

ACT20M-TCI-AO-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.	1375480000
Type	ACT20M-TCI-AO-S
GTIN (EAN)	4050118259650
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	84 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	147 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	cold junction compensation	configurable internal or external cold- junction compensation (thermocouple)
load impedance voltage	≥ 10 kΩ		

General data

Accuracy	absolute accuracy: < ±0.05 % of the measurement range, Basic accuracy: < ±0.5°
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	3-way isolator	
Power consumption, max.	0.7 W	
Power consumption, typ.	0.49 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	3-way isolator
Insulation voltage	2.5 kV _{eff} / 1 min.	Pollution severity	2
Rated voltage	300 V _{eff}	Surge voltage category	II

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.
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Technical data**Approvals**

Approvals



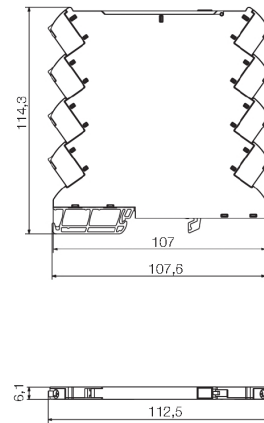
ROHS	Conform
UL File Number Search	E337701

Downloads

Approval/Certificate/Document of Conformity	DNV-GL certificate FM certificate IECEX certificate ATEX certificate Declaration of Conformity
Engineering Data	STEP
Engineering Data	EPLAN, WSCAD, Zuken E3.S
Software	DIP switch configuration tool
User Documentation	instruction sheet

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Drawings



DIP switch configuration											
Temperature range [°C]											
TC = -100...+200 °C TC = TC-100...+1372 °C											
TC sensor type	S1	S2				S2				S2	
		Min.	52	Max.	Temp.	Min.	52	Max.	Temp.	Min.	52
K (standard C/C)	1	125	100	125	100	5	125	100	125	100	5
K (optional C/C)	2	100	125	100	125	5	100	125	100	125	5
K (optional C/C)	3	100	125	100	125	5	100	125	100	125	5
K (optional C/C)	4	100	125	100	125	5	100	125	100	125	5
Output											
0...20 mA	1	25	25	25	25	3	25	25	25	25	3
4...20 mA	2	5	5	5	5	3	5	5	5	5	3
0...5 V	3	5	5	5	5	3	5	5	5	5	3
0...2.5 V	4	5	5	5	5	3	5	5	5	5	3
0...5 V	5	5	5	5	5	3	5	5	5	5	3
0...1 V	6	5	5	5	5	3	5	5	5	5	3
Rearset error detection											
enabled	7	100	100	100	100	7	100	100	100	100	7
disabled	8	200	100	100	100	7	200	100	100	100	7
Output error level											
Warning	9	50	50	50	50	9	50	50	50	50	9
Alarm	10	100	100	100	100	9	100	100	100	100	9
update	11	95	95	95	95	9	95	95	95	95	9
Noise suppression											
50 Hz	9	100	100	100	100	9	100	100	100	100	9
60 Hz	10	100	100	100	100	9	100	100	100	100	9
Response time											
< 30 ms	10	100	100	100	100	9	100	100	100	100	9

Weller
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(UL) Approved

(E)

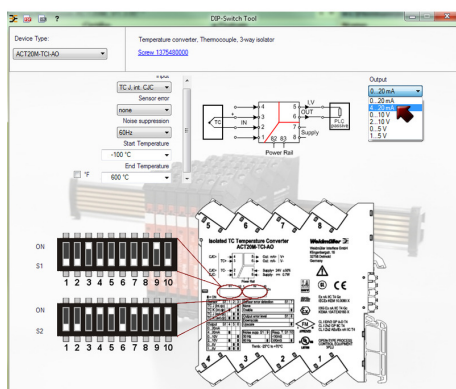
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CE

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example for DIP switch setting
(with ACT20M tool software)



example for DIP switch setting
(with ACT20M tool software)