

## WAZ6 TTA EX

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

www.weidmueller.com

### Similar to illustration



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.

### General ordering data

Version	Input : EX, universal U, I, R,9, Output : I/U universal, 2 x relays
Order No.	<a href="#">8964320000</a>
Type	WAZ6 TTA EX
GTIN (EAN)	4032248782284
Qty.	1 pc(s).

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## Technical data

### Dimensions and weights

Depth	112.4 mm	Depth (inches)	4.425 inch
Width	45 mm	Width (inches)	1.772 inch
Length	100 mm	Length (inches)	3.937 inch
Net weight	280 g		

### Temperatures

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

### Probability of failure

SIL in compliance with IEC 61508	None	MTTF	138 Jahre
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### Input

Input current	-20...+50 mA (min. interval 0.4 mA)	Input frequency	adjustable, 2 Hz...100 kHz
Input voltage	-200...500 mV (min. 4 mV span), -20...50 V DC (min. 0.5 V span)	Number of inputs	1
Potentiometer	10...50 Ω, 50...100 Ω, 100...200 Ω, 200...400 Ω, 400...800 Ω, 800 Ω...2 kΩ, 2...6.5 kΩ, 6.5...100 Ω	Resistance	10 Ω...5 kΩ
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
Temperature input range	Configurable, B: +100...+1820 °C, E: -270...+1000 °C, J: -270...+1200 °C, K: -150...+1372 °C, L: +100...+900 °C, N: -180...+1300 °C, R: -50...+1768 °C, S: -50...+1768 °C, T: -270...+400 °C, U: -200...+600 °C, User defined		

### Output

Load impedance current	≤ 600 Ω, @ max 23mA
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### Output (digital)

Continuous current	2 A	Max. switching voltage, AC	250 V
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

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### Output (analogue)

Load resistance current	< 700 $\Omega$	Load resistance voltage	> 10 k $\Omega$ @ 0...10 V / > 20 k $\Omega$ @ -10...+10 V
Number of analogue outputs	1	Output current	adjustable between 0 and 20 mA (min. span of 5 mA)
Output voltage	adjustable between -10...+10 V (min. span 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)		

### General data

Accuracy	< 0.1 % span (DC, RTD); 0.2 % span (or 1 °C) + CJ failure	Configuration	Using free Windows software, TTA Set Software, Requires configuration adapter 8978580000 CBX200 USB
Long-term drift	0	Power consumption	< 3.5 W
Step response time	50 ms...1 sec (RTD, mV inputs), 110 ms...1 sec (V, mA inputs)	Temperature coefficient	<0.1 % / K (DC, RTD); <0.1 % FSR / K + CJ error 0.07 °C/K (thermocouples)
Type of connection	Tension-clamp connection	Voltage supply	24...240 V AC/DC; 24...36 V AC / 24...50 V DC (ATEX Zone 2)

### Insulation coordination

Clearance & creepage distances	$\geq 5.5$ 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		

### Data for Ex applications (ATEX)

Marking	II 3 G Ex nA nC IIC T4 Gc
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### Connection data

Type of connection	Tension-clamp connection	Stripping length, rated connection	7 mm
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	EC002653	ETIM 7.0	EC002653
ETIM 8.0	EC002653	ECLASS 9.0	27-21-01-20
ECLASS 9.1	27-21-01-20	ECLASS 10.0	27-21-01-20
ECLASS 11.0	27-21-01-20	ECLASS 12.0	27-21-01-20

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**Technical data**

**Tender specification sheets**

Long specification

Short specification

**Universal measurement isolating converters and trip amplifiers, for Ex zone 2 applications; can be configured with a PC**  
**Universal measurement isolating converters and trip amplifiers in 45 mm width with external supply for voltage and sensors, for transmitting and isolating analogue DC current**  
 -20 to 50 mA, voltages -200 to 500 mV/ -20 to 50 V, 2-/3-/4-wire RTD, resistors, thermocouples according to IEC 584 and frequencies up to 100 kHz( 2- / 3-wire sensors).  
 Two switching outputs (CO contacts) are available on the output side for alarms.  
 Analogue DC voltage (-10...+10 V) and current outputs (0...20 mA) are available on the output side.  
 The component can be configured with a PC using the proprietary TTA-Set software.  
 Add-on housing for TS35 rail mounting  
 Dimensions: L/W/H 100/ 45/ 112.4 mm  
 Tension-clamp connection / Nominal cross-section 1.5 mm<sup>2</sup>  
 Protection degree: IP 20  
 Input -20...50 mA  
 -200...500 mV / -10...+10 V  
 PT100, PT1000, Ni100, Ni1000, Cu10/25/50/100 2-/3-/4-wire  
 Resistance 10 Ohm...5 kOhm/ Potentiometer 100 Ohm... 100 kOhm  
 Thermocouple types B, E, J, K, N, R, S, T

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### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	c2a21576-d875-4548-ae68-5e7f85ddf0c7

### Important note

#### Product information

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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="#">ATEX certification</a> <a href="#">DNV GL Certificate</a> <a href="#">Declaration of Conformity</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Engineering Data	<a href="#">WSCAD</a>
Software	<a href="#">Runtime Software – Install_TTASet_V107.zip</a>
User Documentation	<a href="#">Manual english, deutsch, france</a> <a href="#">Instruction sheet</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	

WAZ6 TTA EX

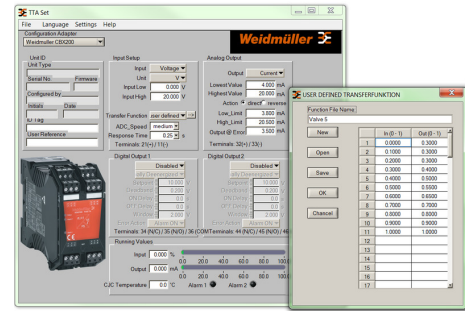
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Drawings

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Screenshot of TTA Set software

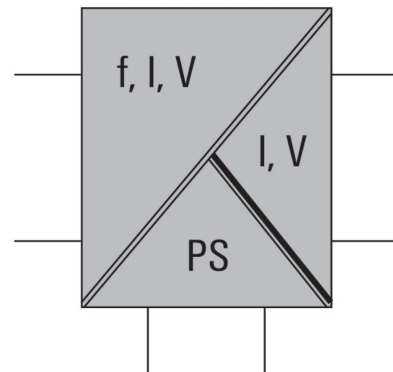


example of user defined transfer function for assigning customized output values

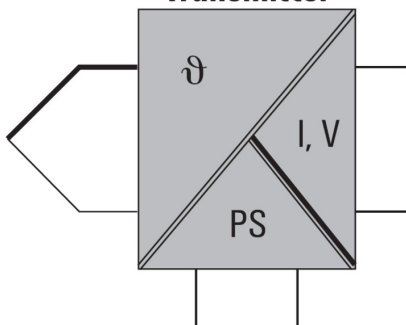


connection to your PC

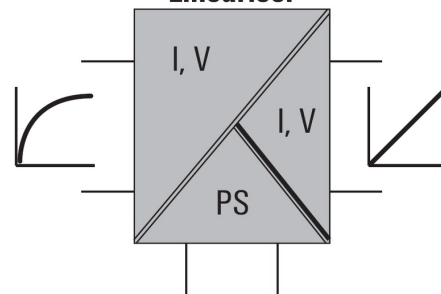
Converter



Transmitter



Lineariser



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