





**CML 18ATEX2193X  
Issue 0**

## 11 Description

The NIVUS R-8z and NIVUS R-16z are DC powered level measurement sensor utilising radar technology. The sensor models are identical; differing in power outputs only. The sensor is housed in a non-metallic enclosure with integral five core cable which connects to control equipment located in the safe area providing power and data communication. The enclosure incorporates a threaded cap which allows the equipment to be mounted on a suitable bracket or flange.

Intrinsic safety is achieved by connecting to the non-hazardous area via intrinsically safe interface devices, and by encapsulation of the electronics and sensor.

The equipment has the following safety description:

Power Port		Signal Port		RX port		TX port	
U <sub>i</sub>	= 28V	U <sub>i</sub>	= 10V	U <sub>i</sub>	= 10V	U <sub>i</sub>	= 10V
I <sub>i</sub>	= 120mA	I <sub>i</sub>	= 200mA	I <sub>i</sub>	= 200mA	I <sub>i</sub>	= 200mA
P <sub>i</sub>	= 0.83W	P <sub>i</sub>	= 0.5W	P <sub>i</sub>	= 0.5W	P <sub>i</sub>	= 0.5W
C <sub>i</sub>	= 5nF	C <sub>i</sub>	= 0	C <sub>i</sub>	= 0	C <sub>i</sub>	= 0
L <sub>i</sub>	= 0	L <sub>i</sub>	= 0	L <sub>i</sub>	= 0	L <sub>i</sub>	= 0
				U <sub>o</sub>	= 6.51V	U <sub>o</sub>	= 6.51V
				I <sub>o</sub>	= 208mA	I <sub>o</sub>	= 208mA

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	06/07/2018	R11818A/00	Issue of prime certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

## 13 Conditions of manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- 13.1 Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.

## 14 Special Conditions for Safe Use (Conditions of Certification)

The following conditions relate to safe installation and/or use of the equipment.

- 14.1 Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. This is particularly important if the equipment is installed in a zone 0 location. In addition, the equipment shall only be cleaned with a damp cloth.
- 14.2 The equipment must be routinely inspected to avoid the build up of dust layers when installed in a Zones 20, 21, or 22.



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- 14.3 The equipment must only be connected to resistive intrinsically safe sources with minimum resistances as follows
- Power connection  $R \geq 234\Omega$
  - Signal connection  $R \geq 50\Omega$
  - TX connection  $R \geq 50\Omega$
  - RX connection  $R \geq 50\Omega$
- 14.4 When installing the equipment, the installer shall consider the length of integral cable attached to the equipment, in addition to any externally installed cable. The integral cable shall be considered to have parameters of 200pF/m, and 1 $\mu$ H/m or 30 $\mu$ H/ $\Omega$

## Certificate Annex



**Certificate Number** CML 18ATEX2193X  
**Equipment** NIVUS R-8z & NIVUS R-16z  
**Manufacturer** NIVUS GmbH

The following documents describe the equipment or component defined in this certificate:

### Issue 0

Drawing No	Sheets	Rev	Approved date	Title
D-804-1284-B	1 of 1	B	06/07/2018	NIVUS Ex ia R-8z & R-16z mmWave Radar wrap-around Labels



## Certificate and File Transfer

This document confirms the transfer of the following referenced certificates and files.

**Receiving Notified Body:**

CML B.V.,  
Koopvaardijweg 32,  
4906CV Oosterhout,  
The Netherlands  
(Notified Body number 2776)

**(Original) Issuing Notified Body:**

Certification Management Limited (Eurofins E&E CML Limited)  
Newport Business Park,  
New Port Road,  
Ellesmere Port  
CH65 4LZ  
United Kingdom  
(Notified Body number 2503)

**Manufacturer:**

NIVUS GmbH  
Im Täle 2,  
75031 Eppingen,  
Germany

**Certificates transferred**

CML 18ATEX2193X  
CML 18ATEX5194X

The manufacturer may use this document as evidence of continuity of certification.

Where the certification documentation or markings require updating to reflect the transfer, for example, change to Notified Body number, this is permitted without submission of updated documentation to CML.

The manufacturer shall apply to CML for any other changes to the product design.

Signed

On behalf of  
CML B.V.

**D R Stubbings MIET**

Technical Director

Tuesday, 08 December 2020

On behalf of  
CML UK

**A C Smith**

Technical Operations Director

Tuesday, 08 December 2020

On behalf of  
NIVUS GmbH

**Samuel Seiter**

Ex Representative

Tuesday, 08 December 2020

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