

ACT20M-AI-AO-E-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, without sensor supply, Input : I / U, Output : I / U |
| Order No. | 1176010000 |
| Type | ACT20M-AI-AO-E-S |
| GTIN (EAN) | 4032248970094 |
| Qty. | 1 pc(s). |

ACT20M-AI-AO-E-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 |
| Width | 6.1 mm | Width (inches) | 0.24 inch |
| Net weight | 83.5 g | | |

Temperatures

| | | | |
|---------------------|--|-----------------------|--------------|
| Storage temperature | -40 °C...85 °C | Operating temperature | 0 °C...70 °C |
| Humidity | 40 °C / 93 % rel. humidity, no condensation | | |

Probability of failure

| | | | |
|----------------------------------|------|------|-----------|
| SIL in compliance with IEC 61508 | None | MTBF | 249 Years |
|----------------------------------|------|------|-----------|

Environmental Product Compliance

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

Input

| | | | |
|-----------------------------|--|---------------------------|---------|
| Input current | configurable, 0...20 mA, 4...20mA | Input frequency | 100 Hz |
| 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 | 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 | Type | active, connected control must be passive |
| load impedance voltage | ≥ 10 kΩ | | |

General data

| | | |
|-------------------------|---------------------------------------|-----------|
| Accuracy | < 0.2 % 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. | 0.8 W | |
| Power consumption, typ. | 0.56 W | |
| Rail | TS 35 | |
| Step response time | ≤ 7 ms | |
| Temperature coefficient | ≤ 0.015 % / °C | |
| Type of connection | Screw connection | |

Creation date January 21, 2022 5:57:25 PM CET

ACT20M-AI-AO-E-S

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

www.weidmueller.com

Technical data

Voltage supply 24 V DC $\pm 30\%$ at terminal or via CH20M rail bus

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 |

EMC conformity and approvals

| | | | |
|---------------|--------------------|-----------|-------------|
| EMC standards | IEC 61326-1, NE 21 | Standards | IEC 61010-1 |
|---------------|--------------------|-----------|-------------|

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 | | |

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-E-S**

Important note

| | |
|---------------------|---|
| Product information | The configurable DC isolating amplifier ACT20M-AI-AO-E-S isolates and converts analogue signals. An analogue input signal is linearly converted into an analogue output signal and galvanically isolated. The power supply is galvanically isolated from the input and output (3-way isolation) by means of direct wiring or the Weidmüller rail bus. |
|---------------------|---|

ACT20M-AI-AO-E-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 | CAD data – STEP |
| Engineering Data | EPLAN, WSCAD, Zuken E3.S |
| Software | Software unit – DIP switch configuration tool |
| User Documentation | Instruction sheet |
| Catalogues | Catalogues in PDF-format |
| Brochures | |

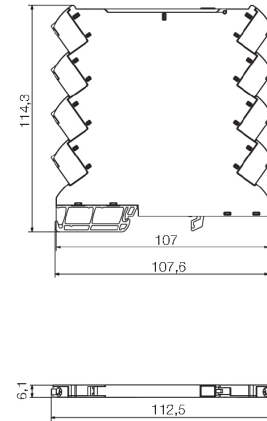
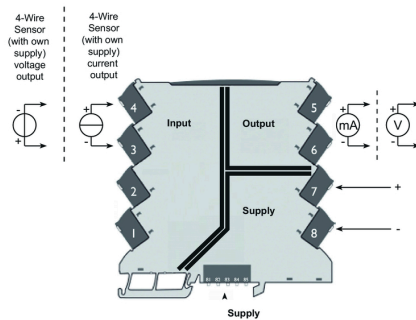
ACT20M-AI-AO-E-S

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

www.weidmueller.com

Drawings

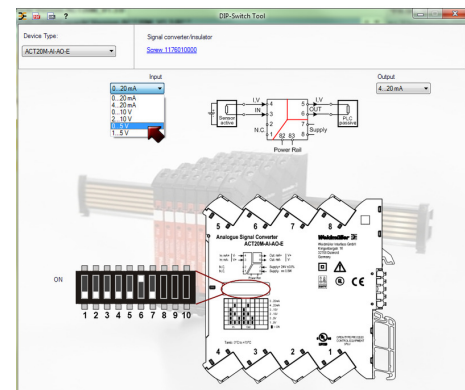
Connection diagram



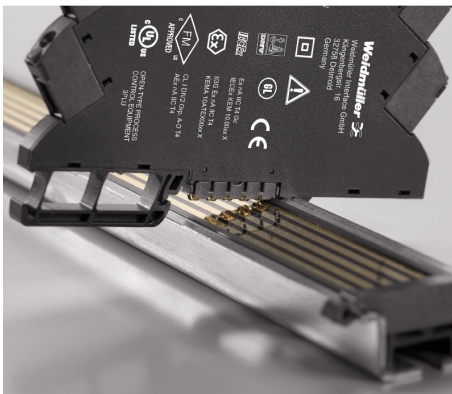
DIP switch setting

| 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 | | | | | | | |

■ = ON



Example of DIP switch setting with software tool



Power supply via the rail bus

ACT20M-AI-AO-E-S

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Accessories

Network-compatible current measuring transducers ACT20C



The ACT20C series was especially developed for applications with continuous processes. It enables the continuous monitoring of diagnostic, device and process information ("condition monitoring"). Several ACT20C components form a station which consists of an ACT20C Ethernet gateway, communicative ACT20C signal converters and an ACT20C bus termination terminal.

General ordering data

| | | |
|------------|----------------------------|--|
| Type | SET CH20M BUS 250MM TS ... | Version |
| Order No. | 1335140000 | OMNIMATE Housing - series CH20M, Length: 250 mm, Width: 25.1 |
| GTIN (EAN) | 4050118138375 | mm |
| Qty. | 1 pc(s). | |

Blank



MultiFit is the Weidmüller marker system used for other makes of terminals. Similar to the Weidmüller Dekafix, the markers of the MultiFit family are available ready-for-use with standard printing.

We recommend to carry out a test with sample markers on the terminals used when using MultiFit for the first time.

- One marker, suitable for different makes of terminals.
- Ready-to-use markers with standard printing
- Blank markers for printing with the PrintJet CONNECT or Plotter
- Delivery of individually printed markers according to customer CAE data or specifications
- One marking system for all applications

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling specifications.

General ordering data

| | | |
|------------|----------------------------|--|
| Type | MF 5/7.5 MC NE WS | Version |
| Order No. | 1877680000 | MultiFit, Terminal marker, 5 x 7.5 mm, Pitch in mm (P): 7.50 Adels |
| GTIN (EAN) | 4032248468270 | RKW, Phoenix, white |
| Qty. | 320 pc(s). | |

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

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Accessories****ACT20 (incl. DIN rail bus & powersupplies)**

Power supply adapter modules for separate supply and distribution of the supply voltage; for the ACT20 series/ MICROSERIES signal converters.

The 22.5/6.1 mm wide power-feed modules are mounted directly adjacent to the analogue signal converters. Then the 24 VDC supply voltage is optionally bridged via the CH20M (ACT20-series) rail bus or simply bridged over using the pluggable ZQV 4N (MICROSERIES) cross-connectors.

The ACT20-Feed-In-PRO-S can also detect faults coming from any of the devices mounted on the CH20 bus mounting profile.

In the event of an error or fault, the integrated status relay sends a common alarm to the external controller. In addition, two power supply units (as primary and backup supply) can be connected to the ACT20 Feed-In PRO-S.

Two feed-in modules mounted to the CH20 bus mounting profile guarantee a 100% redundant power supply.

Three LEDs are used to show the status of the power supply and error messages.

The ACT20M-Feed-In PRO can also be used in Ex zone2 / Division2 applications.

General ordering data

| | | |
|------------|----------------------------|---|
| Type | ACT20-FEED-IN-BASIC-S | Version |
| Order No. | 1282490000 | Supply module, Distributes supply voltage to rail bus |
| GTIN (EAN) | 4050118072730 | |
| Qty. | 1 pc(s). | |

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Weidmuller:](#)

[1176010000](#)