

## ACT20X ACT20X-2HTI-2SAO-S

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
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The ACT20X-HTI-SAO / 2HTI-2SAO temperature transducers record temperatures from PT100 sensors and thermocouples from Ex zone 0. Current loops from 0(4) to 20 mA can also be connected on the input side. On the output side, there are active and passive current loops available for the safe zone. Integrated alarm contacts issue an alert in the event of a malfunction; this makes troubleshooting easier and increases system availability. The rail-mounted current output isolators are optionally available in one- or two-channel versions. With 11 mm width per channel, the devices need little space in the electrical cabinet.

### General ordering data

Type	ACT20X-2HTI-2SAO-S
Order No.	<a href="#">8965480000</a>
Version	EX signal isolating converter, Ex-input: I,Ø, Safe-output: 4-20mA, 2-channel
GTIN (EAN)	4032248785094
Qty.	1 pc(s).

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

Width	22.5 mm	Width (inches)	0.886 inch
Height	117.2 mm	Height (inches)	4.614 inch
Depth	113.6 mm	Depth (inches)	4.472 inch
Net weight	180 g		

**Temperatures**

Humidity	0...95 % (no condensation)	Operating temperature, max.	60 °C
Operating temperature, min.	-20 °C	Storage temperature, max.	85 °C
Storage temperature, min.	-20 °C	Operating temperature	-20 °C...60 °C
Storage temperature	-20 °C...85 °C		

**Probability of failure**

MTBF	111 Years	SIL in compliance with IEC 61508	2
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**Input EX**

Input current	0...20 mA, 4...20mA	Input resistance, current	20 Ω + PTC 50 Ω
Line resistance in measuring circuit		Sensor	RTD: PT10, PT20, PT50, PT100, PT250, PT300, PT400, PT500, PT1000, Ni50, Ni100, Ni120, Ni1000, Thermocouples: B, E, J, K, N, R, S, T ; in compliance with IEC 60584-1 and L, U in compliance with DIN43710
Temperature input range	≤ 50 Ω	Type	intrinsically safe circuit, RTD, TC, DC (mA)
	Configurable		

**Output**

Type	active (as current source) or passive (as current sink)	Influence of load resistance	≤ 0.01% of span / 100 Ω
Output signal limit		Output current	0...23 mA, configurable: 0...20 / 4...20 / 20...0 / 20...4 mA, configurable downscale (3.5 mA) / upscale (23 mA) @ error
load impedance current	3.8...20.5 mA / 0...20.5 mA (dependent on range)		
	≤ 600 Ω		

**Alarm output**

Alarm function	Line interruption at the input, Short circuit at input, No supply voltage, Device error	Type	Relay, 1 NC (voltage-free)
Nominal switching voltage	≤ 125 V AC / 110 V DC (safe area) ≤ 32 V AC / 32 V DC (Zone 2)	Continuous current	≤ 0.5 A AC / 0.3 A DC (safe zone), ≤ 0.5 A AC / 1 A DC ( Zone 2)
Power rating	≤ 62.5 VA / 32 W (safe area) ≤ 16 VA / 32 W (Zone 2)		

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**Technical data**
**General specifications**

Configuration	With FDT/DTM software	Supply voltage	19.2 – 31.2 V DC
Type of connection	Screw connection, Removable terminal block	Power consumption	≤ 1.4 W
Step response time	≤ 400 ms (with current), ≤ 1 s (with temperature)	Protection degree	IP20
Humidity	0...95 % (no condensation)		

**Insulation coordination**

EMC standards	DIN EN 61326, NE 21	Insulation voltage	2.6 kV (input / output)
Rated voltage	300 V		

**Data for Ex applications (ATEX)**

Voltage $U_0$	8.7 V DC	Current $I_0$	18.4 mA
Power $P_0$	40 mW	Marking	II (1) G [Ex ia Ga] IIC/IIB/ IIA, II (1) D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I

**Safety-related basic specifications**

Device type	B	Hardware fault tolerance (HFT)	0
$T_{proof}$	3 Years	Safety category	SIL 2
Probability of outage PFH	$6.1 \times 10^{-8} \text{ h}^{-1}$		

**Safety-related specifications Low demand mode**

Average Probability of Failure on Demand (PFD <sub>avg</sub> )	$3.96 \times 10^{-4}$ ( $T_{proof} = 1$ year), $6.5 \times 10^{-4}$ ( $T_{proof} = 2$ years), $1.41 \times 10^{-4}$ ( $T_{proof} = 5$ years)
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**Connection data**

Type of connection	Screw connection, Removable terminal block	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.6 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>
Wire connection cross section AWG, min.	AWG 30	Wire connection cross section AWG, max.	AWG 14

**Rated data UL**

UL certificate	E337701.pdf
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**Ratings IECEx/ATEX/cUL**

ATEX certificate	10ATEX0020X.pdf	IEC Ex certificate	IECEx certification
Certificate No. (ATEX)	KEMA10ATEX0020X	Certificate No. (IECEX)	IECEXKEM09.0092X

## Data sheet

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## Technical data

### Classifications

ETIM 3.0	EC002479	ETIM 4.0	EC002479
ETIM 5.0	EC002479	ETIM 6.0	EC002919
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	27-21-01-29		

### Product information

Product information	Weidmüller provides an extended guarantee period of 36 months for this device.
Descriptive text ordering data	CBX200 USB configuration adapter - 8978580000

### Approvals

Approvals



Approvals	DNVGL;
ROHS	Conform

### Downloads

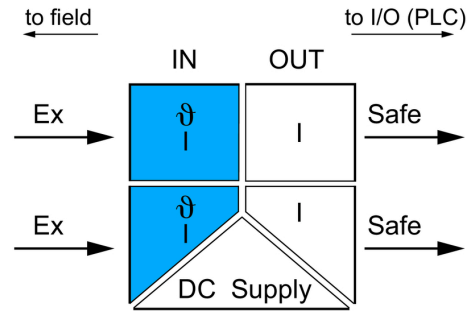
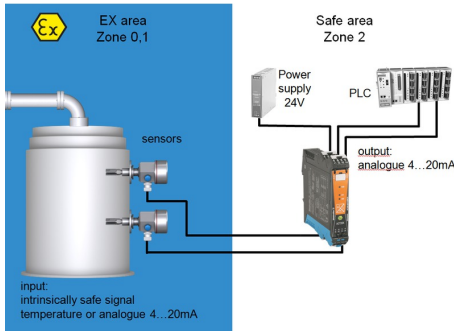
Approval/Certificate/Document of Conformity	<a href="#">SIL certificate</a> <a href="#">Certification DNV GL</a> <a href="#">Declaration of Conformity</a>
Brochure/Catalogue	<a href="#">CAT 4.1 ELECTR 16/17 EN</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Engineering Data	<a href="#">STEP</a>
Software	<a href="#">WI-Manager, DTM-Library for online installation</a>
User Documentation	<a href="#">Instruction sheet</a> <a href="#">Manual</a> <a href="#">MAN SAFETY ACT20X-(2)HTI(2)SAO</a>

**Data sheet**

**ACT20X  
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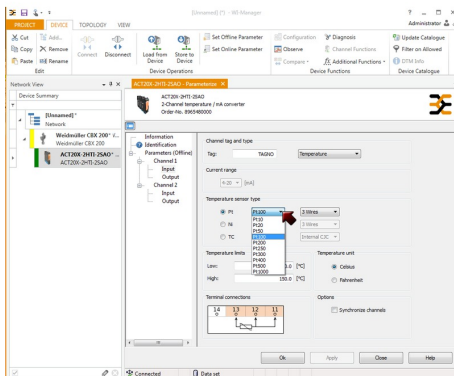
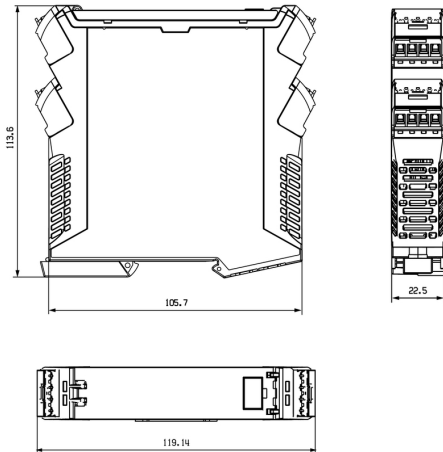
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**Drawings**

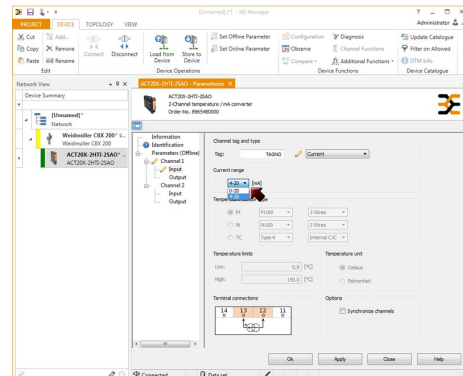


application schematic

**Dimensioned drawing**



screenshot of temperature configuration with FDT2 / DTM software

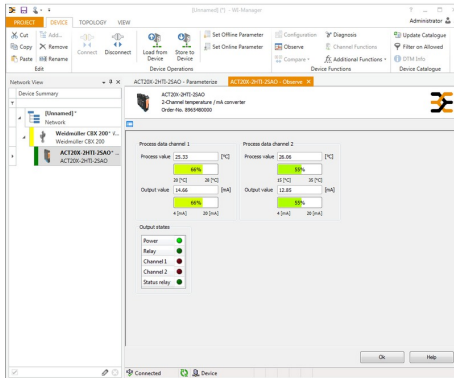


screenshot of current configuration with FDT2 / DTM software

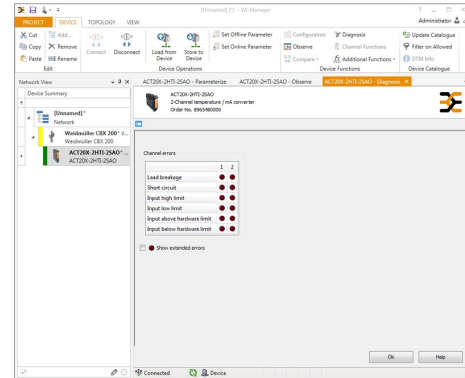
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**Drawings**



screenshot of "observe" with FDT2 / DTM software



screenshot of "diagnosis" with FDT2 / DTM software

