

WAS6 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. | 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 |
| Humidity | 5...95 %, no condensation | | |

Probability of failure

| | |
|------|-----------|
| MTTF | 138 Jahre |
|------|-----------|

Environmental Product Compliance

| | |
|------------|----------------|
| REACH SVHC | Lead 7439-92-1 |
|------------|----------------|

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, (JIS 1604), 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 | | |

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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 |
| 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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Technical data**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 | 27-21-01-90 | ECLASS 10.0 | 27-21-01-20 |
| ECLASS 11.0 | 27-21-01-20 | | |

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Technical data

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.

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

Short specification

WAS6 TTA EX

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Important note

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.

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Approvals

Approvals



| | |
|-----------------------|---------|
| ROHS | Conform |
| UL File Number Search | E141197 |

Downloads

| | |
|---|---|
| Approval/Certificate/Document of Conformity | ATEX certification DNV GL Certificate Declaration of Conformity |
| Engineering Data | STEP |
| Engineering Data | EPLAN, WSCAD |
| Software | Install_TTASet_V107.zip |
| User Documentation | Manual english, deutsch, france Instruction sheet |
| Catalogues | Catalogues in PDF-format |
| Brochures | |

WAS6 TTA EX

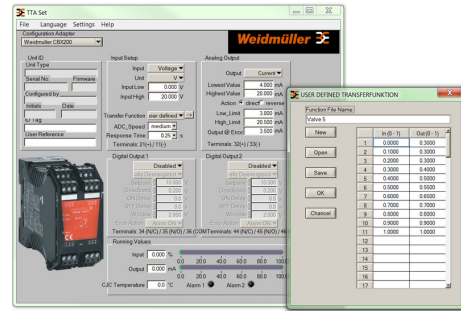
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Drawings



Screenshot of TTA Set software

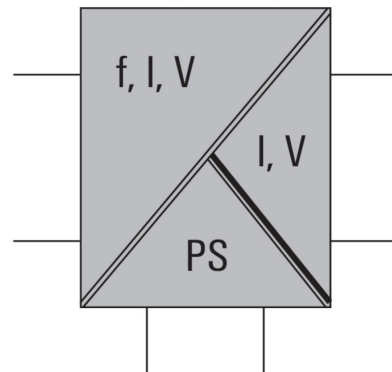


example of user defined transfer function for assigning customized output values

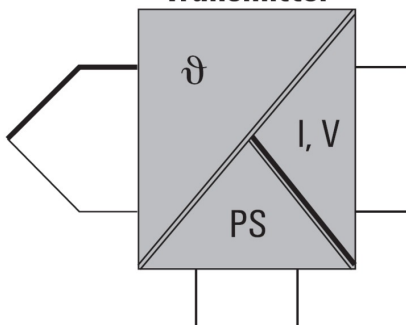


connection to your PC

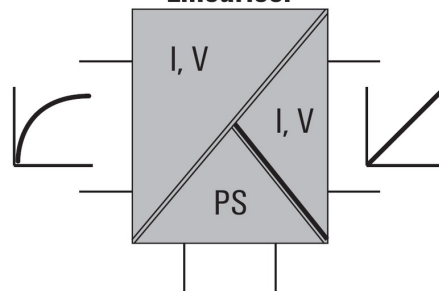
Converter



Transmitter



Lineariser



Data sheet**WAS6 TTA EX**

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Accessories**Configuration interfaces****General ordering data**

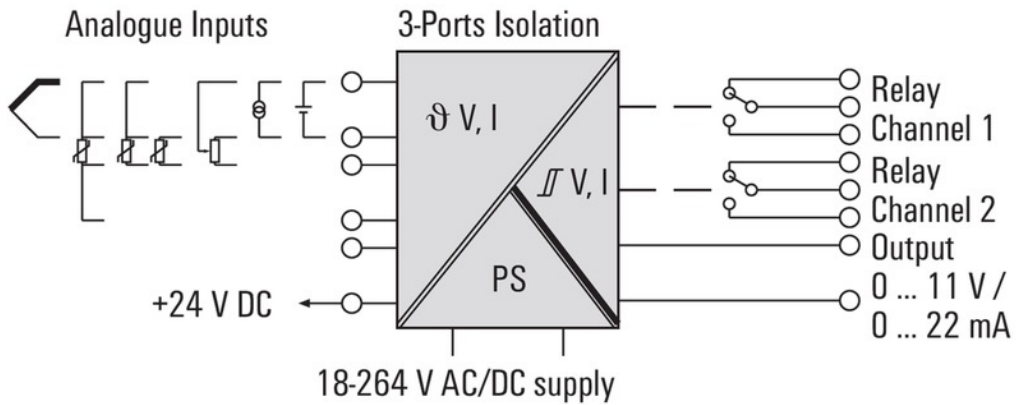
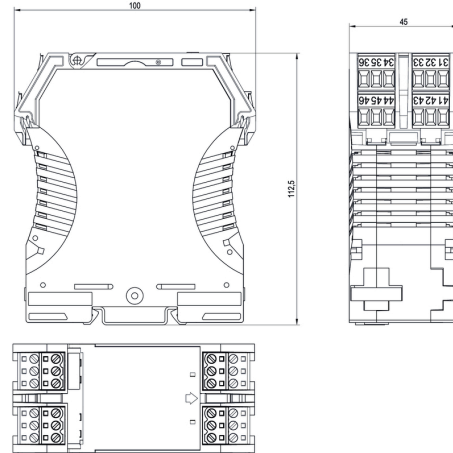
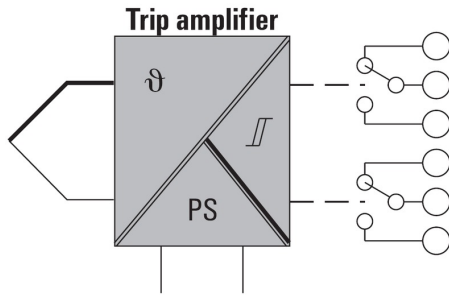
| | |
|------------|----------------------------|
| Type | CBX200 USB |
| Order No. | 8978580000 |
| GTIN (EAN) | 4032248813759 |
| Qty. | 1 pc(s). |

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Drawings



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