

## ACT20M-TCI-AO-E-S

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://www.weidmueller.com)

### Product image



#### 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

Version	Temperature converter, Thermocouple, Without galvanic isolation, Input : Temperature, thermocouple, Output : I / U
Order No.	<a href="#">1375500000</a>
Type	ACT20M-TCI-AO-E-S
GTIN (EAN)	4050118259674
Qty.	1 items

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## Technical data

## Approvals

Approvals



IECEX



ROHS Conform

UL File Number Search [UL Website](#)

Certificate no. (cULus) E337701

## Dimensions and weights

Depth	114.3 mm	Depth (inches)	4.5 inch
Height	112.5 mm	Height (inches)	4.4291 inch
Width	6.1 mm	Width (inches)	0.2402 inch
Net weight	70 g		

## Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-25 °C...70 °C
Humidity at operating temperature	0...95 % (no condensation)	Humidity	40 °C / 93 % rel. humidity, no condensation

## Probability of failure

MTBF 189 a

## Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-421a-46db-a0c2-cf1609156924

## Input

Sensor	Thermocouples: J, K	Number inputs	1
Temperature input range	Configurable, J: (-100...+1200 °C), K: (-180...+1372 °C), min. measurement range 50°C (TC)		

## Output

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

## General data

Accuracy	absolute accuracy: <math>\leq \pm 0.1\%</math> of the measurement range, Basic accuracy: <math>\leq \pm 1\text{ °C}</math>
Protection degree	IP20
Supply voltage	24 V DC $\pm$ 30 %

Creation date 27.02.2026 08:45:56 MEZ

Catalogue status / Drawings

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**Technical data**

Step response time	Configurable, ≤ 30 ms, <300 ms	
Mounting rail	TS 35	
Temperature coefficient	0,1 °C/°C, or, ≤0,01% des Messbereichs°C	
Delivery state	Setting parameters	Input
	Configuration	0 °C
	Setting parameters	Output 1
	Configuration	0...20 mA
	Setting parameters	Output 2
	Configuration	0...20 mA
	Setting parameters	Noise suppression
	Configuration	100 Hz
	Setting parameters	Sensor error detection
	Configuration	enabled
	Setting parameters	Output error level
	Configuration	downscale
	Setting parameters	Step response time
	Configuration	< 30 ms
Nominal power consumption	0.5 VA	
Configuration	DIP switch	
Power consumption, max.	0.5 W	
Power consumption, typ.	0.37 W	
Delivery state	Input: 0 °C // Output 1: 0...20 mA // Output 2: 0...20 mA // Noise suppression: 100 Hz // Sensor error detection: enabled // Output error level: downscale // Step response time: < 30 ms	

**Insulation coordination**

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

**Data for Ex applications (ATEX)**

Marking	II 3 G Ex nA IIC T4 Gc	IECEx - gas labelling	Ex nA IIC T4 Gc, Standard: IEC 60079-0-15
Installation location	Device installed in safe area, zone 2		

**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 <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

**EMC conformity and approvals**

EMC standards	IEC 61326-1	Standards	IEC 61010-1
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**Part description**

Product description  
 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.

**Technical data**

**Classifications**

ETIM 8.0	EC002919	ETIM 9.0	EC002919
ETIM 10.0	EC002919	ECLASS 14.0	27-21-01-29
ECLASS 15.0	27-21-01-29		

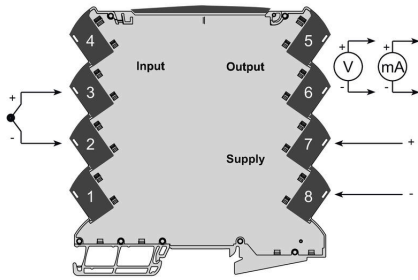
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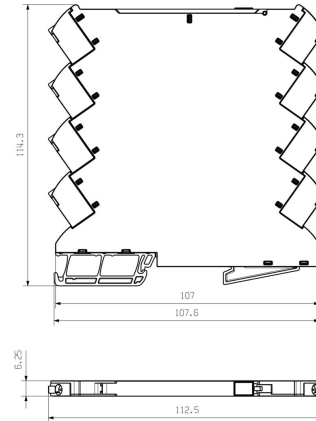
**Drawings**

www.weidmueller.com

**Connection diagram**



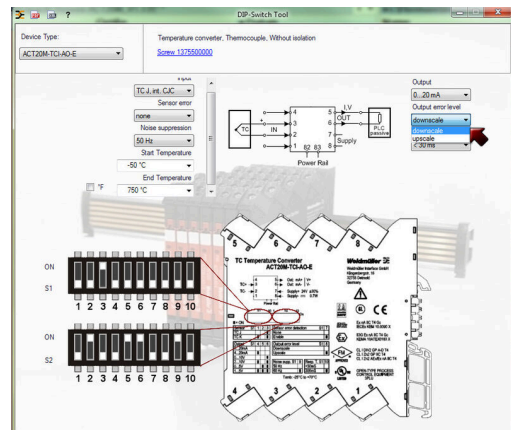
**Dimensional drawing**



DIP switch configuration

TC sensor type	S1	Temperature range (°C)										
		Min. Temp.	S2	Max. Temp.	S3	Min. Temp.	S4	Max. Temp.	S5	Min. Temp.	S6	Max. Temp.
TC (internal CAC)	1	0	1	0	1	0	1	0	1	0	1	0
K (internal CAC)	1	0	1	0	1	0	1	0	1	0	1	0
Output	4	0	1	0	1	0	1	0	1	0	1	0
0...20 mA	1	0	1	0	1	0	1	0	1	0	1	0
4...20 mA	1	0	1	0	1	0	1	0	1	0	1	0
0...10 V	1	0	1	0	1	0	1	0	1	0	1	0
2...10 V	1	0	1	0	1	0	1	0	1	0	1	0
0...5 V	1	0	1	0	1	0	1	0	1	0	1	0
1...5 V	1	0	1	0	1	0	1	0	1	0	1	0
Sensor error detection	7	0	1	0	1	0	1	0	1	0	1	0
none	1	0	1	0	1	0	1	0	1	0	1	0
inhibit	1	0	1	0	1	0	1	0	1	0	1	0
Output error level	9	0	1	0	1	0	1	0	1	0	1	0
downscale	1	0	1	0	1	0	1	0	1	0	1	0
upscale	1	0	1	0	1	0	1	0	1	0	1	0
Noise suppression	9	0	1	0	1	0	1	0	1	0	1	0
50 Hz	1	0	1	0	1	0	1	0	1	0	1	0
50 Hz	1	0	1	0	1	0	1	0	1	0	1	0
Response time	10	0	1	0	1	0	1	0	1	0	1	0
< 20 ms	1	0	1	0	1	0	1	0	1	0	1	0
300 ms	1	0	1	0	1	0	1	0	1	0	1	0

example for DIP switch setting  
 (with ACT20M tool software)



example for DIP switch setting  
 (with ACT20M tool software)

