



Product Service

(1) **EU-Type Examination Certificate**
TRANSLATION

- (2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres – **Directive 2014/34/EU**
- (3) Number of Certificate of EU-Type Examination:

TPS 19 ATEX 038892 0008 X *Issue 01*



- (4) Equipment: Humidity / Temperature Sensor
Type: EE100Ex with connection cable HA011068
- (5) Manufacturer: E+E Elektronik GmbH
- (6) Address: Langwiesen 7
4209 ENGERWITZDORF
AUSTRIA
- (7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) TÜV SÜD Product Service GmbH, notified body No. 0123 in accordance with Article 17 of the Council Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that 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 atmospheres, given in Annex II of the Directive.
The examination and test results are recorded in the confidential report 713215988.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
- EN IEC 60079-0:2018**
EN 60079-11:2012
- (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 EU-Type Examination Certificate relates only to the design and the construction of the specified equipment in accordance with Directive 2014/34/EU. Further requirements of this Directive apply to the manufacturer and supply of this equipment.
- (12) The marking of the equipment (EE100Ex) shall include the following:

 **II 2G Ex ia IIB T4 Gb**

Certification body Explosion Protection
Ridlerstrasse 65, 80339 Munich

Munich, 14.07.2021

Stefan Vierbücher

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EU-Type Examination Certificate without signature shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by TÜV SÜD Product Service GmbH.
In case of dispute, the German text shall prevail.

The document is internally administrated under the following number: EX5A 038892 0008 Rev.01



(13) **Schedule**

(14) **EU-Type Examination Certificate TPS 19 ATEX 038892 0008 X** *Issue 01*

(15) Description of equipment:

The intrinsically safe sensor EE100Ex is dedicated for the measurement of relative humidity, temperature and dew point temperature / frost point temperature in hazardous gas areas up to Zone 1. The device may only be supplied by an associated apparatus with intrinsically safe connectors.

The intrinsically safe power supply and data output is carried out on an isolated 2-wire 4..20 mA interface. The device contains two galvanic isolated 2-wire channels, whereas channel 2 can only be operated together with channel 1.

Outside the hazardous area the configuration and adjustment of the EE100Ex can be performed with the associated HA011068 connection cable, a configuration device and a PC.

The EE100EX is available with three different types of probes: probe fixed directly onto the enclosure, remote probe with cable fixed onto the enclosure and remote probe with M12 connector. The protection of the sensing element is realised with a choice of seven different filter caps.

Technical data:

Ambient temperature of EE100Ex:	-40 °C to +60 °C
Ambient temperature of HA011068:	-40 °C to +40 °C
Protection class EE100Ex:	IP65 (IP20 for ignition protection)
Protection class HA011068:	IP20
Electrical connection for EE100Ex:	
Supply voltage	(11 + RL*0.02) - 28 V DC
(sourced by a 4-20 mA interface, CH1, CH2)	
Electrical connection for HA011068	
Supply voltage	5 VDC (USB)
Communication	USB or RS232

Models:

- T1: Wall mount with fixed probe
- T3: Remote probe with fixed cable 3m long
- T23: Probe with M12 connector (maximum cable length 3 m)

Filter caps:

Type	Order code
PTFE filter (PTFE / PC)	F2
Membrane filter (Stainless steel grid / PC)	F3
Stainless steel sintered filter	F4
PTFE sintered filter	F5
Stainless steel grid filter	F9
PTFE-stainless steel filter	F11
H2O2 filter (PTFE)	F12



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Entity parameters:

Ui	28V
Ii	100mA
Pi	700mW (per channel, linear supply)
Ci	2,2 nF
Li	negligible

- (16) Test report: 713215988
- (17) Special conditions for safe use:
- EE100Ex meets the requirements for “ia” according to EN 60079-11. Usage is only permitted in EPL Gb, Zone 1 due to the aluminium enclosure.
 - The fixed or separated probe must not be installed in Zone 0, since the EPL of the entire EE100Ex device is limited to “Gb”.
 - The sensor probe must be covered with one of the provided filter caps.
 - The configuration and adjustment of the EE100Ex is only permitted with the associated HA011068 connection cable outside the hazardous area. When the HA011068 is connected to the EE100Ex, CH1 and CH2 must not be connected.
- (18) Essential health and safety requirements:
met by standards