

WAS5 PRO Thermo

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Only remaining stock
 available



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	TC isolating transformer, Input : Temperature, thermocouple, Output : I / U
Order No.	8560720000
Type	WAS5 PRO Thermo
GTIN (EAN)	4032248207336
Qty.	1 pc(s).
Delivery status	This article will no longer be available in the future.
Available until	2020-12-31
Alternative product	1176030000

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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	128.8 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	270 Jahre
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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	Number of inputs	1
Sensor	Thermo element (IEC 584) type: K,J,T,E,N,R,S,B	Temperature input range	-200...+1820 °C

Output

Fine adjustment	± 5% (switchable)	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)	cold junction compensation	Yes
load impedance voltage	≥ 1 kΩ		

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General data

Accuracy	Type K & J: -150°C... 1200°C ±(3°C + 0,1% of range), Type T: -150°C... 400°C ±(3°C + 0,1% of range), Type E: -150°C... 1000°C ±(3°C + 0,1% of range), Type N: -150°C... 1300°C ±(3°C + 0,1% of range), Type R & S: 200°C...1760°C ±(6°C + 0,1% of range), Type B: 500°C...1820°C ±(6°C + 0,1% of range)	Configuration	
Current-carrying capacity of cross- connect.	≤ 2 A	Galvanic isolation	DIP switch
Input/Output	configurable	Linearity	3-way isolator
Power consumption	800...850...950 mW at I _{OUT} = 20 mA	Rail	Yes
Step response time	without filter: max. 1.4 s; with filter: max. 7.5 s	Type of connection	TS 35
Voltage supply	24 V DC ± 20 %		Screw connection

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

TC temperature measurement isolating transformer; configured with DIP switches
TC- temperature measurement isolating transformer in 17.5 mm width with external power supply, for transmitting thermocouples (insulated version) types K, J, T, E, N, R, S and B according to IEC 584.
Standard DC signals 0(4) to 20 mA / 0 to 10 V are available on the output side.
Internal cold-junction compensation
Potentiometer for zero/ span compensation
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
Input TC
Type Type K, J, T, E, N, R, S

Output
0/4...20 mA

0...10 V
Load resistance < 600 Ohm/ Strom/> 1 kOhm/ voltage
Transmission error 0.2...0.3
0.8 % of input (depending on TC Type)
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
300 V AC/DC at overvoltage category III and pollution degree 2

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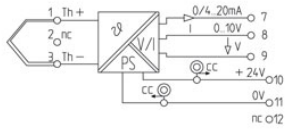
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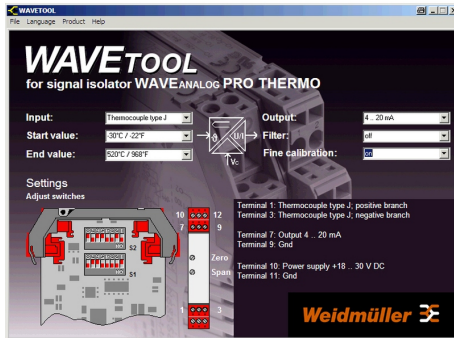
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Drawings

Electric symbol



Similar to illustration



Screenshot example, Wave tool software