ACT20M-RTI-AO-S

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany

www.weidmueller.com

Product image, Similar to illustration

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

Version	Temperature converter, 2-/3-/4- wire RTD, With galvanic isolation, Input : Temperature, PT100, Output : I / U
Order No.	1375510000
Type	ACT20M-RTI-AO-S
GTIN (EAN)	4050118259667
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Depth	114.3 mm	Depth (inches)	4.5 inch
Height	112.5 mm	Height (inches)	4.429 inch
Net weight	89 g	Width	6.1 mm
Width (inches)	0.24 inch		

Temperatures

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

Probability of failure

MTBF	152 Years

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1

Input

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

Output

Load impedance current	≤ 600 Ω	Number of outputs	1
Output current	configurable, 0...20 mA, 4...20 mA	Output signal limit	< 4 mA (average), < 60 mA (pulse current), low duty cycle
Output voltage, note	configurable, 0(2)...10 V, 0(1)...5 V	Wire break detection	3.5 mA / 23 mA / none
load impedance voltage	≥ 10 kΩ		

General data

Accuracy	absolute accuracy: < ±0.05 % of the measurement range, Basic accuracy: < ±0.1°C
Configuration	DIP switch
Delivery state	Output: 4...20 mA // Sensor error detection: enabled // Output error level: downscale // Noise suppression: 50 Hz // Step response time: < 30 ms // Start temperature: -200 °C // End temperature: 0 °C

Delivery state

Setting parameters	Output
Configuration	4...20 mA
Setting parameters	Sensor error detection
Configuration	enabled
Setting parameters	Output error level
Configuration	downscale
Setting parameters	Noise suppression
Configuration	50 Hz
Setting parameters	Step response time
Configuration	< 30 ms
Setting parameters	Start temperature
Configuration	-200 °C
Setting parameters	End temperature
Configuration	0 °C

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Galvanic isolation	3-way isolator
Power consumption, max.	0.7 W
Power consumption, typ.	0.49 W
Rail	TS 35
Step response time	≤ 30 ms
Temperature coefficient	≤0.01 % of the measurement range/°C or 0.02 °C / °C
Type of connection	Screw connection
Voltage supply	24 V DC ± 30 %

Insulation coordination

EMC standards	IEC 61326-1, NE 21	Galvanic isolation	3-way isolator
Insulation voltage	2.5 kV_{eff} / 1 min.	Pollution severity	2
Rated voltage	300 V_{eff}	Surge voltage category	II

Data for Ex applications (ATEX)

Marking	II 3 G Ex nA 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 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

Classifications

ETIM 6.0	EC002919	ETIM 7.0	EC002919
ECLASS 9.0	27-21-01-29	ECLASS 9.1	27-21-01-29
ECLASS 10.0	27-21-01-29	ECLASS 11.0	27-21-01-29

Important note

Product information	The ACT20M-RTI-AO-S configurable temperature transducer isolates and converts analogue signals. An analogue RTD input signal (Type Pt100) is linearly converted into an analogue output signal and galvanically isolated. The power supply is galvanically isolated from the input and output (3-way isolation) and this is done with direct wiring or over the Weidmüller rail bus.

Approvals

Approvals

c UL us LISTED · DNV · DNV·GL · EAC · FM APPROVED · IECEx - KEMA · ATEX - KEMA

ROHS	Conform
UL File Number Search	E337701

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Technical data

Downloads

Approval/Certificate/Document of Conformity	DNV-GL certificate FM certificate IECEXx certificate ATEX certificate Declaration of Conformity
Engineering Data	STEP
Engineering Data	EPLAN, WSCAD, Zuken E3.S
Software	DIP switch configuration tool
User Documentation	instruction sheet

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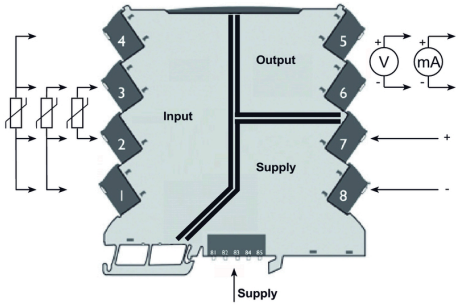
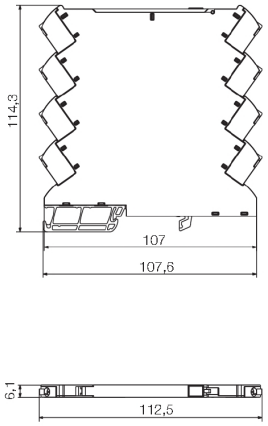
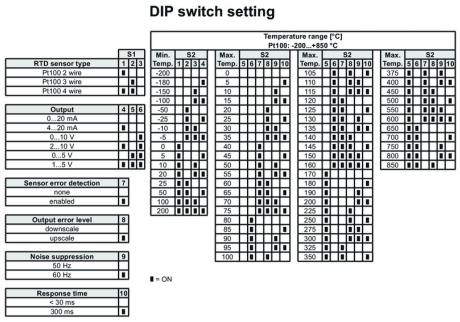
Drawings

Connection diagram

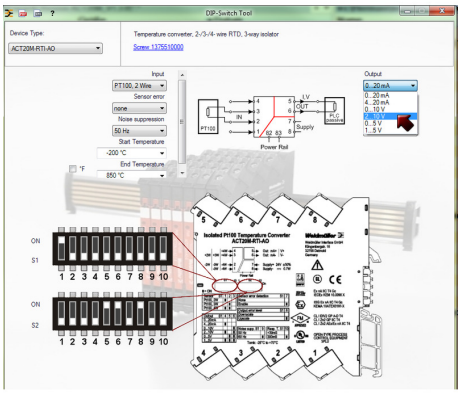






example for DIP switch setting
(with ACT20M tool software)

Power supply via the rail bus



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