

ACT20P-PRO DCDC II-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	Analogue isolating amplifier, 24...230 V AC/DC power supply, Input : I/U universal, Output : I/U universal
Order No.	1481970000
Type	ACT20P-PRO DCDC II-S
GTIN (EAN)	4050118291032
Qty.	1 items

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Technical data

Approvals

Approvals	CCCEX; CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; IECEXULD
Approvals	CULUS;
Approvals	



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E314307
Certificate no. (cULusEX)	E345958

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	-40 °C...85 °C	Operating temperature	-20 °C...60 °C
Humidity at operating temperature	0...95 % (no condensation)	Humidity	5...95 %, no condensation

Probability of failure

SIL in compliance with IEC 61508	None	MTBF	76 a
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Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-42 1a-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		

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Output

load impedance voltage	$\geq 1 \text{ k}\Omega$	Load impedance current	$\leq 600 \Omega$
Offset voltage	$< 10 \text{ mV}$	Offset current	$20 \mu\text{A}$
Type	active (as current source) or passive (as current sink), connected control can be active / passive	Output voltage, note	Adjustable, $0 \dots \pm 10 \text{ V}$
Output current	configurable, $0 \dots \pm 20 \text{ mA}$	Cut-off frequency (-3 dB)	$> 10 \text{ kHz} / < 10 \text{ Hz}$

Display

Display value	Configuration data	Type	Dot-matrix display with ticker text, green
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General data

Accuracy	$< 0.05 \%$ of measuring range	Protection degree	IP20
Supply voltage	$24 \dots 230 \text{ V DC} \pm 20 \%$, $24 \dots 230 \text{ V AC} \pm 10 \%$ @ $48 \dots 62 \text{ Hz}$	Step response time	$\leq 50 \mu\text{s}$
Mounting rail	TS 35	Power consumption	$\leq 2.3 \text{ W}$
Temperature coefficient	$\leq 0.01\%$ des Messbereichs/ $^{\circ}\text{C}$	Nominal power consumption	2 VA
Configuration	DIP switch, or via display and push-buttons	Operating altitude	$\leq 2000 \text{ m}$

Insulation coordination

Impulse withstand voltage	$5 \text{ kV} (1.2/50 \mu\text{s})$	EMC standards	EN 61326-1
Surge voltage category	II	Pollution severity	2
Galvanic isolation	3-way isolator, between input / output / supply	Insulation voltage	4 kVeff , input / output / power supply
Rated voltage	600 V		

Data for Ex applications (ATEX)

Marking	II 3 G Ex nA IIC T4 Gc
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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^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 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"> • universal wide-range voltage supply • universally configurable via DIP switch or via the LED display using control buttons • Active or passive signal output • Operating status display on a front panel LED • Galvanic 3-way isolation between input, output and supply.
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Technical data

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		

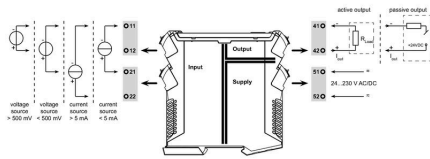
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Drawings

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Wiring



DIP switch setting for standard values

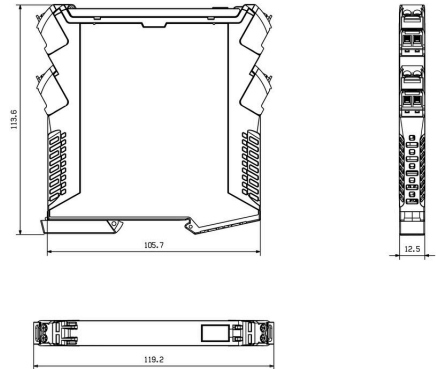
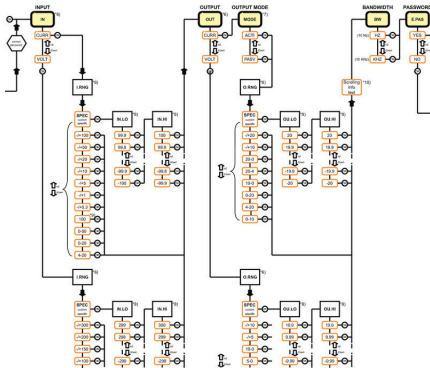
Input range	DIP switch			
	1	2	3	4
configuration via display				
-10...+10 V				
-5...+5V				
0...300 V				
0...100 V				
0...30 V				
0...10 V				
2...10 V				
0...5 V				
0...10 V				
0...5 V				
1...5 V				
0...150 mV				
0...60 mV				
-20...+20 mA				
0...20 mA				
4...20 mA				
reserved				

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

Configuration menu (part) universal input / output values



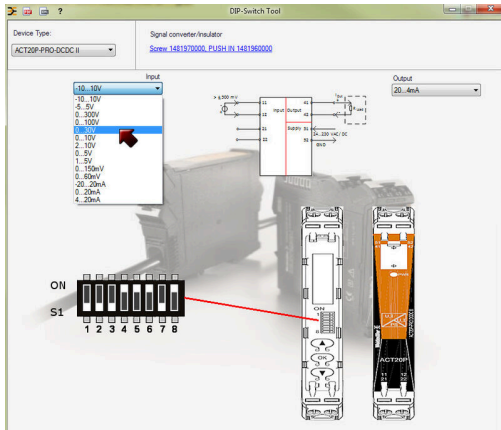
setting via display and push-buttons

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example for DIP switch setting (with ACT20 tool)