

ACT20M ACT20M-TCI-AO-E-S

Weidmüller Interface GmbH & Co. KG
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 Germany
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Product image, Similar to illustration



ACT20M: The slim solution

- Safe and space-saving (6 mm) isolation and conversion
- Quick installation of the power supply unit using the CH20M mounting rail bus
- Easy configuration via DIP switch or FDT/DTM software
- Extensive approvals such as ATEX, IECEX, GL, DNV
- High interference resistance

General ordering data

Type	ACT20M-TCI-AO-E-S
Order No.	137550000
Version	Temperature converter, Thermocouple, Input : Temperature, Output : I / U
GTIN (EAN)	4050118259674
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

Width	6.1 mm	Width (inches)	0.24 inch
Height	112.5 mm	Height (inches)	4.429 inch
Depth	114.3 mm	Depth (inches)	4.5 inch
Net weight	86 g		

Temperatures

Humidity	40 °C / 93 % rel. humidity, no condensation	Storage temperature, max.	85 °C
Storage temperature, min.	-40 °C	Operating temperature	
Ambient temperature	-25 °C...+70 °C	Storage temperature	-40 °C...85 °C

Probability of failure

MTBF	189 Years
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Rated data UL

UL certificate	E337701.pdf
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Input

Number of inputs	1	Sensor	Thermocouple (type J, K)
Input measurement range	Thermocouple type J -100...+1200°C, Thermocouple type K -200...+1370°C	Temperature input range	Configurable, min. measurement range 50°C (TC)

Output

Number of outputs	1	Output voltage, note	configurable, 0(2)...10 V, 0(1)...5 V
Output current	configurable, 0...20 mA, 4...20 mA	Wire break detection	Configurable, 3.5 mA / 23 mA / none
load impedance voltage	≥ 10 kΩ	load impedance current	≤ 600 Ω

General data

Accuracy	absolute accuracy: < ±0.1 % of the measurement range, Basic accuracy: < ±1 °C	Configuration	DIP switch
Galvanic isolation	Without isolation	Power consumption, max.	0.52 W
Power consumption, typ.	0.37 W	Rail	TS 35
Step response time	≤ 30 ms, < 300 ms, Configurable	Temperature coefficient	0,1 °C/°C, or, ≤0,01% des Messbereichs°C
Voltage supply	24 V DC ± 30 %		

Insulation coordination

EMC standards	IEC 61326-1, NE 21	Galvanic isolation	Without isolation
Pollution severity	2		

Creation date May 27, 2019 3:51:12 PM CEST

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Technical data**Data for Ex applications (ATEX)**

Marking	II 3 G Ex nA IIC T4 Gc
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Connection data

Type of connection	Screw connection	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.6 Nm	Clamping range, rated connection	2.5 mm ²
Clamping range, min.	0.5 mm ²	Clamping range, max.	2.5 mm ²
Wire connection cross section AWG, min.	AWG 30	Wire connection cross section AWG, max.	AWG 14

Ratings IECEx/ATEX/cUL

Certificate No. (ATEX)	KEMA10ATEX0183X	Certificate No. (IECEX)	IECEXKEM10.0090X
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Classifications

ETIM 5.0	EC002653	ETIM 6.0	EC002919
eClass 6.2	27-21-01-20	eClass 7.1	27-21-01-20
eClass 8.1	27-21-01-20	eClass 9.0	27-21-01-29
eClass 9.1	27-21-01-29		

Product information

Product information

The ACT20M-TCI-AO-S configurable temperature transducer isolates and converts analogue signals. An analogue thermocouple input signal (Type J, K) is linearly converted into an analogue output signal and is galvanically isolated. The power supply is galvanically isolated from the input and output (3-way isolation) and this is done with direct wiring or over the Weidmüller rail bus.

The ACT20M-TCI-AO-E-S configurable temperature transducer offers the same functionality but does not have galvanic isolation.

Approvals

Approvals



ROHS	Conform
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Downloads

Approval/Certificate/Document of Conformity	DNV-GL certificate Declaration of Conformity
Brochure/Catalogue	CAT 4.1 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD
Engineering Data	STEP
Software	DIP switch configuration tool
User Documentation	instruction sheet

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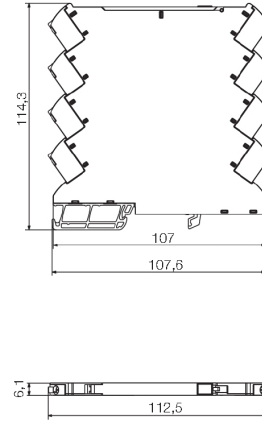
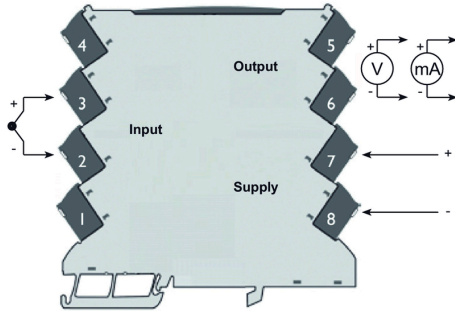
Catalogue status 23.05.2019 / We reserve the right to make technical changes.

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Drawings

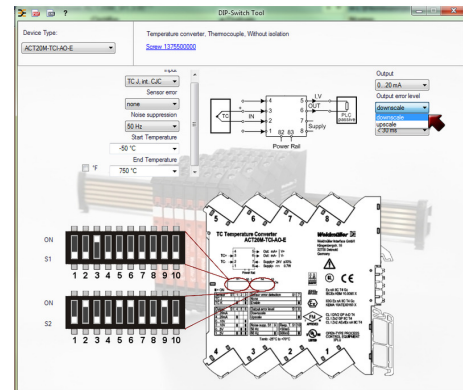
Connection diagram



DIP switch configuration

	S1	Temperature range (°C)															
		TC J, -100...+1200 °C				TC K, -180...+3372 °C				TC Pt, -100...+3372 °C				TC Ni, -100...+3372 °C			
TC sensor type		Min. Temp.	Max. Temp.	TC	Min. Temp.	Max. Temp.	TC	Min. Temp.	Max. Temp.	TC	Min. Temp.	Max. Temp.	TC	Min. Temp.	Max. Temp.	TC	
J (internal C/C)	<input type="checkbox"/>	-200	1200	J	-180	3372	K	-100	3372	Pt	-100	3372	Pt	-100	3372	Ni	
K (internal C/C)	<input type="checkbox"/>	-180	3372	K	-100	3372	Pt	-100	3372	Pt	-100	3372	Pt	-100	3372	Ni	
Output																	
0...20 mA	<input type="checkbox"/>																
4...20 mA	<input type="checkbox"/>																
0...10 V	<input type="checkbox"/>																
2...10 V	<input type="checkbox"/>																
0...5 V	<input type="checkbox"/>																
1...5 V	<input type="checkbox"/>																
Sensor error detection																	
loop	<input type="checkbox"/>																
enabled	<input type="checkbox"/>																
Output error level																	
downscale	<input type="checkbox"/>																
upscale	<input type="checkbox"/>																
Noise suppression																	
50 Hz	<input type="checkbox"/>																
60 Hz	<input type="checkbox"/>																
Response time																	
< 30 ms	<input type="checkbox"/>																
300 ms	<input type="checkbox"/>																

example for DIP switch setting
(with ACT20M tool software)



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