

ACT20P-CMT-30-AO-RC-P

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

www.weidmueller.com



ACT20P: The flexible solution

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

General ordering data

| | |
|------------|--|
| Version | Current-measuring transducer, Limit value monitoring, Input : 0...20/25/30 A, Analogue output, Relay output, Current-carrying cable in feed-through hole |
| Order No. | 1510320000 |
| Type | ACT20P-CMT-30-AO-RC-P |
| GTIN (EAN) | 4050118319569 |
| Qty. | 1 items |

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Technical data

Approvals

Approvals CE; CULUS; DETNORVER

Approvals CULUS;

Approvals



ROHS Conform

UL File Number Search [UL Website](#)

Certificate no. (cULus) E141197

Dimensions and weights

| | | | |
|------------|----------|-----------------|-------------|
| Depth | 114 mm | Depth (inches) | 4.4882 inch |
| Height | 127.1 mm | Height (inches) | 5.0039 inch |
| Width | 22.8 mm | Width (inches) | 0.8976 inch |
| Net weight | 179.52 g | | |

Temperatures

| | | | |
|---------------------|---------------------------|-----------------------|----------------|
| Storage temperature | -40 °C...85 °C | Operating temperature | -25 °C...60 °C |
| Humidity | 5...95 %, no condensation | | |

Environmental Product Compliance

| | |
|--------------------------------------|--------------------------------------|
| RoHS Compliance Status | Compliant with exemption |
| RoHS Exemption (if applicable/known) | 6c, 7a, 7cl |
| REACH SVHC | Lead 7439-92-1 |
| SCIP | 2f6dd957-421a-46db-a0c2-cf1609156924 |

Input

| | | | |
|-------------------------|---|-----------------|---|
| Number inputs | 1 | Input frequency | AC: 15...700 Hz (true root mean square) |
| Input measurement range | configurable, 0...20/25/30 A AC (RMS) or DC, max. peak current 10 × I _{Input} (1 s), For DC current measurement (AA): Current direction display at the output (-/+ analog value) | Input signal | Current-carrying cable in feed-through hole |
| Overload behaviour | Max. peak current: 10 × I _{Input} for 1s | | |

Output

| | |
|------|---|
| Type | active, connected control must be passive |
|------|---|

Output (digital)

| | | | |
|---------------------------|-----|----------------------------|------------------------|
| Rated switching current | 6 A | Continuous current | 2 × I _{Input} |
| Number of digital outputs | 1 | Max. switching voltage, AC | 250 V |

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| Max. switching voltage, DC | 24 V | Type | Relay, 1 CO contact, normal / inverse adjustment |
| Alarm function | Surge current, Undercurrent, Alarm limit setting: 2 - 105 %, Hysteresis 5% / 10%, Alarm delay: 0...10 s | | |

Output (analogue)

| | | | |
|-------------------------|---------------------------|-------------------------|--|
| Transmit function | direct or inverted | Output voltage | Adjustable, 0...10 V, 2...10 V, 0...5 V, 1...5 V, -5...+5 V, -10...+10 V |
| Load resistance voltage | $\geq 10 \text{ k}\Omega$ | Number analogue outputs | 1 |
| Load resistance current | $\leq 600 \Omega$ | Output current | Adjustable, 0...20 mA, 4...20 mA, -20...+20 mA |

General data

| | | | |
|-------------------------|------------------------------|-------------------------|---|
| Accuracy | <0.75 % FSR | Protection degree | IP20 |
| Supply voltage | 16,8 V...31,2 V | Step response time | $\leq 300 \text{ ms (RMS)}$, $\leq 60 \text{ ms (AA)}$ |
| Mounting rail | TS 35 | Temperature coefficient | typ. 0.04 % / K, max. 0.09 % / K |
| Configuration | DIP switch and potentiometer | Power consumption, max. | 2.2 W |
| Power consumption, typ. | 0.9 W | | |

Insulation coordination

| | | | |
|---------------------------|--------------------------------|------------------------|---|
| Impulse withstand voltage | 6.4 kV (1.2/50 μs) | EMC standards | EN 61326-1 |
| Test voltage | 4 kV | Surge voltage category | III |
| Pollution severity | 2 | Galvanic isolation | 4-way isolator, between input / output / supply / relay |
| Insulation voltage | 4 kVeff / 1 min. | Rated voltage | 300 V ACrms |

Connection data

| | | | |
|---|---------------------|---|---------------------|
| Type of connection | PUSH IN | 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 26 | Wire connection cross section AWG, max. | AWG 14 |
| Wire cross-section, solid, min. | 0.2 mm ² | Wire cross-section, solid, max. | 2.5 mm ² |
| Wire connection cross section, finely stranded, min. | 0.2 mm ² | Wire connection cross section, finely stranded, max. | 2.5 mm ² |
| Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min. | 0.2 mm ² | Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max. | 2.5 mm ² |

Part description

| | | | |
|---------------------|--|--|--|
| Product description | <p>The ACT20P-CMT-XX-(AO)-RC-P series of devices measure and monitor AC and DC currents of up to 60 A. The real effective value method used allows for precise measurement, even for distorted current curve shapes. The devices feature integrated limit value monitoring with an adjustable switching threshold, delay and hysteresis, as well as a relay output.</p> <p>Features</p> <ul style="list-style-type: none"> • Real effective value measurement (True RMS) or arithmetic averaging (AA) measurement and contactless through-hole technology • Limit value monitoring for overcurrent or undercurrent | | |
|---------------------|--|--|--|

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Technical data

- Relay output by means of the open-circuit / closed-circuit principle
- Adjustable trigger delay for filtering current peaks
- Operational status and error display on a front panel LED and output signalling according to NE43, NE44, NE107
- Galvanic four-way insulation for secure isolation according to IEC/EN 61010-2-201

Classifications

| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 8.0 | EC002475 | ETIM 9.0 | EC002475 |
| ETIM 10.0 | EC002475 | ECLASS 14.0 | 27-21-01-23 |
| ECLASS 15.0 | 27-21-01-23 | | |

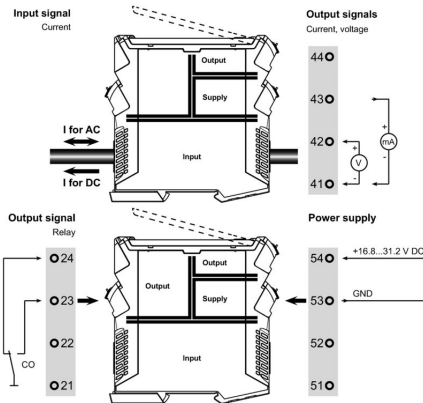
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Drawings

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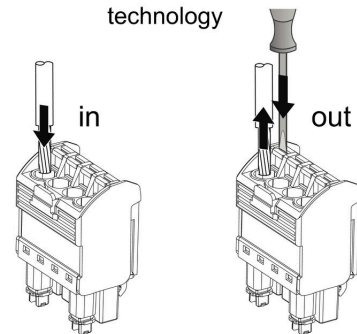
Dimensioned drawing



Configuration

| DIP switch S1 | | DIP switch S2 | |
|-----------------------------------|--------------------------|---------------------------|--------------------------|
| Current input range | 1 2 3 4 5 6 7 8 | Output range | 1 2 3 4 5 6 7 8 |
| 0...20 A | <input type="checkbox"/> | 0...10 V | <input type="checkbox"/> |
| 0...25 A | <input type="checkbox"/> | 2...10 V | <input type="checkbox"/> |
| 0...30 A | <input type="checkbox"/> | 0...5 V | <input type="checkbox"/> |
| Measuring method | 1 2 3 4 5 6 7 8 | 1...5 V | <input type="checkbox"/> |
| True RMS | <input type="checkbox"/> | -5...+5 V | <input type="checkbox"/> |
| Arithmetic average | <input type="checkbox"/> | -10...+10 V | <input type="checkbox"/> |
| Alarm delay time | 1 2 3 4 5 6 7 8 | 0...20 mA | <input type="checkbox"/> |
| 0 s | <input type="checkbox"/> | -20...+20 mA | <input type="checkbox"/> |
| 2 s | <input type="checkbox"/> | Alarm relay action | 1 2 3 4 5 6 7 8 |
| 5 s | <input type="checkbox"/> | Energized | <input type="checkbox"/> |
| 10 s | <input type="checkbox"/> | De-energized | <input type="checkbox"/> |
| Measuring range monitoring | 1 2 3 4 5 6 7 8 | Alarm hysteresis | 1 2 3 4 5 6 7 8 |
| Yes | <input type="checkbox"/> | 5 % | <input type="checkbox"/> |
| No | <input type="checkbox"/> | 10 % | <input type="checkbox"/> |
| Output error action | 1 2 3 4 5 6 7 8 | Alarm type | 1 2 3 4 5 6 7 8 |
| Upscale | <input type="checkbox"/> | High alarm | <input type="checkbox"/> |
| Downscale | <input type="checkbox"/> | Low alarm | <input type="checkbox"/> |
| Transfer function | 1 2 3 4 5 6 7 8 | | |
| Normal | <input type="checkbox"/> | | |
| Inverse | <input type="checkbox"/> | | |

PUSH IN technology



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example for DIP switch setting (with ACT20 tool)