

WAS6 TTA EX

Weidmüller Interfaces GmbH & Co. KG

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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, S, Output : I/U universal, 2 x relays
Order No.	8964310000
Type	WAS6 TTA EX
GTIN (EAN)	4032248782277
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	265 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)

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	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		

Output (analogue)

Load resistance current	< 700 Ω	Load resistance voltage	> 10 k Ω @ 0...10 V / > 20 k Ω @ -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	Screw connection	Voltage supply	24...240 V AC/DC; 24...36 V AC / 24...50 V DC (ATEX Zone 2)

Insulation coordination

Clearance & creepage distances	≥ 5.5 mm (1 mm _{input/output})	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	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	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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Tender specification sheets

Long specification

Universal measurement isolating converters and trip amplifiers, for Ex zone 2 applications; can be configured with 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.

Short specification

Add-on housing for TS35 DIN rail installation
Dimensions: L/W/H
100/ 45/ 112.4 mm
Screw connection / nominal cross-section
2.5 mm²
Protection degree: IP20
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 to 5 kOhm/ potentiometer
100 Ohm to 100 kOhm
Thermocouple types
B, E, J, K, N, R, S, T

Frequencies 2 Hz... 100 kHz (2-/3-wire sensors)
Sensor supply 24 VDC
22 mA

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Technical data

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1	www.weidmueller.com
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	ATEX certification DNV GL Certificate Declaration of Conformity
Engineering Data	CAD data – STEP
Engineering Data	WSCAD
Software	Runtime Software – Install_TTASet_V107.zip
User Documentation	Manual english, deutsch, france Instruction sheet
Catalogues	Catalogues in PDF-format
Brochures	

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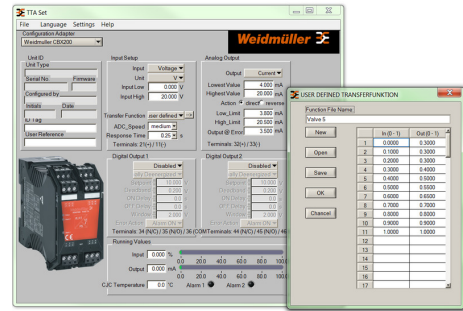
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Drawings



Screenshot of TTA Set software

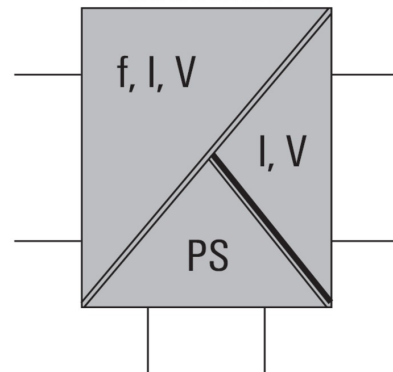


example of user defined transfer function for assigning customized output values

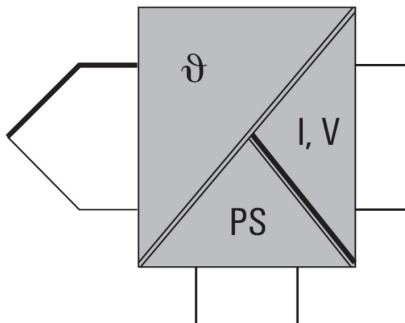


connection to your PC

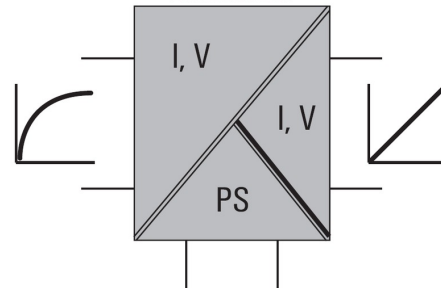
Converter



Transmitter



Lineariser



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