ACT20M
ACT20M-RTI-CO-EOLP-S

Weidmüller Interface GmbH & Co. KG
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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-RTI-CO-EOLP-S
Order No.	1435610000
Version	Temperature converter, 2-/3-/4- wire RTD, Input : Temperature, Output : 4-20 mA, (loop powered)
GTIN (EAN)	4050118240528
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	Storage temperature, max.	85 °C
Storage temperature, min.	-40 °C	Operating temperature	
Ambient temperature	-25 °C...+70 °C	Storage temperature	-40 °C...85 °C

Probability of failure

MTBF	227 Years

Input

Number of inputs	1	Sensor	PT100 / 2-/3-/4-wire
Influence of the sensor cable resistance	< 0.002 Ω/Ω	Input measurement range	PT100 -200...+850 °C
Line resistance in measuring circuit	50 Ω@ RTD (Pt100), 10 kΩ @ TC (J, K)	Temperature input range	Configurable, min. measurement range 10°C (RTD)

Output

Number of outputs	1	Output current	configurable, 4...20 mA, 20...4 mA
Wire break detection	3.5 mA / 23 mA / none		

General data

Accuracy	absolute accuracy: < ±0.1 % of the measurement range, Basic accuracy: < ±0.2°C	Cold-junction compensation error	±(2.0 °C + 0.4 °C x Δt) Δt = inside temperature – ambient temperature
Configuration	DIP switch	Galvanic isolation	Without isolation
Mounting rail	TS 35	Power consumption, max.	0.8 W
Power consumption, typ.	0.48 W	Step response time	≤ 30 ms, < 300 ms
Supply voltage	Output loop powered, 6... 35 V	Temperature coefficient	RTD (PT100) ≤0.01 % of the measurement range/°C or 0.02 °C / °C

Insulation coordination

EMC standards	IEC 61326-1, NE 21	Galvanic isolation	Without isolation
Pollution severity	2		

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 mm²
Clamping range, min.	0.5 mm²	Clamping range, max.	2.5 mm²
Wire connection cross section AWG, min.	AWG 30	Wire connection cross section AWG, max.	AWG 14

Rated data UL

UL certificate	E337701.pdf

Ratings IECEx/ATEX/cUL

Certificate No. (ATEX)	KEMA10ATEX0183X	Certificate No. (IECEX)	IECEXKEM10.0090X

Classifications

ETIM 5.0	EC002653	ETIM 6.0	EC002919
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	27-21-01-29		

Product information

Product information	ACT20M-RTCI-CO-(E)OLP-S Configurable passive signal converter for temperature measurement of PT100, 2-, 3-, 4-wires and thermocouples type J and K. The 6.1 mm wide ACT20M-RTCI-CO-(E)OLP-S signal converter is output-current loop-powered and suitable for converting and isolating RTD and TC signals. Input and output parameters as well as a fast conversion time of 30 ms or 300 ms can be configured via DIP switch. The ACT20M temperature converter detects sensor errors (short-circuit, cable break) and issues corresponding NAMUR signal limits at the output (configurable upscale/ downscale). On the ACT20M-RTCI-CO-OLP-S the input/output channel is completely galvanically isolated with 2.5 kV. The ACT20M-RTCI-CO-EOLP-S does not have any galvanic isolation. The ACT20M product family features high accuracy of < 0.05% of the measurement range, a large temperature range of -25°C (0°C)...+70°C, outstanding EMC characteristics and international approvals (cULus, ATEX Zone2, FM Div2, GL, DNV). This permits use around the globe in a wide range of applications. Power is supplied directly on the module via the output-current loop.
Descriptive text accessories	DIN mounting rail, see accessories

Approvals

Approvals	c UL us LISTED, DNV, EAC, FM APPROVED, IECEx - KEMA, ATEX - KEMA
ROHS	Conform

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Technical data

Downloads

Approval/Certificate/Document of Conformity	Declaration of Conformity
Brochure/Catalogue	CAT 4.1 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD
Software	DIP switch configuration tool
User Documentation	instruction sheet

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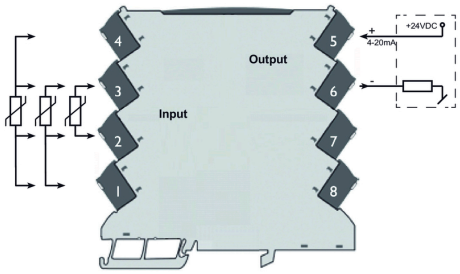
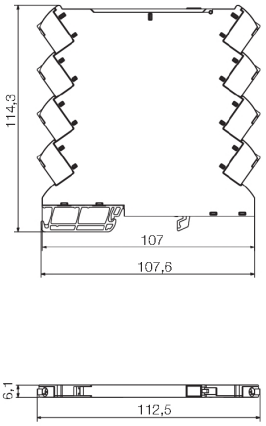
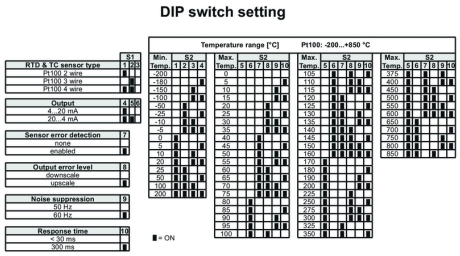
Drawings

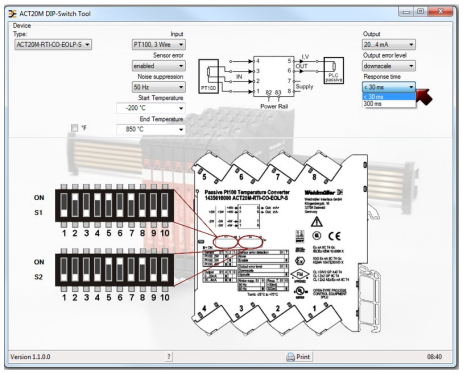
Connection diagram







example for DIP switch setting
(with ACT20M tool software)



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