

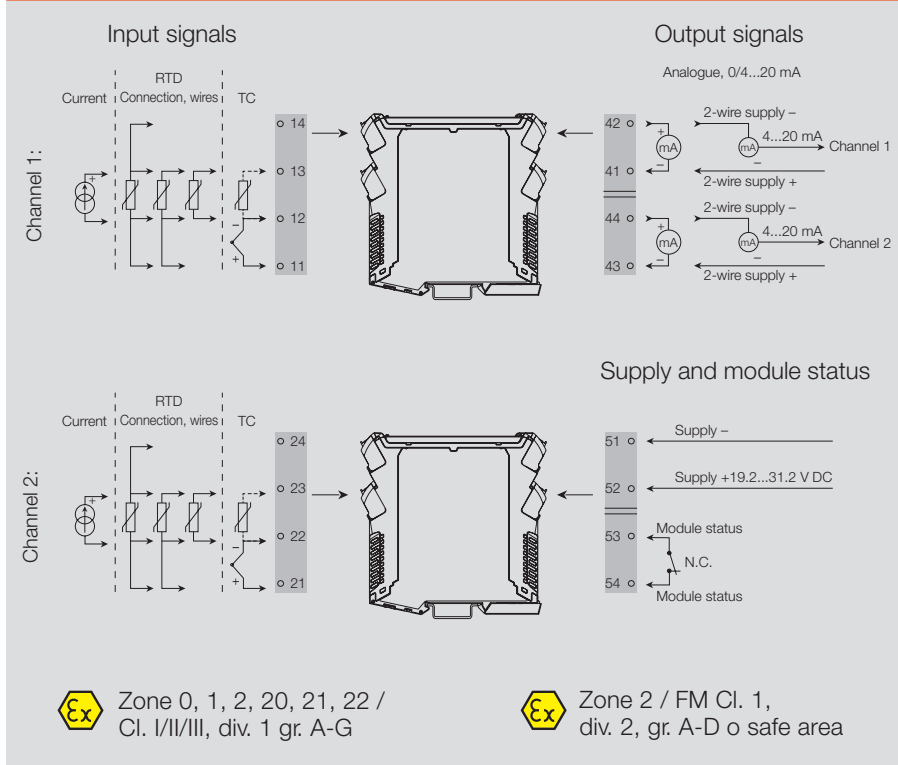
**ACT20X**

**Temperature transducer**

The ACT20X-HTI-SAO temperature transducer processes temperature signals from PT100 sensors and thermocouples originating in the Ex zone. A current signal (mA) can also be connected as the input signal. The input circuit is designed for intrinsically safe signals from the Ex zone 0. Analogue signals are available for the output-side safe zone. It is optionally available in a single-channel or double-channel version.

**B**

**Connection diagram: ACT20X-HTI-SAO temperature transducer**



**Ex label**

<b>ATEX</b>
II 3 G Ex nA nC IIC T4
II (1) G [Ex ia] IIC/II B/IIA
II (1) D [Ex iaD]
<b>IECEX</b>
Ex nA nC IIC T4 Gc
[Ex ia Ga] IIC/II B/IIA
[Ex ia Da] IIIC
<b>FM</b>
Installation in CL I DIV2 GP A-D T4
Protects Ex circuits, in compliance with
Cl. I-III ABT 1/2 GP A-G or
Cl. I Zn2 AEx/Ex nA nC [ia] IIC T4.

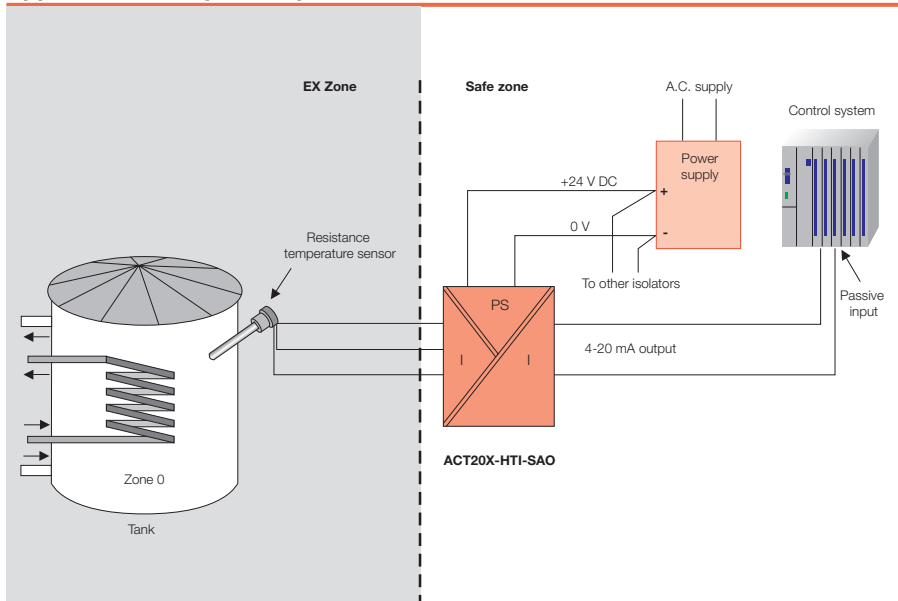
**Note**

**Accuracy / temperature coefficients**

**ACT20X-HTI-SAO**

Input	Accuracy	Temperature coefficient
Input mA	≤ ±4 μA	≤ ±4 μA / °C
<b>Input RTD</b>		
PT100	≤ ±0.2 °C	≤ ±0.02 °C / °C
Ni100	≤ ±0.3 °C	≤ ±0.03 °C / °C
<b>Input TC</b>		
Type B	≤ ±4.5 °C	≤ ±0.45 °C / °C
Type E, J, K, L, N, T, U	≤ ±1 °C	≤ ±0.1 °C / °C
Type R, S, W3, W5, LR	≤ ±2 °C	≤ ±0.2 °C / °C
<b>Note</b>		

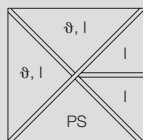
**Application example: temperature measurements in the Ex zone**



### Temperature transducer

- Converts intrinsically safe RTD, thermocouple and mA signals into analogue signals for the safe zone.
- PC configuration with FDT/DTM software, download at [www.weidmueller.com](http://www.weidmueller.com)
- Relay output for error alarm
- 1 or 2 channels in one module

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



### Technical data

Input	
Type	RTD, TC, DC (mA)
Sensor supply	3.8...26 V DC
Temperature input range	Configurable
Line resistance in measuring circuit	≤ 50 Ω
Input current	0(4)...20 mA
Input resistance, current	20 Ω + PTC 50 Ω
Output	
Output current	0(4)...20 mA / 20...4 mA (configurable)
Output signal limit	3.8...20.5 mA / 0...20.5 mA (dependent on range)
load impedance current	≤ 600 Ω
Influence of load resistance	≤ 0.01% of span / 100 Ω
Current loop output	
Output current	4...20 mA
Load resistance	(U <sub>0</sub> - 3.5) / 0.023 A
Influence of load resistance	≤ 0.01% of span / 100 Ω
2-wire supply	3.5...26 V DC
Alarm output	
Type	Relay, 1 NO (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 / 1 A DC (safe area, Zone 2)
Power rating	≤ 62.5 V AC / 32 W (safe area) ≤ 16 VA / 32 W (Zone 2)
General data	
Supply voltage	19...31.2 V DC
Power consumption	≤ 3 W (2 channels)
Tightening torque, min. / Tightening torque, max.	0.4 Nm / 0.6 Nm
Ambient temperature / Storage temperature	-20 °C...+60 °C / -20 °C...+85 °C
Approvals	
Approvals	cULus; CE; ATEX; IECEX; FM
Insulation coordination	
Insulation voltage	2.6 kV (input / output)
Rated voltage	300 V
EMC standards	DIN EN 61326
Data for Ex applications (ATEX)	
Voltage U <sub>0</sub>	8.7 V DC
Current I <sub>0</sub>	18.4 mA
Power P <sub>0</sub>	40 mW
Dimensions	
Clamping range (nominal / min. / max.)	mm <sup>2</sup> 2.5 / 0.5 / 2.5
Length x width x height	mm 119.2 / 22.5 / 113.6
Note	

Type	Temperature-range	Accuracy
<b>Metal PTC</b>		
Pt100	-200...850 °C	± (0.15 + 0.02 x T) Class A ± (0.30 °C + 0.005 x T) Class B
Pt500	-200...850 °C	
Pt1000	-200...850 °C	
Ni50		± (0.4 + 0.007 x T) ± (0.4 + 0.028 x T)
Ni100	-60...0 °C	
Ni120	0...180 °C	
Ni1000		
<b>TC-Type according to IEC60584-1</b>		
B	50...250 °C	± 25 K
	250...500 °C	± 10 K
	500...1820 °C	± 6 K
E	-200...-150 °C	± 4 K
	-150...1000 °C	± 3 K
J	-200...-150 °C	± 4 K
	-150...1200 °C	± 3 K
K	-200...-150 °C	± 5 K
	-150...1200 °C	± 3 K
	1200...1372 °C	± 4 K
N	-200...-150 °C	± 6 K
	-150...1300 °C	± 3 K
R	-50...200 °C	± 10 K
	200...1780 °C	± 6 K
S	-50...200 °C	± 10 K
	200...1780 °C	± 6 K
T	-200...-150 °C	± 5 K
	-150...400 °C	± 3 K
<b>according to DIN43710</b>		
U	0...600 °C	± 3 °C
L	0...900 °C	± 3 °C

### Ordering data

Type	Qty.	Order No.
<b>1-channel version</b>		
ACT20X-HTI-SAO-S	1	8965470000
<b>2-channel version</b>		
ACT20X-2HTI-2SAO-S	1	8965480000

CBX200 USB configuration interface - 8978580000