

CERTIFICATE

(1) UK Type Examination

(2) **Product or Protective System Intended for use in Potentially Explosive Atmospheres - UKSI 2016:1107 (as amended) – Schedule 3A, Part 1**

(3) UK Type Examination Certificate Number: **DEKRA 21UKEX0046 X** Issue Number: **0**

(4) Product: **Capacitance Level Switch, Type CN 8100*3*F*****e...**

(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 UK Ltd., Approved Body number 8505 in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), 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 Schedule 1 of the Regulations.

The examination and test results are recorded in confidential report **EX22080002-011** 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 to this certificate.

(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 UK Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Regulations 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:

Integral version:

II 1 G Ex ia IIC TX Ga

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

Remote version, sensor head:

II 1 G Ex ia IIC TX Ga

II 2 D Ex ia 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

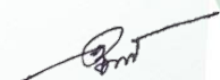


Date of certification: 20 February 2023



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DEKRA Certification UK Ltd.


Abul Kashem
Certification Manager

2714:3
Page 1/4

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(13) **SCHEDULE**

(14) **to UK Type Examination Certificate DEKRA 21UKEX0046 X**

Issue No. 0

(15) **Description**

The Capacitance Level Switch, Type CN 8100*3*F*****e... 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*3*F*****e...	Ex i; EPL Ga and Db	Ex i; EPL Ga and Db	Ex i; EPL Ga and Da	Ex i; EPL Ga, Da and Da/Db

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.

For the nomenclature see Annex 1 to report EX22080002-011 Issue 0.

(13) **SCHEDULE**

(14) **to UK Type Examination Certificate DEKRA 21UKEX0046 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 +60 °C	-40 °C to +95 °C ^{(1) (2)}	T4	T ₂₀₀ 145 °C	T70 °C
-40 °C to +60 °C	-40 °C to +125 °C ^{(1) (2)}	T3	T ₂₀₀ 175 °C	T70 °C

For: - Sensor head of remote version

Ambient temperature range	Temperature class (EPL Ga)	Surface temperature (EPL Db)
-40 °C to +45 °C	T6	T55 °C
-40 °C to +60 °C	T4	T70 °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 thermal isolator.

Electrical data

Supply and signal output circuit Profibus PA (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 V; I_i = 380 mA; P_i = 5,32 W; C_i = 5 nF; L_i = 10 µH.

Solid state switch circuit (terminals 6 and 7):

in type of protection intrinsic safety Ex ia IIC/IIIC, only for connection to a certified intrinsically safe circuit, with following maximum values:

U_i = 30 V; I_i = 200 mA; P_i = 350 mW; C_i = 0 nF; L_i = 0 µH.

Probe circuit:

in type of protection intrinsic safety Ex ia IIC/IIIC, only for connection to the integral probe or to a remotely mounted probe. Maximum cable length 35 m.

The Solid state switch circuit is infallibly galvanic isolated from the Supply and signal output 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.

(13) **SCHEDULE**

(14) **to UK Type Examination Certificate DEKRA 21UKEX0046 X**

Issue No. **0**

(16) **Report Number**

No. EX22080002-011 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.

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.

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.

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

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, conformity is demonstrated in the report.

(19) **Test documentation**

As listed in Report No. EX22080002-011 Issue 0.