

ACT20P-UI-AO-DO-LP**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	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 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	12.5 mm	Width (inches)	0.492 inch
Net weight	225.52 g		

Temperatures

Storage temperature	-20 °C...70 °C	Operating temperature	-20 °C...70 °C
Operating temperature, min.	-20 °C	Operating temperature, max.	70 °C
Humidity	10...90 %, no condensation		

Probability of failure

SIL in compliance with IEC 61508	None
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Input

Cable-length compensation	< ±0.002 Ω per cable resistance Ω	Influence of the sensor cable resistance	5 Ω @ RTD- Kabel
Input current	configurable, ± 5 A DC (min. measurement range 0.5 A)	Input resistance, current	40 Ω
Input resistance, voltage		Input voltage	configurable, ± 12 V DC (min. measurement range 1 V), ± 28 V DC (min. measurement range 2 V), ± 300 V DC (min. measurement range 100 V)
	> 10 MΩ @ 600 mV, 2 MΩ	Potentiometer	1.2...500 kΩ
Number of inputs	1	Sensor	PT100 (2-/3- wire), PT1000 (2-/3- wire), PT200, N120, Cu 10, Thermocouples: B, E, J, K, L, N, R, S, T, U
Resistance	0...750 Ω, 0...1.5 kΩ, 0...12 kΩ	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
Sensor supply	0.1 mA / 0.05 mA (depending on measuring range) @ RTD cable		
Type	Universal signal isolator / signal amplifier, thermocouple, RTD		

Output

Load impedance current	≤ 600 Ω	Type	passive, connected control must be active
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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	Rated switching current	20 mA
Rated switching voltage	≤ 30 V DC	Type	Transistor, open collector

Output (analogue)

Number of analogue outputs	1	Output current	4...20 mA (current loop)
Signal output	direct or inverted		

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
Long-term drift	0	Rail	TS 35
Step response time	450 ms	Temperature coefficient	<0.02 °C of measuring range / °C
Type of connection	Screw connection	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

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

Classifications

ETIM 6.0	EC002653	ETIM 7.0	EC002653
ETIM 8.0	EC002653	ECLASS 9.0	27-21-01-20
ECLASS 9.1	27-21-01-20	ECLASS 10.0	27-21-01-20
ECLASS 11.0	27-21-01-20	ECLASS 12.0	27-21-01-20

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-421a-46db-a0c2-cf1609156924

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Technical data**Important note**

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.

Approvals

Approvals



Approvals

CULUS;

ROHS

Conform

Downloads

Approval/Certificate/Document of Conformity

[UL Certification](#)
[Declaration of Conformity](#)

Engineering Data

[CAD data – STEP](#)

Engineering Data

[WSCAD, Zuken E3.S](#)

Software

[Library and function block – WI-Manager, DTM-Library for online installation](#)
[Release notes for Weidmueller FDT-DTM Software version](#)

User Documentation

[Instruction sheet](#)
[20210120 Security Advisory - WI-Manager affected by MundM Software fdtCONTAINER vulnerability](#)

Catalogues

[Catalogues in PDF-format](#)

Brochures

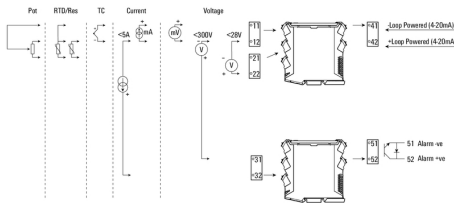
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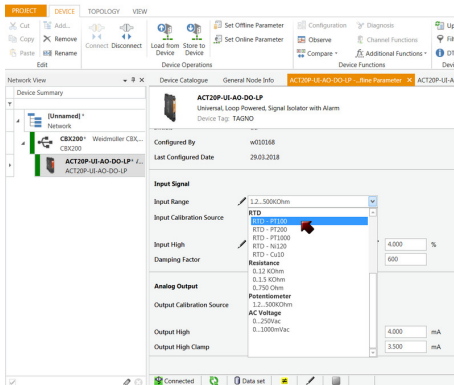
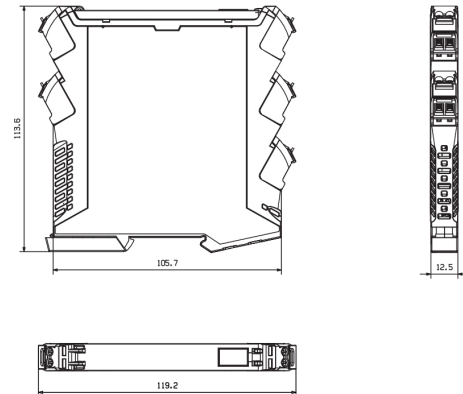
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Drawings

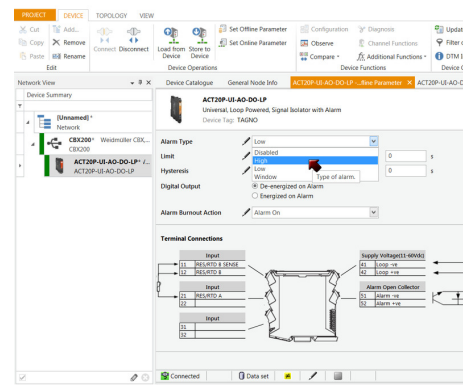
Connection diagram



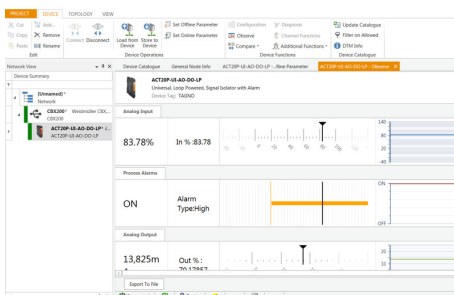
Dimensioned drawing



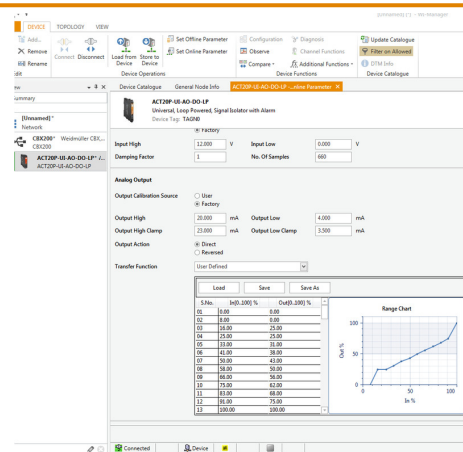
screenshot of configuration with FDT2 / DTM software



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