

**ACT20M-BAI-AO-S****Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

**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	Signal converter/insulator, Configurable, Input : I / U/bidirectional I, Output : I / U
Order No.	<a href="#">1375450000</a>
Type	ACT20M-BAI-AO-S
GTIN (EAN)	4050118236736
Qty.	1 pc(s).

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Catalogue status 27.01.2024 / We reserve the right to make technical changes.

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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
Width	6.1 mm	Width (inches)	0.24 inch
Net weight	80 g		

### Temperatures

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

### Probability of failure

MTBF	181 a
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### Input

Input current	configurable, -10 mA...0... +10 mA, -20 mA...0...+20 mA	Input resistance, voltage	≥ 1 MΩ
Input voltage	configurable, -5 V...0...+5 V, -10 V...0...+10 V	Number of inputs	1
Sensor	Voltage source, Current source	Voltage drop, current input	1 V at 20 mA

### Output

Cut-off frequency (-3 dB)	≥ 100 Hz, 10 Hz	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
load impedance voltage	≥ 10 kΩ		

### General data

Accuracy	< 0.05 % of measuring range	
Configuration	DIP switch	
Delivery state	Setting parameters	Bandwidth
	Configuration	100 Hz
	Setting parameters	Input
	Configuration	-10...10 V
	Setting parameters	Output
	Configuration	0...20 mA
Delivery state	Bandwidth: 100 Hz // Input: -10...10 V // Output: 0...20 mA	
Galvanic isolation	4-way isolator;	
Power consumption, max.	0.8 W	
Power consumption, typ.	0.45 W	
Rail	TS 35	
Step response time	≤ 7 ms	
Temperature coefficient	<0.01% of span/°C (TU)	
Voltage supply	24 V DC ±30 % at terminal or via CH20M rail bus	

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### Insulation coordination

EMC standards	IEC 61326-1, NE 21	Galvanic isolation	4-way isolator;
Insulation voltage	2.5 kV <sub>eff</sub> / 1 min.	Pollution severity	2
Rated voltage	300 V <sub>eff</sub>	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
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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 <sup>2</sup>
Clamping range, min.	0.5 mm <sup>2</sup>	Clamping range, max.	2.5 mm <sup>2</sup>
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, NE 21	Standards	IEC 61010-1
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### Classifications

ETIM 6.0	EC002653	ETIM 7.0	EC002653
ETIM 8.0	EC002653	ETIM 9.0	EC002653
ECLASS 9.0	27-21-01-20	ECLASS 9.1	27-21-01-20
ECLASS 10.0	27-21-01-20	ECLASS 11.0	27-21-01-20
ECLASS 12.0	27-21-01-20	ECLASS 13.0	27210120

### Tender specification sheets

Short specification	Bipolar standard signal converter 1-channel signal converter, 6.1 mm wide, with external voltage supply, for transmission and isolation of analogue DC current signals +/- 10 mA or +/- 20 mA and voltage signals +/- 5 V or +/- 10 V. Input and output signals can be configured with DIP switches.
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### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-421a-46db-a0c2-cf1609156924

### Important note

Product information	The configurable DC-Converter ACT20M-BAI-AO-S separates and converts standard analogue signals. An analogue input signal is converted linear and galvanic isolated into an analogue output signal. The power supply is galvanically isolated from input and output and happens via a direct wiring or the Weidmüller DIN Rail Bus (3-way isolation).
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**Technical data**

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E337701

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">DNV-GL certificate</a> <a href="#">FM certificate</a> <a href="#">IECEX certificate</a> <a href="#">ATEX certificate</a> <a href="#">Declaration of Conformity</a>
Engineering Data	<a href="#">CAD data – STEP</a>
Engineering Data	<a href="#">Zuken E3.S</a>
Software	<a href="#">DIP switch configuration tool</a>
User Documentation	<a href="#">Device description – Instruction sheet</a>
Catalogues	<a href="#">Catalogues in PDF-format</a>
Brochures	

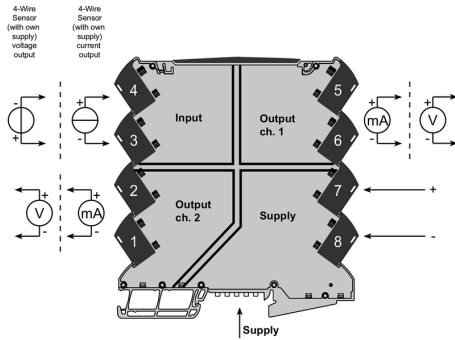
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**Drawings**

**Connection diagram**



**Dimensional drawing**



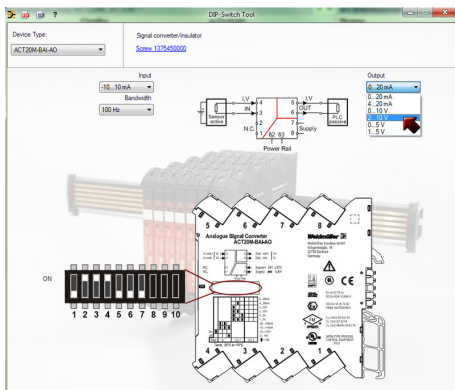
Power supply via the rail bus

**DIP switch setting**

Input Setup					
Bandwidth	1	Input range	2	3	4
10 Hz	■	-10...+10 mA	■	■	■
100 Hz		-20...+20 mA	■	■	
		-5...+5 V			■
		-10...+10 V			

■ = ON

Output setup		Output range	5	6	7
		0...20 mA			
		4...20 mA		■	
		0...10 V	■		
		2...10 V	■	■	
		0...5 V	■		■
		1...5 V	■	■	■



example for DIP switch setting (with ACT20M-Tool software)