29
ECLASS 10.0	27-21-01-29	ECLASS 11.0	27-21-01-29

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Technical data

Tender specification sheets

Long specification

Short specification

**RTD measurement
isolating transformer;
configured with DIP
switches**

**RTD measurement
isolating transformer
in 17.5 mm width with
external power supply,
for transmitting and
isolating PT1000 and
Ni1000 2-/3-/4-wire
signals, resistors
and potentiometer
signals.**

**Analogue DC signals
0(4) to 20 mA / 0 to 10
V are available on the
output side.**

**Zero/span
compensation with
potentiometer.**

Add-on housing for TS35
rail mounting
Dimensions: L/W/H
92.4/ 17.5/ 112.4 mm
Screw
connection / Nominal
cross-section 2.5 mm²
Protection degree: IP 20

**Type
WAS5 PRO RTD 1000**

**Input
PT1000, Ni1000 2-/3-/4-
wire**

**Resistance
0...4.5 kOhm/
Potentiometer 0...1
kOhm**

**Output
0/4...20 mA**

**0...10 V
Load resistance
< 600 Ohm/ Strom/> 1
kOhm/ voltage
Transmission error <
0.8% of input (RTD)**

typ.

**200 ppm / °C
Auxiliary
power 24 VDC
+/- 25 %
Power loss
approx. 0.9 W
Ambient
temperature
range 0°C...+55 °C**

**Isolation EN
50178, 3-way isolation
up to 4 kV AC/DC of all
circuits against each
other**

**Test voltage 2
kV input against output
against auxiliary power
Rated**

**RTD measurement
isolating transformer;
configured with DIP
switches
RTD measurement
isolating transformer
in 17.5 mm width with
external power supply,
for transmitting and
isolating PT1000 and
Ni1000 2-/3-/4-wire
signals, resistors
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**Analogue DC signals
0(4) to 20 mA / 0 to 10**

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Technical data**Important note**

Product information This product will soon be replaced by a new product.
Please do not use with new systems. Please contact our technical support.

Approvals

Approvals



ROHS Conform
UL File Number Search E141197

Downloads

Approval/Certificate/Document of Conformity [DNV GL Certificate](#)
[Declaration of Conformity](#)
Engineering Data [EPLAN, WSCAD](#)
User Documentation [Instruction sheet](#)

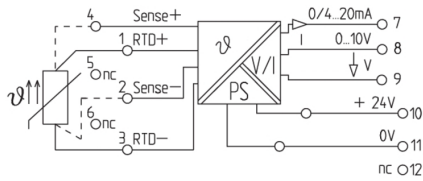
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Drawings

Electric symbol



Similar to illustration

