



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX ULD 23.0005X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2023-08-31

Applicant: **Weidmüller Interface GmbH & Co. KG**
Klingenbergstrasse 26
Detmold 32758
Germany

Equipment: **Analogue Signal Converter Isolator, ACT20P series**

Optional accessory:

Type of Protection: **Increased Safety "ec"**

Marking: Ex ec IIC T4 Gc
-40°C ≤ Tamb ≤ +70°C
See Annex for additional information

Approved for issue on behalf of the IECEx
Certification Body:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:
(for printed version)

Date:
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
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UL International DEMKO A/S
Borupvang 5A
DK-2750 Ballerup
Denmark





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Date of issue: 2023-08-31

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Manufacturer: **Weidmüller Interface GmbH & Co. KG**
Klingenbergstrasse 26
Detmold 32758
Germany

Manufacturing locations: **Weidmüller Interface GmbH & Co. KG**
Klingenbergstrasse 26
Detmold 32758
Germany

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[DK/ULD/ExTR23.0005/00](#)

Quality Assessment Report:

[NL/DEK/QAR12.0052/08](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The universally configurable ACT20P-PRO-RTCI-AO-DO-x and ACT20P-PRO-RTC-AO-DOS-x measurement and signal converters isolate, convert and monitor analogue signals. An analogue input signal (voltage, potentiometer, resistance or temperature sensor signal) is converted into an analogue output signal (current or voltage) and galvanically isolated. The device features an NPN transistor output that issues an alarm if the preset limit values are exceeded or not met.

The universally configurable frequency converter ACT20P-PRO-FI-AO-DO-x and ACT20P-PRO-FI-AO-DOS-x separate, convert and monitor frequency signals and the duty cycle of pulse width modulated (PWM) signals. A frequency or PWM input signal is converted into an analogue output signal (current or voltage) and is galvanically isolated. The device features an NPN transistor output that issues an alarm if the preset limit values are exceeded or not met.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment shall be installed in an enclosure that provides a minimum ingress protection of IP54 in accordance with IEC 60079-0 and only accessible by use of a tool.
- The equipment shall only be used in an area of at least pollution degree 2, as defined in IEC 60664-1.
- Transient protection shall be provided that is set at a level not exceeding 140 % of the peak rated voltage value at the supply terminals to the equipment
- For full details surrounding Ambient Temperature ratings, deratings, input and output ratings and mounting requirements, see Instructions.
- The minimum rated temperature of the cable connected to the field wiring terminals must be 85 °C.
- Only use cables with copper conductors.

Annex:

[Annex to IECEx ULD 23.0005X Issue 0.pdf](#)



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TYPE DESIGNATION

Nomenclature:

I	II	III	IV
ACT20P-PRO-	RTCI-AO-	DO-	S

I	ACT20P-PRO-	Model series
II	RTCI-AO-	Resistor/Thermocouple input, analogue output signal type (DO only)
	RTC-AO-	Resistor/Thermocouple input, analogue output signal type (DOS only)
	FI-AO-	Frequency converter input, analogue output type
III	DO-	Digital out (RTCI and FI only)
	DOS-	SIL rated Digital out (RTC and FI only)
IV	P	Push/spring terminals
	S	Screw terminals

Electrical Ratings:

Power Supply:

ACT20P-PRO-RTCI-AO-DO-x and ACT20P-PRO-RTC-AO-DOS-x
48...230 V AC -10% / +20%
24...230 V DC -10% / +20%
≤ 2.5 W

ACT20P-PRO-FI-AO-DO-x and ACT20P-PRO-FI-AO-DOS-x
48...230 V AC -10% / +20%
24...230 V DC -10% / +20%
≤ 3 W

Ambient Temperature Ratings:

-40°C ≤ Tamb ≤ +70°C

Device distance between modules shall be ≥ 12 mm for ambient temperatures > 60 °C (e.g., use of end bracket WEW 35/1 SW, order number 1162600000)

Alarm transistor for all models:

≤ 24 V DC ±30 % / ≤ 100 mA

For inputs and outputs, see Instructions drawings (2505930000, 2592360000, 2592350000, 2592380000).



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MARKING

Marking has to be readable and indelible; it has to include the following indications:

Copy of Marking Plate:

Weidmüller 2447940000 ACT20P-PRO-FI-AO-DO-S

Weidmüller Interface GmbH, Klingenbergstr. 26, 32758 Detmold - Germany
www.weidmueller.com, info@weidmueller.com



II 3G Ex ec IIC T4 Gc
UL 23 ATEX 2956X



Class I Div. 2 Group A-D T4

Ex ec IIC T4 Gc
IECEX ULD 23.0005X



II 3G Ex ec IIC T4 Gc

31	PNP	Input
32	+15V	
21	f IN / PWM / NPN (w PU) / PNP(w PD)	
22	GND	
11	NAMUR+	
12	NAMUR-	

Power Supply		61
		62
Digital Output	NPN-	51
	NPN+	52
Analogue Output	V- / mA-	41
	V+ / mA+	42

Power Supply 24...230VDC -10...+20% AC: 48...62Hz; ≤ 3W
Power Supply 48...230VAC -10...+20% DC: ≤ 3W
For derating see Instruction sheet



-40°C ≤ T_a ≤ +70°C

Weidmüller 2447950000 ACT20P-PRO-FI-AO-DO-P

Weidmüller Interface GmbH, Klingenbergstr. 26, 32758 Detmold - Germany
www.weidmueller.com, info@weidmueller.com



II 3G Ex ec IIC T4 Gc
UL 23 ATEX 2956X



Class I Div. 2 Group A-D T4

Ex ec IIC T4 Gc
IECEX ULD 23.0005X



II 3G Ex ec IIC T4 Gc

31	PNP	Input
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For derating see instruction sheet

-40°C ≤ T_a ≤ +70°C



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Weidmüller 2448100000 ACT20P-PRO-RTCI-AO-DO-S

Weidmüller Interface GmbH, Klingenbergstr. 26, 32758 Detmold - Germany
www.weidmueller.com, info@weidmueller.com

	II 3G Ex ec IIC T4 Gc UL 23 ATEX 2956X		Class I Div. 2 Group A-D T4
Ex ec IIC T4 Gc IECEx ULD 23.0005X		II 3G Ex ec IIC T4 Gc	

2	Sense+ / TC+ / WIPER	Analogue Input	Power Supply	\sim	10
4	Sense- / TC-		Digital Output	NPN-	5
1	RTD+ / R / Pot	Analogue Input		NPN+	6
3	RTD- / R / Pot		Analogue Output	V- / mA-	9
			V+ / mA+	7	

Power Supply 24...230VDC -10...+20% AC: 48...62Hz; \leq 2.5W
Power Supply 48...230VAC -10...+20% DC: \leq 2.5W



For derating see instruction sheet

-40°C \leq T_a \leq +70°C

Weidmüller 2448110000 ACT20P-PRO-RTCI-AO-DO-P

Weidmüller Interface GmbH, Klingenbergstr. 26, 32758 Detmold - Germany
www.weidmueller.com, info@weidmueller.com

	II 3G Ex ec IIC T4 Gc UL 23 ATEX 2956X		Class I Div. 2 Group A-D T4
Ex ec IIC T4 Gc IECEx ULD 23.0005X		II 3G Ex ec IIC T4 Gc	

2	Sense+ / TC+ / WIPER	Analogue Input	Power Supply	\sim	10
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Power Supply 24...230VDC -10...+20% AC: 48...62Hz; \leq 2.5W
Power Supply 48...230VAC -10...+20% DC: \leq 2.5W



For derating see instruction sheet

-40°C \leq T_a \leq +70°C

Weidmüller 2489890000 ACT20P-PRO-RTC-AO-DOS-S

Weidmüller Interface GmbH, Klingenbergstr. 26, 32758 Detmold - Germany
www.weidmueller.com, info@weidmueller.com

	II 3G Ex ec IIC T4 Gc UL 23 ATEX 2956X		Class I Div. 2 Group A-D T4
Ex ec IIC T4 Gc IECEx ULD 23.0005X		II 3G Ex ec IIC T4 Gc	

2	Sense+ / TC+ / WIPER	Analogue Input	Power Supply	\sim	10
4	Sense- / TC-		Digital Output	NPN-	5
1	RTD+ / R / Pot	Analogue Input		NPN+	6
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Power Supply 24...230VDC -10...+20% AC: 48...62Hz; \leq 2.5W
Power Supply 48...230VAC -10...+20% DC: \leq 2.5W



For derating see instruction sheet

-40°C \leq T_a \leq +70°C

Weidmüller 2490010000 ACT20P-PRO-FI-AO-DOS-S

Weidmüller Interface GmbH, Klingenbergstr. 26, 32758 Detmold - Germany
www.weidmueller.com, info@weidmueller.com

	II 3G Ex ec IIC T4 Gc UL 23 ATEX 2956X		Class I Div. 2 Group A-D T4
Ex ec IIC T4 Gc IECEx ULD 23.0005X		II 3G Ex ec IIC T4 Gc	

31	PNP	Input	Power Supply	\sim	61
32	+15V		Digital Output	NPN-	51
21	f IN / PWM / NPN (w PU) / PNP(w PD)	Input		NPN+	52
11	NAMUR+		Analogue Output	V- / mA-	41
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Power Supply 24...230VDC -10...+20% AC: 48...62Hz; \leq 3W
Power Supply 48...230VAC -10...+20% DC: \leq 3W



For derating see instruction sheet

-40°C \leq T_a \leq +70°C



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<p>Weidmüller 2490020000 ACT20P-PRO-FI-AO-DOS-P Weidmüller Interface GmbH, Klingenbergstr. 26, 32758 Detmold - Germany www.weidmueller.com, info@weidmueller.com</p>	<p>Weidmüller 2490030000 ACT20P-PRO-RTC-AO-DOS-P Weidmüller Interface GmbH, Klingenbergstr. 26, 32758 Detmold - Germany www.weidmueller.com, info@weidmueller.com</p>																																							
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ROUTINE EXAMINATIONS AND TESTS

Each piece of equipment shall be subjected to routine dielectric strength test at a level of 2400 V rms for 2 seconds between all electrical circuits without electrical breakdown in accordance with applicable OrdLoc standard.

For ACT20P-PRO-FI-AO-...:

Block 1	Block 2	Applied Voltage	Max Leakage Current
X1/X2/X3	X4/X5/X6	2.4 kV AC, 50 Hz, ≥ 2 s	6 mA RMS
X1/X2/X3/X4/X5	X6	2.4 kV AC, 50 Hz, ≥ 2 s	6 mA RMS
X4	X5	2.4 kV AC, 50 Hz, ≥ 2 s	6 mA RMS

For ACT20P-PRO-RTC-AO-... and ACT20P-PRO-RTCI-AO-...:

Block 1	Block 2	Voltage	Max Leakage Current
X1/X2	X4/X5/X6	2.4 kV AC, 50 Hz, ≥ 2 s	6 mA RMS
X1/X2/X4/X5	X6	2.4 kV AC, 50 Hz, ≥ 2 s	6 mA RMS
X4	X5	2.4 kV AC, 50 Hz, ≥ 2 s	6 mA RMS