

ACT20M-TCI-AO-E-S**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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.	1375500000
Type	ACT20M-TCI-AO-E-S
GTIN (EAN)	4050118259674
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

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

Temperatures

Storage temperature	-40 °C...85 °C	Humidity	40 °C / 93 % rel. humidity, no condensation
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Probability of failure

MTBF	189 Years
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1	SCIP	2f6dd957-421a-46db-a0c2-cf1609156924
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Input

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

Output

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

General data

Accuracy	absolute accuracy: < ±0.1 % of the measurement range, Basic accuracy: < ±1 °C
Configuration	DIP switch
Delivery state	Output: 4...20 mA // Sensor error detection: enabled // Output error level: downscale // Noise suppression: 50 Hz // Step response time: < 30 ms // Start temperature: -200 °C // End temperature: 0 °C

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Technical data

Delivery state	Setting parameters	Output
	Configuration	4...20 mA
	Setting parameters	Sensor error detection
	Configuration	enabled
	Setting parameters	Output error level
	Configuration	downscale
	Setting parameters	Noise suppression
	Configuration	50 Hz
	Setting parameters	Step response time
	Configuration	< 30 ms
	Setting parameters	Start temperature
	Configuration	-200 °C
	Setting parameters	End temperature
	Configuration	0 °C
Galvanic isolation	Without isolation	
Power consumption, max.	0.52 W	
Power consumption, typ.	0.37 W	
Rail	TS 35	
Step response time	Configurable, ≤ 30 ms, < 300 ms	
Temperature coefficient	0,1 °C/°C, or, ≤0,01% des Messbereichs/°C	
Type of connection	Screw connection	
Voltage supply	24 V DC ± 30 %	

Insulation coordination

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

Data for Ex applications (ATEX)

Installation location	Device installed in safe area, zone 2	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

EMC conformity and approvals

EMC standards	IEC 61326-1, NE 21	Standards	IEC 61010-1
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Classifications

ETIM 6.0	EC002919	ETIM 7.0	EC002919
ETIM 8.0	EC002919	ECLASS 9.0	27-21-01-29
ECLASS 9.1	27-21-01-29	ECLASS 10.0	27-21-01-29
ECLASS 11.0	27-21-01-29	ECLASS 12.0	27-21-01-29

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Technical data**Important note**

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

UL File Number Search UL Website

Certificate no. (cULus) E337701

Downloads

Approval/Certificate/Document of Conformity

[DNV-GL certificate](#)
[FM certificate](#)
[IECEX certificate](#)
[ATEX certificate](#)
[Declaration of Conformity](#)

Engineering Data

[CAD data – STEP](#)
[EPLAN, WSCAD](#)

Engineering Data

[Runtime Software – DIP switch configuration tool](#)
[instruction sheet](#)

Software

User Documentation

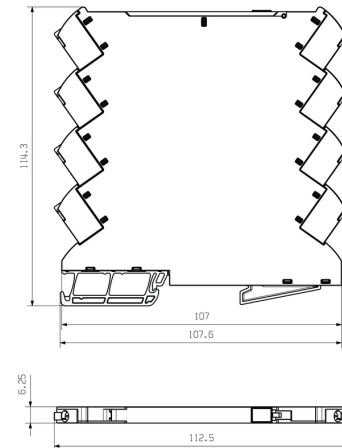
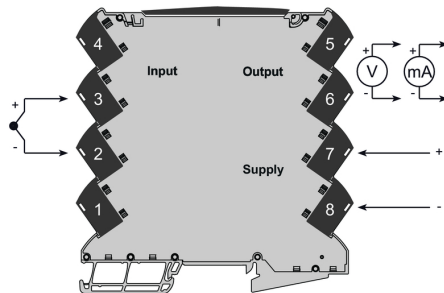
[Catalogues in PDF-format](#)

Catalogues

Brochures

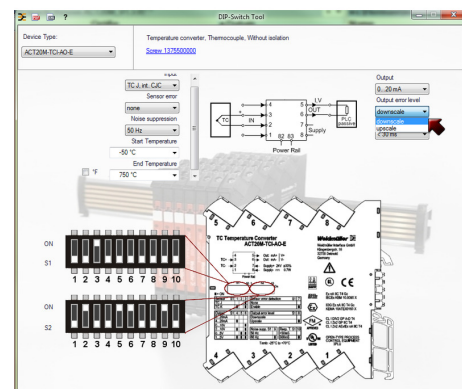
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Dimensional drawing



DIP switch configuration											
				Temperature range [°C]							
				TC: -40...+120°C				TC: -40...+132°C			
				Min.	S2	Max.	S2	Min.	S2	Max.	S2
TC xanalar için				Temp. 1	2	3	4	Temp. 5	6	7	8
Internal code				110	1	120	1	110	1	120	1
K (Internal code)				110	5	120	5	110	5	120	5
Output				+150	10	110	10	110	10	120	10
0 - 20 mA				100	15	110	15	120	15	130	15
0 - 20 mA				30	20	120	20	120	20	130	20
0 - 10 V				30	25	120	25	130	25	140	25
0 - 10 V				30	30	130	30	130	30	140	30
0 - 10 V				30	35	140	35	140	35	150	35
0 - 10 V				30	40	150	40	145	40	150	40
0 - 10 V				30	45	160	45	150	45	160	45
0 - 10 V				30	50	170	50	160	50	170	50
Sensor selection				70	20	170	20	170	20	180	20
none				25	30	180	30	180	30	190	30
I _{ref}				100	35	190	35	190	35	200	35
Output error level				100	40	200	40	200	40	210	40
downscale				100	45	210	45	210	45	220	45
upscale				100	50	220	50	220	50	230	50
Noise suppression				80	55	230	55	230	55	240	55
60 Hz				100	60	240	60	240	60	250	60
60 Hz				100	65	250	65	250	65	260	65
Response time				10	70	260	70	260	70	270	70
< 30 ms				10	75	270	75	270	75	280	75
< 300 ms				10	80	280	80	280	80	290	80

example for DIP switch setting
(with ACT20M tool software)



example for DIP switch setting
(with ACT20M tool software)