

CERTIFICATE

(1) EU-Type Examination

(2) **Equipment or protective systems intended for use in potentially explosive atmospheres - Directive 2014/34/EU**

(3) EU-Type Examination Certificate Number: **DEKRA 18ATEX0046 X** Issue Number: **0**

(4) Product: **Capacitive Level Switch, Type RF 8*00 *T/W*... and Capacitive Level Transmitter, Type NC 8100 *T/W*...**

(5) Manufacturer: **UWT GmbH**

(6) Address: **Westendstrasse 5, 87488 Betzigau, Germany**

(7) This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) DEKRA Certification B.V., Notified Body number 0344 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential test report number 222481300-3 issue 0.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0 : 2018
EN 60079-26 : 2015

EN 60079-1 : 2014
EN 60079-31 : 2014

EN 60079-11 : 2012

except in respect of those requirements listed at item 18 of the Schedule.

(10) If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

(11) This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

(12) The marking of the product shall include the following:



See marking section.

Date of certification: 10 February 2020

DEKRA Certification B.V.

R. Schuller
Certification Manager



© Integral publication of this certificate and adjoining reports is allowed. This Certificate may only be reproduced in its entirety and without any change.

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0046 X**

Issue No. 0

Marking

RF 8*00 *T/W*...



RF 8*00 *T*...:

II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb

II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db

RF 8*00 *W*...:

II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db

NC 8100 *T/W*...:



NC 8100 *T*...:

II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb

II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db

NC 8100 *W*...:

II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db

(15) **Description**

The Capacitance Level Switch, Type RF 8*00 *T/W*... and Capacitance Level Transmitter, Type NC 8100 *T/W*... detect the level of a process medium.

The Level Switch resp. Level Transmitter consist of a sensor head, which contains the electronics like the signal amplifier, and a level probe.

The equipment has two thread entries for connection purposes. Suitable cable glands, blanking elements or adapters can optionally be provided with the equipment or provided by the user.

The Level Switch resp. Level Transmitter is provided with an integral level probe, available in several variations.

The available variations for the RF type are: Extended PFA cable, Extended rod, Extended bare cable and High temp. rod.

The available variations for the NC type are: PFA insulated weighted cable, PFA insulated stilling well rod, PFA insulated rod and Non-insulated weighted cable.

The Level Switch or Transmitter can be provided with a Profibus PA signal amplifier, reed switch and display unit.

The probe is always in type of protection intrinsic safety "ia" and is powered by the signal amplifier.

For use in potentially explosive atmospheres of flammable gases, fluids or vapours.

The sensor head of the Level Switch resp. Level Transmitter provides IP65 per EN IEC 60079-0 and EN 60529.

The enclosure of the level probe provides IP5X per EN 60529.

The max. allowed process pressure is 3500 kPa.

For the nomenclature see Annex 1 to this report.

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0046 X**

Issue No. **0**

Type of level switch or level transmitter	Types of protection and EPL's	
	Sensor head	Level probe
RF 8*00*T*...	Ex d, Ex i and Ex t; EPL Gb and Db	Ex i EPL Ga and Da
RF 8*00*W*...	Ex i and Ex t; EPL Da and Db	Ex i; EPL Da
NC 8100 *T*...	Ex d, Ex i and Ex t; EPL Gb and Db	Ex i; EPL Ga and Da
NC 8100 *W*...	Ex i and Ex t; EPL Db	Ex i; EPL Da

Thermal data

The relations between temperature class, ambient temperature range and maximum process medium temperature is shown in the following tables:

RF 8*00 *T/W*...:

Ambient temperature range	Process medium temperature range	Temperature class (EPL Ga or Gb)	Surface temperature (EPL Da)	Surface temperature (EPL Db)
-40 °C to +70 °C	-40 °C to +75 °C ⁽¹⁾	T6	T ₂₀₀ 80 °C	T80 °C
-40 °C to +80 °C	-40 °C to +90 °C ⁽¹⁾⁽²⁾	T5	T ₂₀₀ 95 °C	T90 °C
-40 °C to +80 °C	-40 °C to +125 °C ⁽¹⁾⁽²⁾	T4	T ₂₀₀ 130 °C	T90 °C
-40 °C to +80 °C	-40 °C to +190 °C ⁽¹⁾⁽²⁾	T3	T ₂₀₀ 195 °C	T90 °C
-40 °C to +80 °C	-40 °C to +285 °C ⁽³⁾	T2	T ₂₀₀ 290 °C	T90 °C
-40 °C to +80 °C	-40 °C to +400 °C ⁽³⁾	T1	T ₂₀₀ 405 °C	T90 °C

NC 8100 *T/W*...:

Ambient temperature range	Process medium temperature range	Temperature class (EPL Ga or Gb)	Surface temperature (EPL Da)	Surface temperature (EPL Db)
-40 °C to +70 °C	-40 °C to +75 °C ⁽¹⁾	T6	T ₂₀₀ 80 °C	T80 °C
-40 °C to +80 °C	-40 °C to +90 °C ⁽¹⁾⁽²⁾	T5	T ₂₀₀ 95 °C	T90 °C
-40 °C to +80 °C	-40 °C to +125 °C ⁽¹⁾⁽²⁾	T4	T ₂₀₀ 130 °C	T90 °C
-40 °C to +80 °C	-40 °C to +190 °C ⁽¹⁾⁽²⁾	T3	T ₂₀₀ 195 °C	T90 °C
-40 °C to +80 °C	-40 °C to +200 °C ⁽¹⁾⁽²⁾	T2	T ₂₀₀ 205 °C	T90 °C

Notes:

1. With optional FFKM wetted seal the lower service temperature is limited to -20 °C.
2. For process temperatures > 85 °C: Only applicable for versions with a thermal isolator.
3. Only applicable for high temperature version (RF 8200).

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0046 X**

Issue No. **0**

Electrical data

RF 8*00 *T*E... and RF 8*00 *W*E...

Power supply: 12 - 250 V (ac or dc), 0 - 60 Hz, max. 2 W ($U_m = 250$ V)
Output: Relay ($U_m = 250$ V) max. 250 Vac, 8A and 2000 VA (non inductive), or
30 Vdc, 5 A and 150 W (non inductive)
Solid state switch ($U_m = 250$ V) max. 30 Vdc or 30 Vac (peak), 82 mA

Probe circuit: In type of protection intrinsic safety Ex ia IIC or IIIC.
The maximum length of any extension between the sensor head and the level probe enclosure is 25 m.

RF 8*00 *T*F... and RF 8*00 *W*F...

Power supply: Profibus PA, bus voltage 12 - 30 Vdc, 12,5 mA ($U_m = 250$ Vac)
Output: Profibus PA
Solid state switch ($U_m = 250$ V) max. 30 Vdc or 30 Vac (peak), 82 mA

Probe circuit: In type of protection intrinsic safety Ex ia IIC or IIIC.
The maximum length of any extension between the sensor head and the level probe enclosure is 25 m.

NC 8100 ***...

Power supply: 12 - 30 Vdc ($U_m = 250$ Vac)
Output: 4 - 20 mA or 20 - 4 mA

Probe circuit: In type of protection intrinsic safety Ex ia IIC or IIIC.
The maximum length of any extension between the sensor head and the level probe enclosure is 25 m.

Installation instructions

The instructions provided with the product shall be followed in detail to assure safe operation.

(16) **Report Number**

No. 222481300-3 issue 0.

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0046 X**

Issue No. **0**

(17) **Specific conditions of use**

The relation between the ambient and process temperature ranges and the surface temperature or temperature class is shown at thermal data above.

The user shall ensure that the equipment is not installed in a location where it may be subjected to external conditions which might cause a build-up of electrostatic charge on non-conducting surfaces.

If the process temperature exceeds the max. permissible ambient temperature, the max. resulting temperature at the process connection of the sensor head shall not exceed the related max. permissible ambient temperature, taking the worst case conditions into account.

This shall be verified by measurement when installed.

The flameproof joints are not intended to be repaired.

The flameproof joints are not intended to be repaired.

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at item (9).

(19) **Test documentation**

As listed in Report 222481300-3 issue 0.

(20) **Certificate history**

Issue 0 - 222481300-3 initial certificate