

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 18ATEX0042 X** Issue Number: **0**

(4) Product: **Capacitance Level Switch, Type CN 8100*W/T*E/F...**

(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 222481300-2 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: 7 February 2020

DEKRA Certification B.V.

R. Schuller
Certification Manager



(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0042 X**

Issue No. **0**

(15) **Description**

The Capacitance Level Switch, Type CN 8100*W/T*E/F... detects the level of a process medium.

The Level Switch consists 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 is available as types: Extended cable, Extended rod, Sanitary – extended rod, Sanitary – compact, Compact.

Versions:

- Integral: The sensor head is directly attached to the level probe.
- Remote: The sensor head is connected, with a remote connection, to a cable of max. 35 m long. The other end of the cable is connected, with a second remote connection, to the probe.

The sensor head of the Level Switch 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 2500 kPa.

Type of level switch	Types of protection and EPL's			
	Sensor head		Level probe	
	Enclosure	Remote connection	Probe (in process)	Remote connection
CN 8100*T*E/F...	Ex d, Ex i and Ex t; EPL Gb and Db	Ex i; EPL Gb or Db	Ex i; EPL Ga and Da	Ex i; EPL Ga, Da and Da/Db
CN 8100*W*E/F...	Ex i and Ex t; EPL Db	Ex i; EPL Db	Ex i; EPL Da	Ex i; EPL Da and Da/Db

The level switch can optionally be provided with a standard electronic module or a digital electronic module with a Profibus PA signal amplifier, reed switch and display unit.

The sensor head is provided with a glass seal (Type CN 8100*T*E/F...), or a brass, or glass seal (Type CN 8100*W*E/F...), at the integral version separating the electronics compartment from the probe and at the remote version separating the electronics compartment from the cable compartment including the connections to the level probe.

If provided with the glass seal:

- The electronics compartment is in type of protection flameproof enclosures “d”.
- The integral type has a partition wall for separation of areas requiring EPL Ga (process) from areas requiring EPL Gb (ambient).
- An extension, called thermal isolator, can optionally be used between the glass seal and the level probe, and is in types of protection Ex t and Ex i.

The sensor head is dust ignition protected by the enclosure “t”

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0042 X**

Issue No. **0**

The level probe including the cable compartment of the remote sensor head is always in type of protection intrinsic safety "i" and is powered by the signal amplifier.

For the nomenclature see Annex 1 to this certificate.

Electrical data

Electronic module: Standard

Power supply: 12 - 250 V (ac or dc), 0 - 60 Hz, max. 2 W (Um = 250 V)

Output: Relay (Um = 250 V) max. 250 Vac, 8A and 2000 VA (non-inductive),
or 30 Vdc, 5 A and 150 W (non-inductive)
Solid state switch (Um = 250 V) max. 30 Vdc or 30 Vac (peak), 82 mA

Electronic module: Digital

Power supply: Profibus PA, bus voltage 12 - 30 Vdc, 12,5 mA

Output: Profibus PA
Solid state switch (Um = 250 V) max. 30 Vdc or 30 Vac (peak), 82 mA

Marking

Type CN 8100*T*E/F...

Integral version:

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



Remote version, sensor head:

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

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

Remote version, level probe:

II 1 G Ex ia IIC TX Ga

II 1 D Ex ia IIIC TX Da

II 1/2 D Ex ia IIIC TX Da/Db

Type CN 8100*W*E/F...

Integral version:

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



Remote version, sensor head:

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

Remote version, level probe:

II 1 D Ex ia IIIC TX Da

II 1/2 D Ex ia IIIC TX Da/Db

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0042 X**

Issue No. **0**

Thermal data

For: - Integral version
- Level probe of remote version

Ambient temperature range	Process medium temperature range	Temperature class (EPL Ga or Gb)	Surface temperature (EPL Da)	Surface temperature (EPL Db)
-40 °C to +45 °C	-40 °C to +45 °C ⁽¹⁾	T6	T ₂₀₀ 95 °C	T55 °C
-40 °C to +60 °C	-40 °C to +60 °C ⁽¹⁾	T5	T ₂₀₀ 110 °C	T70 °C
-40 °C to +80 °C	-40 °C to +95 °C ⁽¹⁾⁽²⁾	T4	T ₂₀₀ 145 °C	T90 °C
-40 °C to +80 °C	-40 °C to +125 °C ⁽¹⁾⁽²⁾	T3	T ₂₀₀ 175 °C	T90 °C

For: - Sensor head of remote version

Ambient temperature range	Temperature class (EPL Gb)	Surface temperature (EPL Db)
-40 °C to +45 °C	T6	T55 °C
-40 °C to +60 °C	T6	T70 °C
-40 °C to +80 °C	T5	T90 °C

Notes:

1. With optional FFKM wetted seal the minimum process temperature is limited to -20 °C.
2. Process temperatures > 85 °C are only applicable for versions with a thermal isolator..

Installation instructions

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

(16) **Report Number**

No. 222481300-2 issue 0.

(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0042 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.

If the process temperature exceeds the maximum permissible ambient temperature, the maximum resulting temperature at the connection of the sensor head (see dotted line in the manual) shall not exceed the related maximum permissible ambient temperature, taking the worst case conditions into account.

This shall be verified by measurement when installed.

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.

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 No. 222181300-2 issue 0.

(20) **Certificate history**

Issue 0 - 222481300-2 initial certificate