

ACT20P-PRO-RTCI-AO-DO-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	Temperature converter, Limit value monitoring, Input : Temperature, Resistance, Potentiometer, Output : I/U universal, Transistor (Alarm)
Order No.	2448100000
Type	ACT20P-PRO-RTCI-AO-DO-S
GTIN (EAN)	4050118462241
Qty.	1 items

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Technical data

Approvals

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ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E337701

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	194 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-40 °C...60 °C
Humidity	5...95 %, no condensation		

Probability of failure

MTTF	20 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	RTD: PT100, PT200, PT500, PT1000, Ni50, Ni100, Ni120, Ni1000, Cu10, Cu25, Cu50, Cu100, RTD (2-wire): KTY83/110, KTY83/120, KTY83/150, KTY83/121, KTY83/122, KTY83/210, KTY83/220, KTY83/221, KTY83/250, KTY82/110, KTY82/120, KTY82/150, KTY82/121, KTY82/122, KTY82/210, KTY82/220, KTY82/221, KTY82/250, KTY84/130, KTY16, KTY19, ST13, ST20, Thermocouples: B, E, J, K, L, N, R, S, T, U, L	Number inputs	1
Potentiometer	500 Ω... 120 kΩ	Input voltage	0...300 mV
Temperature input range	adjustible from -200...+850 °C	Resistance	0... 15 kΩ
Note, technical data 1	see details in instruction sheet		

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Output (digital)

Rated switching voltage	24 VDC $\pm 30\%$	Rated switching current	100 mA
Number of digital outputs	1	Hysteresis	1...20 %
Type	NPN-Transistor	Switch-on delay	0...180 s, 50 ms ... 7.5 s
Alarm function	configurable, Top and bottom limit values, window range, Short circuit at input		

Output (analogue)

Signal output	direct or inverted	Type (analogue output)	Voltage and current output (configurable), Active/passive
Transmit function	linear, \sqrt{X} , X1, X1.5, X2, X2.5, 1-X, -5...+5 % of output span (TRIM)	Output voltage	configurable, 0(1)...5 V, 0(2)...10 V, downscale (0 V), upscale (11 V), -5...+5 V, -10...+10 V
Load resistance voltage	> 1 k Ω (60 VAC <U _{in} <230 VAC), > 5 k Ω (24 VAC <U _{in} <60 VAC)	Number analogue outputs	1
Load resistance current	$\leq 600 \Omega$	Output current	configurable, 0(4)...20 mA, -20...+20 mA, ± 10 mA, upscale (23 mA), downscale (3,5 mA)

Display

Display range	-9999...9999, -999...9999	Display value	Configuration data and process data (input/output) in operation
Type	Dot-matrix display with ticker text, green		

General data

Accuracy	Basic accuracy: $\leq 0.05\%$ of span, Accuracy of the individual sensor types, see instruction sheet.	Protection degree	IP20
Supply voltage	24...230 V DC $\pm 15\%$, 110 - 230 V AC / 60-50 Hz	Long-term drift	0.1 % / 10.000 h
Step response time	10 ms, 2- / 4- wire: 320 ms; 3- wire / Poti: 640 ms	Mounting rail	TS 35
Power consumption	≤ 2.5 W	Temperature coefficient	$\pm 0.01\%$ of output span / $^{\circ}\text{C}$
Nominal power consumption	3 VA	Configuration	with push-buttons and display
Operating altitude	≤ 2000 m	Included in delivery	Transducer, Instruction sheet

Insulation coordination

Impulse withstand voltage	5 kV (1.2/50 μs)	EMC standards	EN 61326-1
Surge voltage category	II	Pollution severity	2
Galvanic isolation	4-way isolator, between input/output/supply	Insulation voltage	4 kV _{eff} / 1 min.
Rated voltage	600 V		

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Data for Ex applications (ATEX)

IECEx - gas labelling Ex ec IIC T4 Gc

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
Wire cross-section, solid, min.	0.2 mm ²	Wire cross-section, solid, max.	2.5 mm ²
Wire connection cross section, finely stranded, min.	0.2 mm ²	Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, min.	0.2 mm ²
Wire connection cross-section, finely stranded with wire-end ferrules DIN 46228/4, max.	2.5 mm ²		

Part description

Product description The universal, configurable resistance measuring transducer ACT20P-PRO-RTCI-AO-DOS converts 2- / 3- / 4-wire ohmic resistance and potentiometers into an active or passive standard current signal or an active voltage signal. For set point Limit Monitoring the device is equipped with an digital NPN Output. The universal power supply can be powered up from 24Vuc...230Vuc. The device can be configured via the display.

Features

- universal wide range supply
- universal configurability, LED- Display by touch key
- Active or passive signal output
- Digital NPN transistor output
- Operating status display via front-sided LED
- Galvanic 4-way isolation between Input, analogue, digital output and supply

Classifications

ETIM 8.0	EC002919	ETIM 9.0	EC002919
ETIM 10.0	EC002919	ECLASS 14.0	27-21-01-29
ECLASS 15.0	27-21-01-29		

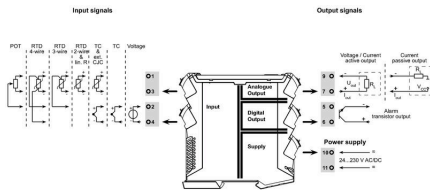
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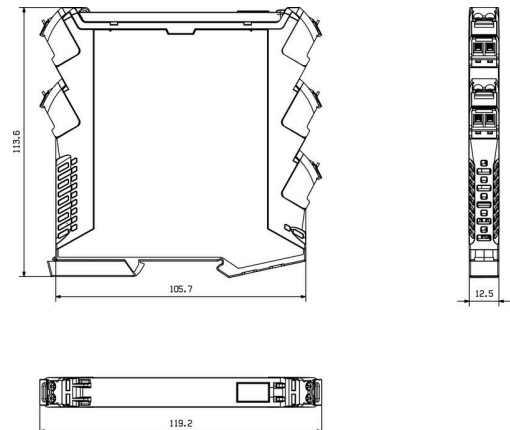
Drawings

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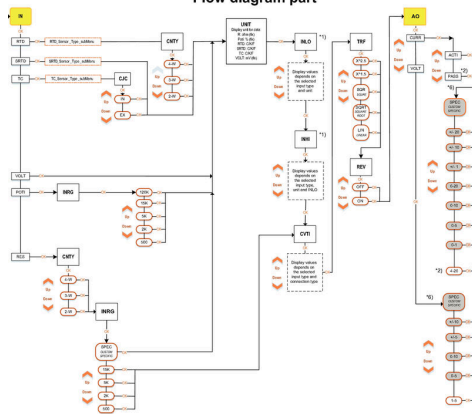
Connection diagram



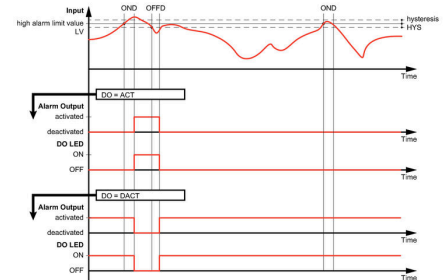
Dimensioned drawing



Flow diagram part



Measuring overrange



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