

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 18ATEX0045 X** Issue Number: **0**

(4) Product: **Capacitive Level Switch, Type RF 8*00 *Y***

(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 60079-11 : 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:



II 1 G Ex ia IIC TX Ga
II 1/2 D Ex ia IIIC TX Da/Db

Date of certification: 10 February 2020

DEKRA Certification B.V.

R. Schuller
Certification Manager



(13) **SCHEDULE**

(14) **to EU-Type Examination Certificate DEKRA 18ATEX0045 X**

Issue No. **0**

(15) **Description**

The Capacitance Level Switch, Type RF 8*00 *Y*... is used for the detection of the level limit of fluids or solids. 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 provided with an integral level probe, available in several variations. The available variations are: Extended PFA cable, Extended rod, Extended bare cable and High temp. rod.

The Level Switch is intended to be connected to a Profibus PA fieldbus. A separate solid state output is available for use as an alarm switch or as a level limit switch. Optionally the Level Switch is provided with an indicator.

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 3500 kPa.

Types of protection and EPL's	
Sensor head	Level probe
Ex i: EPL Ga and Da	Ex i: EPL Ga and Da

For the nomenclature see Annex 1 to this report.

Thermal data

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

Ambient temperature range	Process medium temperature range	Temperature class (EPL Ga or Gb)	Surface temperature (EPL Da)	Surface temperature (EPL Db)
-40 °C to +60 °C	-40 °C to +75 °C ⁽¹⁾	T6	T ₂₀₀ 80 °C	T70 °C
-40 °C to +60 °C	-40 °C to +90 °C ⁽¹⁾⁽²⁾	T5	T ₂₀₀ 95 °C	T70 °C
-40 °C to +60 °C	-40 °C to +125 °C ⁽¹⁾⁽²⁾	T4	T ₂₀₀ 130 °C	T70 °C
-40 °C to +60 °C	-40 °C to +190 °C ⁽¹⁾⁽²⁾	T3	T ₂₀₀ 195 °C	T70 °C
-40 °C to +60 °C	-40 °C to +290 °C ⁽³⁾	T2	T ₂₀₀ 295 °C	T70 °C
-40 °C to +60 °C	-40 °C to +400 °C ⁽³⁾	T1	T ₂₀₀ 405 °C	T70 °C

Notes:

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

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Electrical data

Supply and signal output circuit (terminals Profibus PA 1 and 2):
in type of protection intrinsic safety Ex ia IIC/IIIC, only for connection to a certified intrinsically safe fieldbus in accordance with the FISCO Model according to EN 60079-11, with following maximum values:

$U_i = 24 \text{ V}$; $I_i = 380 \text{ mA}$; $P_i = 5,32 \text{ W}$; $C_i = 5 \text{ nF}$; $L_i = 10 \text{ }\mu\text{H}$.

Solid state switch circuit (terminals 6 and 7):
in type of protection intrinsic safety Ex ia IIC or IIIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

$U_i = 30 \text{ V}$; $I_i = 200 \text{ mA}$; $P_i = 350 \text{ mW}$; $C_i = 0 \text{ nF}$; $L_i = 0 \text{ }\mu\text{H}$.

Probe circuit:

in type of protection intrinsic safety Ex ia IIC or IIIC, only for connection to the integral probe.

When the apparatus is connected to associated intrinsically safe apparatus in type of protection Ex ia IIB or Ex ib IIC or Ex ib IIB, the type of protection is still Ex ia IIC for the Probe circuit.

The maximum length of any extension between the sensor head and the level probe enclosure is 25 m.

The Solid state output switch is infallibly galvanic isolated from the signal and supply circuit and from the probe circuit to a maximum voltage of 60 V.

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.

(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.

Because the enclosure and optionally the process connection of the equipment is made of aluminium alloy, the apparatus must be installed so, that even in the event of rare incidents, an ignition source due to impact or friction between enclosure and iron/steel is excluded, when used in potentially explosive atmosphere requiring apparatus of equipment 1G.

If the process temperature exceeds the max. permissible ambient temperature, the max. resulting temperature at the connection of the sensor head (see dotted line in the manual) shall not exceed the related max. permissible ambient temperature, taking the worst case conditions into account. This shall be verified by measurement when installed.

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(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