

ACT20M-RTI-CO-EOLP-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, 2-/3-/4- wire RTD, Input : Temperature, PT100, Output : 4-20 mA, (loop powered)
Order No.	1435610000
Type	ACT20M-RTI-CO-EOLP-S
GTIN (EAN)	4050118240528
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	80 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	227 Years
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Input

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

Output

Number of outputs	1	Output current	configurable, 4...20 mA, 20...4 mA
Wire break detection	3.5 mA / 23 mA / none		

General data

Accuracy	absolute accuracy: < ±0.1 % of the measurement range, Basic accuracy: < ±0.2°C	
Cold-junction compensation error	±(2.0 °C + 0.4 °C x Δt) Δt = inside temperature – ambient temperature	
Configuration	DIP switch	
Delivery state	Setting parameters	Output
	Configuration	4...20 mA (loop)
	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
Delivery state	Output: 4...20 mA (loop) // 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	
Galvanic isolation	Without isolation	

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Technical data

Power consumption, max.	0.8 W
Power consumption, typ.	0.48 W
Rail	TS 35
Step response time	≤ 30 ms, < 300 ms
Temperature coefficient	RTD (PT100) ≤ 0.01 % of the measurement range/°C or 0.02 °C/°C
Type of connection	Screw connection
Voltage supply	Output loop powered, 6...35 V

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-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). The ACT20M-RTI-CO-EOLP-S passive configurable temperature transducer does not have any galvanic isolation and has no TC input.
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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

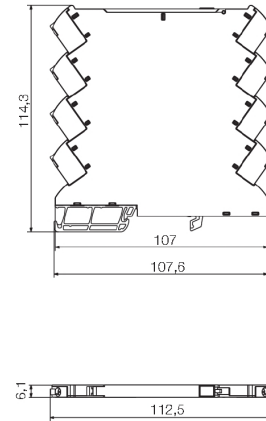
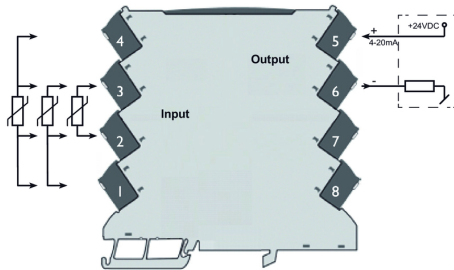
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Drawings

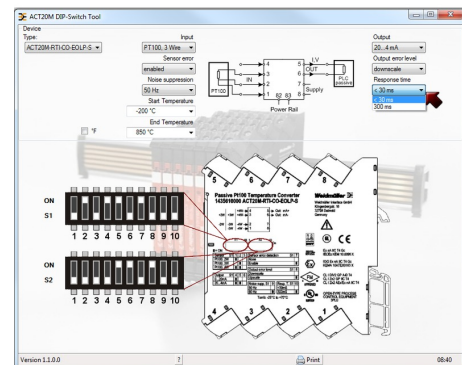
Connection diagram



DIP switch setting

	RTI & TC sensor type	Temperature range [°C]									
		Min.	S1	Max.	S2	Min.	S1	Max.	S2	Min.	S1
Output	PT100-2 wire	-200	1	200	2	-200	1	200	2	-200	1
	PT100-3 wire	-200	1	200	2	-200	1	200	2	-200	1
	PT100-4 wire	-200	1	200	2	-200	1	200	2	-200	1
	PT100-5 wire	-200	1	200	2	-200	1	200	2	-200	1
Output	4-20 mA	-200	1	200	2	-200	1	200	2	-200	1
	20-4 mA	-200	1	200	2	-200	1	200	2	-200	1
	20-4 mA	-200	1	200	2	-200	1	200	2	-200	1
	20-4 mA	-200	1	200	2	-200	1	200	2	-200	1
Sensor error detection	none	-200	1	200	2	-200	1	200	2	-200	1
	enabled	-200	1	200	2	-200	1	200	2	-200	1
	enabled	-200	1	200	2	-200	1	200	2	-200	1
	enabled	-200	1	200	2	-200	1	200	2	-200	1
Output error level	disabled	-200	1	200	2	-200	1	200	2	-200	1
	disabled	-200	1	200	2	-200	1	200	2	-200	1
	disabled	-200	1	200	2	-200	1	200	2	-200	1
	disabled	-200	1	200	2	-200	1	200	2	-200	1
Noise suppression	disabled	-200	1	200	2	-200	1	200	2	-200	1
	disabled	-200	1	200	2	-200	1	200	2	-200	1
	disabled	-200	1	200	2	-200	1	200	2	-200	1
	disabled	-200	1	200	2	-200	1	200	2	-200	1
Response time	disabled	-200	1	200	2	-200	1	200	2	-200	1
	disabled	-200	1	200	2	-200	1	200	2	-200	1
	disabled	-200	1	200	2	-200	1	200	2	-200	1
	disabled	-200	1	200	2	-200	1	200	2	-200	1

example for DIP switch setting
 (with ACT20M tool software)



example for DIP switch setting
 (with ACT20M tool software)