

## WAVESERIES WAS6 TTA

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 16

D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

www.weidmueller.com



When used for industrial monitoring applications, sensors can record ambience conditions. Sensor signals are used within the process to continually track changes to the area being monitored. Both digital and analogue signals can occur.

Normally an electrical voltage or current value is produced which corresponds proportionally to the physical variables that are being monitored. Analogue signal processing is required when automation processes have to constantly maintain or reach defined conditions. This is particularly significant for process automation applications. Standardised electrical signals are typically used for process engineering. Analogue standardised currents / voltage 0(4)...20 mA/ 0...10 V have established themselves as physical measurement and control variables.

Weidmüller meets the ever increasing challenges of automation and offers a product portfolio tailored to the requirements of handling sensor signals in analogue signal processing.

The analogue signal processing products can be used universally in combination with other Weidmüller products and in combination among each other. Their electrical and mechanical design is such that they require only minimal wiring efforts.

Housing types and wire-connection methods matched to the respective application facilitate the universal use in process and industrial automation applications.

The product line includes the following functions:

- Isolating transformers, supply isolators and signal converters for DC standard signals
- Temperature measuring transducers for resistance thermometers and thermocouples,
- frequency converters,
- potentiometer-measuring-transducers,
- bridge measuring transducers (strain gauges)
- trip amplifiers and modules for monitoring electrical and non-electrical process variables
- AD/DA converters
- displays
- calibration devices

### General ordering data

The products mentioned are available as pure signal converters / isolation transducers, 2-way/3-way isolators, supply isolators, passive isolators or as trip amplifiers.

Order No.	8939670000
Version	Signal converter/insulator, Limit value monitoring, Screw connection
GTIN (EAN)	4032248721078
Qty.	1 pc(s).

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**Technical data**
**Dimensions and weights**

Length	100 mm	Length (inches)	3.937 inch
Width	45 mm	Width (inches)	1.772 inch
Depth	112.4 mm	Depth (inches)	4.425 inch
Weight	215 g	Net weight	256.1 g

**Temperatures**

Humidity	5...95 %, no condensation	Operating temperature, max.	70 °C
Operating temperature, min.	-40 °C	Storage temperature, max.	85 °C
Storage temperature, min.	-40 °C	Operating temperature	-40 °C...70 °C
Storage temperature	-40 °C...85 °C		

**Probability of failure**

MTTF	138 Jahre
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**Input**

Number of inputs	1	Sensor	Thermocouples: B, E, J, K, L, N, R, S, T (IEC 60584), PT100, PT1000, (EN 60571) Ni100, Ni1000, (JIS1604), Cu10, Cu25, Cu50, Cu100 (DIN 43760) 2-/3-/4-wire
Sensor supply	24 V DC / 22 mA	Input voltage	-200...500 mV (min. 4 mV span), -20...50 V DC (min. 0.5 V span)
Input current	-20...50 mA (min. span 0.4 mA)	Input frequency	2 Hz...100 kHz
Resistance	10 Ω...5 kΩ	Potentiometer	100 Ω...100 kΩ

**General data**

Accuracy	< 0.1 % span (DC, RTD); 0.2 % span (or 1 °C) + CJ failure	Configuration	Using free Windows software, TTA Set Software
Power consumption	< 3.5 W	Step response time	50 ms...1 sec (RTD, mV inputs), 110 ms...1 sec (V, mA inputs)
Supply voltage	18...264 V AC/DC	Temperature coefficient	< 0.1 % / K (DC, RTD); < 0.1 % FSR / K + CJ error 0.07 °C/K (thermocouples )

**Insulation coordination**

Clearance & creepage distances	≥ 5.5 mm (1 mm <sub>Input/output</sub> )	EMC standards	EN 55011, EN 61000-6
Impulse withstand voltage	6 kV	Insulation voltage	2.5 kV
Pollution severity	2	Rated voltage	300 V
Surge voltage category	III		

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**Technical data****Output (analogue)**

Load resistance current	< 700 $\Omega$	Load resistance voltage	> 10 k $\Omega$ @ 0...10 V / > 20 k $\Omega$ @ -10...+10 V
Output current	Adjustable between 0...20 mA (min. span of 5 mA)	Output voltage	Adjustable between -10...+10 V (min. span of 2.5 V)
Signal output	direct or inverted	Transmit function	Linear, $x^{1/2}$ , $x^{3/2}$ , $x^{5/2}$ or user-defined curve (101 points)

**Output (digital)**

Alarm function	Top and bottom limit values, window range, Over-temperature, Alarm mode: delay, switch on or switch on/off, Holding function can be activated, Delayed 0...4200 s	Number of digital outputs	2
Type	2 x 1 CO contact (hard gold-plated), Process alarms (4x) with hysteresis, with alarm delay (configurable) 0...180 s	Max. switching voltage, AC	250 V

**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 3.0	EC002479	ETIM 4.0	EC002479
ETIM 5.0	EC002479	ETIM 6.0	EC002653
UNSPSC	30-21-18-01	eClass 5.1	27-21-01-07
eClass 6.2	27-21-01-07	eClass 7.1	27-21-01-07
eClass 8.1	27-21-01-07	eClass 9.0	27-21-01-07
eClass 9.1	27-21-01-90		

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**Technical data**
**Product information**

## Product information

WAS/WAZ6 TTA is a universal signal converter and trip amplifier that can be configured on the PC. Combines the functions of isolation, transmission, linearisation and trip amplification in a single module. These exceptional characteristics and outstanding configurability combine to make the TTA truly unique. The TTA functions with stability and precision under a wide range of voltages and ambient temperatures. It is compatible with all standard sensor types.

- Universal input signals: temperature signals such as resistance thermometer, thermocouple, potentiometer, frequency transmitter, DC voltage signals and current signals
- Loop-powered or passive input
- Wide-range power supply: 18 – 264 V AC/DC
- User-defined linearization
- Inputs and outputs can be configured on PC
- Combined analogue and relay output
- Ambient temperature range: -40 °C ...70 °C

The CBX200 USB interface is used to connect to the PC.  
 The WAS/WAZ6 TTA is also offered as an option with ATEX Zone 2 and UL C1D2 approvals.

Descriptive text ordering data	CBX200 USB configuration adapter - 8978580000
Instructions for accessories	CBX200 USB interface - 8978580000 Connects the WAVE TTA with a PC for calibration

**Approvals**

## Approvals



ROHS	Conform
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**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">ATEX certification</a> <a href="#">Declaration of Conformity</a>
Brochure/Catalogue	<a href="#">CAT 4.1 ELECTR 16/17 EN</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Software	<a href="#">Install_TTASet_V107.zip</a>
User Documentation	<a href="#">Manual english, deutsch, france</a> <a href="#">Instruction sheet</a>

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**Drawings**

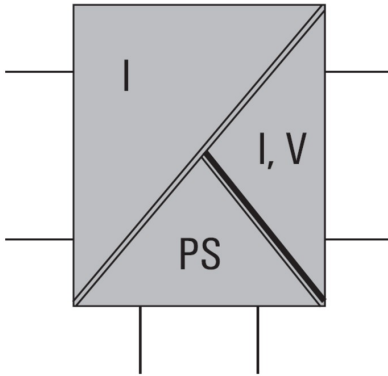


Screenshot of TTA Set Software

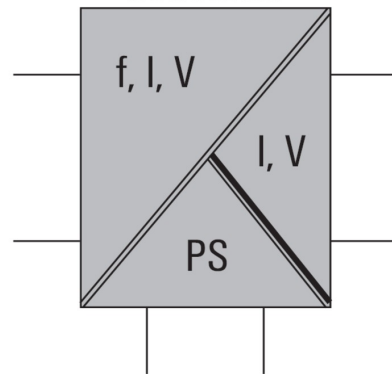


connection to your PC

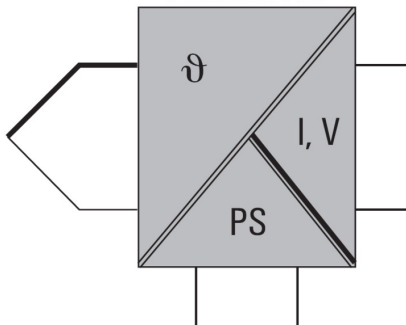
**Isolator**



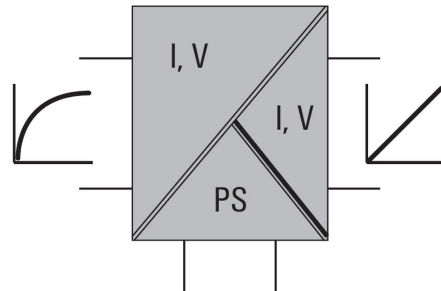
**Converter**



**Transmitter**



**Lineariser**



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