Weidmüller

ACT20P
ACT20P-UI-AO-DO-LP-S

Product image

ACT20P: The flexible solution

• Precise and highly functional signal converters

• Release levers simplify handling

General ordering data

Type	ACT20P-UI-AO-DO-LP-S
Order No.	1453210000
Version	Signal converter/insulator, Limit value monitoring, Input: temperature, R, U, I, Output: 4 - 20 mA, Output current loop powered, Input : universal U, I, R,ϑ, Output : 4-20 mA
GTIN (EAN)	4050118259605
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Width	12.5 mm	Width (inches)	0.492 inch
Height	119.2 mm	Height (inches)	4.693 inch
Depth	113.6 mm	Depth (inches)	4.472 inch
Net weight	157 g		

Temperatures

Humidity	10...90 %, no condensation	Operating temperature, max.	70 ℃
Operating temperature, min.	-20 ℃	Storage temperature, max.	70 ℃
Storage temperature, min.	-20 ℃	Operating temperature	-20 ℃...70 ℃
Ambient temperature	-20 ℃...+70 ℃	Storage temperature	-20 ℃...70 ℃

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1

Input

Number of inputs	1	Type	Universal signal isolator / signal amplifier, thermocouple, RTD
Sensor	PT100 (2-/3- wire), PT1000 (2-/3- wire), PT200, N120, Cu 10, Thermocouples: B, E, J, K, L, N, R, S, T, U	Sensor supply	0.1 mA / 0.05 mA (depending on measuring range) @ RTD cable
Influence of the sensor cable resistance	5 Ω @ RTD- Kabel	Input voltage	configurable, -150...+150 mV DC (min. measurement range 15 mV), -600...+600 mV DC (min. measurement range 50 mV), ± 12 V DC (min. measurement range 1 V), ± 28 V DC (min. measurement range 2 V), ± 300 V DC (min. measurement range 100 V), 0...1 V AC (min. measurement range 300 mV), 0...250 V AC (min. measurement range 100 V)
Input resistance, voltage	> 10 MΩ @ 600 mV, 2 MΩ	Input current	configurable, ± 5 A DC (min. measurement range 0.5 A)
Input resistance, current	40 Ω	Cable-length compensation	< ±0.002 Ω per cable resistance Ω
Temperature input range	CU10: -100...+260 ℃, Ni120: -80 ℃...+320 ℃, PT100 / 200 / 1000: -200 ℃...+850 ℃, B: +100...+1820 ℃, E: -270...+1000 ℃, J: -270...+1200 ℃, K: -270...+1372 ℃, L: +100...+900 ℃, N: -180...+1300 ℃, R: -50...+1768 ℃, S: -50...+1768 ℃, T: -270...+400 ℃, U: -200...+600 ℃	Resistance	0...750 Ω, 0...1.5 kΩ, 0... 12 kΩ
Potentiometer	1.2...500 kΩ		

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Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

Technical data

General data

Accuracy	< 0.1 % of measuring range	Cold-junction compensation error	$\pm1.0°C$ @ -20° C - 65°C
Configuration	With FDT/DTM software	Galvanic isolation	2-way isolator, between input/output
Rail	TS 35	Step response time	450 ms
Temperature coefficient	< 0.02 °C of measuring range / °C	Voltage supply	Output loop powered, (10...45 V)

Insulation coordination

Galvanic isolation	2-way isolator, between input/output	Impulse withstand voltage	4 kV (1.2/50 µs)
Insulation voltage	3.51 kV between input and output	Pollution severity	2
Rated voltage	300 V_{eff}	Surge voltage category	III

Output (analogue)

Output current	4...20 mA (current loop)	Signal output	direct or inverted

Output (digital)

Alarm function	configurable, Top and bottom limit values, window range, Alarm delay: 0...99 s	Hysteresis	≥ 0.1 % of FS
Number of digital outputs	1	Type	Transistor, open collector
Rated switching current	20 mA	Rated switching voltage	≤ 30 V DC

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 mm²
Clamping range, min.	0.5 mm²	Clamping range, max.	2.5 mm²
Wire connection cross section AWG, min.	AWG 26	Wire connection cross section AWG, max.	AWG 12

Classifications

ETIM 6.0	EC002653	ETIM 7.0	EC002653
eClass 9.0	27-21-01-20	eClass 9.1	27-21-01-90
eClass 10.0	27-21-01-20		

Product information

Product information	The ACT20P-UI-AO-DO-LP-X converts and isolates current, voltage, potentiometer and temperature sensor signals (mA, A, mV, V, potentiometer, RTD and TC). The transmit function between the input and output can be set via the configuration program either to predefined functions (x0.5, x, x2) or via a freely definable function table. The device is powered via the output current loop. Features • Configuration and monitoring are performed via FDT/DTM-Software „WI-Manager". • The active or passive signal inputs for RTD, TC, potentiometer, mV, V, mA and A are completely electrically isolated. • The TC signal input has internal cold-junction compensation. • Alarm output (for example, for limit monitoring, sensor error detection and more) • 3-way galvanic isolation between input, output/supply and alarm output.

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Technical data

Approvals

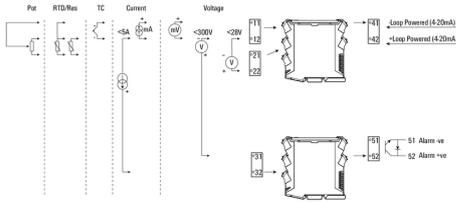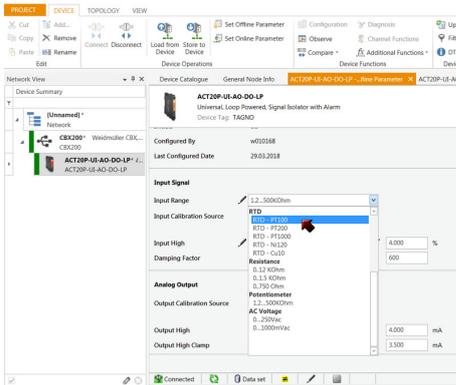| Approvals	
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Approvals	CULUS;
ROHS	Conform

Downloads

Approval/Certificate/Document of Conformity	UL Certification Declaration of Conformity
Brochure/Catalogue	CAT 4.1 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD, Zuken E3.S
Engineering Data	STEP
Software	WI-Manager, DTM-Library for online installation V.1.2.0
User Documentation	Instruction sheet

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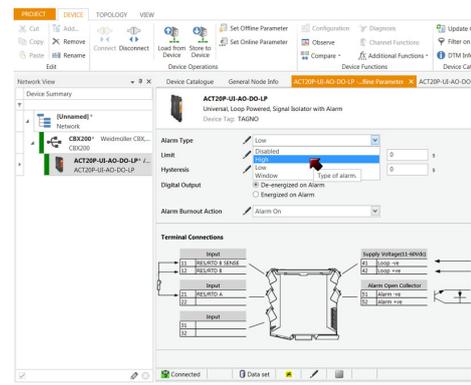
Drawings

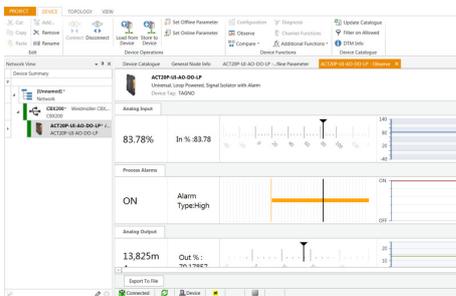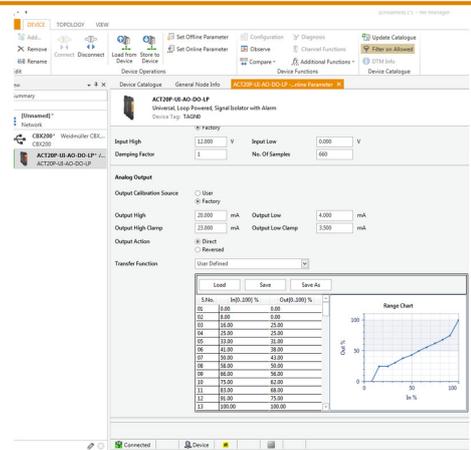### Connection diagram

Dimensioned drawing

screenshot of configuration with FDT2 / DTM software

screenshot of configuration with FDT2 / DTM software

screenshot of "observe" with FDT2 / DTM software"

example of user defined transfer function
for assigning customized output values

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Accessories

Markers

ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.
Various types are available for devices from the following manufacturers:
• Siemens
• Télémecanique
• ABB
• Beckhoff
• Lumberg
• Tags for all-purpose usage; self-adhesive or clip-on tags, depending on the type

Advantages at a glance:
• Tags for universal usage, self-adhesive or clip-on tags, depending on type
• For aligned equipment, e.g. circuit breakers, we supply ESG markers for clipping onto tag rails
• Individual laser-quality printing according to specifications

General ordering data

Type	ESG 8/13.5/43.3 SAI AU	Version	
Order No.	1912130000	ESG, Device markers x 13.5 mm, PA 66, Colour: Transparent	
GTIN (EAN)	4032248541164		
Qty.	5 pc(s).		
Type	ESG 6.6/11 BHZ 5.00/02	Version	
Order No.	1082490000	ESG, Device markers x 11 mm, PA 66, Colour: white	
GTIN (EAN)	4032248845330		
Qty.	200 pc(s).		

Configuration interfaces

CBX 100/CBX 200 USB interfaces for PC-based configuration and calibration
of the universal signal isolating converters ITXPlus, WAVE TTA and the ACT20 series.
CBX 100/200 USB interface adapters have a status LED for
displaying the transmit/receive mode. The driver software is an integral part of the Weidmüller DTM Library and is available for download
at our website.

General ordering data

Type	CBX200 USB
Order No.	8978580000
GTIN (EAN)	4032248813759
Qty.	1 pc(s).

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