ACT20P-UI-AO-DO-LP

Universal, Output Loop Powered Signal Converter

General ordering data

Version	Limit value monitoring, Input : universal U, I, R,ϑ, Output : 4-20 mA, (loop powered), Transistor (Alarm)
Order No.	1453210000
Type	ACT20P-UI-AO-DO-LP
GTIN (EAN)	4050118259605
Qty.	1 items

ACT20P-UI-AO-DO-LP

Technical data

Approvals

Approvals	CE; CULUSEX
Approvals	CULUS;
Approvals	
ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULusEX)	E338066

Dimensions and weights

Depth	113.6 mm	Depth (inches)	4.4724 inch
Height	119.2 mm	Height (inches)	4.6929 inch
Width	12.5 mm	Width (inches)	0.4921 inch
Net weight	150.63 g		

Temperatures

Storage temperature	-20 °C...70 °C	Operating temperature	-20 °C...60 °C
Humidity at operating temperature	0...95 % (no condensation)	Humidity	10...90 %, no condensation

Probability of failure

SIL in compliance with IEC 61508	None

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cI
REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-421a-46db-a0c2-cf1609156924

Input

Sensor	PT100 (2-/3- wire), PT1000 (2-/3- wire), PT200, N120, Cu 10, Thermocouples: B, E, J, K, L, N, R, S, T, U	Number inputs	1
Type	Universal signal isolator / signal amplifier, thermocouple, RTD	Potentiometer	1.2...500 kΩ
Sensor supply	0.1 mA / 0.05 mA (depending on measuring range) @ RTD cable	Input voltage	configurable, ± 150 mV DC (min. measurement range 15 mV), ± 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...300 V AC
Temperature input range	CU10: -100...+260 °C, Ni120: -80 °C...+320 °C, PT100 / 200 / 1000:	Resistance	0...750 Ω, 0...1.5 kΩ, 0...12 kΩ

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	-200 °C...+850 °C, B: +100...+1820 °C, E: -270...+1000 °C, J: -270...+1200 °C, K: -270...+1372 °C, L: +100...+900 °C, N: -180...+1300 °C, R: -50...+1768 °C, S: -50...+1768 °C, T: -270...+400 °C, U: -200...+600 °C		
Input current	configurable, ± 5 A DC (min. measurement range 0.5 A), ± 25 mA DC	Input resistance, voltage	> 10 MΩ @ 600 mV, 2 MΩ
Input resistance, current	40 Ω	Cable-length compensation	<±0.002 Ω per cable resistance Ω
Influence of the sensor cable resistance	5 Ω @ RTD- Kabel		

Output

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

Output (digital)

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

Output (analogue)

Signal output	direct or inverted	Number analogue outputs	1
Load resistance current	typ. 700 Ω @ 24 V DC	Output current	4...20 mA (current loop)

General data

Accuracy	<0.1 % of measuring range	Protection degree	IP20
Supply voltage	Output loop powered, (10...45 V)	Cold-junction compensation error	±1.0°C @ -20° C - 65°C
Step response time	450 ms	Mounting rail	TS 35
Temperature coefficient	<0.02 °C of measuring range / °C	Nominal power consumption	2 VA
Configuration	With FDT/DTM software, Requires configuration adapter 8978580000 CBX200 USB	Operating altitude	≤ 2000 m

Insulation coordination

Impulse withstand voltage	4 kV (1.2/50 µs)	EMC standards	EN 61326-1
Surge voltage category	III	Pollution severity	2
Galvanic isolation	2-way isolator, between input/output	Insulation voltage	3.51 kV between input and output
Rated voltage	300 Veff		

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

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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

Part description

Product description	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.

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

Connection diagram

Dimensioned drawing
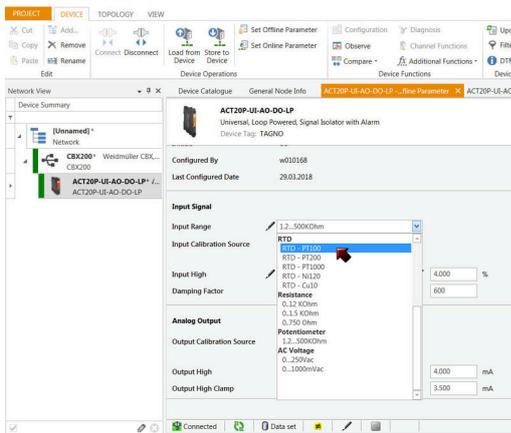
screenshot of configuration with FDT2 / DTM software

screenshot of configuration with FDT2 / DTM software

Weidmüller ϾϹ

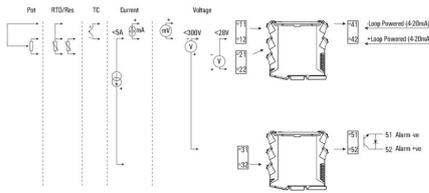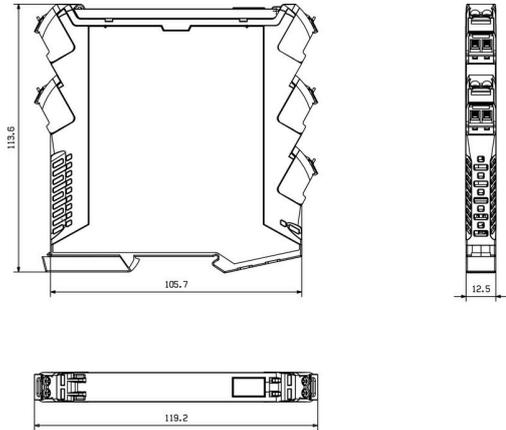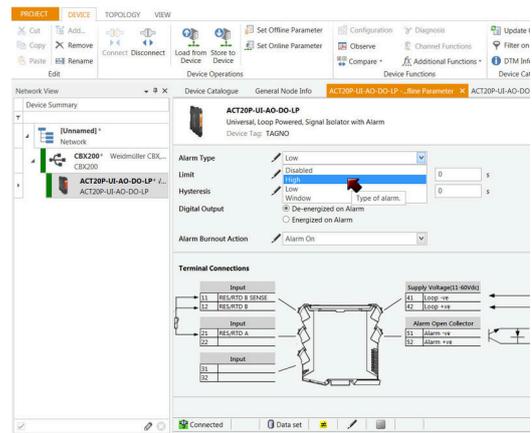**Weidmüller Interface GmbH & Co. KG**
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Drawings
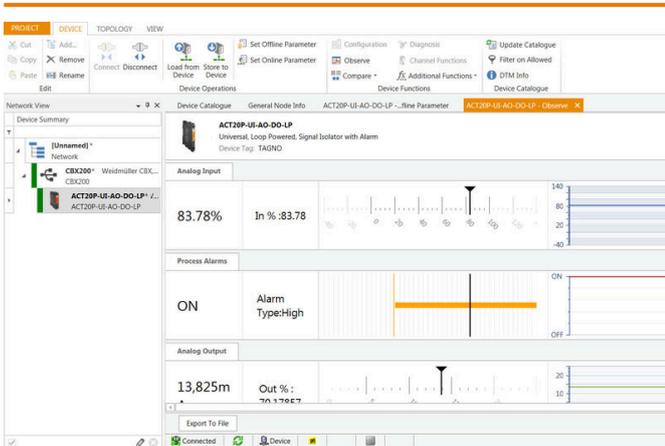
screenshot of "observe" with FDT2 / DTM software"
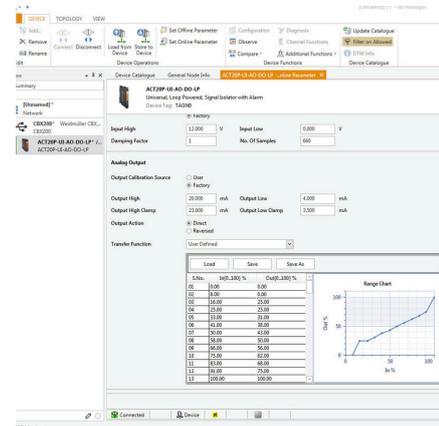
example of user defined transfer function
for assigning customized output values

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Accessories

Configuration interfaces

General ordering data

Type	CBX200 USB	Version	
Order No.	8978580000		
GTIN (EAN)	4032248813759		
Qty.	1 ST		

Blank
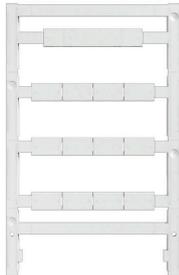
ESG is the tried-and-tested marker in MultiCard format for use on many well-known electrical devices. The result is high-quality device marking with a high-contrast appearance.

Various types are available for devices from manufacturers like Siemens, ABB, Beckhoff etc.
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

For custom printing: Please send us a file of our labeling software M-Print PRO or M-Print PRO Online (without installation) for your labeling 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	pluggable	
Qty.	5 ST		
Type	ESG 6.6/11 BHZ 5.00/02	Version	
Order No.	1082490000	ESG, Device markers x 11 mm, PA 66, Colour: white, pluggable	
GTIN (EAN)	4032248845330		
Qty.	200 ST		