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

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany
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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	ACT20P, Signal converter/insulator, Limit value monitoring, Input: temperature, R, U, I, Output: 4 - 20 mA, Output current loop powered
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 °C
Operating temperature, min.	-20 °C	Storage temperature, max.	70 °C
Storage temperature, min.	-20 °C	Operating temperature	-20 °C...70 °C
Ambient temperature	-20 °C...+70 °C	Storage temperature	-20 °C...70 °C

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 range15 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 range300 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 °C, Ni120: -80 °C...+320 °C, PT100 / 200 / 1000: -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	Resistance	0...750 Ω, 0...1.5 kΩ, 0...12 kΩ
Potentiometer	1.2...500 kΩ		

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General data

Accuracy	< 0.1 % of measuring range	Cold-junction compensation error	±1.0°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

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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Approvals

Approvals

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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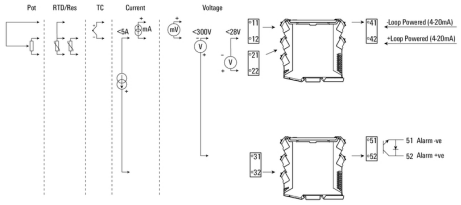
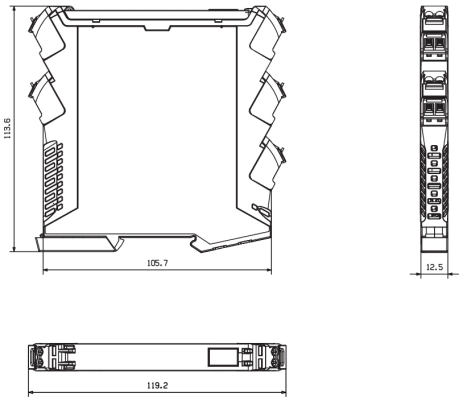
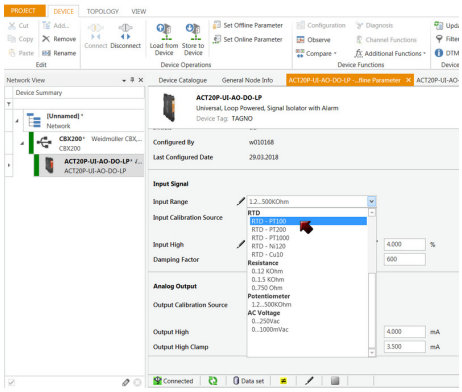
Drawings

Connection diagram

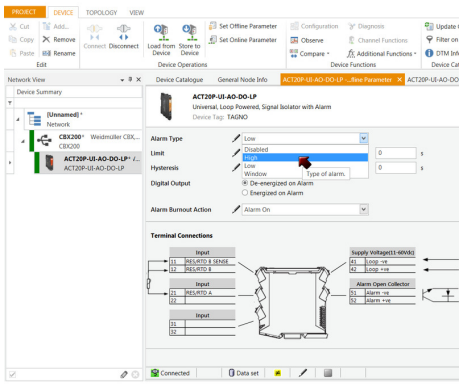


Dimensioned drawing

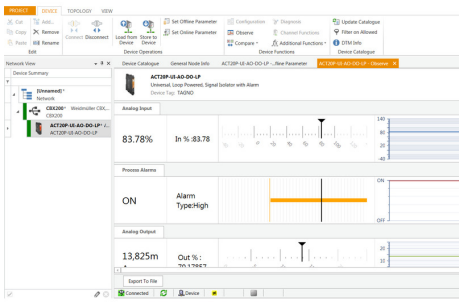




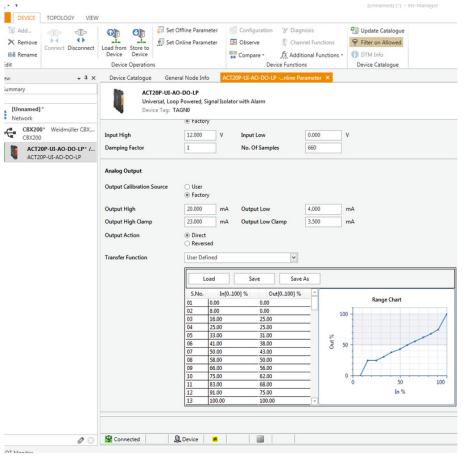
screenshot of configuration with FDT2 / DTM software



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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