

## ACT20M-RTI-CO-EOLP-S

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

www.weidmueller.com

### Product image



#### 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    | Passive isolator, Without galvanic isolation, Input : Temperature, PT 100, Output : 4-20 mA |
| Order No.  | <a href="#">1435610000</a>  |
| Type       | ACT20M-RTI-CO-EOLP-S  |
| GTIN (EAN) | 4050118240528   |
| Qty.       | 1 items   |

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## Technical data

## Approvals

Approvals



IECEX



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...70 °C                              |
| Humidity at operating temperature | 0...95 % (no condensation) | Humidity              | 40 °C / 93 % rel. humidity, no condensation |

## Probability of failure

MTBF 227 a

## Environmental Product Compliance

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

## Input

|  |                                       |                         |  |
|--|---------------------------------------|-------------------------|--|
| Sensor                                   | PT100 (2-/3-/4- wire)                 | Number inputs           | 1  |
| Line resistance in measuring circuit     | 50 Ω @ RTD (Pt100), 10 kΩ @ TC (J, K) | Temperature input range | Configurable, PT100: -200...+850 °C, min. measurement range 10°C (RTD) |
| Influence of the sensor cable resistance | <0.002 Ω/Ω                            |                         |  |

## Output

|                         |   |                        |  |
|-------------------------|---|------------------------|--|
| Number of outputs       | 1   | load impedance voltage | ≥ 10 kΩ                                  |
| Load impedance current  | ≤ 600 Ω                                   | Wire break detection   | Yes, Configurable, 3.5 mA / 23 mA / none |
| Type                    | passive, connected control must be active | Output current         | 4...20 mA, loop-powered                  |
| Supply voltage (output) | 16,8 V...31,2 V                           |                        |  |

## General data

|                                  |  |
|----------------------------------|--|
| Accuracy                         | absolute accuracy: <±0.1 % of the measurement range, Basic accuracy: <±0.2°C |
| Protection degree                | IP20   |
| Supply voltage                   | Output loop powered, 6...35 V  |
| Cold-junction compensation error | ±(2.0 °C + 0.4 °C x Δt) Δt = inside temperature - ambient temperature        |

Creation date 17.02.2026 01:55:33 MEZ

Catalogue status / Drawings

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## Technical data

|                           |   |                   |
|---------------------------|---|-------------------|
| Step response time        | Configurable, $\leq 30$ ms, $<300$ ms   |                   |
| Mounting rail             | TS 35   |                   |
| Temperature coefficient   | RTD (PT100) $\leq 0.01$ % of the measurement range/°C or 0.02 °C/°C   |                   |
| Delivery state            | Setting parameters  | Input             |
|                           | Configuration   | 0 °C              |
|                           | Setting parameters  | Bandwidth         |
|                           | Configuration   | 100 Hz            |
|                           | Setting parameters  | Output            |
|                           | Configuration   | 0...20 mA         |
|                           | Setting parameters  | Output 2          |
|                           | Configuration   | 0...20 mA         |
|                           | Setting parameters  | Noise suppression |
|                           | Configuration   | 50 Hz             |
|                           | Setting parameters  | Start temperature |
|                           | Configuration   | -200 °C           |
| Nominal power consumption | Setting parameters  | End temperature   |
|                           | Configuration   | 0 °C              |
| Nominal power consumption | 0.5 VA  |                   |
| Configuration             | DIP switch  |                   |
| Operating altitude        | $\leq 2000$ m   |                   |
| Power consumption, max.   | 0.8 W   |                   |
| Power consumption, typ.   | 0.48 W  |                   |
| Delivery state            | Input: 0 °C // Bandwidth: 100 Hz // Output: 0...20 mA // Output 2: 0...20 mA // Noise suppression: 50 Hz // Start temperature: -200 °C // End temperature: 0 °C |                   |

### Insulation coordination

|                    |                   |                    |   |
|--------------------|-------------------|--------------------|---|
| EMC standards      | IEC 61326-1       | Pollution severity | 2 |
| Galvanic isolation | Without isolation |                    |   |

### 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 mm <sup>2</sup> |
| Clamping range, min.                    | 0.5 mm <sup>2</sup> | Clamping range, max.                    | 2.5 mm <sup>2</sup> |
| 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 | Standards | IEC 61010-1 |
|---------------|-------------|-----------|-------------|

### Part description

|                     |  |
|---------------------|--|
| Product description | <p>The ACT20M-RTCI-CO-OLP-S passive configurable temperature transducer isolates and converts analogue signals. An analogue RTD (Type Pt100) or TC (Type J, K) input signal is linearly converted into an analogue output signal and galvanically isolated. Power is supplied through the output measurement circuit (output- loop powered).</p> <p>The ACT20M-RTI-CO-EOLP-S passive configurable temperature transducer does not have any galvanic isolation and has no TC input.</p> |
|---------------------|--|

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**Technical data**

**Classifications**

|             |             |             |             |
|-------------|-------------|-------------|-------------|
| ETIM 8.0    | EC002919    | ETIM 9.0    | EC002919    |
| ETIM 10.0   | EC002919    | ECLASS 14.0 | 27-21-01-29 |
| ECLASS 15.0 | 27-21-01-29 |             |             |

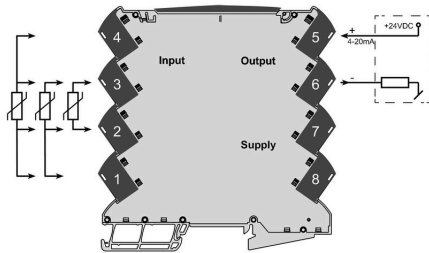
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**Drawings**

**Connection diagram**



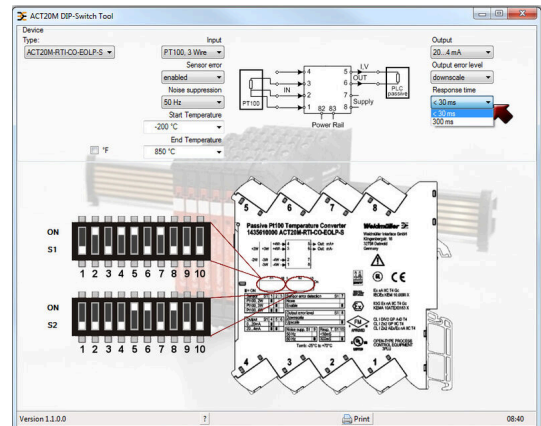
**Dimensional drawing**



DIP switch setting

| RTD & TC element type  | PT100 - 3 Wire |      | PT100 - 4 Wire |      | PT100 - 4 Wire |      | K (external eolp) |      | K (external eolp) |      | K (external eolp) |      |
|------------------------|----------------|------|----------------|------|----------------|------|-------------------|------|-------------------|------|-------------------|------|
|                        | Min.           | Max. | Min.           | Max. | Min.           | Max. | Min.              | Max. | Min.              | Max. | Min.              | Max. |
| Temperature range [°C] | -200 ... 850   |      |                |      |                |      |                   |      |                   |      |                   |      |
| Resolution [°C]        | 0.1            |      |                |      |                |      |                   |      |                   |      |                   |      |
| Output                 | 20 mA          |      |                |      |                |      |                   |      |                   |      |                   |      |
| Output error level     | ±0.1           |      |                |      |                |      |                   |      |                   |      |                   |      |
| Noise suppression      | 50 Hz          |      |                |      |                |      |                   |      |                   |      |                   |      |
| Response time          | ≤ 30 ms        |      |                |      |                |      |                   |      |                   |      |                   |      |

example for DIP switch setting  
 (with ACT20M tool software)



example for DIP switch setting  
 (with ACT20M tool software)



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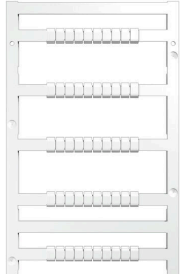
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## Accessories

### 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.  | <a href="#">1877680000</a> |         | MultiFit, Terminal marker, 5 x 7.5 mm, Pitch in mm (P): 7.50 Adels |
| GTIN (EAN) | 4032248468270              |         | RKW, Phoenix, white  |
| Qty.       | 320 ST                     |         |  |