

ACT20M-TCI-AO-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, With galvanic isolation, Input : Temperature, thermocouple, Output : I / U
Order No.	1375480000
Type	ACT20M-TCI-AO-S
GTIN (EAN)	4050118259650
Qty.	1 pièce(s)

ACT20M-TCI-AO-S

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Caractéristiques techniques

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	84 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	147 a
------	-------

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
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	Input: 0 °C // Bandwidth: 50 Hz // Output 1: 0...20 mA // Output 2: 0...20 mA // Sensor error detection: enabled // Step response time: < 30 ms // Noise suppression: enabled		
Delivery state	Setting parameters	Input	
	Configuration	0 °C	
	Setting parameters	Bandwidth	
	Configuration	50 Hz	
	Setting parameters	Output 1	
	Configuration	0...20 mA	
	Setting parameters	Output 2	
	Configuration	0...20 mA	
	Setting parameters	Sensor error detection	
	Configuration	enabled	
Setting parameters	Step response time		
Configuration	< 30 ms		
Setting parameters	Noise suppression		
Configuration	enabled		
Galvanic isolation	3-way isolator		
Power consumption, max.	0,7 W		
Power consumption, typ.	0,49 W		
Protection degree	IP20		

Date de création 26 novembre 2024 14:05:52 CET

ACT20M-TCI-AO-S

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Caractéristiques techniques

Rail	TS 35
Step response time	Configurable, ≤ 30 ms, <300 ms
Temperature coefficient	$0,1$ °C/°C, or, $\leq 0,01\%$ des Messbereichs/°C
Voltage supply	24 V DC $\pm 30\%$ at terminal or via CH20M rail bus

Insulation coordination

EMC standards	IEC 61326-1	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)

Installation location	Device installed in safe area, zone 2	Marking	II 3 G Ex nA IIC T4 Gc
-----------------------	---------------------------------------	---------	------------------------

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	Standards	IEC 61010-1
---------------	-------------	-----------	-------------

Classifications

ETIM 6.0	EC002919	ETIM 7.0	EC002919
ETIM 8.0	EC002919	ETIM 9.0	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	ECLASS 13.0	27-21-01-29
ECLASS 14.0	27-21-01-29		

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

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.
---------------------	---

ACT20M-TCI-AO-S

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Caractéristiques techniques

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 UL certification for canada Declaration of Conformity
Engineering Data	CAD data – STEP
Software	DIP switch configuration tool
User Documentation	instruction sheet
Catalogues	Catalogues in PDF-format
Brochures	

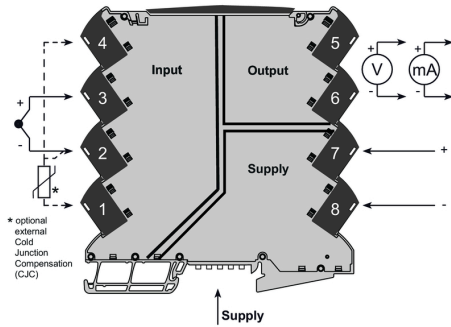
ACT20M-TCI-AO-S

Weidmüller Interface GmbH & Co. KG
 Klängenbergstraße 26
 D-32758 Detmold
 Germany

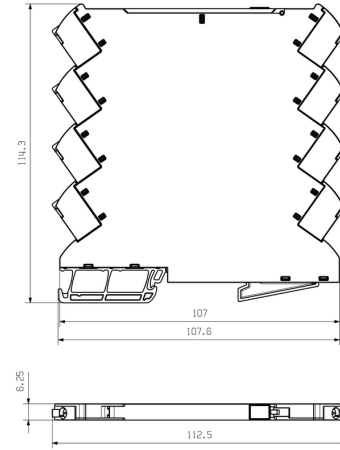
www.weidmueller.com

Dessins

Connection diagram



Dimensional drawing



DIP switch configuration

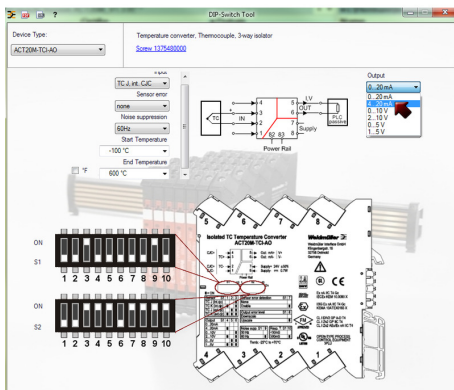
		Temperature range [°C]									
		TC J: -100...+1200 °C # TC K: -100...+1372 °C									
TC sensor type	S1	Min. Temp.	Max. Temp.	Min. Temp.	Max. Temp.	Min. Temp.	Max. Temp.	Min. Temp.	Max. Temp.	Min. Temp.	Max. Temp.
J (internal CJC)	1	-200	0	105	1100	105	1100	105	1100	105	1100
K (external CJC)	2	-100	10	115	1100	115	1100	115	1100	115	1100
J (external CJC)	3	-100	10	115	1100	115	1100	115	1100	115	1100
K (external CJC)	4	-100	10	115	1100	115	1100	115	1100	115	1100
Output	5	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA
4...20 mA	6	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA	0...20 mA
0...10 V	7	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V
2...10 V	8	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V
0...5 V	9	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V
1...5 V	10	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V	0...10 V
Sensor error detection	11	60	60	60	60	60	60	60	60	60	60
none	12	100	100	100	100	100	100	100	100	100	100
warning	13	200	200	200	200	200	200	200	200	200	200
Output error level	14	80	80	80	80	80	80	80	80	80	80
downscale	15	90	90	90	90	90	90	90	90	90	90
upscale	16	100	100	100	100	100	100	100	100	100	100
Noise suppression	17	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz	20 Hz
60 Hz	18	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
Response time	19	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms	20 ms
300 ms	20	300 ms	300 ms	300 ms	300 ms	300 ms	300 ms	300 ms	300 ms	300 ms	300 ms

■ = ON
 1) optional / optional / optional / optional / optional

example for DIP switch setting (with ACT20M tool software)



Additional power supply option via bus



example for DIP switch setting (with ACT20M tool software)