

ACT20M ACT20M-AI-AO-E-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-AI-AO-E-S
Order No.	1176010000
Version	Signal converter/insulator, Configurable, without sensor supply, Input : I / U, Output : I / U
GTIN (EAN)	4032248970094
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	83.5 g		

Temperatures

Humidity	40 °C / 93 % rel. humidity, no condensation	Operating temperature, max.	70 °C
Operating temperature, min.	0 °C	Storage temperature, max.	85 °C
Storage temperature, min.	-40 °C	Operating temperature	0 °C...70 °C
Ambient temperature	-25 °C...+70 °C	Storage temperature	-40 °C...85 °C

Probability of failure

MTBF	249 Years
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Input

Number of inputs	1	Sensor	Voltage source, Current source
Input voltage	configurable, 0(2)...10 V, 0(1)...5 V	Input resistance, voltage	>500 kΩ
Input current	configurable, 0...20 mA, 4...20mA	Voltage drop, current input	<1,5 V
Input resistance, current	70 Ω	Input frequency	100 Hz
Voltage drop	<1,5 V		

Output

Number of outputs	1	Output voltage, note	configurable, 0(2)...10 V, 0(1)...5 V
Output current	configurable, 0...20 mA, 4...20 mA	Cut-off frequency (-3 dB)	100 Hz
load impedance voltage	≥ 10 kΩ	load impedance current	≤ 600 Ω, @ max 23mA

General data

Accuracy	< 0.2 % of measuring range	Configuration	DIP switch
Galvanic isolation	3-way isolator	Mounting rail	TS 35
Power consumption, max.	0.8 W	Power consumption, typ.	0.56 W
Step response time	≤ 7 ms	Supply voltage	24 V DC ± 30 %
Temperature coefficient	≤ 0.015 % / °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

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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

Rated data UL

UL certificate	E337701.pdf
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Classifications

ETIM 3.0	EC002479	ETIM 4.0	EC002653
ETIM 5.0	EC002653	ETIM 6.0	EC002653
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	27-21-01-20		

Product information

Product information	The configurable DC isolating amplifier ACT20M-AI-AO-E-S isolates and converts analogue signals. An analogue input signal is linearly converted into an analogue output signal and galvanically isolated. The power supply is galvanically isolated from the input and output (3-way isolation) by means of direct wiring or the Weidmüller rail bus.
Descriptive text technical data	Power supply optionally over the DIN mounting rail CH20M
Instructions for accessories	DIN mounting rail, see Accessories

Approvals

Approvals



ROHS	Conform
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Downloads

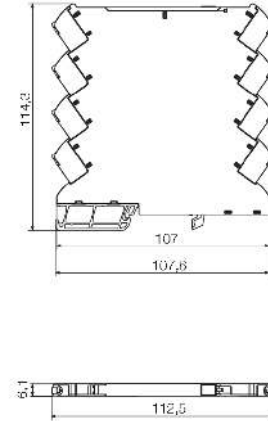
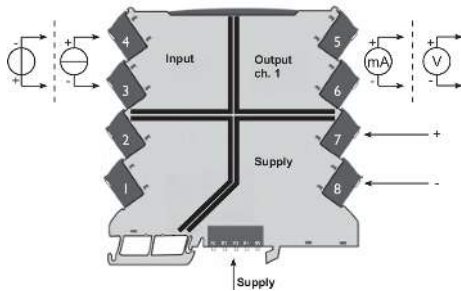
Approval/Certificate/Document of Conformity	Declaration of Conformity
Brochure/Catalogue	CAT 4.1 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD, Zuken E3.S
Engineering Data	STEP
Software	DIP switch configuration tool
User Documentation	Instruction sheet

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Drawings

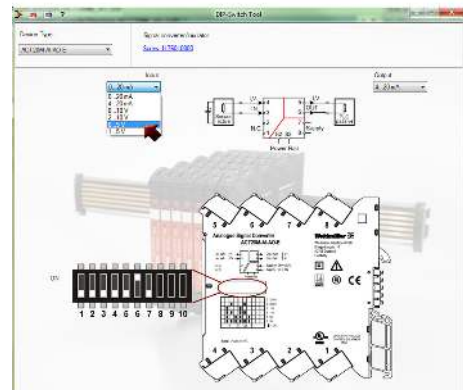
Connection diagram



DIP switch setting

Range	Input Setup				Output setup		
	1	2	3	4	5	6	7
0...20 mA							
4...20 mA			■			■	
0...10 V							
2...10 V		■	■			■	
0...5 V		■		■		■	■
1...5 V			■		■	■	■

■ = ON



Power supply via the rail bus

Example of DIP switch setting with software tool



Power supply via the rail bus