

**WAS5 PRO THERMO****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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, Configurable, Input : thermocouple, Output : I / U
Order No.	<a href="#">8560720000</a>
Type	WAS5 PRO THERMO
GTIN (EAN)	4032248207336
Qty.	1 pc(s).
Delivery status	<b>This article will no longer be available in the future.</b>
Available until	2023-06-30
Alternative product	<a href="#">1176030000</a>

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## Technical data

## Dimensions and weights

Depth	112.4 mm	Depth (inches)	4.425 inch
Width	17.5 mm	Width (inches)	0.689 inch
Length	92.4 mm	Length (inches)	3.638 inch
Net weight	128.8 g		

## Temperatures

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

MTTF	270 a
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## Input

Line resistance in measuring circuit	50 Ω	Number of inputs	1
Sensor	Thermocouples: B, E, J, K, L, N, R, S, T, U	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	Wire break detection	LED flashing (output value: > 20 mA, >10 V)
load impedance voltage	≥ 1 kΩ		

## Output (digital)

Status indicator	Module active: LED on/ wire breakage: LED flash- ing/Error: LED off
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## Output (analogue)

Output current	0...20 mA, 4...20 mA
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## General data

Accuracy	Type K & J: -150°C... 1200°C $\pm(3^\circ\text{C} + 0,1\%$ of range), Type T: -150°C... 400°C $\pm(3^\circ\text{C} + 0,1\%$ of range), Type E: -150°C... 1000°C $\pm(3^\circ\text{C} + 0,1\%$ of range), Type N: -150°C... 1300°C $\pm(3^\circ\text{C} + 0,1\%$ of range), Type R & S: 200°C...1760°C $\pm(6^\circ\text{C} + 0,1\%$ of range), Type B: 500°C...1820°C $\pm(6^\circ\text{C} + 0,1\%$ of range)	Configuration	
Galvanic isolation	3-way isolator	Linearity	DIP switch Yes
Power consumption	800...850...950 mW at $I_{OUT} = 20\text{ mA}$	Rail	TS 35
Step response time	without filter: max. 1.4 s; with filter: max. 7.5 s	Voltage supply	24 V DC $\pm 20\%$

## Insulation coordination

EMC standards	EN 55011, EN 61000-6	Galvanic isolation	3-way isolator
Impulse withstand voltage	4 kV	Insulation voltage	2 kV <sub>eff</sub> / 5 s
Insulation voltage input or output/rail	4 kV <sub>eff</sub> / 1 min.	Insulation voltage input or output/supply	2 kV <sub>eff</sub> / 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 <sup>2</sup>	Clamping range, min.	0.5 mm <sup>2</sup>
Clamping range, max.	2.5 mm <sup>2</sup>		

## Classifications

ETIM 6.0	EC002919	ETIM 7.0	EC002919
ETIM 8.0	EC002919	ETIM 9.0	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
ECLASS 12.0	27-21-01-29	ECLASS 13.0	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 mm<sup>2</sup>**  
**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**  
**Rated voltage 300 V AC/DC at overvoltage category III and pollution degree 2**

**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.**  
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REACH SVHC	Lead 7439-92-1
SCIP	b25f3b7c-b874-4a4e-a8b2-4f423a7e2a65

**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.
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**Approvals**

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E141197
Certificate no. (cULusEX)	E223527

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">DNV GL Certificate</a> <a href="#">Application notes – Declaration of Conformity</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Software	<a href="#">Software – WaveTool.zip</a>
User Documentation	<a href="#">Instruction sheet</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	

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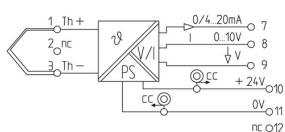
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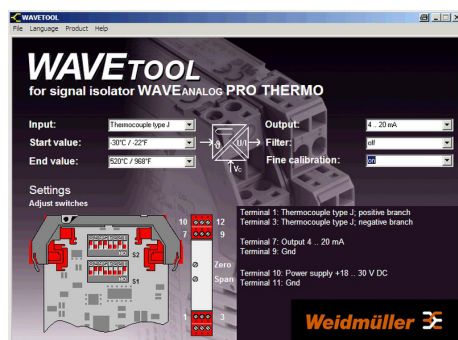
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## Drawings

### Electric symbol



### Similar to illustration



Screenshot example, Wave tool software

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## Accessories

### Blank



WS markers are the perfect match for the W-series connectors. Thanks to their system compatibility, the WS tags can also be used with the I-series and the Z-series. The large marking surfaces do not only permit long character strings but also multi-line text. WS markers are ideal for labels with long, customised character strings. Thanks to the proven MultiCard format, printing with PrintJet CONNECT oder/or Plotter is possible.

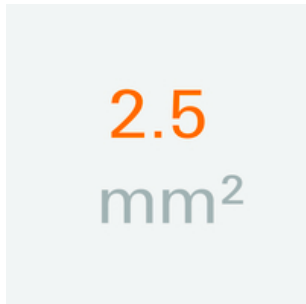
- Can be fitted in strips or individually
- Markers in proven MultiCard format

**For custom printing:** Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

### General ordering data

Type	WS 10/5 MC NE WS	Version
Order No.	<a href="#">1635000000</a>	WS, Terminal marker, 10 x 5 mm, Pitch in mm (P): 5.00 Weidmueller,
GTIN (EAN)	4008190261948	Allen-Bradley, white
Qty.	720 pc(s).	

### 2.5 mm<sup>2</sup>



The plug-in cross-connections feature easy handling and quick installation. This saves a great deal of time during installation in comparison with screwed solutions.

### General ordering data

Type	ZQV 2.5N/2 GE	Version
Order No.	<a href="#">1693800000</a>	W-Series, Cross-connector, 24 A
GTIN (EAN)	4008190883621	
Qty.	60 pc(s).	
Type	ZQV 2.5N/2 SW	Version
Order No.	<a href="#">1718080000</a>	W-Series, Cross-connector, 24 A
GTIN (EAN)	4008190349301	
Qty.	60 pc(s).	
Type	ZQV 2.5N/2 RT	Version
Order No.	<a href="#">1717900000</a>	W-Series, Cross-connector, 24 A
GTIN (EAN)	4008190349288	
Qty.	60 pc(s).	

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Type	ZQV 2.5N/2 BL	Version
Order No.	<a href="#">1717990000</a>	W-Series, Cross-connector, 24 A
GTIN (EAN)	4008190349295	
Qty.	60 pc(s).	