

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

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

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

Version	Temperature converter, Thermocouple, 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
Net weight	86 g	Width	6.1 mm
Width (inches)	0.24 inch		

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
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Input

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

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
Wire break detection	Configurable, 3.5 mA / 23 mA / none	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	
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
Galvanic isolation	Setting parameters	End temperature
	Configuration	0 °C
Power consumption, max.	Without isolation 0.52 W	

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Technical data

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
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)

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

Classifications

ETIM 6.0	EC002919	ETIM 7.0	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

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.
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Approvals

Approvals



ROHS	Conform
UL File Number Search	E337701

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Technical data

Downloads

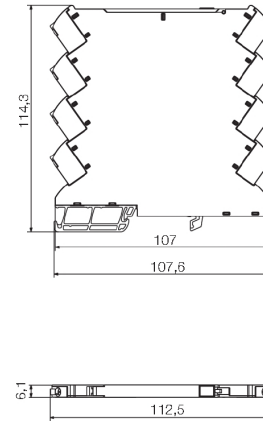
Approval/Certificate/Document of Conformity	DNV-GL certificate
	FM certificate
	IECEXx certificate
	ATEX certificate
	Declaration of Conformity
Engineering Data	STEP
Engineering Data	EPLAN, WSCAD
Software	DIP switch configuration tool
User Documentation	instruction sheet

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The diagram shows a 16-pin DIP package with the following pin functions:

- Input:** Pins 1, 2, 3, and 4.
- Output:** Pins 5, 6, 7, and 8.
- Supply:** Pins 7 and 8.

Additional details include a voltage source (V) and a current source (mA) connected to pins 5 and 6, and a ground symbol connected to pin 1.



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 °C)				1	2	3	4	1	2	3	4
K (Internal °C)				1	2	3	4	1	2	3	4
Output				4	5	6	7	4	5	6	7
0 - 20 mA				10	10	10	10	115	115	115	115
0 - 20 mA				10	15	15	15	120	120	120	120
0 - 10 V				30	20	20	20	125	125	125	125
0 - 10 V				30	25	25	25	130	130	130	130
0 - 10 V				30	30	30	30	135	135	135	135
0 - 10 V				30	35	35	35	140	140	140	140
0 - 10 V				30	40	40	40	145	145	145	145
0 - 10 V				30	45	45	45	150	150	150	150
0 - 10 V				30	50	50	50	155	155	155	155
0 - 10 V				30	55	55	55	160	160	160	160
0 - 10 V				30	60	60	60	165	165	165	165
0 - 10 V				30	65	65	65	170	170	170	170
0 - 10 V				30	70	70	70	175	175	175	175
0 - 10 V				30	75	75	75	180	180	180	180
0 - 10 V				30	80	80	80	185	185	185	185
0 - 10 V				30	85	85	85	190	190	190	190
0 - 10 V				30	90	90	90	195	195	195	195
0 - 10 V				30	95	95	95	200	200	200	200
0 - 10 V				30	100	100	100	205	205	205	205
0 - 10 V				30	105	105	105	210	210	210	210
0 - 10 V				30	110	110	110	215	215	215	215
0 - 10 V				30	115	115	115	220	220	220	220
0 - 10 V				30	120	120	120	225	225	225	225
0 - 10 V				30	125	125	125	230	230	230	230
0 - 10 V				30	130	130	130	235	235	235	235
0 - 10 V				30	135	135	135	240	240	240	240
0 - 10 V				30	140	140	140	245	245	245	245
0 - 10 V				30	145	145	145	250	250	250	250
0 - 10 V				30	150	1		255	255	255	255

Sensor selection

7	20	35	170	800	1000	1150	1300	1450	1600	1750	1900
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8	25	80	160	180	190	200	210	220	230	240	250
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9	100	120	140	160	180	200	220	240	260	280	300
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10	100	120	140	160	180	200	220	240	260	280	300
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11	100	120	140	160	180	200	220	240	260	280	300
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12	100	120	140	160	180	200	220	240	260	280	300
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13	100	120	140	160	180	200	220	240	260	280	300
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14	100	120	140	160	180	200	220	240	260	280	300
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