

**ACT20P-PRO DCDC II-24-S**

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

www.weidmueller.com

**Product image**



ACT20P: The flexible solution

- Precise and highly functional signal converters
- Release levers simplify handling

**General ordering data**

|            |   |
|------------|---|
| Version    | Analogue isolating amplifier, 24 V DC power supply, Input : I/U universal, Output : I/U universal |
| Order No.  | <a href="#">2816690000</a>  |
| Type       | ACT20P-PRO DCDC II-24-S   |
| GTIN (EAN) | 4064675313809   |
| Qty.       | 1 items   |

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**Technical data**

**Approvals**

Approvals



|                         |                            |
|-------------------------|----------------------------|
| ROHS                    | Conform                    |
| UL File Number Search   | <a href="#">UL Website</a> |
| Certificate no. (cULus) | E314307                    |

**Dimensions and weights**

|            |          |                 |             |
|------------|----------|-----------------|-------------|
| Depth      | 113.7 mm | Depth (inches)  | 4.4764 inch |
| Height     | 119.2 mm | Height (inches) | 4.6929 inch |
| Width      | 12.5 mm  | Width (inches)  | 0.4921 inch |
| Net weight | 130 g    |                 |             |

**Temperatures**

|                                   |                            |                       |                |
|-----------------------------------|----------------------------|-----------------------|----------------|
| Storage temperature               |                            | Operating temperature | -20 °C...60 °C |
| Humidity at operating temperature | 0...95 % (no condensation) |                       |                |

**Probability of failure**

|                                  |      |      |      |
|----------------------------------|------|------|------|
| SIL in compliance with IEC 61508 | None | MTBF | 76 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                    | 4- wire sensor (with own power supply)  | Number inputs             | 1                                      |
| Input voltage             | configurable, ±40 mV...±300 V, Measuring range: min 40 mV, (Example: 0...+40 mV or -40...0 mV or -20...+20 mV or...), Measuring range, max: 300 V | Input signal              | Current or voltage input is selectable |
| Input current             | configurable, ± 0.1mA...± 100 mA, Measuring range min. 200 µA   | Input resistance, voltage | ≥ 1 MΩ                                 |
| Input resistance, current | <5 mA: approx. 100 Ω; >5 mA: approx. 5 Ω  |                           |  |

**Output**

|                        |  |                           |                         |
|------------------------|--|---------------------------|-------------------------|
| load impedance voltage | ≥ 1 kΩ   | Load impedance current    | ≤ 600 Ω                 |
| Offset voltage         | <10 mV   | Offset current            | 20 µA                   |
| Type                   | active (as current source) or passive (as current sink), connected control can be active / passive | Output voltage, note      | configurable, 0...±10 V |
| Output current         | configurable, 0...±20 mA   | Cut-off frequency (-3 dB) | > 10 kHz/ <10 Hz        |

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## Technical data

### Display

|               |   |      |   |
|---------------|---|------|---|
| Display value | current measured value,<br>Configuration data | Type | Dot-matrix display with<br>ticker text, green |
|---------------|---|------|---|

### General data

|                         |  |                           |          |
|-------------------------|--|---------------------------|----------|
| Accuracy                | <0.05 % of measuring<br>range                  | Protection degree         | IP20     |
| Supply voltage          | 24 V DC (-20% / +30%)                          | Step response time        | ≤50 μs   |
| Mounting rail           | TS 35  | Power consumption         | ≤2.3 W   |
| Temperature coefficient | ≤0,01% des Messbereichs/<br>°C                 | Nominal power consumption | 2 VA     |
| Configuration           | DIP switch, or via display<br>and push-buttons | Operating altitude        | ≤ 2000 m |

### Insulation coordination

|                           |  |                    |   |
|---------------------------|--|--------------------|---|
| Impulse withstand voltage | 5 kV (1.2/50 μs)                                   | EMC standards      | EN 61326-1                                |
| Surge voltage category    | II   | Pollution severity | 2   |
| Galvanic isolation        | 3-way isolator, between<br>input / output / supply | Insulation voltage | 4 kVeff, input / output /<br>power supply |
| Rated voltage             | 600 V  |                    |   |

### 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 <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,<br>min. | AWG 26              | Wire connection cross section AWG,<br>max. | AWG 12              |

### Part description

|                     |   |
|---------------------|---|
| Product description | <p>The universally configurable DC isolating amplifier ACT20P-PRO DCDC II isolates and converts analogue signals. An analogue input signal (current or voltage) is linearly converted into an analogue output signal (current or voltage) and galvanically isolated. The power supply is galvanically isolated from the input and output (3-way isolation).</p> <p>Properties</p> <ul style="list-style-type: none"> <li>• universal wide-range voltage supply</li> <li>• universally configurable via DIP switch or via the LED display using control buttons</li> <li>• Active or passive signal output</li> <li>• Operating status display on a front panel LED</li> <li>• Galvanic 3-way isolation between input, output and supply.</li> </ul> |
|---------------------|---|

### 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 |             |             |

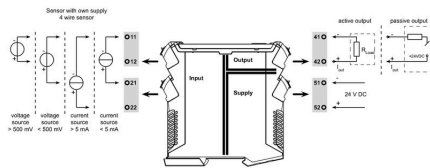
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Drawings

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Wiring



DIP switch setting for standard values

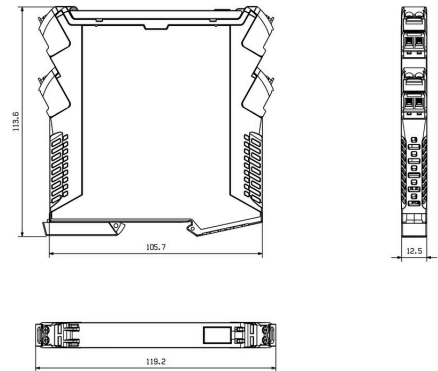
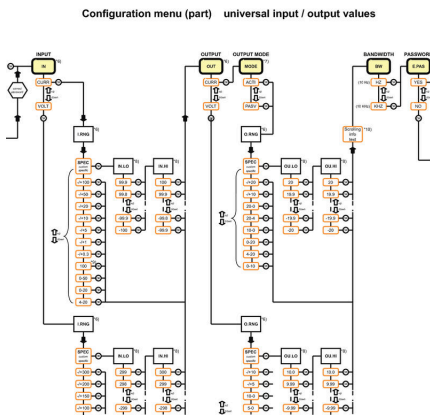
| Input range               | DIP switch |   |   |   |
|---------------------------|------------|---|---|---|
|                           | 1          | 2 | 3 | 4 |
| configuration via display |            |   |   |   |
| -10...+10 V               |            |   |   | ■ |
| -5...+5V                  |            |   |   | ■ |
| 0...300 V                 |            |   | ■ | ■ |
| 0...100 V                 |            |   | ■ | ■ |
| 0...30 V                  |            |   | ■ | ■ |
| 0...10 V                  |            |   | ■ | ■ |
| 2...10 V                  |            |   | ■ | ■ |
| 0...5 V                   |            |   | ■ | ■ |
| 0...10 V                  |            |   | ■ | ■ |
| 0...5 V                   |            |   | ■ | ■ |
| 1...5 V                   |            |   | ■ | ■ |
| 0...150 mV                |            |   | ■ | ■ |
| 0...60 mV                 |            |   | ■ | ■ |
| -20...+20 mA              |            |   | ■ | ■ |
| 0...20 mA                 |            |   | ■ | ■ |
| 4...20 mA                 |            |   | ■ | ■ |
| reserved                  |            |   | ■ | ■ |

| Output range              | DIP switch |   |   |   |
|---------------------------|------------|---|---|---|
|                           | 5          | 6 | 7 | 8 |
| configuration via display |            |   |   |   |
| -10...+10 V               |            |   |   | ■ |
| -5...+5V                  |            |   |   | ■ |
| 10...0 V *                |            |   | ■ | ■ |
| 0...10 V                  |            |   | ■ | ■ |
| 2...10 V                  |            |   | ■ | ■ |
| 5...0 V *                 |            |   | ■ | ■ |
| 0...5 V                   |            |   | ■ | ■ |
| 1...5 V                   |            |   | ■ | ■ |
| -20...+20 mA              |            |   | ■ | ■ |
| -10...+10 mA              |            |   | ■ | ■ |
| 20...0 mA *               |            |   | ■ | ■ |
| 0...20 mA                 |            |   | ■ | ■ |
| 20...4 mA *               |            |   | ■ | ■ |
| 4...20 mA                 |            |   | ■ | ■ |
| reserved                  |            |   | ■ | ■ |

■ = ON \* Inverted output range. Output polarity must be reversed!

Dimensioned drawing



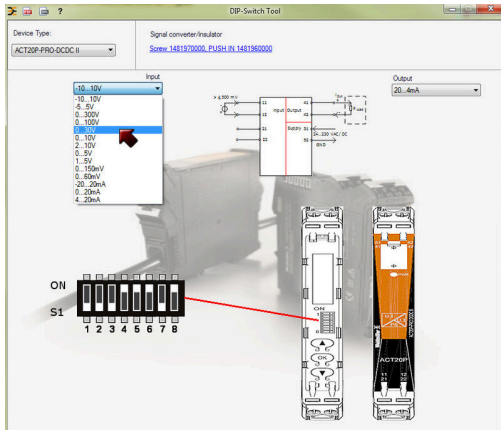
setting via display and push-buttons

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Drawings

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example for DIP switch setting (with ACT20 tool)

## ACT20P-PRO DCDC II-24-S

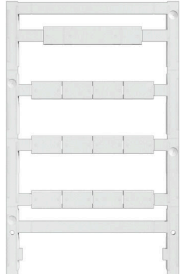
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## Accessories

### Blank



ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.

Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.

Advantages at a glance:

- Tags for universal usage, self-adhesive or clip-on tags, depending on type
- For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
- Individual laser-quality printing according to specifications

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       | ESG 8/13.5/43.3 SAI AU     | Version  |  |
| Order No.  | <a href="#">1912130000</a> | ESG, Device markers x 13.5 mm, PA 66, Colour: Transparent, pluggable |  |
| GTIN (EAN) | 4032248541164              |  |  |
| Qty.       | 5 ST                       |  |  |
| Type       | ESG 6.6/11 BHZ 5.00/02     | Version  |  |
| Order No.  | <a href="#">1082490000</a> | ESG, Device markers x 11 mm, PA 66, Colour: white, pluggable         |  |
| GTIN (EAN) | 4032248845330              |  |  |
| Qty.       | 200 ST                     |  |  |