

ACT20M ACT20M-RTI-CO-EOLP-S

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 16

D-32758 Detmold

Germany

Fon: +49 5231 1429-0

Fax: +49 5231 14292083

www.weidmueller.com



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
GTIN (EAN)	4050118240528
Qty.	1 pc(s).

ACT20M
ACT20M-RTI-CO-EOLP-S

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 1429-0
 Fax: +49 5231 14292083
 www.weidmueller.com

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	
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 ΩΩ	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 Standards	Without isolation IEC 61010-1
Pollution severity	2		

Data for Ex applications (ATEX)

Marking	II 3 G Ex nA IIC T4 Gc
---------	------------------------

**ACT20M
ACT20M-RTI-CO-EOLP-S**

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 1429-0
 Fax: +49 5231 14292083
 www.weidmueller.com

Technical data
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, rated connection, min.	0.5 mm ²	Clamping range, rated connection, max.	2.5 mm ²
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	<p>ACT20M-RTCI-CO-(E)OLP-S</p> <p>Configurable passive signal converter for temperature measurement of PT100, 2-, 3-, 4-wires and thermocouples type J and K.</p> <p>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).</p> <p>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.</p> <p>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.</p> <p>Power is supplied directly on the module via the output-current loop.</p>
Descriptive text accessories	DIN mounting rail, see accessories

Approvals

Approvals



ROHS	Conform
------	---------

Data sheet**ACT20M
ACT20M-RTI-CO-EOLP-S**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 1429-0
Fax: +49 5231 14292083
www.weidmueller.com

Technical data**Downloads**

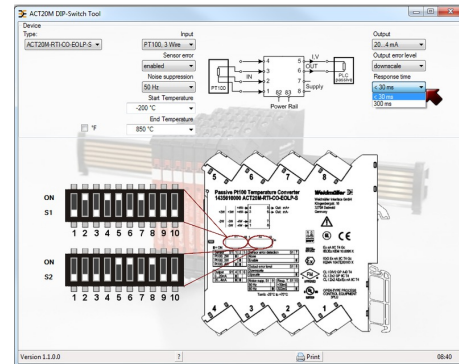
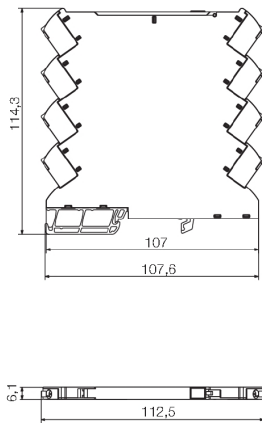
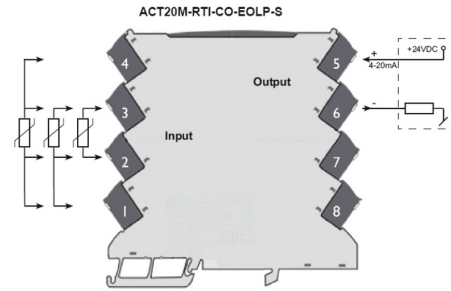
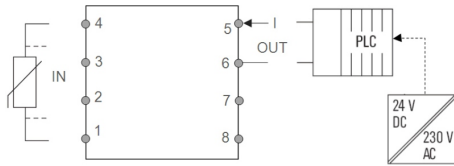
Approval/Certificate/Document of Conformity	Declaration of Conformity
Brochure/Catalogue	CAT 4.1 ELECTR 16/17 EN
Engineering Data	EPLAN, WSCAD
Software	DIP switch configuration tool
User Documentation	instruction sheet

Data sheet

**ACT20M
ACT20M-RTI-CO-EOLP-S**

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 16
 D-32758 Detmold
 Germany
 Fon: +49 5231 1429-0
 Fax: +49 5231 14292083
 www.weidmueller.com

Drawings



example for DIP switch setting
(with ACT20M tool software)