

ACT20M-AI-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, with sensor supply, Input : I / U, Output : I / U
Order No.	1176000000
Type	ACT20M-AI-AO-S
GTIN (EAN)	4032248970063
Qty.	1 pc(s).

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

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data**Dimensions and weights**

Depth	114.3 mm	Depth (inches)	4.5 inch
Height	112.5 mm	Height (inches)	4.429 inch
Net weight	80 g	Width	6.1 mm
Width (inches)	0.24 inch		

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	231 Years
------	-----------

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
------------	----------------

Input

Input current	configurable, 0...20 mA, 4...20mA	Input resistance, current	70 Ω
Input resistance, voltage	>500 kΩ	Input voltage	configurable, 0(2)...10 V, 0(1)...5 V
Number of inputs	1	Sensor	Voltage source, Current source, 2-wire transmitter (without own power supply)
Sensor supply	17...28 V DC (@ 20 mA)	Voltage drop	<1,5 V
Voltage drop, current input	<1,5 V		

Output

Cut-off frequency (-3 dB)	100 Hz	Load impedance current	≤ 600 Ω, @ max 23mA
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	load impedance voltage	≥ 10 kΩ

General data

Accuracy	< 0.05 % of measuring range		
Configuration	DIP switch		
Delivery state	Input: 0...20 mA // Output: 0...20 mA		
Delivery state	Setting parameters	Input	
	Configuration	0...20 mA	
	Setting parameters	Output	
	Configuration	0...20 mA	
Galvanic isolation	3-way isolator		
Power consumption, max.	1.2 W		
Power consumption, typ.	0.84 W		
Rail	TS 35		
Step response time	≤ 7 ms		
Temperature coefficient	≤ 0.01 % / °C		
Type of connection	Screw connection		

Creation date March 23, 2021 7:43:30 AM CET

ACT20M-AI-AO-S

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

Voltage supply 24 V DC $\pm$ 30 %

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

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

Classifications

ETIM 6.0	EC002653	ETIM 7.0	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

Tender specification sheets

Long specification

Short specification

Universal standard signal isolating amplifier
1-channel signal isolating amplifier in 6.1 mm width with external power supply, for transmitting and isolating analogue DC current signals 0/4...20 mA and voltage signals 0/2...10V // 0/1...5 V. I/O signals are configured with DIP switches.

Type
ACT20M-AI-AO-S

Important note

Product information

The configurable DC isolating amplifier ACT20M-AI-AO-S isolates and converts analogue standard signals. An analogue input signal is linearly converted into an analogue output signal and galvanically isolated. The input can also be operated as an active current loop (the loop current is supplied by the device). The power supply is galvanically isolated from the input and output (3-way isolation) by means of direct wiring or the Weidmüller rail bus.

The configurable DC isolation amplifier ACT20M-AI-2AO-S offers the same functionality, but has 2 galvanically isolated outputs (4-way isolation).

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

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data**Approvals**

Approvals



ROHS	Conform
UL File Number Search	E337701

Downloads

Approval/Certificate/Document of Conformity	DNV-GL certificate FM certificate IECEX certificate ATEX certificate Declaration of Conformity
Engineering Data	STEP
Engineering Data	EPLAN, WSCAD, Zuken E3.S
Software	DIP switch configuration tool
User Documentation	Instruction sheet

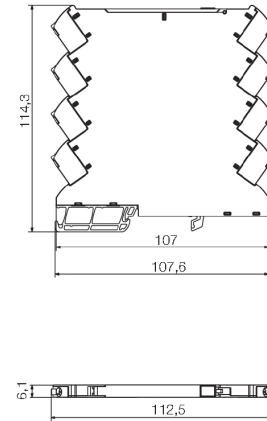
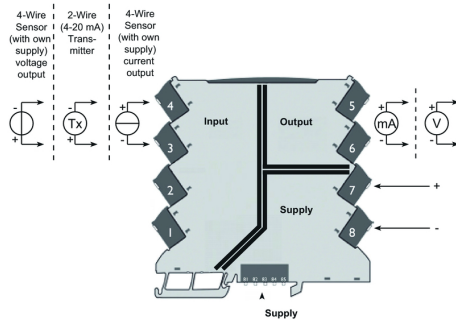
ACT20M-AI-AO-S

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com

Drawings

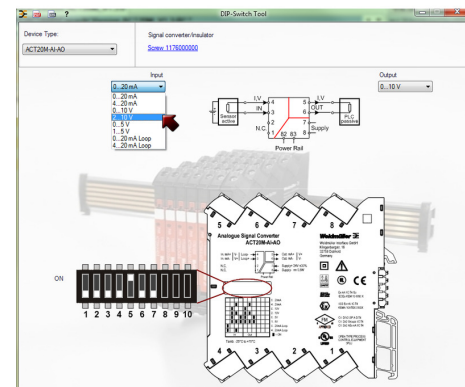
Connection diagram



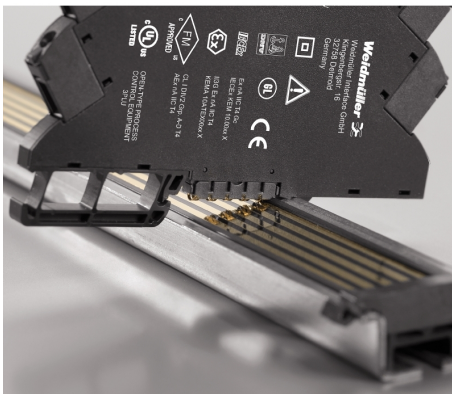
DIP switch setting

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							
0...20 mA (Loop)							
4...20 mA (Loop)							

■ = ON



Example of DIP switch setting with software tool



Power supply via the rail bus