

ACT20M-BAI-AO-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	Signal converter/insulator, Configurable, Input : I / U/bidirectional I, Output : I / U
Order No.	1375450000
Type	ACT20M-BAI-AO-S
GTIN (EAN)	4050118236736
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
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
Operating temperature, min.	-25 °C	Operating temperature, max.	70 °C
Humidity	40 °C / 93 % rel. humidity, no condensation		

Probability of failure

SIL in compliance with IEC 61508	None	MTBF	181 Years
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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	Bandwidth: 100 Hz // Input: -10...10 V // Output: 0...20 mA	
Delivery state	Setting parameters	Bandwidth
	Configuration	100 Hz
	Setting parameters	Input
	Configuration	-10...10 V
	Setting parameters	Output
	Configuration	0...20 mA
Galvanic isolation	4-way isolator;	
Long-term drift	0	
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)	
Type of connection	Screw connection	
Voltage supply	24 V DC ± 30 %	

Creation date January 28, 2023 7:09:32 AM CET

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Technical data**Insulation coordination**

EMC standards	IEC 61326-1, NE 21	Galvanic isolation	4-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)

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 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

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	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

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	DNV-GL certificate FM certificate IECEX certificate ATEX certificate Declaration of Conformity
Engineering Data	CAD data – STEP
Engineering Data	WSCAD, Zuken E3.S
Software	Runtime Software – DIP switch configuration tool
User Documentation	Instruction sheet
Catalogues	Catalogues in PDF-format
Brochures	

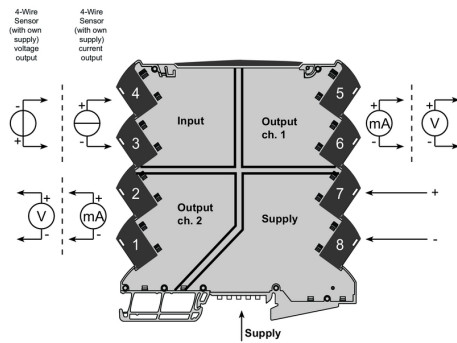
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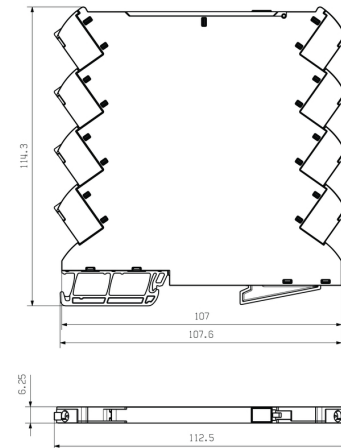
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Drawings

Connection diagram



Dimensional drawing



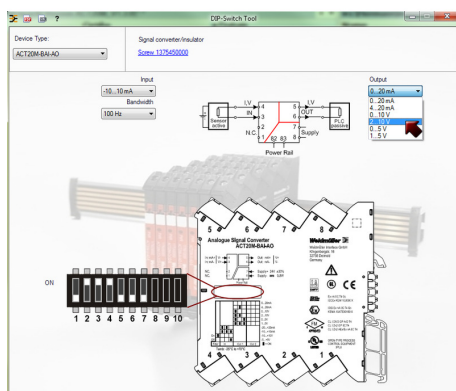
Power supply via the rail bus

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)