

## ACT20M ACT20M-UI-AO-S

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 16  
 D-32758 Detmold  
 Germany  
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 Fax: +49 5231 14292083  
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### ACT20M: The slim solution

- Safe and space-saving (6 mm) isolation and conversion
- Quick installation of the power supply unit using the CH20M mounting rail bus
- Easy configuration via DIP switch or FDT/DTM software
- Extensive approvals such as ATEX, IECEX, GL, DNV
- High interference resistance

### General ordering data

Type	ACT20M-UI-AO-S
Order No.	<a href="#">1176030000</a>
Version	Signal converter/insulator, Temperature converter, All-purpose, 2-/3-/4- wire RTD, Thermocouple, Input : universal U, I, R,9, Output : I / U
GTIN (EAN)	4032248970070
Qty.	1 pc(s).

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**Technical data**
**Dimensions and weights**

Width	6.1 mm	Width (inches)	0.24 inch
Height	112.5 mm	Height (inches)	4.429 inch
Depth	114.3 mm	Depth (inches)	4.5 inch
Net weight	80 g		

**Temperatures**

Humidity	40 °C / 93 % rel. humidity, no condensation	Operating temperature	-25 °C...70 °C
Ambient temperature	-25 °C...+70 °C	Storage temperature	-40 °C...85 °C

**Probability of failure**

MTBF	176 Years
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**Input**

Number of inputs	1	Sensor	Thermocouples: B / C / E / J / K / L / N / R / S / T / W3 / W5 - 200...+ 2300 °C depending on thermocouple, RTD: PT10, PT20, PT50, PT100, PT250, PT300, PT400, PT500, PT1000, Ni50, Ni 100, Ni120, Ni1000, 2-/3-/4-wire
Sensor supply	> 15 V DC at 20 mA	Input voltage	configurable, 0(2)...10 V, 0(1)...5 V, 0...1 V DC, 0,2... 1 V DC
Input resistance, voltage	> 10 MΩ	Input current	configurable, 0...20 mA, 4...20mA
Voltage drop, current input	< 3 V	Temperature input range	Configurable, min. measurement range 10°C (RTD), min. measurement range 50°C (TC)
Resistance	10 Ω...10 kΩ	Potentiometer	10 Ω...10 kΩ

**Output**

Number of outputs	1	Output voltage, note	configurable, 0(2)...10 V, 0(1)...5 V, 0(0,2)...1 V, 1... (0,2)0 V, 5...(1)0 V, 10... (2)0 V
Output current	configurable, 0...20 mA, 4...20 mA, 20...0 mA, 20... 4 mA	Cut-off frequency (-3 dB)	100 Hz
cold junction compensation	internal	load impedance voltage	≥ 10 kΩ
load impedance current	≤ 600 Ω, @ max 28mA		

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**Technical data****General data**

Accuracy	< 0.1 % of measuring range	Configuration	With FDT/DTM software
Galvanic isolation	3-way isolator	Mounting rail	TS 35
Power consumption, max.	1.2 W	Power consumption, typ.	0.84 W
Step response time	400 ms (10...90%) @ U/I, 1 s @ temp	Supply voltage	24 V DC ± 30 %
Temperature coefficient	≤ 0.01 % / °C		

**Insulation coordination**

EMC standards	IEC 61326-1, NE 21	Galvanic isolation	3-way isolator
Insulation voltage	2.5 kV <sub>eff</sub> / 1 min.	Pollution severity	2
Rated voltage	300 V <sub>eff</sub>	Standards	IEC 61010-1
Surge voltage category	II		

**Data for Ex applications (ATEX)**

Marking	II 3 G Ex nA IIC T4 Gc
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**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 <sup>2</sup>
Clamping range, rated connection, min.	0.5 mm <sup>2</sup>	Clamping range, rated connection, max.	2.5 mm <sup>2</sup>
Wire connection cross section AWG, min.	AWG 30	Wire connection cross section AWG, max.	AWG 14

**Rated data UL**

UL certificate	E337701.pdf
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**Ratings IECEx/ATEX/cUL**

Certificate No. (ATEX)	KEMA10ATEX0183X	Certificate No. (IECEx)	IECExKEM10.0090X
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**Classifications**

ETIM 3.0	EC002479	ETIM 4.0	EC002653
ETIM 5.0	EC002653	ETIM 6.0	EC002653
eClass 6.2	27-21-01-20	eClass 7.1	27-21-01-20
eClass 8.1	27-21-01-20	eClass 9.0	27-21-01-20
eClass 9.1	27-21-01-90		

**Product information**

Descriptive text technical data	Power supply optionally over the DIN mounting rail CH20M
Descriptive text accessories	CBX200 USB configuration adapter - 8978580000 DIN mounting rail, see Accessories

**Data sheet**

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**Technical data**

**Approvals**

Approvals



ROHS Conform

**Downloads**

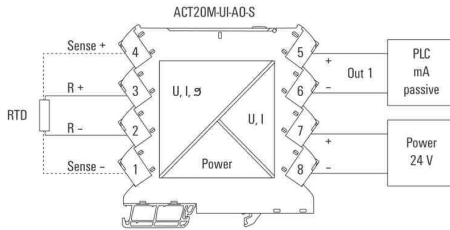
Approval/Certificate/Document of Conformity	<a href="#">Declaration of Conformity</a>
Brochure/Catalogue	<a href="#">CAT 4.1 ELECTR 16/17 EN</a>
Engineering Data	<a href="#">EPLAN, WSCAD, Zuken E3.S</a>
Software	<a href="#">WI-Manager, DTM-Library for online installation</a>
User Documentation	<a href="#">Quick Start Guide to install FDT/DTM Software</a> <a href="#">Instruction sheet</a> <a href="#">IS ACT20M-UI-AO-S</a>

**Data sheet**

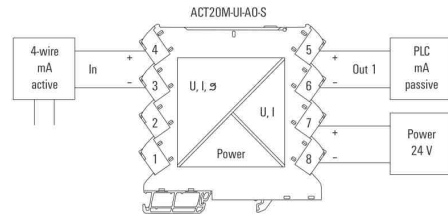
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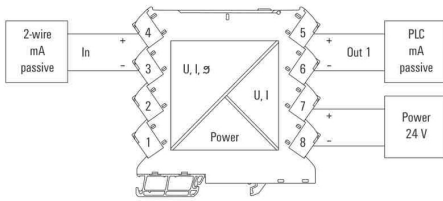
**Drawings**



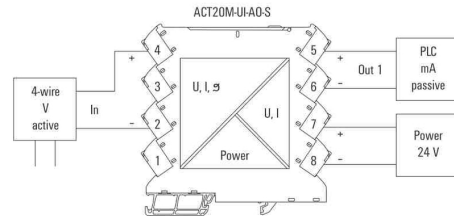
connection example



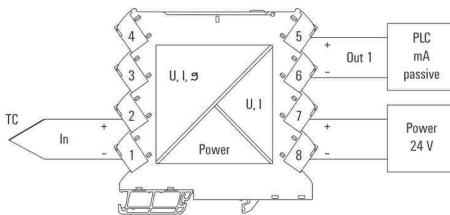
connection example



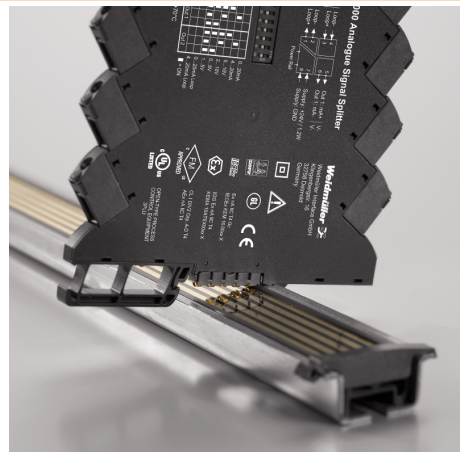
connection example



connection example



connection example



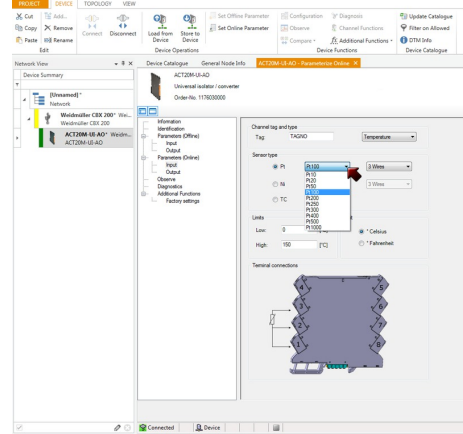
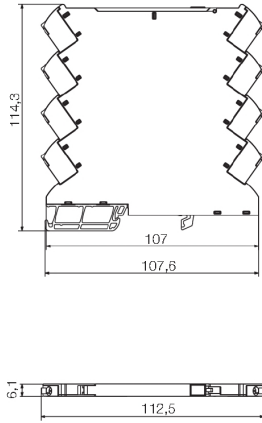
Power supply via the rail bus (housing example)

**Data sheet**

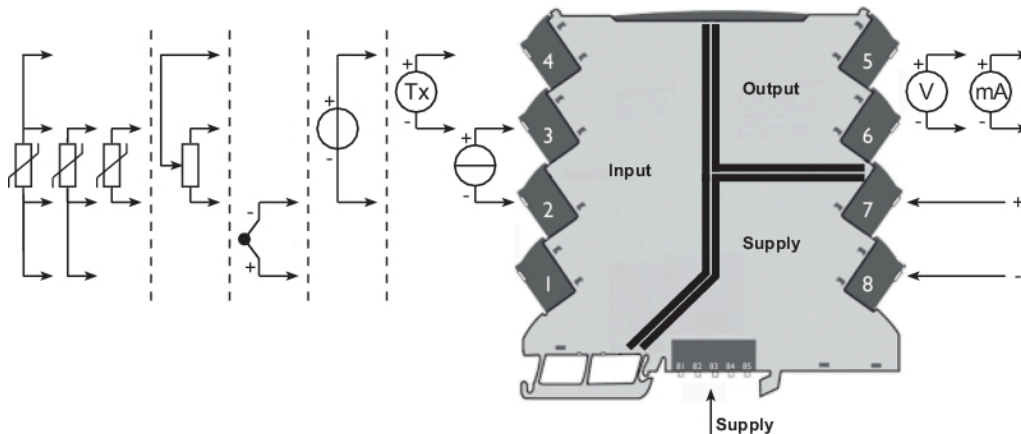
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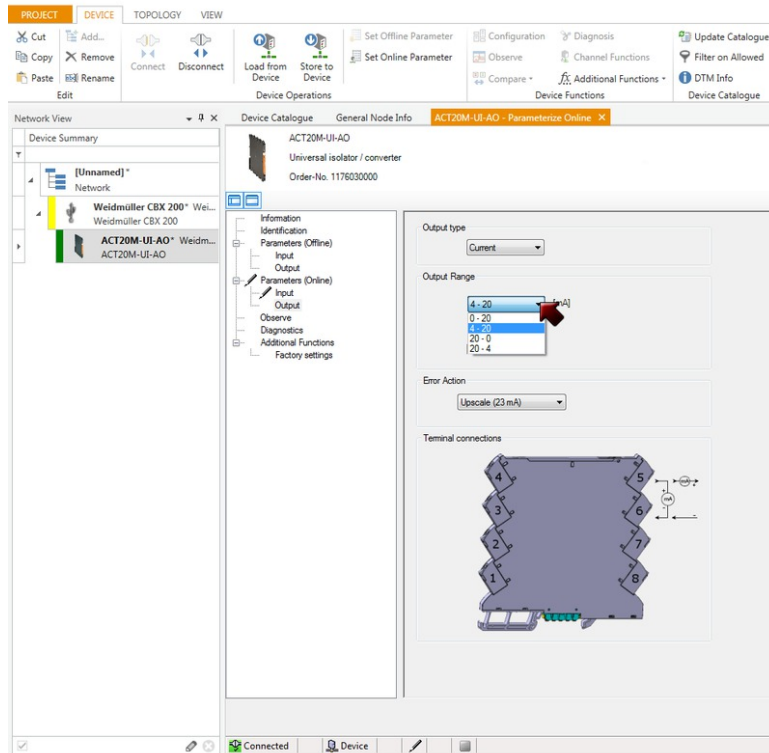
screenshot, setup temperature input with FDT2 / DTM software



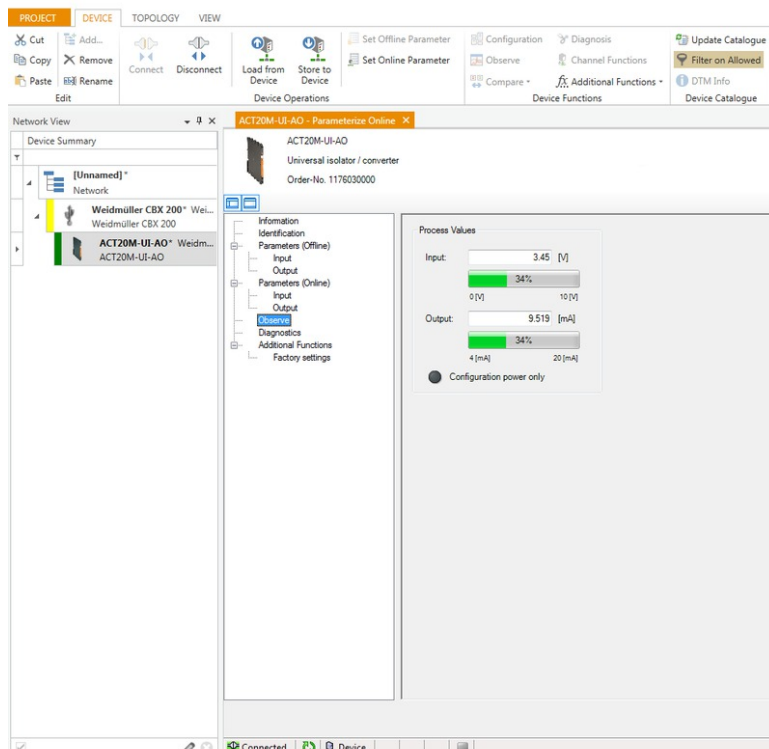
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Drawings



screenshot, setup output with FDT2 / DTM software



screenshot, observe in-/output with FDT2 / DTM software