

ACT20M ACT20M-RTI-AO-S

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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-RTI-AO-S
Order No.	1375510000
Version	Temperature converter, 2-/3-/4- wire RTD, Input : Temperature, Output : I / U
GTIN (EAN)	4050118259667
Qty.	1 pc(s).

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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	89 g		

Temperatures

Humidity	95 %, 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	152 Years
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Input

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

Output

Number of outputs	1	Output signal limit	< 4 mA (average), < 60 mA (pulse current), low duty cycle
Output voltage, note	configurable, 0(2)...10 V, 0(1)...5 V	Output current	configurable, 0...20 mA, 4...20 mA
Wire break detection	3.5 mA / 23 mA / none	load impedance voltage	≥ 10 kΩ
load impedance current	≤ 600 Ω		

General data

Accuracy	absolute accuracy: < ±0.05 % of the measurement range, Basic accuracy: < ±0.1°C	Configuration	DIP switch
Galvanic isolation	3-way isolator	Mounting rail	TS 35
Power consumption, max.	0.7 W	Power consumption, typ.	0.49 W
Step response time	≤ 30 ms, < 300 ms	Supply voltage	24 V DC ± 30 %
Temperature coefficient	≤ 0.01 % of the measurement range/°C or 0.02 °C/°C		

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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Creation date October 8, 2018 8:10:42 PM CEST

Catalogue status 28.09.2018 / We reserve the right to make technical changes.

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Technical data**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

Rated data UL

UL certificate	E337701.pdf
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Ratings IECEx/ATEX/cUL

Certificate No. (ATEX)	KEMA10ATEX0183X	Certificate No. (IECEX)	IECEXKEM10.0090X
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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	27-21-01-20
eClass 9.1	27-21-01-29		

Product information

Instructions for accessories	DIN mounting rail, see accessories
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Approvals

Approvals



ROHS	Conform
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Downloads

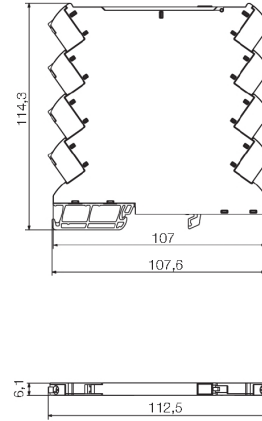
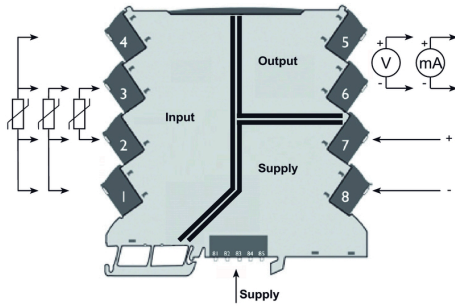
Approval/Certificate/Document of Conformity	Declaration of Conformity
Brochure/Catalogue	CAT 4.1 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD, Zuken E3.S
Engineering Data	STEP
Software	DIP switch configuration tool
User Documentation	instruction sheet

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Drawings

Connection diagram



DIP switch setting

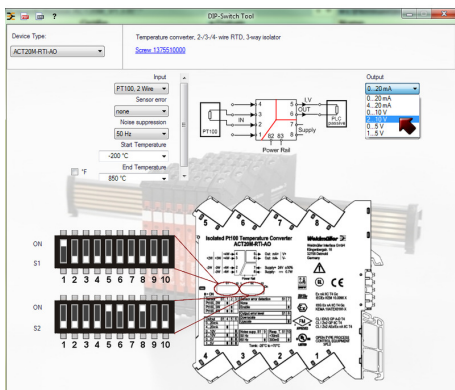
RTD sensor type	S1	Temperature range [°C]												
		Pt100, 2-wire				Pt100, 3-wire				Pt100, 4-wire				
Temp. [°C]	Min.	0	100	200	Temp. [°C]	Min.	0	100	200	Temp. [°C]	Min.	0	100	200
Pt100, 2-wire	1	1	1	1	Pt100, 3-wire	1	1	1	1	Pt100, 4-wire	1	1	1	1
Output	4	1	1	1	0-20 mA	1	1	1	1	4-20 mA	1	1	1	1
Sensor error detection	7	1	1	1	0-10 V	1	1	1	1	2-10 V	1	1	1	1
enabling	8	1	1	1	0-5 V	1	1	1	1	0-3 V	1	1	1	1
Output error level	9	1	1	1	1-5 V	1	1	1	1	1-5 V	1	1	1	1
50mVscale	10	1	1	1	1	1	1	1	1	1	1	1	1	1
variable	11	1	1	1	1	1	1	1	1	1	1	1	1	1
Noise suppression	12	1	1	1	1	1	1	1	1	1	1	1	1	1
50 Hz	13	1	1	1	1	1	1	1	1	1	1	1	1	1
60 Hz	14	1	1	1	1	1	1	1	1	1	1	1	1	1
Response time	15	1	1	1	1	1	1	1	1	1	1	1	1	1
< 30 ms	16	1	1	1	1	1	1	1	1	1	1	1	1	1
300 ms	17	1	1	1	1	1	1	1	1	1	1	1	1	1

■ = ON

example for DIP switch setting (with ACT20M tool software)



Power supply via the rail bus



example for DIP switch setting (with ACT20 tool)