Data sheet

ACT20M-BAI-2AO-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 splitter, Configurable, Input : I/U/bidirectional I, Output : 2 x I/U or 1 x bidirectional
Order No.	1375470000
Type	ACT20M-BAI-2AO-S
GTIN (EAN)	4050118236729
Qty.	1 items

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Technical data

Approvals

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

Dimensions and weights

Depth	114.3 mm	Depth (inches)	4.5 inch
Height	112.5 mm	Height (inches)	4.4291 inch
Width	6.1 mm	Width (inches)	0.2402 inch
Net weight	80 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-25 °C...75 °C
Humidity at operating temperature	0...95 % (no condensation)	Humidity	40 °C / 93 % rel. humidity, no condensation

Probability of failure

SIL in compliance with IEC 61508	None	MTBF	181 a

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cI
REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-421a-46db-a0c2-cf1609156924

Input

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

Output

Number of outputs	2	load impedance voltage	≥ 10 kΩ
Load impedance current	<300 Ω, per channel	Type	active, connected control must be passive
Output voltage, note	configurable, 0(2)...10 V, 0(1)...5 V	Output current	configurable, 0...20 mA, 4...20 mA, 1 channel -10...0...+10 mA, 1 channel -20...0...+20 mA
Cut-off frequency (-3 dB)	≥ 100 Hz, 10 Hz		

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General data

Accuracy	<0.05 % of measuring range	
Protection degree	IP20	
Supply voltage	24 V DC ±30 % at terminal or via CH20M rail bus	
Step response time	≤ 7 ms	
Mounting rail	TS 35	
Temperature coefficient	<0.01% of span/°C (TU)	
Delivery state	Setting parameters	Bandwidth
	Configuration	100 Hz
	Setting parameters	Input
	Configuration	-10...10 V
	Setting parameters	Output 1
	Configuration	0...20 mA
	Setting parameters	Output 2
	Configuration	0...20 mA
Nominal power consumption	1.2 VA	
Configuration	DIP switch	
Operating altitude	≤ 2000 m	
Power consumption, max.	1.2 W	
Power consumption, typ.	0.84 W	
Delivery state	Bandwidth: 100 Hz // Input: -10...10 V // Output 1: 0...20 mA // Output 2: 0...20 mA	

Insulation coordination

EMC standards	EN 61326-1	Surge voltage category	II
Pollution severity	2	Galvanic isolation	4-way isolator;
Insulation voltage	2.5 kVeff /1 min.	Rated voltage	300 Veff

Data for Ex applications (ATEX)

Marking	II 3 G Ex nA IIC T4 Gc	IECEx - gas labelling	Ex nA IIC T4 Gc, Standard: IEC 60079-0-15
Installation location	Device installed in safe area, zone 2		

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 mm²
Clamping range, min.	0.5 mm²	Clamping range, max.	2.5 mm²
Wire connection cross section AWG, min.	AWG 30	Wire connection cross section AWG, max.	AWG 14

EMC conformity and approvals

EMC standards	EN 61326-1	Standards	IEC 61010-1

Part description

Product description	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). The configurable DC-Converter ACT20M-BAI-2AO-S provides the same functionality, but has two galvanically separated outputs (4-way split).

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Classifications

ETIM 8.0	EC002653	ETIM 9.0	EC002653
ETIM 10.0	EC002653	ECLASS 14.0	27-21-01-20
ECLASS 15.0	27-21-01-20		

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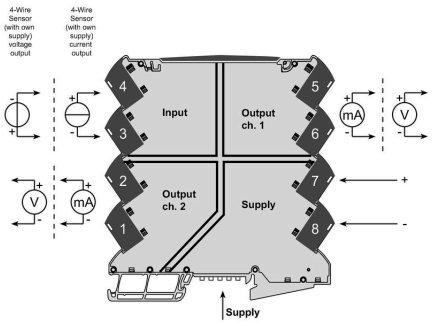
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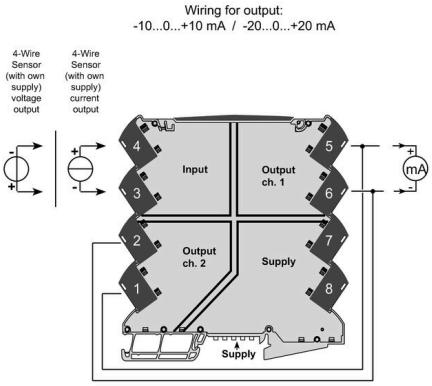
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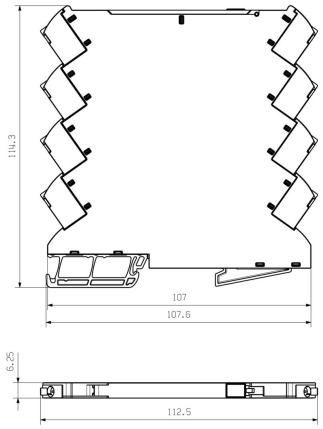
Drawings

Connection diagram



Connection diagram





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			■
■ = ON		-10...+10 V			

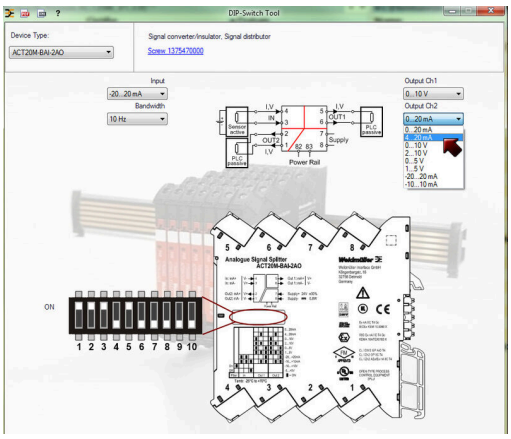
Output setup	Output 1			Output 2		
Output range	5	6	7	8	9	10
0...20 mA						
4...20 mA		■			■	
0...10 V	■			■		
2...10 V	■	■		■	■	
0...5 V	■		■	■		■
1...5 V	■	■	■	■	■	■
±20 mA set-up			■			■
±10 mA set-up		■	■		■	■

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Drawings



example for DIP switch setting
(with ACT20M tool software)



Additional power supply option via bus

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