

ACT20P-CML-10-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...1/5/10 A, Analogue output, Relay output, Power cable can be connected to the terminals |
| Order No. | 2489910000 |
| Type | ACT20P-CML-10-AO-RC-P |
| GTIN (EAN) | 4050118499940 |
| 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 | 17.5 mm | Width (inches) | 0.689 inch |
| Net weight | 141 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...400 Hz (true root mean square) |
| Input measurement range | configurable, 0...1/5/10 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 | Power cable can be connected to the terminals |
| Overload behaviour | Max. peak current: 10 × I _{input} for 1s | | |

Output

| | | | |
|------------------------|---------|------|---|
| Load impedance current | ≤ 600 Ω | Type | active, connected control must be passive |
|------------------------|---------|------|---|

Output (digital)

| | | | |
|---------------------------|-----|----------------------------|------------------------|
| Rated switching current | 2 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, Under-current, Alarm limit setting: 2 - 105 %, Hysteresis 5% / 10%, Alarm delay: 0...10 s | | |

Output (analogue)

| | | | |
|-------------------------|--|-------------------------|--------------------|
| Type (analogue output) | Voltage and current output (configurable) | 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 | ≥ 10 kΩ |
| Number analogue outputs | 1 | Load resistance current | ≤ 600 Ω |
| Output current | Adjustable, 0...20 mA, 4...20 mA, -20...+20 mA | | |

General data

| | | | |
|---------------------------|---------------------------------------|-------------------------|--|
| Accuracy | ≤ ±0.3 % @ 1 A / 5 A, ≤ ±0.6 % @ 10 A | Protection degree | IP20 |
| Supply voltage | 16,8 V...31,2 V | Step response time | ≤ 300 ms (RMS), ≤ 60 ms (AA) |
| Mounting rail | TS 35 | Temperature coefficient | ≤ ±100 ppm/K @ -25...+55 °C, ≤ ±200 ppm/K @ +55...+70 °C |
| Nominal power consumption | 0.9 VA | Configuration | DIP switch and potentiometer |
| Power consumption, max. | 2.2 W | | |

Insulation coordination

| | | | |
|---------------------------|------------------|------------------------|---|
| Impulse withstand voltage | 6 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 | The device ACT20P-CML-10-AO-RC-P measures and monitors AC and DC currents of up to 10 A. The real effective value method used allows for precise measurement, even for distorted current curve shapes. The device features an integrated limit value monitoring function with an adjustable switching threshold, lag and hysteresis, as well as a relay output. |
|---------------------|---|

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Features

- Real effective value measurement (True RMS) or arithmetic averaging (AA) measurement
- Limit value monitoring for overcurrent or undercurrent
- 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 | | |

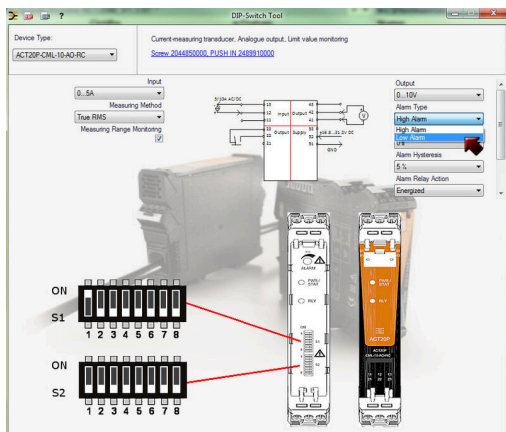
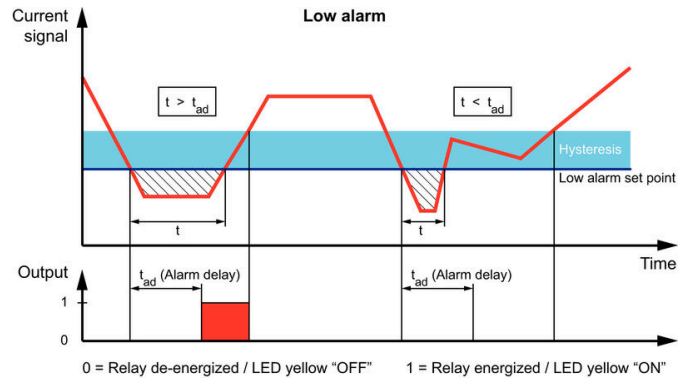
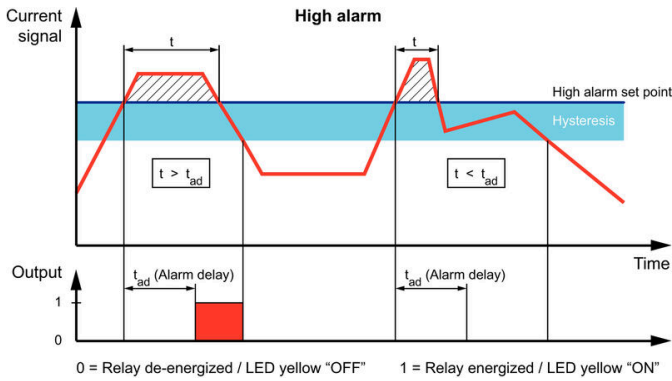
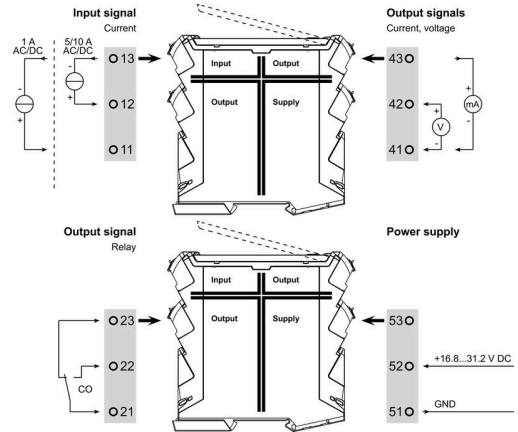
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Drawings

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Connection diagram



example for DIP switch setting (with ACT20 tool)

Configuration

| DIP switch S1 | | | | | | | |
|-----------------------------------|---|---|---|---|---|---|---|
| Current input range | | | | | | | |
| 0...1 A | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 0...5 A | | | | | | | |
| 0...10 A | | | | | | | |
| Measuring method | | | | | | | |
| True RMS | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Arithmetic average | | | | | | | |
| Alarm delay time | | | | | | | |
| 0 s | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 s | | | | | | | |
| 5 s | | | | | | | |
| 10 s | | | | | | | |
| Measuring range monitoring | | | | | | | |
| Yes | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| No | | | | | | | |
| Output error action | | | | | | | |
| Upscale | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Downscale | | | | | | | |
| Transfer function | | | | | | | |
| Normal | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Inverse | | | | | | | |

| DIP switch S2 | | | | | | | |
|---------------------------|---|---|---|---|---|---|---|
| Output range | | | | | | | |
| 0...10 V | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2...10 V | | | | | | | |
| 0...5 V | | | | | | | |
| 1...5 V | | | | | | | |
| -5...+5 V | | | | | | | |
| -10...+10 V | | | | | | | |
| 0...20 mA | | | | | | | |
| 4...20 mA | | | | | | | |
| -20...+20 mA | | | | | | | |
| Alarm relay action | | | | | | | |
| Energized | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| De-energized | | | | | | | |
| Alarm hysteresis | | | | | | | |
| 5% | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 10% | | | | | | | |
| Alarm type | | | | | | | |
| High alarm | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| Low alarm | | | | | | | |

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