

ACT20M ACT20M-BAI-AO-S

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
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 Germany
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 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

| | |
|------------|---|
| Type | ACT20M-BAI-AO-S |
| Order No. | 1375450000 |
| Version | Signal converter/insulator, Configurable, Input : I/U/bidirectional I, Output : I/U/bidirectional I |
| GTIN (EAN) | 4050118236736 |
| 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 | 80 g | | |

Temperatures

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

Probability of failure

| | |
|------|-----------|
| MTBF | 181 Years |
|------|-----------|

Environmental Product Compliance

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

Rated data UL

| | |
|----------------|-------------|
| UL certificate | E337701.pdf |
|----------------|-------------|

Input

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

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, 10 Hz |
| load impedance voltage | ≥ 10 kΩ | load impedance current | ≤ 600 Ω |

General data

| | | | |
|-------------------------|--------------------------------|-------------------------|-------------------------|
| Accuracy | < 0.05 % of measuring range | Configuration | DIP switch |
| Galvanic isolation | 4-way isolator; | Power consumption, max. | 0.8 W |
| Power consumption, typ. | 0.56 W | Rail | TS 35 |
| Step response time | ≤ 7 ms, ≤ 100 ms, Configurable | Temperature coefficient | < 0.01% of span/°C (TU) |
| Voltage supply | 24 V DC ± 30 % | | |

Data sheet

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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)

| | |
|---------|------------------------|
| 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 |

Ratings IECEx/ATEX/cUL

| | | | |
|------------------------|-----------------|-------------------------|------------------|
| Certificate No. (ATEX) | KEMA10ATEX0183X | Certificate No. (IECEX) | IECEXKEM10.0090X |
|------------------------|-----------------|-------------------------|------------------|

Classifications

| | | | |
|------------|-------------|------------|-------------|
| ETIM 3.0 | EC002479 | 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-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). |
|---------------------|--|

Approvals

Approvals



| | |
|------|---------|
| ROHS | Conform |
|------|---------|

Data sheet**ACT20M
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Technical data**Downloads**

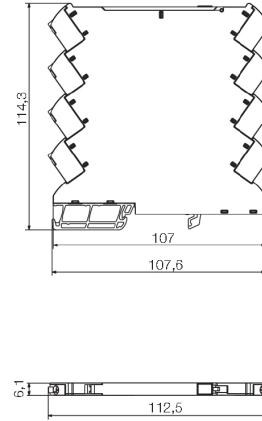
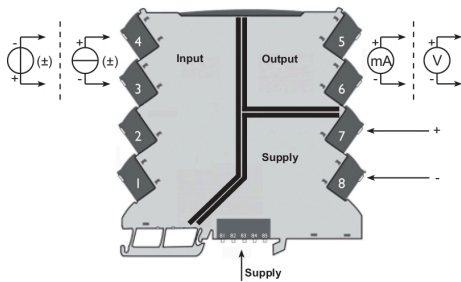
| | |
|---|---|
| Approval/Certificate/Document of Conformity | DNV-GL certificate Declaration of Conformity |
| Brochure/Catalogue | CAT 4.1 ELECTR 16/17 EN |
| Engineering Data | EPLAN, WSCAD, Zuken E3.S |
| Engineering Data | STEP |
| Software | DIP switch configuration tool |
| User Documentation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

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Drawings

Connection diagram



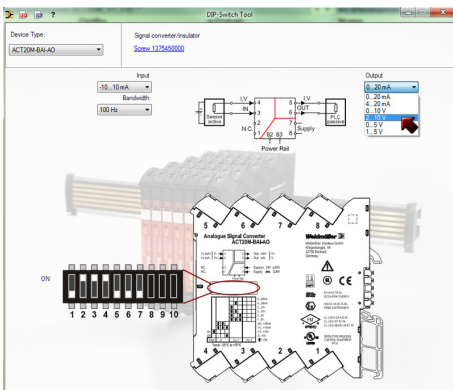
Power supply via the rail bus

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 | ■ | ■ | ■ | |
| ±20 mA set-up | | | | |
| ±10 mA set-up | | | | |



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