

ACT20M
ACT20M-RTCI-CO-OLP-S**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 16

D-32758 Detmold

Germany

Fon: +49 5231 14-0

Fax: +49 5231 14-292083

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

Type	ACT20M-RTCI-CO-OLP-S
Order No.	1435590000
Version	Temperature converter, 2-/3-/4- wire RTD, Thermocouple, Input : Temperature, Output : 4-20 mA, (loop powered)
GTIN (EAN)	4050118240641
Qty.	1 pc(s).

ACT20M

ACT20M-RTCI-CO-OLP-S

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

Technical data

Dimensions and weights

Width	6.1 mm	Width (inches)	0.24 inch
Height	112.5 mm	Height (inches)	4.429 inch
Depth	114.3 mm	Depth (inches)	4.5 inch
Net weight	80 g		

Temperatures

Humidity	40 °C / 93 % rel. humidity, no condensation	Storage temperature, max.	85 °C
Storage temperature, min.	-40 °C	Operating temperature	
Ambient temperature	-25 °C...+70 °C	Storage temperature	-40 °C...85 °C

Probability of failure

MTBF	207 Years
------	-----------

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
------------	----------------

Rated data UL

UL certificate	E337701.pdf
----------------	-------------

Input

Number of inputs	Sensor	PT100 / 2-/3-/4-wire, Thermocouple acc. to IEC 584, type: J, Thermocouple acc. to IEC 584, type: K
1		
Influence of the sensor cable resistance	Input measurement range	PT100 -200...+850 °C, Thermocouple type J -100...+1200°C, Thermocouple type K -200...+1370°C
< 0.002 Ω/Ω		
Line resistance in measuring circuit	Temperature input range	Configurable, min. measurement range 10°C (RTD), min. measurement range 50°C (TC)
50 Ω @ RTD (Pt100), 10 kΩ @ TC (J, K)		

Output

Number of outputs	Output current	configurable, 4...20 mA, 20...4 mA
1		
Wire break detection	cold junction compensation	configurable internal or external cold-junction compensation (thermocouple)
3.5 mA / 23 mA / none		
Supply voltage		16,8 V...31,2 V

ACT20M

ACT20M-RTCI-CO-OLP-S

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 14-0
 Fax: +49 5231 14-292083
 www.weidmueller.com

Technical data

General data

Accuracy	absolute accuracy: $< \pm 0.05$ % of the measurement range, RTD (PT100) Basic accuracy: $< \pm 0.1$ °C of the measurement range, TC (J,K) Basic accuracy: $< \pm 0.5$ °C of the measurement range	Cold-junction compensation error	$\pm(2.0\text{ °C} + 0.4\text{ °C} \times \Delta t)$ Δt = inside temperature – ambient temperature
Configuration	DIP switch	Galvanic isolation	2-way isolator
Power consumption, max.	0.8 W	Power consumption, typ.	0.48 W
Rail	TS 35	Step response time	$\leq 30\text{ ms}$, $< 300\text{ ms}$
Temperature coefficient	RTD (PT100) ≤ 0.01 % of the measurement range/°C or 0.02 °C/°C, TC (J,K) 0.1 °C/°C	Voltage supply	Output loop powered, 6...35 V

Insulation coordination

EMC standards	IEC 61326-1, NE 21	Galvanic isolation	2-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
---------	------------------------

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

Ratings IECEx/ATEX/cUL

Certificate No. (ATEX)	KEMA10ATEX0183X	Certificate No. (IECEX)	IECEXKEM10.0090X
------------------------	-----------------	-------------------------	------------------

Classifications

ETIM 5.0	EC002653	ETIM 6.0	EC002919
eClass 6.2	27-21-01-20	eClass 7.1	27-21-01-20
eClass 8.1	27-21-01-20	eClass 9.0	27-21-01-29
eClass 9.1	27-21-01-29		

Product information

Product information	The ACT20M-RTCI-CO-OLP-S passive configurable temperature transducer isolates and converts analogue signals. An analogue RTD (Type Pt100) or TC (Type J, K) input signal is linearly converted into an analogue output signal and galvanically isolated. Power is supplied through the output measurement circuit (output-loop powered).
---------------------	--

ACT20M ACT20M-RTCI-CO-OLP-S

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Technical data

Approvals

Approvals



ROHS

Conform

Downloads

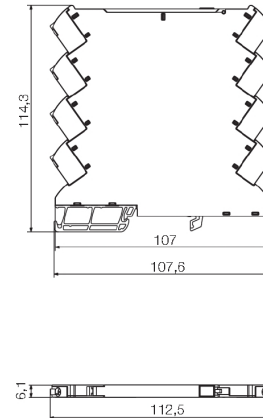
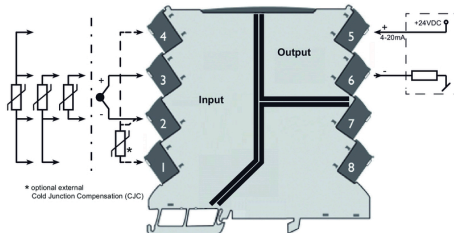
Approval/Certificate/Document of Conformity	DNV-GL certificate Declaration of Conformity
Brochure/Catalogue	CAT 4.1 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD, Zuken E3.S
Engineering Data	STEP
Software	DIP switch configuration tool
User Documentation	instruction sheet

ACT20M ACT20M-RTCI-CO-OLP-S

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Drawings

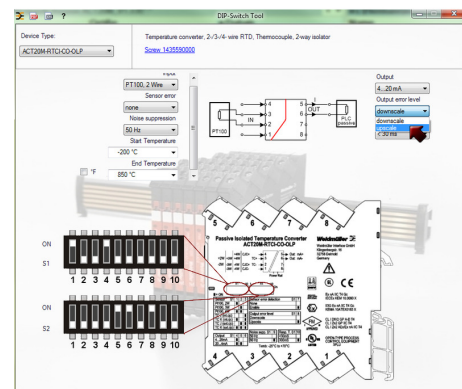
Connection diagram



DIP switch setting

		Temperature range [°C]											
		PT100: -200...+800 °C				TC-1/2: -100...+200 °C				TC-K: -800...+1372 °C			
RTD & TC sensor type	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
PT100 2 wire	-200	800	-100	200	-800	1372	-200	800	-200	800	-200	800	-200
PT100 3 wire	-200	800	-100	200	-800	1372	-200	800	-200	800	-200	800	-200
PT100 4 wire	-200	800	-100	200	-800	1372	-200	800	-200	800	-200	800	-200
TC-1/2 (external CJC)	-100	200	-100	200	-100	200	-100	200	-100	200	-100	200	-100
TC-K (external CJC)	-800	1372	-800	1372	-800	1372	-800	1372	-800	1372	-800	1372	-800
TC-K (external CJC)	-800	1372	-800	1372	-800	1372	-800	1372	-800	1372	-800	1372	-800
TC-K (external CJC)	-800	1372	-800	1372	-800	1372	-800	1372	-800	1372	-800	1372	-800
Output	0	40	0	40	0	40	0	40	0	40	0	40	0
4...20 mA	0	40	0	40	0	40	0	40	0	40	0	40	0
20...4 mA	0	40	0	40	0	40	0	40	0	40	0	40	0
Sensor error detection	0	40	0	40	0	40	0	40	0	40	0	40	0
Output error level	0	40	0	40	0	40	0	40	0	40	0	40	0
Noise suppression	0	40	0	40	0	40	0	40	0	40	0	40	0
Response time	0	40	0	40	0	40	0	40	0	40	0	40	0

example for DIP switch setting
(with ACT20M tool software)



example for DIP switch setting
(with ACT20M tool software)