ACT20M-RTI-AO-S

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

www.weidmueller.com

Product image

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

ACT20M-RTI-AO-S

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

www.weidmueller.com

Technical data

Dimensions and weights

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

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-25 °C...70 °C
Humidity at operating temperature	0...95 % (no condensation)	Humidity	40 °C / 95 % rel. humidity, no condensation

Probability of failure

MTBF	152 a

Input

Influence of the sensor cable resistance	<0.002 Ω/Ω (@ 3/4-wire)	Line resistance in measuring circuit	≤ 50 Ω
Number of inputs	1	Sensor	PT100 (2-/3-/4- wire)
Temperature input range	Configurable, PT100: -200...+850 °C, 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	Type	active, connected control must be passive
Wire break detection	Yes, Configurable, 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	Setting parameters	Input
	Configuration	0 °C
	Setting parameters	Bandwidth
	Configuration	50 Hz
	Setting parameters	Output 1
	Configuration	0...20 mA
	Setting parameters	Output 2
	Configuration	0...20 mA
	Setting parameters	Sensor error detection
	Configuration	enabled
	Setting parameters	Step response time
	Configuration	< 30 ms
	Setting parameters	Noise suppression
	Configuration	enabled
Delivery state	Input: 0 °C // Bandwidth: 50 Hz // Output 1: 0...20 mA // Output 2: 0...20 mA // Sensor error detection: enabled // Step response time: < 30 ms // Noise suppression: enabled	
Included in delivery	Instruction sheet	

ACT20M-RTI-AO-S

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

www.weidmueller.com

Technical data

Nominal power consumption	0.5 VA
Operating altitude	≤ 2000 m
Power consumption, max.	0.7 W
Power consumption, typ.	0.49 W
Protection degree	IP20
Rail	TS 35
Step response time	Configurable, ≤ 30 ms, <300 ms
Temperature coefficient	≤0.01 % of the measurement range/°C or 0.02 °C / °C
Voltage supply	24 V DC ±30 % at terminal or via CH20M rail bus

Insulation coordination

EMC standards	IEC 61326-1	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)

Installation location	Device installed in safe area, zone 2	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

EMC conformity and approvals

EMC standards	IEC 61326-1	Standards	IEC 61010-1

Classifications

ETIM 6.0	EC002919	ETIM 7.0	EC002919
ETIM 8.0	EC002919	ETIM 9.0	EC002919
ETIM 10.0	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	ECLASS 12.0	27-21-01-29
ECLASS 13.0	27-21-01-29	ECLASS 14.0	27-21-01-29
ECLASS 15.0	27-21-01-29		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cI
REACH SVHC	Lead 7439-92-1
SCIP	2f6dd957-421a-46db-a0c2-cf1609156924

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.

ACT20M-RTI-AO-S

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

www.weidmueller.com

Technical data

Approvals

Approvals	
Approvals MAMID	https://mdcop.weidmueller.com/mediadelivery/rendition/900_319228/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319234/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319237/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319240/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319243/-T1z1mm-S800/ https://mdcop.weidmueller.com/mediadelivery/rendition/900_319260/-T1z1mm-S800/
ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E337701

Downloads

Approval/Certificate/Document of Conformity	DNV-GL certificate FM certificate IECEXx certificate ATEX certificate UL certification for canada Declaration of Conformity
Engineering Data	CAD data – STEP
Software	DIP switch configuration tool
User Documentation	instruction sheet
Catalogues	Catalogues in PDF-format
Brochures	

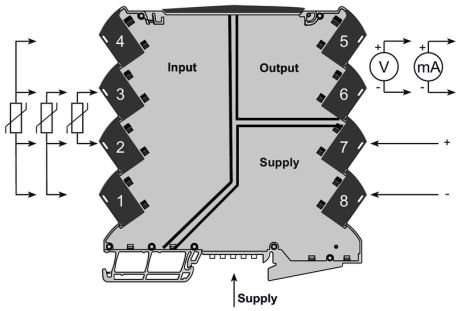
ACT20M-RTI-AO-S

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

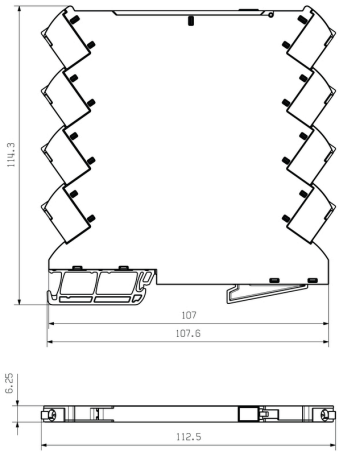
www.weidmueller.com

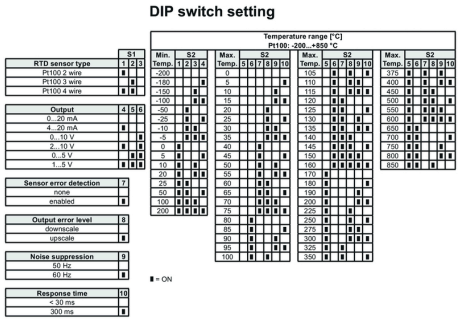
Drawings

Connection diagram



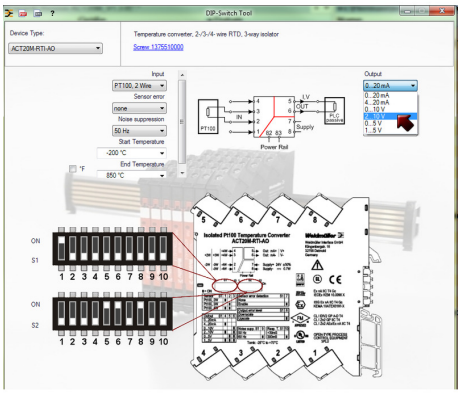
Dimensional drawing





example for DIP switch setting
(with ACT20M tool software)

Additional power supply option via bus



example for DIP switch setting (with ACT20 tool)