

# (1) EU TYPE-EXAMINATION CERTIFICATE



- (2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 14/34/EU**
- (3) EC Type-Examination Certificate Number

**TÜV 16 ATEX 7892 X**

Issue: 00

- (4) Equipment: **Intrinsically safe analogue signal conditioner ACT20X-HUI-SAO-LP**
- (5) Manufacturer: **Weidmuller Pty Ltd (Australia)**
- (6) Address: **43 Huntingwood Drive, Huntingwood, NSW, 2148, Australia**
- (7) This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV Rheinland Zertifizierungsstelle for ex-protected products of TÜV Rheinland Industrie Service GmbH, Notified Body No. 0035 in accordance with Article 21 of the Council Directive 14/34/EU of 26<sup>th</sup> February 2014, certifies this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere, given in Annex II to the Directive.  
The examination and test results are recorded in the confidential report AU / 7892.00/16
- (9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:  
**EN 60079-0: 2012/A11:2013; EN 60079-11: 2012; EN 60079-15:2010**
- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- (11) This Type-Examination Certificate relates only to the design and specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.



**II 3 (1) G Ex nA [ja Ga] IIC T4 Gc  
I (M1) [Ex ia Ma] I  
II (1) G [Ex ia Ga] IIC  
II (1) D [Ex ia Da] IIIC  
Tamb -20°C ≤ to 70°C**

TÜV Rheinland ExNB for explosion protected equipment

Cologne, 2016-07-28

Dipl.-Ing. Andreas Maschke



This EU Type-Examination Certificate without signature and stamp shall not be valid.  
This Type-examination Certificate may be circulated only without alteration. Extracts or alterations are subject to approval by the  
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(13) Annex

(14) **EU Type Examination Certificate**

**TÜV 16 ATEX 7892 X**

Issue: 00

(15) Description of equipment

15.1 Equipment and type:

Intrinsically safe analogue signal conditioner ACT20X-HUI-SAO-LP

15.2 Description / Details of Change

General product information

The ACT20X-HUI-SAO-LP Loop Powered Transmitter with universal inputs is designed to provide a galvanically isolated power supply and restrict the transfer of energy from unspecified non-hazardous area equipment to the hazardous area circuits by limitation of voltage and current.

The equipment comprises of electronic components mounted on two double sided printed wiring boards all housed within a plastic enclosure. External connections are made via integral terminals mounted in the wall of the enclosure.

The equipment is designed as safe area apparatus for intrinsic safety equipment but also may be installed in Zone 2 as Ex nA equipment provided it is installed within a suitably certified enclosure meeting IP 54 according to the conditions in this report, as required by IEC 60079-15.

Technical Data

Non Hazardous Area Connections

1. Electrical Parameters

Terminals 41, 42 and J7 (Programming interface)

$U_m = 250 \text{ V}$  (Used for Ex ia)

$U_n = 30 \text{ V}$  (Used for Ex nA)

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## Output Hazardous Area Connections Parameters

Terminal	U <sub>o</sub> (V)	I <sub>o</sub> (mA)	P <sub>o</sub> (mW)	C <sub>i</sub> (μF)	L <sub>i</sub> (mH)
Terminal 21 wrt 12	5.88	9	13	0.001	Negligible
Terminal 22 wrt 12	5.88	0.003	< 1.0	0.001	Negligible
Terminal 11 wrt 12	5.88	79.2	116.4	0.001	Negligible
Terminal 21, 22 & 11 wrt 12	5.88	88.2	129	0.003	Negligible

The capacitance and either the inductance or the inductance to resistance (L/R) ratio of the hazardous area load connected to the hazardous area connections must not exceed the following values;

Model	Group I			Group IIA			Group IIB/IIIC			Group IIC		
	Co (μF)	Lo (mH)	L/R (μH/Ω)	Co (μF)	Lo (mH)	L/R (μH/Ω)	Co (μF)	Lo (mH)	L/R (μH/Ω)	Co (μF)	Lo (mH)	L/R (μH/Ω)
Terminal 21 wrt 12	1000	1000	2000	1000	1000	2000	1000	1000	2000	43	438	1900
Terminal 22 wrt 12	1000	1000	2000	1000	1000	2000	1000	1000	2000	43	1000	1900
Terminal 11 wrt 12	1000	74.3	3850	1000	45.3	2400	1000	22.6	1221	43	5.6	300
Terminal 21, 22 & 11 wrt 12	1000	60	3600	1000	36.5	2196	1000	18.2	1098	43	4.57	274

The above load parameters apply where;

- The external circuit contains no combined lumped inductance (*Li*) or lumped capacitance (*Ci*) greater than 1% of the above values. OR
- The external circuit contains either only lumped inductance (*Li*) or lumped capacitance (*Ci*) in combination with a cable. OR
- The inductance and capacitance are distributed as in a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the inductance and capacitance values are allowed.

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Thermal Data:

Ambient Temperature

$T_{amb} -20^{\circ}\text{C} \leq t_o \leq 70^{\circ}\text{C}$

(16) Test-Report No. AU / Ex 7892.00 / 16

(17) Special Conditions for safe use

1. When installed in a hazardous area the apparatus is to be mounted within a suitably certified enclosure that offers a degree of protection not less than IP54 and certified as an Ex e or Ex n enclosure.
2. Programming of the equipment is to be performed in the safe area only.

(18) Basic Safety and Health Requirements

Covered by afore mentioned standard

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