

ACT20P-CML-10-AO-RC-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	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 pc(s).

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Technical data

Dimensions and weights

Depth	113.6 mm	Depth (inches)	4.472 inch
Height	119.2 mm	Height (inches)	4.693 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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Input

Input frequency		Input measurement range	configurable, 0...1/5/10 A AC (RMS) or DC, max. peak current $10 \times I_{\text{Input}}$ (1 s), For DC current measurement (AA): Current direction display at the output (-/+ analog value)
	AC: 15...400 Hz (true root mean square)		
Number of inputs	1	Overload behaviour	Max. peak current: $10 \times I_{\text{Input}}$ for 1s

Output

Load impedance current	$\leq 600 \Omega$	Type	active, connected control must be passive
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Output (digital)

Alarm function	Surge current, Under-current, Alarm limit setting: 2 - 105 %, Hysteresis 5% / 10%, Alarm delay: 0... 10 s	Continuous current	$2 \times I_{\text{Input}}$
Max. switching voltage, AC	250 V	Max. switching voltage, DC	24 V
Number of digital outputs	1	Rated switching current	2 A
Type	Relay, 1 CO contact, normal / inverse adjustment		

Output (analogue)

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

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General data

Accuracy	$\leq \pm 0.3\% @ 1\text{ A} / 5\text{ A}, \leq \pm 0.6\% @ 10\text{ A}$	Configuration	DIP switch and potentiometer
Galvanic isolation	4-way isolator, between input / output / supply / relay	Power consumption, max.	2.2 W
Protection degree	IP20	Rail	TS 35
Step response time	$\leq 300\text{ ms (RMS)}, \leq 60\text{ ms (AA)}$	Temperature coefficient	$\leq \pm 100\text{ ppm/K @ -25...+55 }^\circ\text{C}, \leq \pm 200\text{ ppm/K @ +55...+70 }^\circ\text{C}$
Voltage supply	16,8 V...31,2 V		

Insulation coordination

EMC standards	EN 61326-1	Galvanic isolation	4-way isolator, between input / output / supply / relay
Impulse withstand voltage	6 kV (1.2/50 μs)	Insulation voltage	4 kV _{eff} / 1 min.
Pollution severity	2	Rated voltage	300 V AC _{rms}
Surge voltage category	III	Test voltage	4 kV

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

Classifications

ETIM 6.0	EC002475	ETIM 7.0	EC002475
ETIM 8.0	EC002475	ETIM 9.0	EC002475
ECLASS 9.0	27-21-01-23	ECLASS 9.1	27-21-01-23
ECLASS 10.0	27-21-01-23	ECLASS 11.0	27-21-01-23
ECLASS 12.0	27-21-01-23	ECLASS 13.0	27-21-01-23
ECLASS 14.0	27-21-01-23		

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

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Technical data**Important note**

Product information

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.

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

Approvals

Approvals



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

Downloads

Approval/Certificate/Document of Conformity	Certification DNV GL Certification UL Declaration of Conformity
Engineering Data	CAD data – STEP
Software	DIP switch configuration tool
User Documentation	instruction sheet
Catalogues	Catalogues in PDF-format

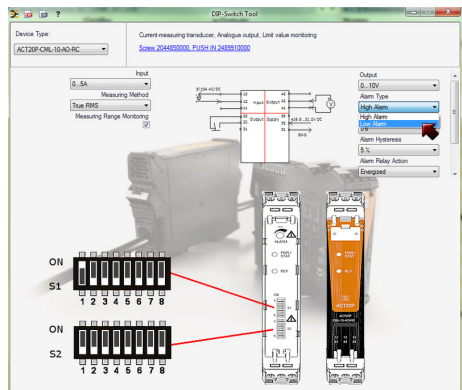
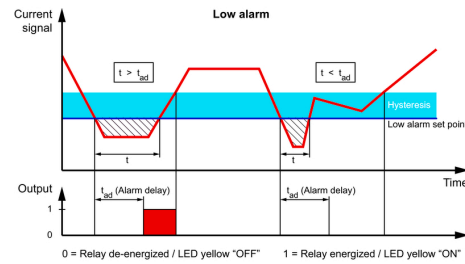
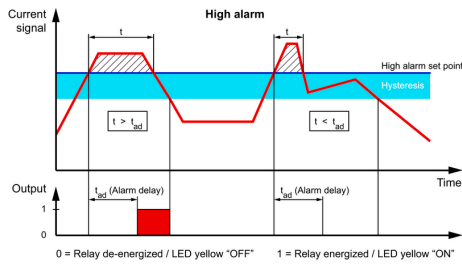
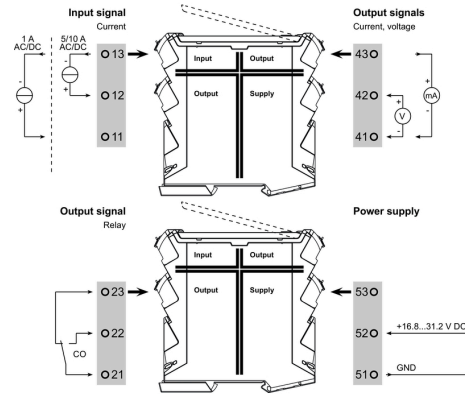
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Drawings

Connection diagram



Configuration

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

example for DIP switch setting (with ACT20 tool)