

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 21UKEX0045X** Issue Number: **0**

(4) Product: **Capacitance Level Switch,
Type CN 8100*2/5*E/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 **EX22080002-014** 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 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:

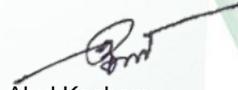


See marking section.

Date of certification: 20 February 2023



DEKRA Certification UK Ltd.


Abul Kashem
Certification Manager

2714:3
Page 1/5

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

DEKRA Certification UK Ltd., Stokenchurch House, Oxford Road, Stokenchurch, Buckinghamshire HP14 3SX, United Kingdom
T +44 330 9120368 certification.uk@dekra.com www.DEKRA-UK.co.uk Registered 13129030

(13) **SCHEDULE**

(14) **to UK Type Examination Certificate DEKRA 21UKEX0045X**

Issue No. **0**

(15) **Description**

The Capacitance Level Switch, Type CN 8100*2/5*E/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*5*E/F*****e...	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*2*E/F*****e...	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*2*E/F*****e...), or a brass, or glass seal (Type CN 8100*5*E/F*****e...), 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.

(13) **SCHEDULE**

(14) **to UK Type Examination Certificate DEKRA 21UKEX0045X**

Issue No. **0**

The sensor head is dust ignition protected by the enclosure "t"
 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 Report No. EX22080002-014 Issue 0.

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*5*E/F*****e...

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*2*E/F*****e...

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 UK Type Examination Certificate DEKRA 21UKEX0045X**

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**

EX22080002-014 Issue 0.

(13) **SCHEDULE**

(14) **to UK Type Examination Certificate DEKRA 21UKEX0045X**

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**

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. EX22080002-014 Issue 0.