

ACT20P-CML-10-AO-RC-S

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
Order No.	2044850000
Type	ACT20P-CML-10-AO-RC-S
GTIN (EAN)	4050118409680
Qty.	1 items

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Technical data

Approvals

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ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E141197

Dimensions and weights

Depth	113.6 mm	Depth (inches)	4.4724 inch
Height	119.2 mm	Height (inches)	4.6929 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		

Probability of failure

MTTF	130 a
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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)	Overload behaviour	Max. peak current: 10 × I _{Input} for 1s

Output

Load impedance current	≤ 600 Ω	Type	active, connected control must be passive
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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, Undercurrent, 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	Screw connection	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.6 Nm	Clamping range, rated connection	1.5 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 12

Part description

Product description	<p>The device ACT20P-CML-10-AO-RC-S 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.</p> <p>Features</p> <ul style="list-style-type: none"> • 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 		
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Technical data

- 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		

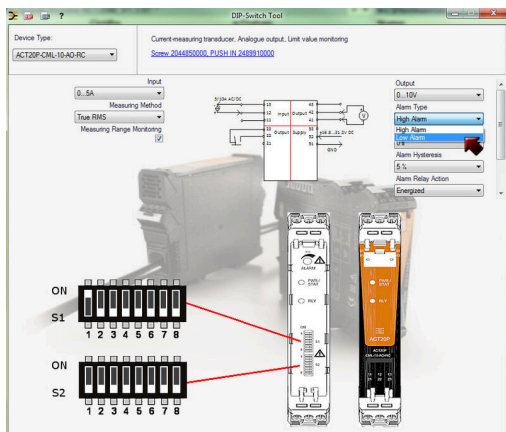
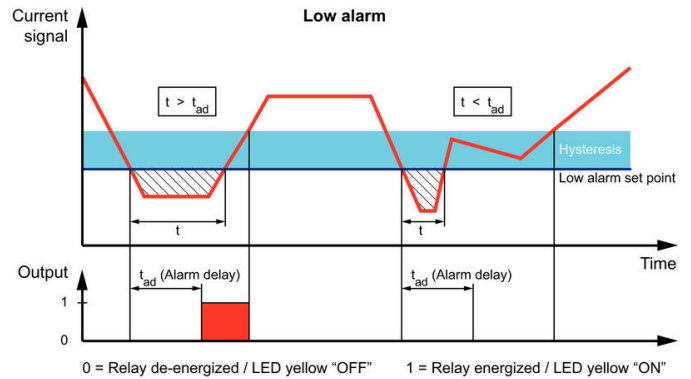
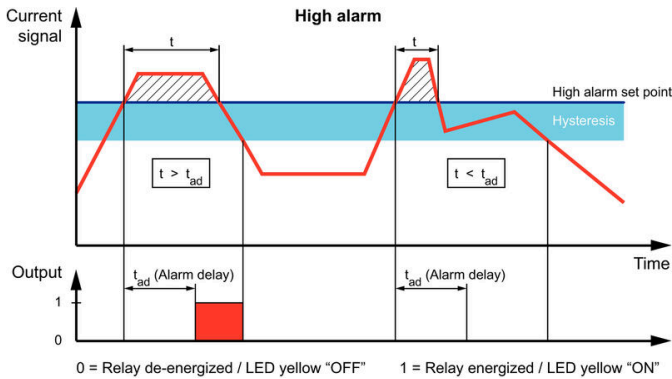
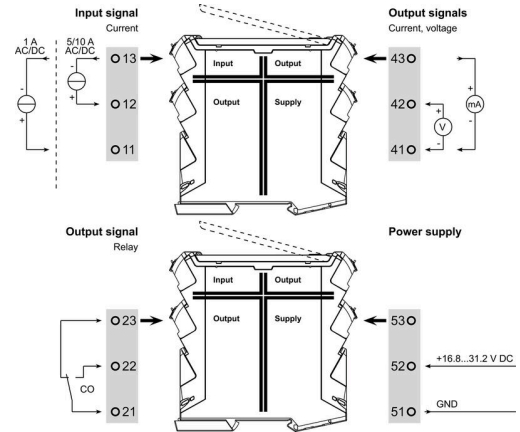
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Drawings

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Connection diagram



example for DIP switch setting (with ACT20 tool)

Configuration

DIP switch S1	
Current input range	1 2 3 4 5 6 7 8
0...1 A	<input type="checkbox"/>
0...5 A	<input checked="" type="checkbox"/>
0...10 A	<input type="checkbox"/>
Measuring method	1 2 3 4 5 6 7 8
True RMS	<input checked="" type="checkbox"/>
Arithmetic average	<input type="checkbox"/>
Alarm delay time	1 2 3 4 5 6 7 8
0 s	<input type="checkbox"/>
2 s	<input type="checkbox"/>
5 s	<input checked="" type="checkbox"/>
10 s	<input type="checkbox"/>
Measuring range monitoring	1 2 3 4 5 6 7 8
Yes	<input type="checkbox"/>
No	<input checked="" type="checkbox"/>
Output error action	1 2 3 4 5 6 7 8
Upscale	<input type="checkbox"/>
Downscale	<input checked="" type="checkbox"/>
Transfer function	1 2 3 4 5 6 7 8
Normal	<input checked="" type="checkbox"/>
Inverse	<input type="checkbox"/>

DIP switch S2	
Output range	1 2 3 4 5 6 7 8
0...10 V	<input type="checkbox"/>
2...10 V	<input checked="" type="checkbox"/>
0...5 V	<input type="checkbox"/>
1...5 V	<input type="checkbox"/>
-5...+5 V	<input type="checkbox"/>
-10...+10 V	<input type="checkbox"/>
0...20 mA	<input type="checkbox"/>
4...20 mA	<input checked="" type="checkbox"/>
-20...+20 mA	<input type="checkbox"/>
Alarm relay action	1 2 3 4 5 6 7 8
Energized	<input type="checkbox"/>
De-energized	<input checked="" type="checkbox"/>
Alarm hysteresis	1 2 3 4 5 6 7 8
5 %	<input type="checkbox"/>
10 %	<input checked="" type="checkbox"/>
Alarm type	1 2 3 4 5 6 7 8
High alarm	<input type="checkbox"/>
Low alarm	<input checked="" type="checkbox"/>